



**Agenda**  
**The Township of Cavan Monaghan**  
**Regular Council Meeting**

Monday, November 15, 2021

1:00 p.m.

During the Council Meeting attendance in the Council Chambers will not be permitted. A link to the livestreaming of this meeting will be available through our website at [www.cavanmonaghan.net](http://www.cavanmonaghan.net). Council Members may be participating remotely.

	<b>Pages</b>
1. Open Session	
2. Call to Order	
3. Approval of the Agenda	
4. Disclosure of Pecuniary Interest and the General Nature Thereof	
5. Closed Session	
6. Presentation	
6.1. Darryl Abs and Gary Scandlan, Watson & Associates Economists - Water/Wastewater Rate Analysis	4 - 34
7. Minutes	
7.1. Minutes of the Regular Meeting held November 1, 2021	35 - 45
8. Minutes from Committees and Boards	
8.1. Municipal Revitalization and Heritage Advisory Committee meeting minutes of October 21, 2021	46 - 49
9. Reports	
9.1. Report - Finance 2021-17 Water and Wastewater Rate Analysis and Water and Wastewater User Fees and Charges By-law (KP/WH)	50 - 100
9.2. Report - Public Works 2021-18 RFP - PW-21-02 for Design and Engineering Services for Main Street Watermain Replacement (WH)	101 - 103

9.3.	Report - Public Works 2021-19 Former Millbrook Correctional Facility Groundwater Investigation (WH)	104 - 111
9.4.	Report - Public Works 2021-20 Municipal Solar Units Update Revised (WH)	112 - 123
9.5.	Report - Planning 2021-58 Update: Status Report - 1066 Syer Line (JC)	124 - 126
9.6.	Report - CAO Report and Capital Status (YH)	127 - 131
9.7.	Council/Committee Verbal Reports	
10.	General Business	
11.	Correspondence for Information	
12.	Correspondence for Action	
13.	By-laws	
13.1.	By-law No. 2021-66 being a by-law to authorize the Clerk and Deputy Clerk to provide Civil Marriage Services to the public	132 - 132
13.2.	By-law No. 2021-67 being a by-law to impose Water and Wastewater User Fees and Charges	133 - 135
13.3.	By-law No. 2021-68 being a by-law to authorize the execution of an Environmental Impact Mitigation Measures Agreement between 1972867 Ontario Inc. and the Corporation of the Township of Cavan Monaghan	136 - 140
14.	Unfinished Business	
15.	Notice of Motion	
16.	Confirming By-law	
16.1.	By-law No. 2021-69 being a by-law to confirm the proceedings of the meeting held November 15, 2021	141 - 141
17.	Adjournment	
18.	Upcoming Events/Meetings	
18.1.	Cavan Monaghan Public Library Board Meeting Tuesday, November 16, 2021 at 7:00 p.m.	

- 18.2. Municipal Revitalization and Heritage Advisory Committee Thursday, November 18, 2021 at 9:00 a.m. via Zoom**
  
- 18.3. Millbrook Valley Trails Advisory Committee Meeting Monday, November 22, 2021 at 5:00 p.m. via Zoom**



# Township of Cavan Monaghan

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Water/Wastewater Rate Analysis  
Council Presentation

November 15, 2021 4



# Study Purpose



- Watson undertook a water and wastewater rate study for the Township in 2020.
- The study calculated water and wastewater rates for 2021 to 2029.
- Two rate scenarios were presented in the report:
  - 2% rate increases annually; and
  - 0% rate increase for 2021 and 2.25% rate increases thereafter.
- A third scenario was presented to Council whereby there would be a 0% rate increase for 2021 followed by an update in late 2021.



# Highlights of the Study

- Council passed the following resolution on Nov. 16, 2020:
  - *Receive the 2020 water and wastewater rate study as presented by Watson & Associates Ltd.; and select Scenario 3 (0% increase for 2021, then due to Covid 19 pandemic, a volume flow review and September 2021 presentation to Council for Council's consideration of the future annual increases for 2022-2025).*
- Findings of the Review –2020 rate study vs. actual



**2.25% rate increases can now be reduced to 1.5%**

# Updates



- The following slides present the updated calculations for the forecast period and provide a revised rate forecast.

# Current Water and Wastewater Rates



Township of Cavan Monaghan		
2021 - Water Billing Rates		
Millbrook Monthly Base Charge		
15mm/18mm	\$	32.68
25mm	\$	59.67
40mm	\$	135.74
50mm	\$	316.23
75mm	\$	653.02
100mm	\$	1,158.07
Volume Charge		
\$	1.820	per m <sup>3</sup>
Bulk Water Rate		
\$	3.080	per m <sup>3</sup>

Township of Cavan Monaghan		
2021 - Wastewater Billing Rates		
Millbrook Monthly Base Charge		
15mm/18mm	\$	60.47
25mm	\$	112.33
40mm	\$	279.32
50mm	\$	662.34
75mm	\$	1,373.75
100mm	\$	2,441.25
Volume Charge		
\$	2.490	per m <sup>3</sup>

- The above provides for the 2020 water and wastewater rates as presented in the 2020 rate study
- As there was no increase in the rates for 2021, the above also represents the current rates

# Customer Profile

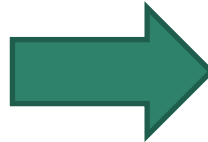


**Total Customers - Year-end 2019**

Metered	Water	Wastewater
15mm/18mm	818	807
25mm	3	2
40mm	1	1
50mm	3	3
75mm	0	0
100mm	1	1
<b>Total</b>	<b>826</b>	<b>814</b>

## New Customer Forecast as per 2020 Rate Study

Year	Total Users
2020	50
2021	60
2022	20
2023	40
2024	40
2025	45
2026	40
2027	55
2028	55
2029	45
<b>Total</b>	<b>450</b>



## Updated New Customer Forecast

Year	Total Users
2020	86
2021	78
2022	20
2023	40
2024	40
2025	45
2026	40
2027	55
2028	55
2029	45
<b>Total</b>	<b>504</b>

- 2020 rate study forecasted 50 additional customers in 2020 and 60 in 2021
- There were more customers added than anticipated; 86 in 2020 and 78 in 2021

# Historical Volumes



Year	Total Billable Volumes (cu.m)	Total Customers	Total Billable Volumes per Customer (cu.m)
2017	90,015	602	149.53
2018	93,985	653	143.93
2019	105,160	787	133.62
2020	125,305	937	133.73

- 2015 rate study assumed 170 cu.m/customer for new users
- 2018 rate study update assumed 150 cu.m/customer
- 2020 rate study utilized 140 cu.m/customer
- Average volumes per customer over last four years is 140 cu.m
- The update analysis continues to assume each new customer will generate 140 cu.m in annual volume



# Water Forecast Users and Billable Volumes

Assumed an average of 140 cu.m per customer for future flows.

Water Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	826	826	826	826	826	826	826	826	826	826
New - Growth	43	125	174	204	244	287	329	377	432	482
<b>Total</b>	<b>869</b>	<b>951</b>	<b>1,000</b>	<b>1,030</b>	<b>1,070</b>	<b>1,113</b>	<b>1,155</b>	<b>1,203</b>	<b>1,258</b>	<b>1,308</b>

Water Volume Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook</b>										
Bulk Water	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762
Existing		110,620	110,620	110,620	110,620	110,620	110,620	110,620	110,620	110,620
New - CMCC	125,305	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
New - Growth		17,500	24,360	28,560	34,160	40,180	46,060	52,780	60,480	67,480
<b>Total</b>	<b>135,067</b>	<b>141,132</b>	<b>147,992</b>	<b>152,192</b>	<b>157,792</b>	<b>163,812</b>	<b>169,692</b>	<b>176,412</b>	<b>184,112</b>	<b>191,112</b>

Estimated Volumes at Year-end  
2020 as per 2020 Rate Study



Actual Volumes at Year-end  
2020





# Wastewater Forecast Users and Billable Volumes

Assumed an average of 140 cu.m per customer for future flows.

Wastewater Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	814	814	814	814	814	814	814	814	814	814
New - Growth	43	125	174	204	244	287	329	377	432	482
<b>Total</b>	<b>857</b>	<b>939</b>	<b>988</b>	<b>1,018</b>	<b>1,058</b>	<b>1,101</b>	<b>1,143</b>	<b>1,191</b>	<b>1,246</b>	<b>1,296</b>

Wastewater Flows Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook</b>										
Existing		108,940	108,940	108,940	108,940	108,940	108,940	108,940	108,940	108,940
New - CMCC	123,625	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
New - Growth		17,500	24,360	28,560	34,160	40,180	46,060	52,780	60,480	67,480
<b>Total</b>	<b>123,625</b>	<b>129,690</b>	<b>136,550</b>	<b>140,750</b>	<b>146,350</b>	<b>152,370</b>	<b>158,250</b>	<b>164,970</b>	<b>172,670</b>	<b>179,670</b>

Estimated Volumes at Year-end  
2020 as per 2020 Rate Study



Actual Volumes at Year-end  
2020





# Capital Infrastructure



- Capital forecasts for the water and wastewater systems were prepared as part of the 2020 rate study
- No changes to the water capital forecast were provided as part of this update
- Based on discussions with staff, additional capital was added to the wastewater forecast (Headworks at the Wet Well and a Stress Test)
- Subsequent to the above, it is noted that RVA is currently undertaking a study to review future long-term capital needs. Future consideration of the capital needs will be reviewed upon update of the D.C. study.

# Water Capital System Needs 2021 to 2029

(Uninflated \$)



Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Water Distribution System (4830)</b>	-									
Water Main Replacement Main Street	-									
Watermain Replacement (various locations)	\$ 3,000,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 350,000	\$ 350,000	\$ 400,000	\$ 400,000
Replacement of Well and Pump	\$ 150,000		\$ 150,000							
<b>Studies:</b>	-									
Water Rate Study & Financial Plan	-									
<b>Growth Related:</b>	-									
Water Master Servicing Study	\$ 20,000	\$ 20,000								
Duke Street from King Street Southwards	\$ 153,000		\$ 153,000							
King Street from Queen Street to IO Property	\$ 51,000					\$ 51,000				
Water Servicing Studies - Future Development Areas	\$ 102,000									\$ 102,000
Future Watermain Booster Pumping Station	\$ 663,000			\$ 663,000						
Future Trunk Watermain Costs (Oversizing)	-									
<b>Total Capital Expenditures</b>	<b>4,139,000</b>	<b>\$ 320,000</b>	<b>\$ 603,000</b>	<b>\$ 963,000</b>	<b>\$ 300,000</b>	<b>\$ 351,000</b>	<b>\$ 350,000</b>	<b>\$ 350,000</b>	<b>\$ 400,000</b>	<b>\$ 502,000</b>

Note: growth-related projects are 100% recoverable from D.C.s

# Wastewater Capital System Needs 2021 to 2029



(Uninflated \$)

Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Wastewater Collection System(4811)</b>	\$ -									
Sewer Relining	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Various Wastewater Facility Upgrades	\$ 300,000		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -
	\$ -									
<b>Growth Related:</b>	\$ -									
Wastewater Master Servicing Study	\$ 274,000	\$ 70,000								\$ 204,000
Cambium Studies	\$ 80,000	\$ 40,000	\$ 40,000							
Infiltration Solutions	\$ 100,000	\$ 50,000	\$ 50,000							
Pump Station and Forcemain between property north of Municipal Office and Larmer Line	\$ 500,000			\$ 500,000						
Duke Street from King Street Southwards	\$ 255,000		\$ 255,000							
King Street from Queen Street to IO Property	\$ 102,000					\$ 102,000				
Nina Court Extension Sanitary Sewer Oversizing	\$ -									
Wastewater Servicing Studies - Future Development Areas	\$ -									
Future Sanitary Pumping Station - Sewage	\$ 1,122,000			\$ 1,122,000						
Future Trunk Sanitary Sewer (oversizing)	\$ 122,400	\$ 122,400								
Headworks - Wet Well & Stress Test	\$ 820,000			\$ 273,333	\$ 273,333	\$ 273,333				
<b>Total Capital Expenditures</b>	<b>\$ 3,925,400</b>	<b>\$ 532,400</b>	<b>\$ 445,000</b>	<b>\$ 1,895,333</b>	<b>\$ 373,333</b>	<b>\$ 375,333</b>	<b>\$ 100,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 204,000</b>

Note: growth-related projects are 100% recoverable from D.C.s



# Capital Financing Options

For the capital needs from 2021 to 2029

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



# Reserve Balances – Comparison Between Projected and Actual Year-end 2020 Balances

	Reserve/Reserve Fund	2020 Projected	2020 Actual
1	Water Capital Reserve	\$1,391,060	\$1,541,406
2	Water D.C. Reserve Fund	(\$358,817)	\$164,290
	<b>Sub-Total Water</b>	<b>\$1,032,243</b>	<b>\$1,705,696</b>
1	Wastewater Capital Reserve	\$906,024	\$1,201,750
2	Wastewater D.C. Reserve Fund	\$475,372	\$529,444
	<b>Sub-Total Wastewater</b>	<b>\$1,381,396</b>	<b>\$1,731,194</b>
	<b>Combined Total</b>	<b>\$2,413,639</b>	<b>\$3,436,890</b>

1. Increase in capital reserves of \$446,072 due to:
  - a. Increased number of customers = additional base charges
  - b. Increased volumes = additional volume charges
  - c. Deferred watermain replacement project of \$300,000
2. Increase in D.C. reserve funds of \$577,179 due to:
  - a. Increased number of customers = additional development charges

# Proposed Capital Financing Programs 2021 to 2029



Inflated \$

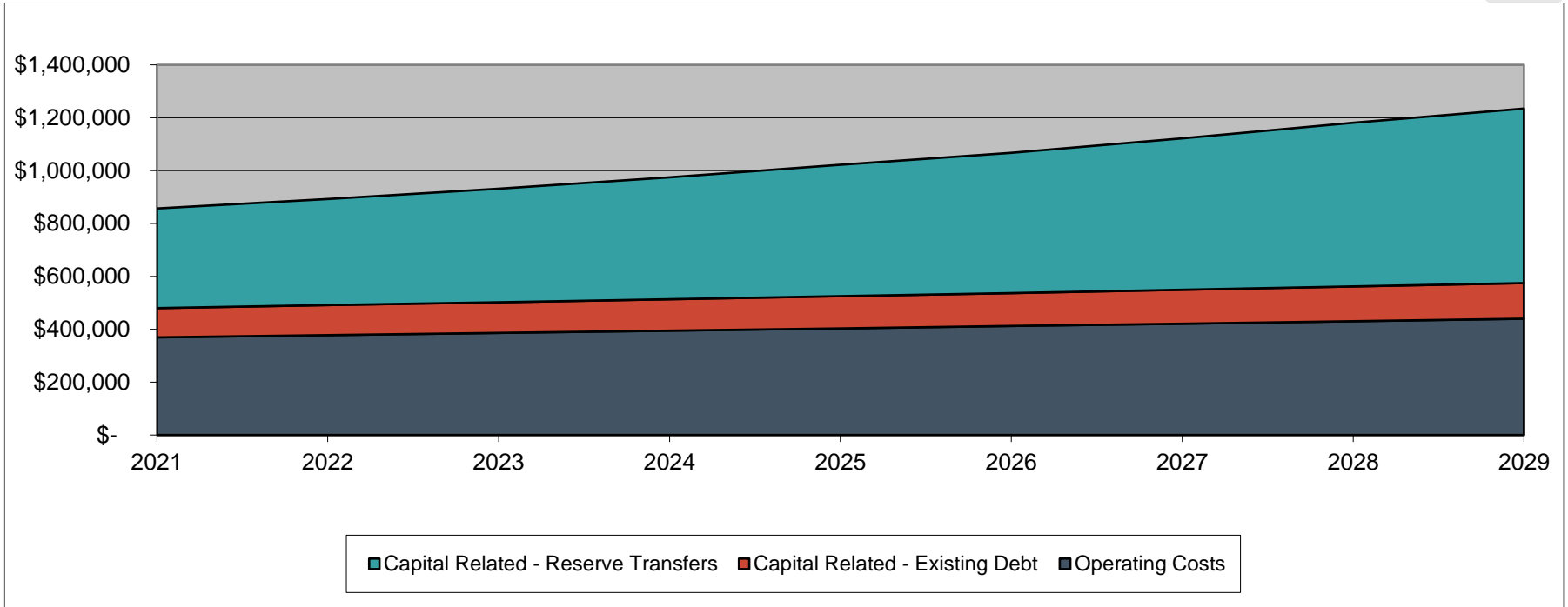
Description	Water 2021 to 2029	Wastewater 2021 to 2029
<b>Capital Financing</b>		
Provincial/Federal Grants	\$ -	\$ -
Development Charges Reserve Fund	\$ 1,061,000	\$ 3,614,000
Non-Growth Related Debenture Requirements	\$ -	\$ -
Growth Related Debenture Requirements	\$ -	\$ -
Operating Contributions	\$ -	\$ -
Lifecycle Reserve Fund	\$ -	\$ -
Water Reserve	\$ 3,491,000	\$ 580,000
<b>Total Capital Financing</b>	<b>\$ 4,552,000</b>	<b>\$ 4,194,000</b>

# Operating Budgets



- Operating expenditures (for water and wastewater) are increasing over the forecast to recognize:
  - Inflationary Impacts
    - 2% for most operating expenditures
    - 5% for utilities, materials, and supplies

# Water Operating Budget

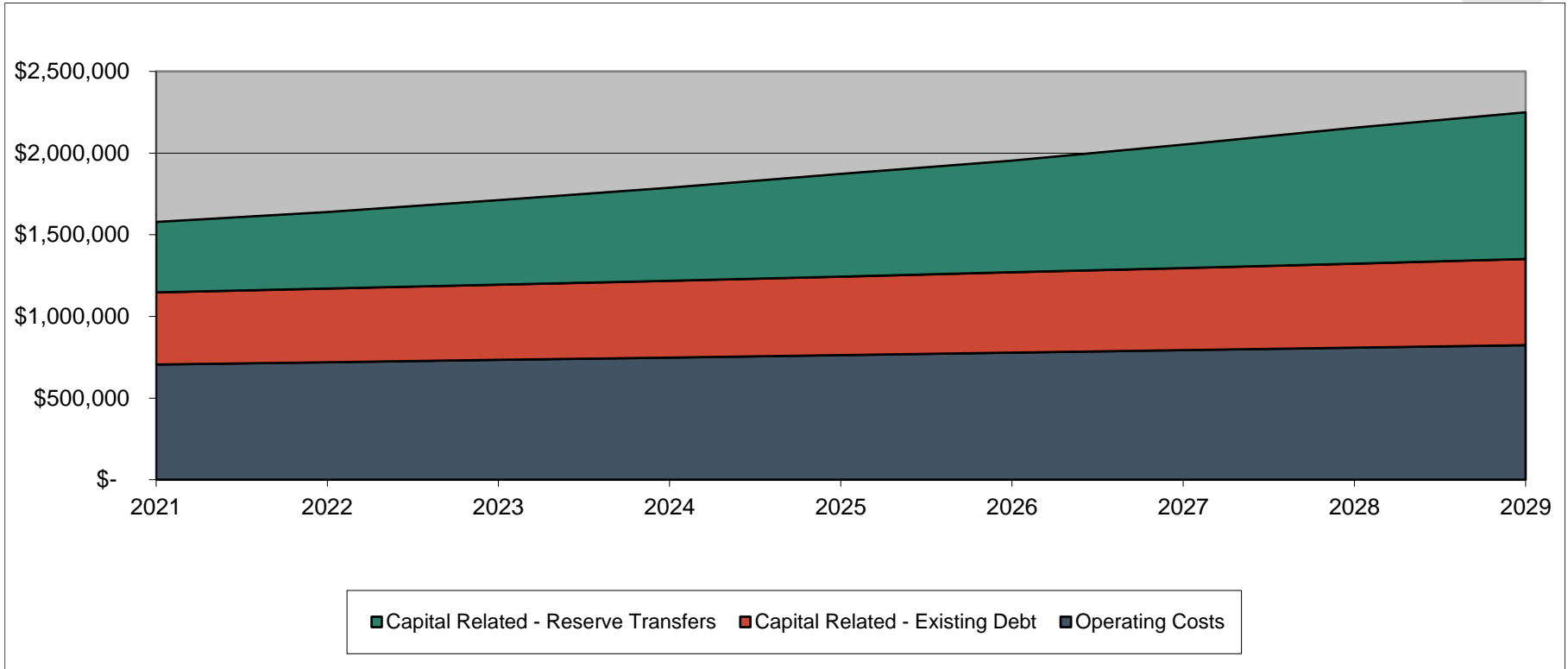


Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Costs	\$ 369,778	\$ 378,210	\$ 386,526	\$ 394,846	\$ 403,573	\$ 412,406	\$ 421,445	\$ 430,490	\$ 439,841
Capital Related - Existing Debt	\$ 110,425	\$ 113,145	\$ 115,952	\$ 118,849	\$ 121,839	\$ 124,924	\$ 128,107	\$ 131,393	\$ 134,783
Capital Related - Reserve Transfers	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
<b>Total</b>	<b>\$ 857,015</b>	<b>\$ 892,388</b>	<b>\$ 931,754</b>	<b>\$ 974,697</b>	<b>\$ 1,021,910</b>	<b>\$ 1,067,541</b>	<b>\$ 1,122,763</b>	<b>\$ 1,181,261</b>	<b>\$ 1,235,324</b>

Note: Capital Related-Reserve Transfers are funds transferred to the capital reserve to fund capital projects. The Township transfers revenue to the reserves and reserve funds where these revenues are held until they are needed for capital expenditures such as asset replacement or rehabilitation.



# Wastewater Operating Budget



Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Costs	\$ 705,878	\$ 719,910	\$ 733,924	\$ 748,042	\$ 762,665	\$ 777,592	\$ 792,824	\$ 808,160	\$ 824,001
Capital Related - Existing Debt	\$ 440,378	\$ 450,079	\$ 460,090	\$ 470,420	\$ 481,081	\$ 492,083	\$ 503,436	\$ 515,153	\$ 527,243
Capital Related - Reserve Transfers	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
<b>Total</b>	<b>\$ 1,578,294</b>	<b>\$ 1,639,765</b>	<b>\$ 1,711,091</b>	<b>\$ 1,787,774</b>	<b>\$ 1,871,808</b>	<b>\$ 1,953,094</b>	<b>\$ 2,051,317</b>	<b>\$ 2,154,655</b>	<b>\$ 2,250,423</b>

Note: Capital Related-Reserve Transfers are funds transferred to the capital reserve to fund capital projects. The Township transfers revenue to the reserves and reserve funds where these revenues are held until they are needed for capital expenditures such as asset replacement or rehabilitation.

# Reserve/Reserve Fund Balances (Water)



## Water Reserves/ Reserve Funds Continuity

Inflated \$

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,541,406	\$ 1,620,279	\$ 1,564,962	\$ 1,693,000	\$ 1,851,864	\$ 2,047,623	\$ 2,222,051	\$ 2,441,127	\$ 2,649,814
Transfer from Operating	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
Transfer to Capital	\$ 306,000	\$ 468,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000
Transfer to Operating	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Closing Balance</b>	<b>\$ 1,612,218</b>	<b>\$ 1,553,312</b>	<b>\$ 1,676,237</b>	<b>\$ 1,829,001</b>	<b>\$ 2,017,362</b>	<b>\$ 2,183,834</b>	<b>\$ 2,393,262</b>	<b>\$ 2,591,505</b>	<b>\$ 2,832,514</b>
Interest	\$ 8,061	\$ 11,650	\$ 16,762	\$ 22,863	\$ 30,260	\$ 38,217	\$ 47,865	\$ 58,309	\$ 68,547

## Water Development Charges Reserve Fund Continuity

Inflated \$

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 164,290	\$ 240,042	\$ 67,526	\$ (611,240)	\$ (595,389)	\$ (629,901)	\$ (618,611)	\$ (579,064)	\$ (536,011)
Development Charge Proceeds	\$ 181,094	\$ 75,238	\$ 123,350	\$ 118,163	\$ 128,748	\$ 122,965	\$ 155,120	\$ 162,353	\$ 139,343
Transfer to Capital	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000
Transfer to Operating	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
<b>Closing Balance</b>	<b>\$ 238,848</b>	<b>\$ 67,023</b>	<b>\$ (605,189)</b>	<b>\$ (588,039)</b>	<b>\$ (620,592)</b>	<b>\$ (607,971)</b>	<b>\$ (567,710)</b>	<b>\$ (524,216)</b>	<b>\$ (629,562)</b>
Interest	\$ 1,194	\$ 503	\$ (6,052)	\$ (7,350)	\$ (9,309)	\$ (10,640)	\$ (11,354)	\$ (11,795)	\$ (15,235)
Required from Development Charges	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000

# Reserve/Reserve Fund Balances (Wastewater)



## Wastewater Reserves/ Reserve Funds Continuity

Inflated \$

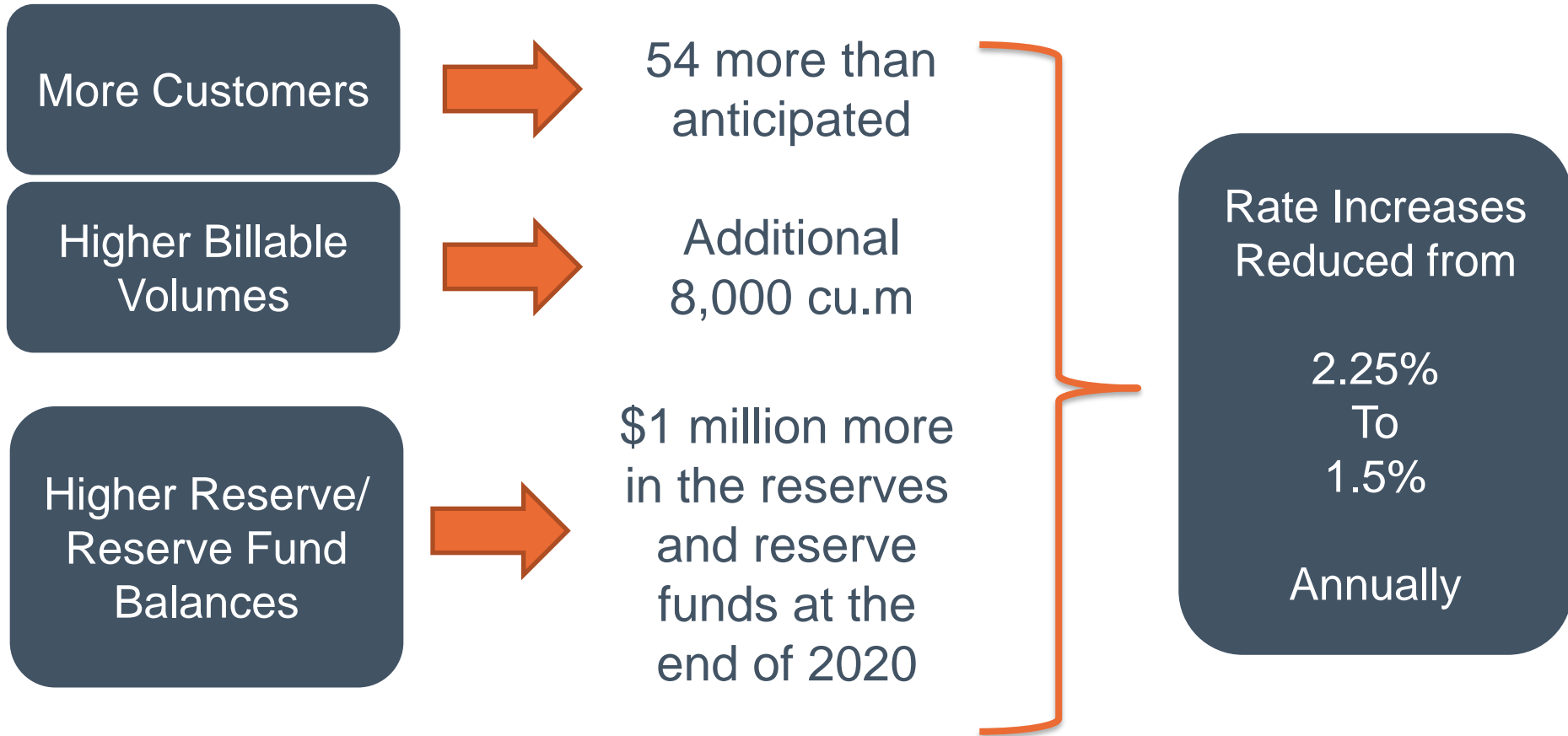
Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,201,750	\$ 1,385,682	\$ 1,764,594	\$ 2,304,488	\$ 2,800,372	\$ 3,479,861	\$ 4,121,159	\$ 4,973,740	\$ 5,935,697
Transfer from Operating	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
Transfer to Capital	\$ 255,000	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000			
Transfer to Operating	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Closing Balance</b>	<b>\$ 1,378,788</b>	<b>\$ 1,751,458</b>	<b>\$ 2,281,671</b>	<b>\$ 2,765,800</b>	<b>\$ 3,428,434</b>	<b>\$ 4,050,279</b>	<b>\$ 4,876,215</b>	<b>\$ 5,805,082</b>	<b>\$ 6,834,875</b>
Interest	\$ 6,894	\$ 13,136	\$ 22,817	\$ 34,572	\$ 51,427	\$ 70,880	\$ 97,524	\$ 130,614	\$ 165,404

## Wastewater Development Charges Reserve Fund Continuity

Inflated \$

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 529,444	\$ 328,320	\$ (206,557)	\$ (2,312,830)	\$ (2,736,927)	\$ (3,280,842)	\$ (3,445,626)	\$ (3,556,848)	\$ (3,674,222)
Development Charge Proceeds	\$ 408,375	\$ 158,493	\$ 271,470	\$ 258,868	\$ 283,406	\$ 269,315	\$ 344,711	\$ 361,384	\$ 306,769
Transfer to Capital	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ 244,000
Transfer to Operating	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
<b>Closing Balance</b>	<b>\$ 326,687</b>	<b>\$ (205,020)</b>	<b>\$ (2,289,931)</b>	<b>\$ (2,703,138)</b>	<b>\$ (3,232,357)</b>	<b>\$ (3,386,365)</b>	<b>\$ (3,487,106)</b>	<b>\$ (3,593,371)</b>	<b>\$ (4,021,450)</b>
Interest	\$ 1,633	\$ (1,538)	\$ (22,899)	\$ (33,789)	\$ (48,485)	\$ (59,261)	\$ (69,742)	\$ (80,851)	\$ (97,319)
Required from Development Charges	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ 244,000

# Results of Rate Review



**Note:** The overall reserve and reserve fund balances at the end of the forecast remain the same.

# Adjustments to Attain 1.5% increase (Water)



## Capital Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>									
Total Capital Expenditures	\$ 326,000	\$ 627,000	\$ 1,022,000	\$ 325,000	\$ 387,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 600,000
<b>Capital Financing</b>									
Reserves and Reserve Funds	\$ 326,000	\$ 627,000	\$ 1,022,000	\$ 325,000	\$ 387,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 600,000

## Reserves/Reserve Funds

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,705,696	\$ 1,860,321	\$ 1,632,488	\$ 1,081,759	\$ 1,256,475	\$ 1,417,722	\$ 1,603,440	\$ 1,862,063	\$ 2,113,803
Transfer from Operating	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
Transfer to Capital	\$ 326,000	\$ 627,000	\$ 1,022,000	\$ 325,000	\$ 387,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 600,000
Transfer to Operating (for growth-related debt payments)	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
<b>Closing Balance (incl. interest)</b>	<b>\$ 1,860,321</b>	<b>\$ 1,632,488</b>	<b>\$ 1,081,759</b>	<b>\$ 1,256,475</b>	<b>\$ 1,417,722</b>	<b>\$ 1,603,440</b>	<b>\$ 1,862,063</b>	<b>\$ 2,113,803</b>	<b>\$ 2,256,264</b>

## Operating Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Expenditures</b>									
System Operating	\$ 369,778	\$ 378,210	\$ 386,526	\$ 394,846	\$ 403,573	\$ 412,406	\$ 421,445	\$ 430,490	\$ 439,841
<b>Capital-Related</b>									
Debt Repayment - Growth-related	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
Debt Repayment - Non-growth	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888	\$ 23,888
Transfer to Capital Reserve	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
<b>Sub Total Capital Related</b>	<b>\$ 487,237</b>	<b>\$ 514,178</b>	<b>\$ 545,228</b>	<b>\$ 579,851</b>	<b>\$ 618,337</b>	<b>\$ 655,135</b>	<b>\$ 701,318</b>	<b>\$ 750,771</b>	<b>\$ 795,483</b>
<b>Total Expenditures</b>	<b>\$ 857,015</b>	<b>\$ 892,388</b>	<b>\$ 931,754</b>	<b>\$ 974,697</b>	<b>\$ 1,021,910</b>	<b>\$ 1,067,541</b>	<b>\$ 1,122,763</b>	<b>\$ 1,181,261</b>	<b>\$ 1,235,324</b>
<b>Revenues</b>									
Base Charge	\$ 398,808	\$ 424,291	\$ 442,774	\$ 465,816	\$ 490,698	\$ 515,800	\$ 544,116	\$ 576,212	\$ 606,941
Bulk Water	\$ 30,067	\$ 30,518	\$ 30,976	\$ 31,441	\$ 31,912	\$ 32,391	\$ 32,877	\$ 33,370	\$ 33,871
Other Revenue	\$ 84,742	\$ 74,980	\$ 80,579	\$ 82,200	\$ 84,864	\$ 85,548	\$ 90,490	\$ 92,267	\$ 91,838
Contributions from Development Charges Reserve Fund	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
<b>Total Operating Revenue</b>	<b>\$ 600,154</b>	<b>\$ 619,047</b>	<b>\$ 646,394</b>	<b>\$ 674,418</b>	<b>\$ 705,425</b>	<b>\$ 734,775</b>	<b>\$ 771,703</b>	<b>\$ 809,354</b>	<b>\$ 843,544</b>
<b>Water Billing Recovery - Operating</b>	<b>\$ 256,861</b>	<b>\$ 273,342</b>	<b>\$ 285,360</b>	<b>\$ 300,278</b>	<b>\$ 316,485</b>	<b>\$ 332,766</b>	<b>\$ 351,060</b>	<b>\$ 371,907</b>	<b>\$ 391,780</b>

## Water Rate Forecast

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Water Billing Recovery	\$ 256,861	\$ 273,342	\$ 285,360	\$ 300,278	\$ 316,485	\$ 332,766	\$ 351,060	\$ 371,907	\$ 391,780
Total Metered Volume (cu.m)	141,132	147,992	152,192	157,792	163,812	169,692	176,412	184,112	191,112
<b>Constant Rate</b>	<b>\$ 1.82</b>	<b>\$ 1.85</b>	<b>\$ 1.88</b>	<b>\$ 1.90</b>	<b>\$ 1.93</b>	<b>\$ 1.96</b>	<b>\$ 1.99</b>	<b>\$ 2.02</b>	<b>\$ 2.05</b>
<b>Bulk Water Rate</b>	<b>\$ 3.08</b>	<b>\$ 3.13</b>	<b>\$ 3.17</b>	<b>\$ 3.22</b>	<b>\$ 3.27</b>	<b>\$ 3.32</b>	<b>\$ 3.37</b>	<b>\$ 3.42</b>	<b>\$ 3.47</b>
<b>Annual Percentage Change</b>	<b>0%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>

# Adjustments to Attain 1.5% increase (Wastewater)



## Capital Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>									
Total Capital Expenditures	\$ 543,000	\$ 463,000	\$ 2,012,000	\$ 404,000	\$ 415,000	\$ 113,000	\$ -	\$ -	\$ 244,000
<b>Capital Financing</b>									
Reserves and Reserve Funds	\$ 543,000	\$ 463,000	\$ 2,012,000	\$ 404,000	\$ 415,000	\$ 113,000	\$ -	\$ -	\$ 244,000

## Reserves/Reserve Funds

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,731,194	\$ 1,714,002	\$ 1,558,037	\$ (8,342)	\$ 63,445	\$ 199,019	\$ 675,533	\$ 1,416,892	\$ 2,261,475
Transfer from Operating	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
Transfer to Capital	\$ 543,000	\$ 463,000	\$ 2,012,000	\$ 404,000	\$ 415,000	\$ 113,000	\$ -	\$ -	\$ 244,000
Transfer to Operating (for growth-related debt payments)	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
<b>Closing Balance (incl. interest)</b>	<b>\$ 1,714,002</b>	<b>\$ 1,558,037</b>	<b>\$ (8,342)</b>	<b>\$ 63,445</b>	<b>\$ 199,019</b>	<b>\$ 675,533</b>	<b>\$ 1,416,892</b>	<b>\$ 2,261,475</b>	<b>\$ 2,881,510</b>

## Operating Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Expenditures</b>									
System Operating	\$ 705,878	\$ 719,910	\$ 733,924	\$ 748,042	\$ 762,665	\$ 777,592	\$ 792,824	\$ 808,160	\$ 824,001
<b>Capital-Related</b>									
Debt Repayment - Growth-related	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
Debt Repayment - Non-growth	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246	\$ 117,246
Transfer to Capital Reserve	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
<b>Sub Total Capital Related</b>	<b>\$ 872,416</b>	<b>\$ 919,855</b>	<b>\$ 977,167</b>	<b>\$ 1,039,732</b>	<b>\$ 1,109,143</b>	<b>\$ 1,175,502</b>	<b>\$ 1,258,493</b>	<b>\$ 1,346,495</b>	<b>\$ 1,426,422</b>
<b>Total Expenditures</b>	<b>\$ 1,578,294</b>	<b>\$ 1,639,765</b>	<b>\$ 1,711,091</b>	<b>\$ 1,787,774</b>	<b>\$ 1,871,808</b>	<b>\$ 1,953,094</b>	<b>\$ 2,051,317</b>	<b>\$ 2,154,655</b>	<b>\$ 2,250,423</b>
<b>Revenues</b>									
Base Charge	\$ 735,483	\$ 782,605	\$ 816,771	\$ 859,374	\$ 905,382	\$ 951,795	\$ 1,004,158	\$ 1,063,514	\$ 1,120,338
Other Revenue	\$ 196,750	\$ 179,265	\$ 190,451	\$ 194,276	\$ 200,029	\$ 202,034	\$ 211,920	\$ 216,147	\$ 216,292
Contributions from Development Charges Reserve Fund	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
<b>Total Operating Revenue</b>	<b>\$ 1,255,365</b>	<b>\$ 1,294,704</b>	<b>\$ 1,350,067</b>	<b>\$ 1,406,825</b>	<b>\$ 1,469,247</b>	<b>\$ 1,528,667</b>	<b>\$ 1,602,268</b>	<b>\$ 1,677,568</b>	<b>\$ 1,746,628</b>
<b>Wastewater Billing Recovery - Operating</b>	<b>\$ 322,928</b>	<b>\$ 345,062</b>	<b>\$ 361,024</b>	<b>\$ 380,949</b>	<b>\$ 402,562</b>	<b>\$ 424,427</b>	<b>\$ 449,048</b>	<b>\$ 477,087</b>	<b>\$ 503,795</b>

## Wastewater Rate Forecast

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Wastewater Billing Recovery	\$ 322,928	\$ 345,062	\$ 361,024	\$ 380,949	\$ 402,562	\$ 424,427	\$ 449,048	\$ 477,087	\$ 503,795
Total Metered Volume (cu.m)	129,690	136,550	140,750	146,350	152,370	158,250	164,970	172,670	179,670
<b>Constant Rate</b>	<b>\$ 2.49</b>	<b>\$ 2.53</b>	<b>\$ 2.57</b>	<b>\$ 2.60</b>	<b>\$ 2.64</b>	<b>\$ 2.68</b>	<b>\$ 2.72</b>	<b>\$ 2.76</b>	<b>\$ 2.80</b>
<b>Annual Percentage Change</b>	<b>0%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>



# Average Residential Bill (Based on 140 cu.m Annual Volumes) – Combined Summary

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Water</b>									
Base Bi-Monthly Charge	\$65.35	\$66.33	\$67.33	\$68.34	\$69.36	\$70.40	\$71.46	\$72.53	\$73.62
Volume Rate	\$1.82	\$1.85	\$1.88	\$1.90	\$1.93	\$1.96	\$1.99	\$2.02	\$2.05
Annual Base Charge	\$392.10	\$397.98	\$403.95	\$410.01	\$416.16	\$422.40	\$428.74	\$435.17	\$441.70
Annual Volume Charge	\$254.80	\$258.58	\$262.50	\$266.42	\$270.48	\$274.54	\$278.60	\$282.80	\$287.00
<b>Total Annual Water Bill</b>	<b>\$646.90</b>	<b>\$656.56</b>	<b>\$666.45</b>	<b>\$676.43</b>	<b>\$686.64</b>	<b>\$696.94</b>	<b>\$707.34</b>	<b>\$717.97</b>	<b>\$728.70</b>
<b>Total Bi-Monthly Water Bill</b>	<b>\$107.82</b>	<b>\$109.43</b>	<b>\$111.08</b>	<b>\$112.74</b>	<b>\$114.44</b>	<b>\$116.16</b>	<b>\$117.89</b>	<b>\$119.66</b>	<b>\$121.45</b>
<b>Wastewater</b>									
Base Bi-Monthly Charge	\$120.94	\$122.75	\$124.60	\$126.46	\$128.36	\$130.29	\$132.24	\$134.22	\$136.24
Volume Rate	\$2.49	\$2.53	\$2.57	\$2.60	\$2.64	\$2.68	\$2.72	\$2.76	\$2.80
Annual Base Charge	\$725.64	\$736.52	\$747.57	\$758.79	\$770.17	\$781.72	\$793.45	\$805.35	\$817.43
Annual Volume Charge	\$348.60	\$353.78	\$359.10	\$364.42	\$369.88	\$375.48	\$381.08	\$386.82	\$392.56
<b>Total Wastewater Bill</b>	<b>\$1,074.24</b>	<b>\$1,090.30</b>	<b>\$1,106.67</b>	<b>\$1,123.21</b>	<b>\$1,140.05</b>	<b>\$1,157.20</b>	<b>\$1,174.53</b>	<b>\$1,192.17</b>	<b>\$1,209.99</b>
<b>Total Bi-Monthly Wastewater Bill</b>	<b>\$179.04</b>	<b>\$181.72</b>	<b>\$184.45</b>	<b>\$187.20</b>	<b>\$190.01</b>	<b>\$192.87</b>	<b>\$195.75</b>	<b>\$198.69</b>	<b>\$201.66</b>
<b>Total Annual Water and Wastewater Bill</b>	<b>\$1,721.14</b>	<b>\$1,746.87</b>	<b>\$1,773.12</b>	<b>\$1,799.64</b>	<b>\$1,826.69</b>	<b>\$1,854.14</b>	<b>\$1,881.87</b>	<b>\$1,910.14</b>	<b>\$1,938.69</b>
<b>Total Bi-Monthly Water and Wastewater Bill</b>	<b>\$286.86</b>	<b>\$291.14</b>	<b>\$295.52</b>	<b>\$299.94</b>	<b>\$304.45</b>	<b>\$309.02</b>	<b>\$313.64</b>	<b>\$318.36</b>	<b>\$323.11</b>
Annual % Increase		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%

Please detach and return this portion with your payment.

Invoice	Description	Amount
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085862 Route # 8 - October 2020 Billing Service  
 Address: 123 Street Address  
 Meter: 99999999

Reading  
 Current: 37,978.0 OCT 13,2020 Actual  
 Prior: 37,744.0 AUG 13,2020 X Multiplier 0.1000  
 Consumption: 23.34 Cubic Metres Billing Days: 60

Sewer Charges 58.12  
 23.34 Cubic Metres at 2.49 = 58.12  
 Sewer Fixed Charge 15 Mm Meter 120.94  
 Water Charges 42.48  
 23.34 Cubic Metres at 1.82 = 42.48  
 Water Fixed Charge 15 Mm Meter 65.35

Billing Amount **\$286.86**

Sample Bill for Two Months



# Average Residential Bill – 2.25% vs. 1.5% Increases



Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Bi-Monthly Bill at 2.25% Rate Increases	\$286.86	\$294.03	\$301.38	\$308.91	\$316.64	\$324.55	\$332.67	\$340.98	\$349.51
Bi-Monthly Bill at 1.5% Rate Increases	\$286.86	\$291.14	\$295.52	\$299.94	\$304.45	\$309.02	\$313.64	\$318.36	\$323.11
<b>Bi-Monthly Difference</b>	<b>\$0.00</b>	<b>\$2.88</b>	<b>\$5.86</b>	<b>\$8.97</b>	<b>\$12.19</b>	<b>\$15.53</b>	<b>\$19.02</b>	<b>\$22.63</b>	<b>\$26.39</b>
<b>Annual Difference</b>	<b>\$0.00</b>	<b>\$17.30</b>	<b>\$35.15</b>	<b>\$53.84</b>	<b>\$73.13</b>	<b>\$93.17</b>	<b>\$114.13</b>	<b>\$135.76</b>	<b>\$158.36</b>

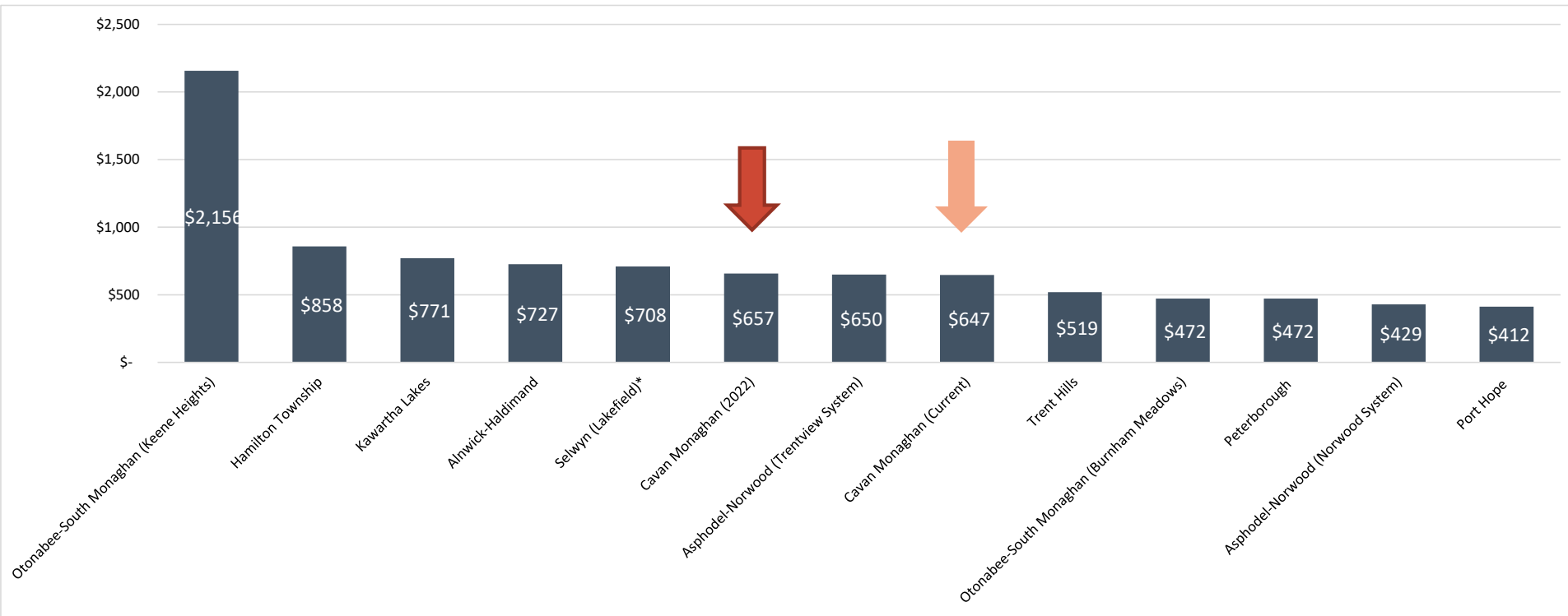




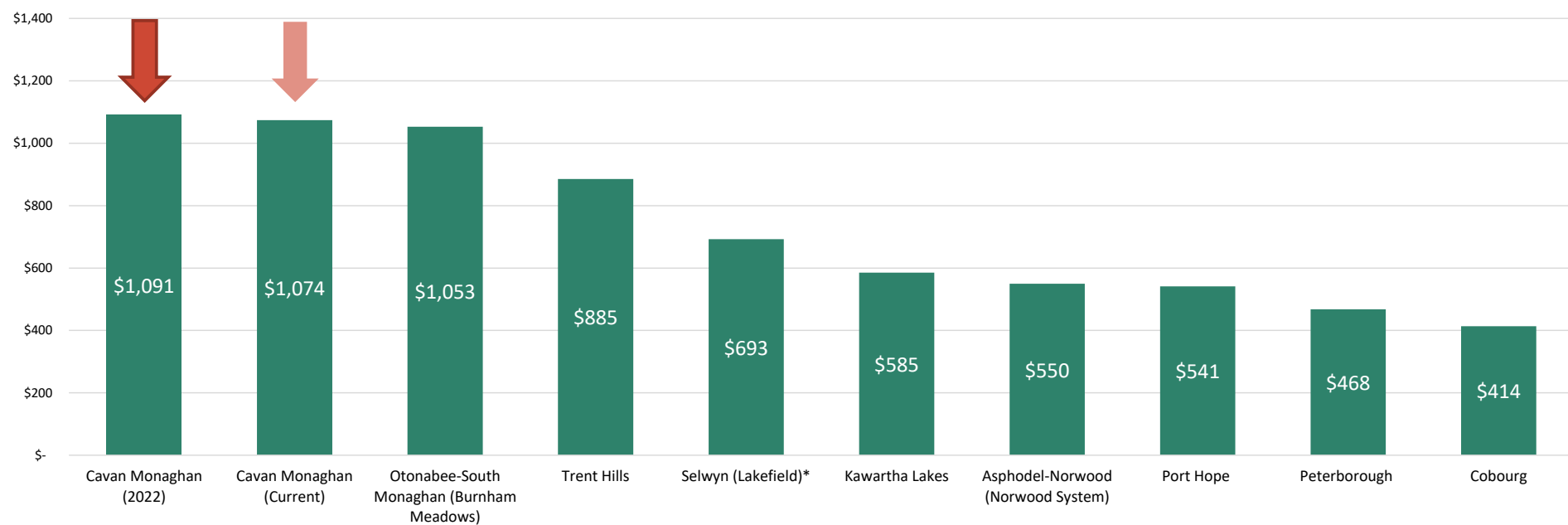
# Items for Consideration

- As the DC reserve fund balances become large deficits, it is recommended the Township consider updating the D.C. study for the following:
  1. Update is required due to changes in legislation
  2. Should update the timing of payment to reflect payment at the agreement stage vs. building permit
  3. Continue to require front-ending or pre-payment of DCs for specific projects

# Comparison of Residential Annual Water Bill (based on 140 cu.m)

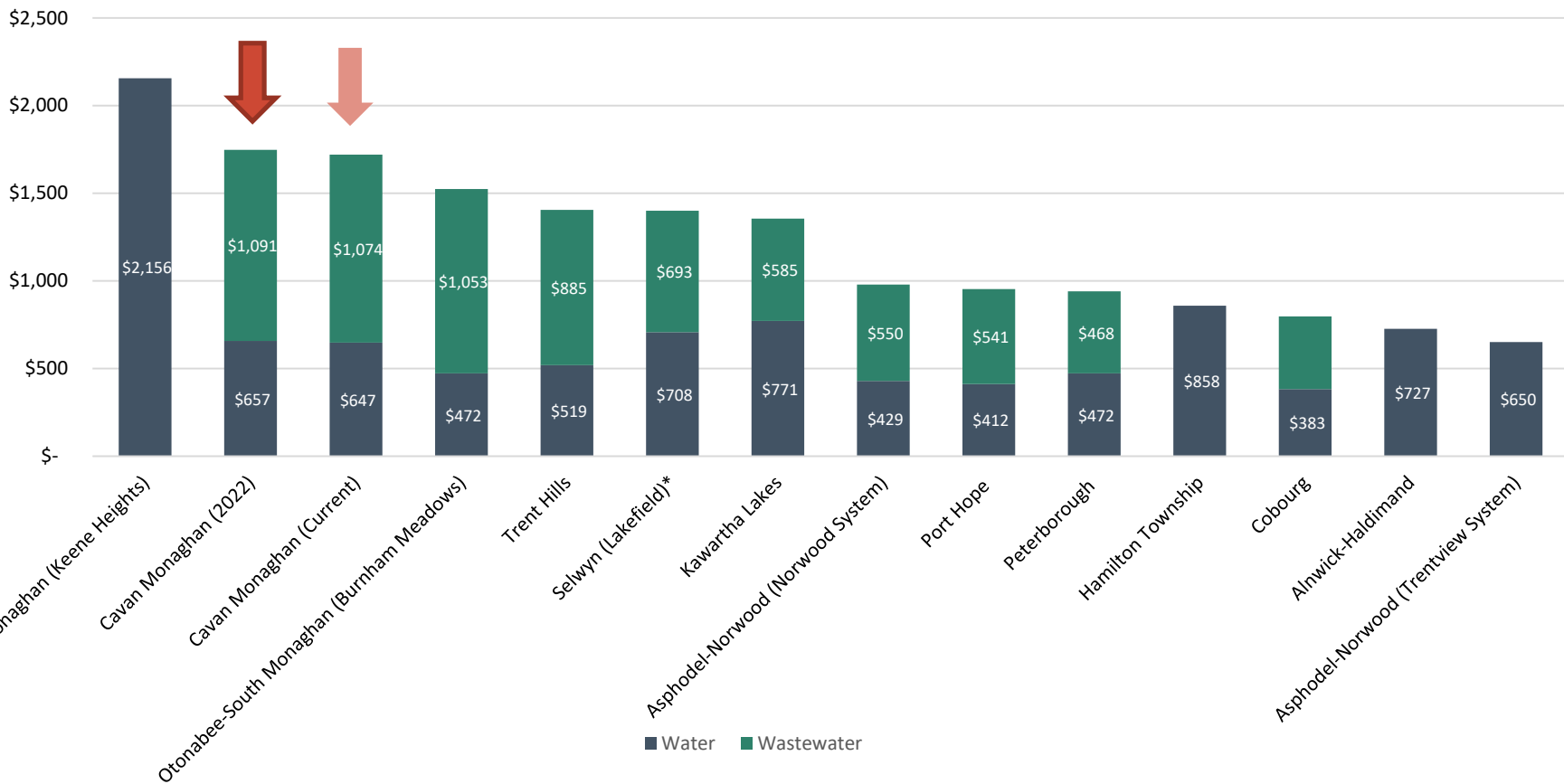


# Comparison of Residential Annual Wastewater Bills (based on 140 cu.m)





# Comparison of Residential Annual Water and Wastewater Combined Bills (based on 140 cu.m)





# Observations on Rate Study Update

- Higher than expected building activity in 2020 and 2021 provided for additional customers, volumes, and revenues;
- The combined reserve and reserve fund balances will be in a positive position throughout the forecast;
- The forecasted rates provide for a 1.5% increase annually from 2022 to 2029.



**2.25% rate increases can now be reduced to 1.5%**

# Questions



Questions?



**Minutes  
The Township of Cavan Monaghan  
Regular Council Meeting**

**Monday, November 1, 2021  
1:00 p.m.  
Remote Locations**

**Those members in attendance were:**

Council	Scott McFadden	Mayor
	Matthew Graham	Deputy Mayor
	Tim Belch	Councillor
	Ryan Huntley	Councillor
	Cathy Moore	Councillor
Staff	Yvette Hurley	CAO
	Cindy Page	Clerk
	Karlie Cornish-Tkalec	Deputy Clerk/Corporate Services Administrator
	Bill Balfour	Fire Chief
	Karen Ellis	Director of Planning
	Chris Allison	Parks and Facilities Manager
	Wayne Hancock	Director of Public Works
	Brigid Ayotte	Economic and Community Development Coordinator

**1. Open Session**

**2. Call to Order**

Mayor McFadden called the meeting to order at 1:00 p.m.

**3. Approval of the Agenda**

R/01/11/21/01

Moved by: Graham

Seconded by: Belch

That the agenda for the Regular Council meeting on November 1, 2021 be approved as presented.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Huntley	X		
McFadden	X		
Moore	X		
Graham	X		
Belch	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**4. Disclosure of Pecuniary Interest and the General Nature Thereof**

There were no pecuniary interests noted.

**5. Closed Session**

There was no closed session.

**6. Presentations**

**6.1 Years of Service Certificates**

Mayor McFadden recognized and thanked Chris Allison, Kyle Phillips and David Harrigan for their Years of Service:

Chris Allison, Parks and Facilities Manager - 15 Years of Service

Kyle Phillips, Chief Building Official – 10 Years of Service

David Harrigan, Public Works Department – 10 Years of Service

**7. Delegations**

**7.1 George Raab - Unimproved Ann Street Road Allowance Request**

R/01/11/21/02

Moved by: Huntley

Seconded by: Graham

That staff be directed to review George Raab's request and report back to Council at a later date.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
McFadden	X		
Huntley	X		
Belch	X		
Graham	X		
Moore	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**8. Public Meeting**

**8.1 Resolution to open the Public Meeting**

R/01/11/21/03

Moved by: Graham



Seconded by: Huntley  
 That the Public Meeting be opened pursuant to Section 17 of the Planning Act, R.S.O. 1990 P.13, as amended.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Moore	X		
Belch	X		
Huntley	X		
McFadden	X		
Graham	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**8.2 Report - Planning 2021-55 Stewart Official Plan Amendment Application Report**

Ms. Ellis spoke to the official plan amendment application received on behalf of Mark and Deborah Stewart, from Emma Drake of D.M. Wills Associates Limited. The Application pertains to lands at 872 Sharpe Line in part of Lot 12, Concession 11 of the Cavan Ward. The Application was received by the Township on September 1, 2021, deemed complete on September 8, 2021 and assigned file number OPA-01-21.

The Application represents Amendment No. 8 to the Official Plan for the Township of Cavan Monaghan. The purpose and effect of Official Plan Amendment No. 8 is to change the land use designation on a portion of the subject lands from “Agricultural” to “Hamlet” to permit the creation of two (2) new non-farm residential lots. The “Hamlet” designation will apply to approximately 0.82 hectares (2 acres) of the subject property. The Amendment also provides relief from the policies of the Official Plan that prohibit the expansion of settlement area boundaries. Two (2) Consent Applications will be required through Peterborough County Land Division to create the severed parcels. A Zoning By-law Amendment application will be required to implement the Official Plan Amendment and the Consent Applications.

The property subject to the Application is approximately 40.82 hectares (100.88 acres) in size with approximately 231 metres (757.87 feet) of frontage on Sharpe Line. The property also abuts Stewart Line to the north for approximately 200 metres (656.16 feet). The property is primarily used for agricultural purposes with an associated residential use. The property is presently developed with a single residential dwelling, attached garage, shed, converted barn and a liquid manure tank that has been converted for use as an irrigation pond. The existing development is serviced with private well and septic.

A pre-consultation meeting for this Application was held with Township and County Planning and Public Works Staff and Mr. Stewart on January

7, 2021. Township and County Staff confirmed the need for an official plan amendment application and planning justification report that addresses Provincial, County and Township policy frameworks. Staff also confirmed that a traffic impact study and hydrogeological study are not required at this time. A follow up meeting was held in March 2021 with the Staff of D.M. Wills to confirm the requirements. Township Planning Department Staff reviewed the Report and confirm that all of the policies applicable to this Application were identified and addressed in the Report. Township Staff agree with the planning opinion expressed in the Report.

**8.3 Questions/Comments from members of Council**

Councillor Huntley asked what does rounding out include.

Deputy Mayor Graham questioned the difference between rounding out in a hamlet versus expanding a hamlet.

Councillor Moore asked if this application was similar to the McCamus’s application.

Councillor Belch asked about the process around severances and agricultural land.

Deputy Mayor Graham stated his concerns with approving this official plan amendment prior to the completed of the Municipal Comprehensive Review in July of 2022.

**8.4 Questions/Comments from members of the public**

Emma Drake, D.M. Wills applicant on behalf of Mark and Deborah Stewart supported the application.

Mayor McFadden called for a recess 1:25 p.m. to 1:30 p.m.

**8.5 Consideration of the Report**

R/01/11/21/04

Moved by: Graham

Seconded by: Belch

That Council for the Township of Cavan Monaghan does not support OPA No.8.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Graham	X		
Huntley		X	
Moore		X	
Belch	X		
McFadden	X		
<b>Results</b>	<b>3</b>	<b>2</b>	
			<b>Carried</b>

**8.6 Resolution to close the Public Meeting**

R/01/11/21/05

Moved by: Huntley

Seconded by: Graham

That the Public Meeting be closed.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Belch	X		
Graham	X		
McFadden	X		
Moore	X		
Huntley	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**9. Minutes**

**9.1 Minutes of the Regular Meeting held October 18, 2021**

R/01/11/21/06

Moved by: Graham

Seconded by: Huntley

That the minutes of the Regular Council Meeting on October 18, 2021 be approved as presented.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Huntley	X		
McFadden	X		
Moore	X		
Graham	X		
Belch	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**10. Minutes from Committees and Boards**

**10.1 Cavan Monaghan Public Library Board meeting minutes of September 21, 2021**

**10.2 Cavan Monaghan Public Library Board meeting minutes of October 5, 2021**

R/01/11/21/07

Moved by: Graham

Seconded by: Moore

That the minutes of the Cavan Monaghan Public Library Board meeting held on September 21 and October 5, 2021 be received.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
McFadden	X		
Huntley	X		
Belch	X		
Graham	X		
Moore	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

## 11. Reports

### 11.1 Report - Planning 2021-56 July 2021 Draft City of Peterborough Official Plan

R/01/11/21/08

Moved by: Graham

Seconded by: Huntley

That Council direct Staff to provide written comments to the City of Peterborough regarding the July 2021 Draft City of Peterborough Official Plan with regard to:

- i. Requesting written confirmation that there is no need to continue boundary adjustment discussions with the Township of Cavan Monaghan at this time;
- ii. Supporting the position that development of the Rural Transitional Area is not permitted until the lands are redesignated through a Municipal Comprehensive Review; and
- iii. Supporting the protection of Employment Districts for employment uses;
- iv. Supporting the preparation of an Employment Lands Strategy in collaboration with Peterborough County and the Township;
- v. Requesting that the City, County and Township develop a more collaborative approach to planning for the Peterborough Airport and surrounding area;
- vi. Requesting the policy framework be amended to permit the consideration of cross-border servicing for regionally significant employment related projects;
- vii. Requesting the policy framework be amended to require an official plan amendment to permit the upgrade to or expansion of municipal utility services, sanitary sewer and water supply to the Peterborough Airport;
- viii. Requesting that the portion of the "Future Municipal Roadway Corridor" in the North Monaghan Ward of the Township be removed from the Plan;
- ix. Requesting that the Township receive a written commitment from the City that Township representatives will be included on any future Master Transportation Planning processes affecting lands in the Township; and
- x. That Staff send a copy of Report Planning 2021-56 to Peterborough City Council.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Moore	X		
Belch	X		
McFadden	X		
Graham	X		
Huntley	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

R/01/11/21/09

Moved by: Graham

Seconded by: Huntley

That the CAO send a letter to the City of Peterborough Council on behalf of Council requesting a response to the letter sent on January 7, 2021 regarding working in collaboration together on mutually agreeable solutions for employment.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
McFadden	X		
Huntley	X		
Belch	X		
Graham	X		
Moore	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

R/01/11/21/10

Moved by: Graham

Seconded by: Moore

That staff send a copy of the letter being sent to the City of Peterborough Council containing Report Planning 2021-56 to the County of Peterborough Council.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Moore	X		
Belch	X		
Huntley	X		
McFadden	X		
Graham	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

## **11.2 Report - Planning 2021-57 Update: Status Report - 1066 Syer Line**

R/01/11/21/11

Moved by: Graham

Seconded by: Huntley

That Council receive Report Planning 2021-57 Update: Status Report – 1066 Syer Line for information.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Graham	X		
Huntley	X		
Moore	X		
Belch	X		
McFadden	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**11.3 Report - ECD 2021-06 Road Occupancy Permit for Christmas In the Village**

R/01/11/21/12

Moved by: Graham

Seconded by: Huntley

That Council authorize staff to apply for a Road Occupancy Permit for the Christmas In the Village Event on County Road 21 from Tupper Street to Union Street; and

That the Township of Cavan Monaghan provide a Certificate of Insurance to the County of Peterborough for the BIA's Christmas in the Village event on December 2, 2021.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Belch	X		
Graham	X		
McFadden	X		
Moore	X		
Huntley	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**11.4 Report - Corporate Services 2021-20 2022 Municipal Election - Simply Voting Agreement**

R/01/11/21/13

Moved by: Huntley

Seconded by: Moore

That Council adopt By-law No. 2021-63 being a by-law to authorize the Mayor and Clerk to execute an Agreement with Simply Voting Inc. for the provision of Telephone and Internet voting services in the 2022 Municipal Election.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Huntley	X		
McFadden	X		
Moore	X		
Graham	X		
Belch	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

### 11.5 Report - CAO Report and Capital Status

R/01/11/21/14

Moved by: Graham

Seconded by: Moore

That Report – CAO Report and Capital Status be received for information.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
McFadden	X		
Huntley	X		
Belch	X		
Graham	X		
Moore	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

### 11.6 Council/Committee Verbal Reports

Deputy Mayor Graham provided an update on the successful work day and repairs made to the Millbrook Valley Trails, noting low lying areas of the trails are still quite muddy.

Councillor Moore noted the next Library Board meeting will be held on Tuesday, November 16, 2021 at 7:00 p.m.

R/01/11/21/15

Moved by: Graham

Seconded by: Huntley

That Council receive the Council/Committee verbal reports for information.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Moore	X		
Belch	X		
Huntley	X		
McFadden	X		
Graham	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

### 12. General Business

There was no general business.

**13. Correspondence for Information**

There was no correspondence for information.

**14. Correspondence for Action**

There was no correspondence for action.

**15. By-laws**

**15.1 By-law 2021-62 Adoption By-law for Official Plan Amendment No. 8 (not approved)**

**15.2 By-law No. 2021-63 - being a by-law to authorize the Mayor and Clerk to execute an Agreement with Simply Voting Inc. for the provision of Telephone and Internet voting services in the 2022 Municipal Election**

**15.3 By-law No. 2021-64 being a by-law to Delegate to Staff, Certain Authority Set Out in the Planning Act**

R/01/11/21/16

Moved by: Graham

Seconded by: Moore

That By-law No. 2021-63 - being a by-law to authorize the Mayor and Clerk to execute an Agreement with Simply Voting Inc. for the provision of Telephone and Internet voting services in the 2022 Municipal Election and By-law No. 2021-64 being a by-law to Delegate to Staff, Certain Authority Set Out in the Planning Act be read a first, second and third time and passed this 1<sup>st</sup> day of November, signed by the Mayor and Clerk and the Corporate Seal attached.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Graham	X		
Huntley	X		
Moore	X		
Belch	X		
McFadden	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**16. Unfinished Business**

There was no unfinished business.

**17. Notice of Motion**

There were no notices of motion.

**18. Confirming By-law**

**18.1 By-law No. 2021-65 being a by-law to confirm the proceedings of the meeting held November 1, 2021**



R/01/11/21/17

Moved by: Graham

Seconded by: Huntley

That By-law No. 2021-61 being a by-law to confirm the proceedings of the meeting held November 1, 2021 be read a first, second and third time and passed this 1<sup>st</sup> day of November signed by the Mayor and Clerk and the Corporate Seal attached.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Belch	X		
Graham	X		
McFadden	X		
Moore	X		
Huntley	X		
<b>Results</b>	<b>5</b>	<b>0</b>	<b>Carried</b>

**19. Adjournment**

R/01/11/21/18

Moved by: Huntley

Seconded by: Graham

That the Regular Council Meeting of the Township of Cavan Monaghan adjourn at 1:56 p.m.

Councillor Belch left the meeting at 1:55 p.m.

<b>Recorded</b>	<b>For</b>	<b>Against</b>	
Huntley	X		
McFadden	X		
Moore	X		
Graham	X		
<b>Results</b>	<b>4</b>	<b>0</b>	<b>Carried</b>

\_\_\_\_\_  
**Scott McFadden**  
Mayor

\_\_\_\_\_  
**Cindy Page**  
Clerk



**Minutes**  
**The Township of Cavan Monaghan**  
**Municipal Revitalization and Heritage Advisory Committee Meeting**  
**Thursday, October 21, 2021**  
**9:00 a.m.**  
**Remote Location**

**Those members in attendance:**

Ryan Huntley  
Rob Ross  
Heather Clarke  
Ena D'Altroy  
Peter Ramsay  
Ashley Stewart

**Those members absent:**

Bruce Lepper  
Tim Belch

**Staff members in attendance:**

Cindy Page	Clerk
Brigid Ayotte	Economic Development Coordinator
Karen Ellis	Director of Planning

**1. Open Session**

**2. Call to Order**

Chair Rob Ross called the meeting to order at 9:00 a.m.

**3. Approval of the Agenda**

Moved by: Huntley

Seconded by: Ramsay

That the Municipal Revitalization and Heritage Advisory Committee agenda be approved as presented.

**Carried**

**4. Disclosure of Pecuniary Interest and the General Nature Thereof**

There were no pecuniary interests noted.

**5. Closed Session**

There was no closed session.

**6. Minutes**

**6.1 Minutes of the meeting held September 23, 2021**

Moved by: Ramsay

Seconded by: Stewart

That the minutes of the meeting held September 23, 2021 be approved as amended.

**Carried**

**7. Business Arising from the Minutes**

There was no business arising from the minutes.

**8. Reports**

**8.1 BIA Update – Heather Clarke**

Heather Clarke provided an update on the BIA initiatives noting that the Millbrook Fall Festival was a huge success, things are underway for the trick or treat event “Get Your Spook On” at the stores downtown on October 30<sup>th</sup>. Christmas in the Village is coming together for December 2<sup>nd</sup> and the BIA is working on their 2022 Budget.

**9. General Business**

**9.1 2022 Final Budget**

Brigid Ayotte and Cindy Page provided an update of the submission for first draft of the 2022 Budget, noting that items requested by Committees are included in the Operating Budget not Capital. Ms. Ayotte noted the CIP monies for 2019, 2020 and 2021 will become one line item under the ECD budget.

Ms. Ayotte will bring a detailed report to the next Committee meeting outlining the projects/applications to date for each year and a breakdown of the monies spent to date and remaining funds.

Ms. Page will coordinate a meeting with Karen Ellis, Peter Ramsay and Rob Ross to do a review of the Springville and Ebenezer cemeteries to determine if work needs to be done this year.

The Committee discussed new projects for consideration in the 2022 budget including a clean-up at the King Street mailboxes and artesian well. Karen Ellis will speak with staff and assess the risks and report back to the Committee.

**9.2 Signage for Springville, Ebenezer and Deyell Parkette**

Karen Ellis, Ena D’Altroy and Peter Ramsay will finalize the verbiage for the signage at the Deyell Parkette and report back at the next meeting.

The Committee will work towards creating verbiage for signage for the Springville and Ebenezer cemeteries and add it to the Workplan.

### **9.3 1 King Street Tree Concern – Follow-up**

Brigid Ayotte provided an update to the Committee on the status of the trees located at 1 King Street. Ms. Ayotte reviewed the arborist report and the recommendations contained within it, noting that one tree could potentially be preserved and the other one needs to be removed. The Committee discussed options for consideration including the size and types of trees for replacement.

Councillor Huntley noted that the trees are littered with gypsy moths and recommended members to look at the trees before they lose their foliage.

Ashley Stewart questioned if there is any requirement on what the size replacement would be if the trees were to come down. Ms. Ayotte confirmed that staff's preference is to get a tree as mature as we can.

Ms. Ayotte will circulate the arborist reports to the Committee for review and the sizes of mature trees that are available for replacement. Staff will add this as an item on the next meeting, allowing time for the Committee to review the reports and then make an informed recommendation.

Moved by: Huntley

Seconded by: Stewart

That staff circulate the arborist reports to the Committee to allow time for a review to make an educated recommendation at the next meeting on the trees prior to them being removed.

**Carried**

### **9.4 Workplan 2021**

The Committee reviewed the workplan and provided updates on the initiatives. Staff will make the changes to the workplan.

Follow-up regarding preliminary discussion including a display at the CMCC, options at the Artesian well and creating new signage for the Springville and Ebenezer Cemeteries to be potential considerations for the workplan for 2022.

Ms. Ayotte will work with the Committee to determine who would like to be appointed to the CIP Expansion Project Committee.

### **10. Adjournment**

Moved by: Stewart

Seconded by: D'Altroy

That the Municipal Revitalization and Heritage Advisory Committee adjourn. (10:46 a.m.)

**Carried**

## 10.1 Next Meeting November 18, 2021

Items to be added:

- 1 King Street Tree Concern
- Millbrook Mural update from Brigid Ayotte and Peter Ramsay
- Follow-up regarding preliminary discussion including a display at the CMCC, options at the Artesian well and creating new signage for the Springville and Ebenezer Cemeteries

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Rob Ross  
Chair

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Cindy Page  
Clerk



## Regular Council Meeting

<b>To:</b>	Mayor and Council
<b>Date:</b>	November 15, 2021
<b>From:</b>	Kimberley Pope, Finance Department and Wayne Hancock, Public Works Department
<b>Report Number:</b>	Finance 2021-17
<b>Subject:</b>	Water & Wastewater Rate Analysis and Water & Wastewater User Fees and Charges By-law

### Recommendations:

1. That Council receives the updated Water & Wastewater Rate Analysis presented by Watson & Associates Ltd., as per motion of Council on November 16, 2020; and
2. That Council approves By-law No. 2021-67 being a by-law to Impose & Consolidate Water & Wastewater User Fees and Charges with annual rate increases of 1.5% from 2022 to 2025.

### Overview:

The purpose of this report is to provide Council with the Water & Wastewater Rate Analysis, prepared by Watson & Associates, and to seek Council's approval of By-law No. 2021-67 to Impose & Consolidate Water & Wastewater User Fees and Charges to establish the rates between 2022-2025.

As outlined in the Water & Wastewater Rate Analysis presentation the original rate scenario from November 2020 contained annual rate increases of 2.25%, which has been reduced to an annual rate increase of 1.5% (2022-2025). This amendment is primarily attributed to the updated customer forecast, the amended wastewater capital forecast, the volume flow review and the updated balances in the W&WW Reserve and Development Charges Reserve (in comparison to projected),.

The 2020 Water & Wastewater Rate Study and Water & Wastewater User Fees and Charges was presented to Council on November 16, 2020 (Finance 2020-21). Council approved the Water & Wastewater User Fees and Charges (By-law No. 2020-66) with a 0% increase for 2021, due to Covid19 pandemic, and directed staff to provide a volume flow review and presentation to Council in September 2021 for Council's consideration of the future annual increases for 2022-2025. Thereafter the Township of Cavan Monaghan updated Financial Plan (#136-301) for the Millbrook Water Distribution System (2021-2029) was submitted to the province in January 2021.

On January 26, 2021 a Special Council meeting was held for the Water Wastewater Rate Study presentation and education session, to provide a more in-depth overview of the 2020 Water & Wastewater Rate Study, presented by Watson & Associates Economists Ltd.

The Water & Wastewater User Fees and Charges have been revisited through various reports, studies and sessions since the adoption of the 2015 User Fees & Charges, in consultation with Watson & Associates, to provide Council with updated information on infrastructure, rates or valuation impacts to ensure that the user fees remained current and recoverable, as per the following historical summary;

- **Finance Report 2018-11** (July 3, 2018)  
Council approved Scenario 2 with inflationary increases of the Water and Wastewater rates for two years, with an annual inflation of 2% in 2019 and 2020. Watson & Associates reviewed the 2015 Water & Wastewater Rate Study to update the 2018 actual operating and capital expenditures as well as update the growth and consumption estimates up to and including 2025 as adopted by Council per By-law No. 2018-44.
- **Finance Report 2018-13** (December 6, 2018)  
Council was advised that Municipal Property Assessment Corporation (MPAC) significantly increased the current value assessment (CVA) on the water and wastewater infrastructure with supplemental billings backdated to June 30, 2016 including a change to the Realty Tax Class (RTC) code of Commercial General (CG), which is exempt from the education levy, to a Commercial Full (CF) code which resulted in taxation that included both a municipal and education portion on the above property.
- **Finance Report 2019-01** (February 4, 2019)  
Council approved a Municipal Public Utility Grant Program to exercise general grant powers to forego the municipal portion of payment in lieu of tax (PIL's, property taxation) for water and wastewater facilities (as public utility properties under section 27 of the Assessment Act), against the municipality's tax levy revenues and therefore mitigated a future increase to the current water and wastewater rates.
- **Finance Report 2019-07** (March 18, 2019)  
Watson & Associates re-presented to Council the 2018 Water and Wastewater Rate Review from July 3, 2018 and provided the opportunity for Council to have further discussion directly with the consultant during the Council meeting.
- **Finance Report 2020-21** (November 16, 2020) Watson & Associates presented to Council the 2020 Water and Wastewater Study and approved By-law No. 2020-66 with a 0% increase for 2021 W&WW rates and directed staff to provide a volume flow review and presentation to Council in September 2021 for Council's consideration of the future annual increases for 2022-2025.
- **Water Wastewater Rate Study presentation and education session** (January 26, 2021)
- **Growth Management Strategy & Master Servicing Study Update** (October 18, 2021) R.V. Anderson Associates Ltd & Watson & Associates Economists presentation including facility conditions and future servicing.

Amendments to the user fees align with the Strategic Plan as per the mission statement, that "the Township of Cavan Monaghan is committed to delivering responsive and cost effective services that provide for the economic, social and environmental well-being of our

ratepayers now and into the future”. Water & Wastewater services are fully funded through the user fees and do not affect the municipal tax rate.

**Financial Impact:**

The proposed changes to the Water & Wastewater User Fees will apply the 1.5% annual rate increases from 2022-2025. All rate adjustments are applied to the first Water and Wastewater billing cycle that occur in February of each calendar year.

**Attachments:**

1. Cavan Monaghan Water & Wastewater Rate Study Analysis – Watson & Associates Ltd.
2. By-law No. 2021-67 Water & Wastewater User Fees & Charges
3. Schedule A - Water & Wastewater User Fees & Charges, By-law No. 2021-67
4. Schedule A - Water & Wastewater User Fees & Charges By-law No. 2020-66 (prior)

Respectfully Submitted by,

Kimberley Pope  
Director of Finance/Treasurer

Wayne Hancock  
Director of Public Works

Reviewed by,

Yvette Hurley  
Chief Administrative Officer





# Memorandum

<b>To</b>	Wayne Hancock, Director of Public Works, Township of Cavan Monaghan
<b>From</b>	Gary Scandlan, Managing Partner, Watson & Associates Economists Ltd.
<b>Date</b>	November 9, 2021
<b>Re:</b>	Township of Cavan Monaghan - Water and Wastewater Rate Analysis Update

Fax

Courier

Mail

Email

## 1. Introduction

In 2020 Watson & Associates Economists Ltd. (Watson) undertook a Water and Wastewater Rate Study for the Township. This study calculated the water and wastewater rates for 2021 to 2029. The rate forecast was prepared to fund both projected operating and capital expenditures while minimizing the impacts of deficits in the combined water and wastewater reserves and reserve funds. With this undertaking, two options for rate increases were presented to Council for their consideration:

1. 2% increases annually for both water and wastewater; or
2. 0% increases for 2021, the 2.25% annual increases thereafter for both water and wastewater.

A subsequent third scenario was presented to Council whereby 0% increases for water and wastewater rates in 2021 would be implemented and accompanied by a review in 2021.

The rates for 2021 were presented to Council, and approved, on November 16, 2020. Council's resolution was as follows:

*Receive the 2020 water and wastewater rate study as presented by Watson & Associates Ltd.; and select Scenario 3 (0% increase for 2021, then due to Covid 19 pandemic, a volume flow review and September 2021 presentation to Council for Council's consideration of the future annual increases for 2022-2025).*

The Township has again retained Watson to update the 2020 rate study calculations which includes updating the number of customers and billing volumes for 2020 along with updated 2020 year-end reserve and reserve fund balances.



The following sections provide a summary of the updated rate calculations for water and wastewater. The detailed calculation tables for water are presented in Appendix A and the detailed calculation tables for wastewater are presented in Appendix B.

## 2. Existing Rates

As noted above, there was no increase in the rates from 2020 to 2021. The table below provides for the schedule of the existing rates for water and wastewater.

Table 2-1  
Township of Cavan Monaghan  
Water and Wastewater Rates – 2021

Township of Cavan Monaghan		
2021 - Water Billing Rates		
Millbrook Monthly Base Charge		
15mm/18mm	\$	32.68
25mm	\$	59.67
40mm	\$	135.74
50mm	\$	316.23
75mm	\$	653.02
100mm	\$	1,158.07
Volume Charge		
\$	1.820	per m <sup>3</sup>
Bulk Water Rate		
\$	3.080	per m <sup>3</sup>

Township of Cavan Monaghan		
2021 - Wastewater Billing Rates		
Millbrook Monthly Base Charge		
15mm/18mm	\$	60.47
25mm	\$	112.33
40mm	\$	279.32
50mm	\$	662.34
75mm	\$	1,373.75
100mm	\$	2,441.25
Volume Charge		
\$	2.490	per m <sup>3</sup>

## 3. Forecast Growth and Servicing Requirements

### 3.1 Customers

The Township of Cavan Monaghan currently services 937 metered water customers and 925 wastewater customers (an increase in the number of customers which totalled 826 for water and 814 for wastewater in 2020). Information on the existing number of customers and existing billable volumes was obtained from Township staff.

As the rate analysis forecasts out to 2029, consideration has been given to the potential growth in customers within the water and wastewater service areas. Discussions were undertaken with staff to assess development potential within the serviced areas and the forecast of new customers has been updated.

The 2020 rate study forecast assumed the addition of 450 new customers from 2020 to 2029. This included an anticipated 50 new customers in 2020 and 60 new customers in



2021. Based on discussions with Township staff, the actual number of customers added to the system in 2020 was 86 and the anticipated number of customers in 2021 is 78. This equates to an additional 54 customers over what was anticipated in the 2020 rate study.

With respect to the remainder of the forecast period, the anticipated additional customers remain the same. The forecast of new water/wastewater customers is provided below in Table 3-1. Table 3-2 presents the new and existing combined total customers (water customers are provided in the blue coloured table, while wastewater customers are in green).



Table 3-1  
2020 to 2029 Users Forecast

**Water and Wastewater Users Forecast**

Year	Total Users	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2020	86	43	86	86	86	86	86	86	86	86	86
2021	78		39	78	78	78	78	78	78	78	78
2022	20			10	20	20	20	20	20	20	20
2023	40				20	40	40	40	40	40	40
2024	40					20	40	40	40	40	40
2025	45						23	45	45	45	45
2026	40							20	40	40	40
2027	55								28	55	55
2028	55									28	55
2029	45										23
<b>Total</b>	<b>504</b>	<b>43</b>	<b>125</b>	<b>174</b>	<b>204</b>	<b>244</b>	<b>287</b>	<b>329</b>	<b>377</b>	<b>432</b>	<b>482</b>
m <sup>3</sup> /user	140	140	140	140	140	140	140	140	140	140	140
<b>Annual Flow</b>		<b>6,020</b>	<b>17,500</b>	<b>24,360</b>	<b>28,560</b>	<b>34,160</b>	<b>40,180</b>	<b>46,060</b>	<b>52,780</b>	<b>60,480</b>	<b>67,480</b>



Table 3-2  
2020 to 2029 New and Existing Customers

Water Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	826	826	826	826	826	826	826	826	826	826
New - Growth	43	125	174	204	244	287	329	377	432	482
<b>Total</b>	<b>869</b>	<b>951</b>	<b>1,000</b>	<b>1,030</b>	<b>1,070</b>	<b>1,113</b>	<b>1,155</b>	<b>1,203</b>	<b>1,258</b>	<b>1,308</b>

Wastewater Customer Forecast	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	814	814	814	814	814	814	814	814	814	814
New - Growth	43	125	174	204	244	287	329	377	432	482
<b>Total</b>	<b>857</b>	<b>939</b>	<b>988</b>	<b>1,018</b>	<b>1,058</b>	<b>1,101</b>	<b>1,143</b>	<b>1,191</b>	<b>1,246</b>	<b>1,296</b>



## 3.2 Volumes

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As noted in the prior section the updated forecast of customers is higher than what was considered in the prior forecast. As a result, the amount of billable volumes has correspondingly increased. The prior rate study forecasted 127,058 cubic metres of total billable water volumes for 2020. Based on a review of actual data the total billable water volumes were 135,067 cubic metres, which represents an increase of 6%.

Table 3-1 (presented in the prior section) identified the actual number of customers for 2020 along with the forecast for 2021 to 2029. At the bottom of that table a forecast of additional billable volumes was provided based on an assumed billing usage of 140 cubic metres per year. The total billable volumes for 2020 to 2029 is presented in Table 3-3 which provides for the forecasted volumes along with the billable volumes for existing customers.



**Table 3-3  
Forecasted and Billable Volumes**

Water Volume Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook</b>										
Bulk Water	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762	9,762
Existing		110,620	110,620	110,620	110,620	110,620	110,620	110,620	110,620	110,620
New - CMCC	125,305	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
New - Growth		17,500	24,360	28,560	34,160	40,180	46,060	52,780	60,480	67,480
<b>Total</b>	<b>135,067</b>	<b>141,132</b>	<b>147,992</b>	<b>152,192</b>	<b>157,792</b>	<b>163,812</b>	<b>169,692</b>	<b>176,412</b>	<b>184,112</b>	<b>191,112</b>

Wastewater Flows Forecast (m³)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook</b>										
Existing		108,940	108,940	108,940	108,940	108,940	108,940	108,940	108,940	108,940
New - CMCC	123,625	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250
New - Growth		17,500	24,360	28,560	34,160	40,180	46,060	52,780	60,480	67,480
<b>Total</b>	<b>123,625</b>	<b>129,690</b>	<b>136,550</b>	<b>140,750</b>	<b>146,350</b>	<b>152,370</b>	<b>158,250</b>	<b>164,970</b>	<b>172,670</b>	<b>179,670</b>



## 4. Capital Infrastructure Needs

Capital forecasts for the water and wastewater systems were prepared as part of the 2020 rate study. These forecasts are presented below in Tables 4-1 and 4-2 for water and wastewater respectively (note: the costs provided are in uninflated dollars based on 2020 values and have been indexed over the forecast period). Table 4-2 has added additional capital to the forecast (Headworks at the Wet Well and a Stress Test) which is scheduled to commence in 2023 and be completed by 2025.

Subsequent to the above, it is noted that RVA is currently undertaking a study to review future long-term capital needs. Future consideration of the capital needs will be reviewed upon update of the Development Charges study.





Table 4-1  
2021 to 2029 Water Capital Forecast (Uninflated 2020 \$)

Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Water Distribution System (4830)</b>	-									
Water Main Replacement Main Street	-									
Watermain Replacement (various locations)	\$ 3,000,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 350,000	\$ 350,000	\$ 400,000	\$ 400,000
Replacement of Well and Pump	\$ 150,000		\$ 150,000							
<b>Studies:</b>	-									
Water Rate Study & Financial Plan	-									
<b>Growth Related:</b>	-									
Water Master Servicing Study	\$ 20,000	\$ 20,000								
Duke Street from King Street Southwards	\$ 153,000		\$ 153,000							
King Street from Queen Street to IO Property	\$ 51,000				\$ 51,000					
Water Servicing Studies - Future Development Areas	\$ 102,000									\$ 102,000
Future Watermain Booster Pumping Station	\$ 663,000			\$ 663,000						
Future Trunk Watermain Costs (Oversizing)	-									
<b>Total Capital Expenditures</b>	<b>\$ 4,139,000</b>	<b>\$ 320,000</b>	<b>\$ 603,000</b>	<b>\$ 963,000</b>	<b>\$ 300,000</b>	<b>\$ 351,000</b>	<b>\$ 350,000</b>	<b>\$ 350,000</b>	<b>\$ 400,000</b>	<b>\$ 502,000</b>



Table 4-2  
2021 to 2029 Wastewater Capital Forecast (Uninflated 2020 \$)

Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Wastewater Collection System(4811)</b>	\$ -									
Sewer Relining	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Various Wastewater Facility Upgrades	\$ 300,000		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -
	\$ -									
<b>Growth Related:</b>	\$ -									
Wastewater Master Servicing Study	\$ 274,000	\$ 70,000								\$ 204,000
Cambium Studies	\$ 80,000	\$ 40,000	\$ 40,000							
Infiltration Solutions	\$ 100,000	\$ 50,000	\$ 50,000							
Pump Station and Forcemain between property north of Municipal Office and Larmer Line	\$ 500,000			\$ 500,000						
Duke Street from King Street Southwards	\$ 255,000		\$ 255,000							
King Street from Queen Street to IO Property	\$ 102,000					\$ 102,000				
Future Sanitary Pumping Station - Sewage	\$ 1,122,000			\$ 1,122,000						
Future Trunk Sanitary Sewer (oversizing)	\$ 122,400	\$ 122,400								
Headworks - Wet Well & Stress Test	\$ 820,000			\$ 273,333	\$ 273,333	\$ 273,333				
<b>Total Capital Expenditures</b>	<b>\$ 3,925,400</b>	<b>\$ 532,400</b>	<b>\$ 445,000</b>	<b>\$ 1,895,333</b>	<b>\$ 373,333</b>	<b>\$ 375,333</b>	<b>\$ 100,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 204,000</b>



## 5. Lifecycle Costing

A review of the Township's water and wastewater inventory information was completed as part of the 2020 rate study. For this update, no changes have been made to the capital forecast as a result of the lifecycle replacement costs identified.

## 6. Capital Cost Financing Options

As presented in the 2020 rate study there are a number of capital financing methods municipalities may utilize. These methods were discussed in detail in the 2020 rate study and are listed as follows:

- Development Charges Act, 1997 (as amended)
- Municipal Act
  - Fees and Charges
  - Sewer and Water Area Charges
  - Connection Fees
  - Local Improvements
- Grant Funding (when available)
- Reserves/Reserve Funds
- Debt Financing

Tables 6-1 and 6-2 provide for the full capital expenditure and funding program by year for water and wastewater (inflated), respectively. Note that the development charge funding amounts provided represent the required amounts needed to finance the growth-related projects, however, as will be discussed later the balances in the reserve funds are negative. These negative balances will need to be addressed by the Township.



Table 6-1  
Capital Budget Forecast – Water  
Inflated \$

Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Water Distribution System (4830)</b>										
Water Main Replacement Main Street										
Watermain Replacement (various locations)	\$ 3,335,000	\$ 306,000	\$ 312,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000
Replacement of Well and Pump	\$ 156,000	\$ -	\$ 156,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Growth Related:</b>										
Water Master Servicing Study	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Duke Street from King Street Southwards	\$ 159,000	\$ -	\$ 159,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
King Street from Queen Street to IO Property	\$ 56,000	\$ -	\$ -	\$ -	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ -
Water Servicing Studies - Future Development Areas	\$ 122,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 122,000
Future Watermain Booster Pumping Station	\$ 704,000	\$ -	\$ -	\$ 704,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Trunk Watermain Costs (Oversizing)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Capital Expenditures</b>	<b>\$ 4,552,000</b>	<b>\$ 326,000</b>	<b>\$ 627,000</b>	<b>\$ 1,022,000</b>	<b>\$ 325,000</b>	<b>\$ 387,000</b>	<b>\$ 394,000</b>	<b>\$ 402,000</b>	<b>\$ 469,000</b>	<b>\$ 600,000</b>
<b>Capital Financing</b>										
Provincial/Federal Grants	\$ -									
Development Charges Reserve Fund	\$ 1,061,000	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000
Non-Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lifecycle Reserve Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Reserve	\$ 3,491,000	\$ 306,000	\$ 468,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000
<b>Total Capital Financing</b>	<b>\$ 4,552,000</b>	<b>\$ 326,000</b>	<b>\$ 627,000</b>	<b>\$ 1,022,000</b>	<b>\$ 325,000</b>	<b>\$ 387,000</b>	<b>\$ 394,000</b>	<b>\$ 402,000</b>	<b>\$ 469,000</b>	<b>\$ 600,000</b>



Table 6-2  
Capital Budget Forecast – Wastewater  
Inflated \$

Description	Total	Forecast								
		2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital Expenditures</b>										
<b>Wastewater Collection System(4811)</b>										
Sewer Relining	\$ 255,000	\$ 255,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Various Wastewater Facility Upgrades	\$ 325,000	\$ -	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Growth Related:</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Master Servicing Study	\$ 315,000	\$ 71,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 244,000
Cambium Studies	\$ 83,000	\$ 41,000	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Infiltration Solutions	\$ 103,000	\$ 51,000	\$ 52,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pump Station and Forcemain between property north of Municipal Office and Larmer Line	\$ 531,000	\$ -	\$ -	\$ 531,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Duke Street from King Street Southwards	\$ 265,000	\$ -	\$ 265,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
King Street from Queen Street to IO Property	\$ 113,000	\$ -	\$ -	\$ -	\$ -	\$ 113,000	\$ -	\$ -	\$ -	\$ -
Nina Court Extension Sanitary Sewer Oversizing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Servicing Studies - Future Development Areas	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Sanitary Pumping Station - Sewage	\$ 1,191,000	\$ -	\$ -	\$ 1,191,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Trunk Sanitary Sewer (oversizing)	\$ 125,000	\$ 125,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Headworks - Wet Well & Stress Test	\$ 888,000	\$ -	\$ -	\$ 290,000	\$ 296,000	\$ 302,000	\$ -	\$ -	\$ -	\$ -
<b>Total Capital Expenditures</b>	<b>\$ 4,194,000</b>	<b>\$ 543,000</b>	<b>\$ 463,000</b>	<b>\$ 2,012,000</b>	<b>\$ 404,000</b>	<b>\$ 415,000</b>	<b>\$ 113,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 244,000</b>
<b>Capital Financing</b>										
Provincial/Federal Grants	\$ -									
Development Charges Reserve Fund	\$ 3,614,000	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ 244,000
Non-Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lifecycle Reserve Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Reserve	\$ 580,000	\$ 255,000	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000	\$ -	\$ -	\$ -
<b>Total Capital Financing</b>	<b>\$ 4,194,000</b>	<b>\$ 543,000</b>	<b>\$ 463,000</b>	<b>\$ 2,012,000</b>	<b>\$ 404,000</b>	<b>\$ 415,000</b>	<b>\$ 113,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 244,000</b>



## 7. Reserves and Reserve Funds

To update the rate study calculations from the 2020 rate study, a review of the projected 2020 year-end balances in the reserves/reserve funds was undertaken relative to the actual balances. The following table summarizes the projected balances as compared to the actual balances.

Table 7-1  
Comparison of 2020 Projected vs. 2020 Actual Year-end  
Reserve/Reserve Fund Balances

Reserve/Reserve Fund	2020 Projected	2020 Actual
Water Capital Reserve	\$1,391,060	\$1,541,406
Water D.C. Reserve Fund	(\$358,817)	\$164,290
<b>Sub-Total Water</b>	<b>\$1,032,243</b>	<b>\$1,705,696</b>
Wastewater Capital Reserve	\$906,024	\$1,201,750
Wastewater D.C. Reserve Fund	\$475,372	\$529,444
<b>Sub-Total Wastewater</b>	<b>\$1,381,396</b>	<b>\$1,731,194</b>
<b>Combined Total</b>	<b>\$2,413,639</b>	<b>\$3,436,890</b>

The above increase in the actual reserve fund balances was due to several factors, as follows:

- a. Increased number of customers which equates to additional base charges and additional development charges.
- b. Increased volumes which equates to additional volume charges.
- c. Deferred watermain replacement project of \$300,000.



## 8. Expenditures and Revenues

### 8.1 Water Operating Expenditures

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The operating budget provides for two distinct components. The first component provides for the day to operating expenditures related to staffing costs, hydro, materials, fuel, etc. The second component provides for capital related expenditures i.e., debt charges and reserve/reserve fund transfers.

In regard to the first component, the forecast budget figures (2021 to 2029) are based on the Township's 2021 operating budget. Each budget component was reviewed with staff to establish forecast adjustments, including inflationary adjustments. Most of the expenditures have been assumed to increase at a rate of 2.0% annually. Operating expenditures that involve utilities, fuels, chemicals, and hydro have been inflated by 5.0% annually.

With respect to the second component, existing debt charges have been continued across the entire forecast period. Annual contributions to the capital reserve fund have been increased above inflation in order to provide adequate amounts to fund the capital program and to offset any deficits expected in the development charge reserve fund.

### 8.2 Water Operating Revenues

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There are three main components to the operating revenues: base charge, volume rates, and miscellaneous revenues. In regard to the latter, the miscellaneous revenues, including meter installation charges, rents, other charges, and fees have been assumed to increase at 2% each year over the forecast period.

The base charges are discussed in more detail in Section 9, but basically are forecast to increase as a result of additional customers over the forecast period, plus a 1.5% annual increase to the base charge rate. Lastly the volume rates are discussed in more detail in Section 10.1 but are also forecast to increase in conjunction with new customers and with a 1.5% annual rate increase.



**Table 8-1  
Operating Budget Forecast – Water (inflated \$)**

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Expenditures</b>										
<b>Operating Costs</b>										
Gross Wages - Full Time	\$ 45,000	\$ 45,900	\$ 46,800	\$ 47,700	\$ 48,700	\$ 49,700	\$ 50,700	\$ 51,700	\$ 52,700	
Benefits – OMERS	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Benefits – EI Reduced Premium	\$ 425	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	
Benefits – CPP	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	
Benefits – EHT	\$ 650	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	
Benefits – WSIB	\$ 1,125	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	
Manulife Group Benefits	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Mileage Reimbursement / Travel	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Staff Training & Development	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Uniforms / Clothing	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Legal Expense	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Corporate Insurance	\$ 10,578	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600	\$ 11,800	\$ 12,000	\$ 12,200	
Water Meters	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800	
Radio Licenses	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Office Supplies	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Allocated Phone Service	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	
Advertising	\$ 50	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	
Allocated Vehicle Costs	\$ 1,250	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	
Property taxes	\$ 22,800	\$ 23,300	\$ 23,800	\$ 24,300	\$ 24,800	\$ 25,300	\$ 25,800	\$ 26,300	\$ 26,800	
Toilet Rebate Program	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800	
<b>Millbrook Water Distribution System</b>										
Hydrant Maintenance	\$ 4,000	\$ 4,100	\$ 4,200	\$ 4,300	\$ 4,400	\$ 4,500	\$ 4,600	\$ 4,700	\$ 4,800	
Materials and Supplies	\$ 1,000	\$ 1,100	\$ 1,200	\$ 1,300	\$ 1,400	\$ 1,500	\$ 1,600	\$ 1,700	\$ 1,800	
Locates	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Contracted Services	\$ 50,000	\$ 51,000	\$ 52,000	\$ 53,000	\$ 54,100	\$ 55,200	\$ 56,300	\$ 57,400	\$ 58,500	
<b>Millbrook Water Treatment &amp; Supply</b>										
Audit Fees	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	
Operator Contract	\$ 125,000	\$ 127,500	\$ 130,100	\$ 132,700	\$ 135,400	\$ 138,100	\$ 140,900	\$ 143,700	\$ 146,600	
Phone	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	
Managed Router & VDSL Servi	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	
Hydro	\$ 15,000	\$ 15,800	\$ 16,600	\$ 17,400	\$ 18,300	\$ 19,200	\$ 20,200	\$ 21,200	\$ 22,300	
Contracted Services	\$ 6,000	\$ 6,100	\$ 6,200	\$ 6,300	\$ 6,400	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800	
<b>Millbrook Water - Standpipe Tower</b>										
Phone	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Managed Router & VDSL Servi	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Hydro	\$ 9,000	\$ 9,500	\$ 10,000	\$ 10,500	\$ 11,000	\$ 11,600	\$ 12,200	\$ 12,800	\$ 13,400	
Contracted Services	\$ 4,000	\$ 4,100	\$ 4,200	\$ 4,300	\$ 4,400	\$ 4,500	\$ 4,600	\$ 4,700	\$ 4,800	
<b>Water Capacity Monitoring</b>										
Contracted Services	\$ 20,000	\$ 20,400	\$ 20,800	\$ 21,200	\$ 21,600	\$ 22,000	\$ 22,400	\$ 22,800	\$ 23,300	
<b>Bulk Water Sale</b>										
Material and Supplies	\$ 1,000	\$ 1,050	\$ 1,103	\$ 1,158	\$ 1,216	\$ 1,277	\$ 1,341	\$ 1,408	\$ 1,478	
Hydro	\$ 1,000	\$ 1,050	\$ 1,103	\$ 1,158	\$ 1,216	\$ 1,277	\$ 1,341	\$ 1,408	\$ 1,478	
Contracted Services	\$ 500	\$ 510	\$ 520	\$ 530	\$ 541	\$ 552	\$ 563	\$ 574	\$ 585	
Interdepartmental Charge - Wat	\$ 23,000	\$ 23,500	\$ 24,000	\$ 24,500	\$ 25,000	\$ 25,500	\$ 26,000	\$ 26,500	\$ 27,000	
<b>Sub Total Operating</b>	<b>\$ 369,778</b>	<b>\$ 378,210</b>	<b>\$ 386,526</b>	<b>\$ 394,846</b>	<b>\$ 403,573</b>	<b>\$ 412,406</b>	<b>\$ 421,445</b>	<b>\$ 430,490</b>	<b>\$ 439,841</b>	





Table 8-1 (continued)  
Operating Budget Forecast – Water (inflated \$)

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Capital-Related</b>									
Existing Debt (Principal) - Growth Related	\$ 43,146	\$ 44,526	\$ 45,950	\$ 47,420	\$ 48,936	\$ 50,501	\$ 52,117	\$ 53,784	\$ 55,504
Existing Debt (Interest) - Growth Related	\$ 43,391	\$ 44,731	\$ 46,114	\$ 47,541	\$ 49,014	\$ 50,534	\$ 52,102	\$ 53,721	\$ 55,391
New Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt (Principal) - Non-Growth Related	\$ 9,883	\$ 10,217	\$ 10,563	\$ 10,920	\$ 11,289	\$ 11,671	\$ 12,065	\$ 12,473	\$ 12,895
Existing Debt (Interest) - Non-Growth Related	\$ 14,005	\$ 13,671	\$ 13,326	\$ 12,968	\$ 12,599	\$ 12,217	\$ 11,823	\$ 11,415	\$ 10,993
New Non-Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Non-Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital Reserve	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
<b>Sub Total Capital Related</b>	<b>\$ 487,237</b>	<b>\$ 514,178</b>	<b>\$ 545,228</b>	<b>\$ 579,851</b>	<b>\$ 618,337</b>	<b>\$ 655,135</b>	<b>\$ 701,318</b>	<b>\$ 750,771</b>	<b>\$ 795,483</b>
<b>Total Expenditures</b>	<b>\$ 857,015</b>	<b>\$ 892,388</b>	<b>\$ 931,754</b>	<b>\$ 974,697</b>	<b>\$ 1,021,910</b>	<b>\$ 1,067,541</b>	<b>\$ 1,122,763</b>	<b>\$ 1,181,261</b>	<b>\$ 1,235,324</b>
<b>Revenues</b>									
Base Charge	\$ 398,808	\$ 424,291	\$ 442,774	\$ 465,816	\$ 490,698	\$ 515,800	\$ 544,116	\$ 576,212	\$ 606,941
Misc. Base Charge from New Development	\$ 15,292	\$ 3,980	\$ 8,079	\$ 8,200	\$ 9,364	\$ 8,448	\$ 11,790	\$ 11,967	\$ 9,938
Public Utility Grant Program (M	\$ 18,700	\$ 19,100	\$ 19,500	\$ 19,900	\$ 20,300	\$ 20,700	\$ 21,100	\$ 21,500	\$ 21,900
Miscellaneous Revenue - Sysco	\$ 2,500	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300
Rent Revenue	\$ 4,600	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400
Meter Installation Revenue	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600
User Fees and Service Charge	\$ 8,400	\$ 8,600	\$ 8,800	\$ 9,000	\$ 9,200	\$ 9,400	\$ 9,600	\$ 9,800	\$ 10,000
Water Connection /Other Charge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water & Sewer Account Set Up	\$ 11,750	\$ 12,000	\$ 12,200	\$ 12,400	\$ 12,600	\$ 12,900	\$ 13,200	\$ 13,500	\$ 13,800
Locates & User Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Write off - Contra Revenue Acc	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Penalty and Interest Income -	\$ 13,000	\$ 13,300	\$ 13,600	\$ 13,900	\$ 14,200	\$ 14,500	\$ 14,800	\$ 15,100	\$ 15,400
Bulk Water Sale	\$ 30,067	\$ 30,518	\$ 30,976	\$ 31,441	\$ 31,912	\$ 32,391	\$ 32,877	\$ 33,370	\$ 33,871
<b>Other Revenue</b>									
Contributions from Development Charges Reserve Fund	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
Contributions from Reserves / Reserve Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Operating Revenue</b>	<b>\$ 600,154</b>	<b>\$ 619,047</b>	<b>\$ 646,394</b>	<b>\$ 674,418</b>	<b>\$ 705,425</b>	<b>\$ 734,775</b>	<b>\$ 771,703</b>	<b>\$ 809,354</b>	<b>\$ 843,544</b>
<b>Water Billing Recovery - Total</b>	<b>\$ 256,861</b>	<b>\$ 273,342</b>	<b>\$ 285,360</b>	<b>\$ 300,278</b>	<b>\$ 316,485</b>	<b>\$ 332,766</b>	<b>\$ 351,060</b>	<b>\$ 371,907</b>	<b>\$ 391,780</b>



### **8.3 Wastewater Operating Expenditures**

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Similar to the discussion on water operating expenditures, the budget has two components. In regard to the first component, the forecast budget figures (2021 to 2029) are based on the Township's 2021 operating budget. Each budget component was reviewed with staff to establish forecast adjustments, including inflationary adjustments. Most of the expenditures have been assumed to increase at a rate of 2.0% annually. Operating expenditures that involve utilities, fuels, chemicals, and hydro have been inflated by 5.0% annually.

With respect to the second component, existing debt charges have been continued across the entire forecast period. Annual contributions to the capital reserve fund have been increased above inflation in order to provide adequate amounts to fund the capital program and to offset any deficits expected in the development charge reserve fund.

### **8.4 Wastewater Operating Revenues**

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The operating revenues for wastewater are very similar to that of water. The miscellaneous revenues include various items including meter installation charges, rents, other charges, and fees. These have been assumed to increase at 2% each year over the forecast period.

The base charges are discussed in more detail in Section 9, but basically are forecast to increase as a result of additional customers over the forecast period, plus a 1.5% annual increase to the base charge rate. Lastly the volume rates are discussed in more detail in Section 10.2 but are also forecast to increase in conjunction with new customers and with a 1.5% annual rate increase.



**Table 8-2**  
**Operating Budget Forecast – Wastewater (inflated \$)**

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Expenditures</b>										
<b>Operating Costs</b>										
<b>Wastewater Administration</b>										
Gross Wages - Full Time	\$ 45,000	\$ 45,900	\$ 46,800	\$ 47,700	\$ 48,700	\$ 49,700	\$ 50,700	\$ 51,700	\$ 52,700	
Gross Wages – Part Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Gross Wages - Vacation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Benefits – OMERS	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Benefits – EI Premium	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Benefits – EI Reduced Premium	\$ 425	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	
Benefits – CPP	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	
Benefits – EHT	\$ 650	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	
Benefits – WSIB	\$ 1,125	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	
Manulife Group Benefits	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Benefits - Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Meal Allowance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Mileage Reimbursement / Trave	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Staff Training & Development	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Uniforms / Clothing	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Legal Expense	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Corporate Insurance	\$ 10,578	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600	\$ 11,800	\$ 12,000	\$ 12,200	
Software Licensing & Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Water Meters	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800	
Radio Licenses	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Office Supplies	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Allocated Land Telephone	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Allocated Phone Service	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	
Advertising	\$ 50	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Postage/Courier	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	
Contracted Services - Plans & S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Allocated Vehicle Costs	\$ 1,250	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	
Property taxes	\$ 22,800	\$ 23,300	\$ 23,800	\$ 24,300	\$ 24,800	\$ 25,300	\$ 25,800	\$ 26,300	\$ 26,800	
Write off Uncollective Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Recovery from Department-Co	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Depreciation:water & WasteW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Pumping Station Expenses</b>										
Phone	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Managed Router & VDSL Servi	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	\$ 1,700	
Hydro	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	
Contracted Services	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	



Table 8-2 (continued)  
Operating Budget Forecast – Wastewater (inflated \$)

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook Wastewater Plant</b>									
Biosolid management	\$ 24,000	\$ 24,500	\$ 25,000	\$ 25,500	\$ 26,000	\$ 26,500	\$ 27,000	\$ 27,500	\$ 28,100
Operator Contract	\$ 290,000	\$ 295,800	\$ 301,700	\$ 307,700	\$ 313,900	\$ 320,200	\$ 326,600	\$ 333,100	\$ 339,800
Phone	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800	\$ 6,900	\$ 7,000	\$ 7,100	\$ 7,200	\$ 7,300
Managed Router & VDSL Servi	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	\$ 3,500	\$ 3,600
Hydro	\$ 116,000	\$ 118,300	\$ 120,700	\$ 123,100	\$ 125,600	\$ 128,100	\$ 130,700	\$ 133,300	\$ 136,000
Gas - Heating	\$ 15,000	\$ 15,300	\$ 15,600	\$ 15,900	\$ 16,200	\$ 16,500	\$ 16,800	\$ 17,100	\$ 17,400
Contracted Services	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600
<b>Wastewater Collection System</b>									
Locates	\$ 500	\$ 510	\$ 520	\$ 530	\$ 541	\$ 552	\$ 563	\$ 574	\$ 585
Contracted Services	\$ 10,000	\$ 10,200	\$ 10,404	\$ 10,612	\$ 10,824	\$ 11,040	\$ 11,261	\$ 11,486	\$ 11,716
<b>Sysco Oper. Wastewater Agreement</b>									
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contracted Services	\$ 40,000	\$ 40,800	\$ 41,600	\$ 42,400	\$ 43,200	\$ 44,100	\$ 45,000	\$ 45,900	\$ 46,800
Sewer Operator Service Charge	\$ 7,000	\$ 7,100	\$ 7,200	\$ 7,300	\$ 7,400	\$ 7,500	\$ 7,700	\$ 7,900	\$ 8,100
<b>Sysco Oper. Wastewater Agreement Booster Pumping Station</b>									
Phone	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Managed Router & VDSL Servi	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Hydro	\$ 7,200	\$ 7,300	\$ 7,400	\$ 7,500	\$ 7,700	\$ 7,900	\$ 8,100	\$ 8,300	\$ 8,500
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
<b>Kawartha Downs Wastewater Agreement</b>									
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contracted Services	\$ 40,000	\$ 40,800	\$ 41,600	\$ 42,400	\$ 43,200	\$ 44,100	\$ 45,000	\$ 45,900	\$ 46,800
Sewer Operator Service Charge	\$ 6,000	\$ 6,100	\$ 6,200	\$ 6,300	\$ 6,400	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800
<b>Wastewater Capacity Monitoring</b>									
Contracted Services	\$ 20,000	\$ 20,400	\$ 20,800	\$ 21,200	\$ 21,600	\$ 22,000	\$ 22,400	\$ 22,800	\$ 23,300
<b>Sub Total Operating</b>	<b>\$ 705,878</b>	<b>\$ 719,910</b>	<b>\$ 733,924</b>	<b>\$ 748,042</b>	<b>\$ 762,665</b>	<b>\$ 777,592</b>	<b>\$ 792,824</b>	<b>\$ 808,160</b>	<b>\$ 824,001</b>
<b>Capital-Related</b>									
Existing Debt (Principal) - Growth Related	\$ 159,876	\$ 165,000	\$ 170,289	\$ 175,747	\$ 181,381	\$ 187,195	\$ 193,195	\$ 199,387	\$ 205,779
Existing Debt (Interest) - Growth Related	\$ 163,256	\$ 167,833	\$ 172,555	\$ 177,427	\$ 182,455	\$ 187,643	\$ 192,996	\$ 198,519	\$ 204,219
New Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt (Principal) - Non-Growth Related	\$ 48,507	\$ 50,147	\$ 51,843	\$ 53,595	\$ 55,408	\$ 57,281	\$ 59,218	\$ 61,220	\$ 63,290
Existing Debt (Interest) - Non-Growth Related	\$ 68,739	\$ 67,099	\$ 65,403	\$ 63,650	\$ 61,838	\$ 59,964	\$ 58,028	\$ 56,025	\$ 53,955
New Non-Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Non-Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital Reserve	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
<b>Sub Total Capital Related</b>	<b>\$ 872,416</b>	<b>\$ 919,855</b>	<b>\$ 977,167</b>	<b>\$ 1,039,732</b>	<b>\$ 1,109,143</b>	<b>\$ 1,175,502</b>	<b>\$ 1,258,493</b>	<b>\$ 1,346,495</b>	<b>\$ 1,426,422</b>
<b>Total Expenditures</b>	<b>\$ 1,578,294</b>	<b>\$ 1,639,765</b>	<b>\$ 1,711,091</b>	<b>\$ 1,787,774</b>	<b>\$ 1,871,808</b>	<b>\$ 1,953,094</b>	<b>\$ 2,051,317</b>	<b>\$ 2,154,655</b>	<b>\$ 2,250,423</b>



Table 8-2 (continued)  
Operating Budget Forecast – Wastewater (inflated \$)

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Revenues</b>										
Base Charge	\$ 735,483	\$ 782,605	\$ 816,771	\$ 859,374	\$ 905,382	\$ 951,795	\$ 1,004,158	\$ 1,063,514	\$ 1,120,338	
Misc. Base Charge from New Development	\$ 28,300	\$ 7,365	\$ 14,951	\$ 15,176	\$ 17,329	\$ 15,634	\$ 21,820	\$ 22,147	\$ 18,392	
Public Utility Grant Program (M	\$ 18,700	\$ 19,100	\$ 19,500	\$ 19,900	\$ 20,300	\$ 20,700	\$ 21,100	\$ 21,500	\$ 21,900	
Miscellaneous Revenue - Sysco	\$ 2,500	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	
Rent Revenue	\$ 4,600	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	
Meter Installation Revenue	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600	
User Fees and Service Charge	\$ 8,400	\$ 8,600	\$ 8,800	\$ 9,000	\$ 9,200	\$ 9,400	\$ 9,600	\$ 9,800	\$ 10,000	
Local Improvements - Water/Se	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Miscellaneous Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Water & Sewer Account Set Up	\$ 11,750	\$ 12,000	\$ 12,200	\$ 12,400	\$ 12,600	\$ 12,900	\$ 13,200	\$ 13,500	\$ 13,800	
Locates & User Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Write off - Contra Revenue Acc	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Penalty and Interest Income -	\$ 13,000	\$ 13,300	\$ 13,600	\$ 13,900	\$ 14,200	\$ 14,500	\$ 14,800	\$ 15,100	\$ 15,400	
Miscellaneous Revenue - Sysco Oper. Wastewater Agreement	\$ 47,000	\$ 47,900	\$ 48,900	\$ 49,900	\$ 50,900	\$ 51,900	\$ 52,900	\$ 54,000	\$ 55,100	
Miscellaneous Revenue - Kawartha Downs Wastewater Agreement Revenue	\$ 52,000	\$ 53,000	\$ 54,100	\$ 55,200	\$ 56,300	\$ 57,400	\$ 58,500	\$ 59,700	\$ 60,900	
<b>Other Revenue</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Contributions from Development Charges Reserve Fund	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997	
Contributions from Reserves / Reserve Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Total Operating Revenue</b>	<b>\$ 1,255,365</b>	<b>\$ 1,294,704</b>	<b>\$ 1,350,067</b>	<b>\$ 1,406,825</b>	<b>\$ 1,469,247</b>	<b>\$ 1,528,667</b>	<b>\$ 1,602,268</b>	<b>\$ 1,677,568</b>	<b>\$ 1,746,628</b>	
<b>Wastewater Billing Recovery - Total</b>	<b>\$ 322,928</b>	<b>\$ 345,062</b>	<b>\$ 361,024</b>	<b>\$ 380,949</b>	<b>\$ 402,562</b>	<b>\$ 424,427</b>	<b>\$ 449,048</b>	<b>\$ 477,087</b>	<b>\$ 503,795</b>	



## 9. Base Charge

As discussed earlier in Section 8.1 the Township collects monthly base charges as part of the budgeted revenue for the water program. Section 2 identifies that there are increasing charges based on the size of the water meter. Table 9-1 (water) provides for the forecast of base charge revenue. The smallest meter size is anticipated to see increases as a result of growth in the residential sector while the rest of the meter sizes are expected to continue with the same number of customers. The annual base charge rate for each category has been indexed at 1.5% annually across the forecast period.

Table 9-2 provides the forecast for wastewater. Similar to water the smallest meter size is expected to experience customer growth over the forecast period. The annual base charge rate for each category has also been indexed at 1.5% annually across the forecast period.



Table 9-1  
Base Charge Forecast – Water

Water	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	826	826	826	826	826	826	826	826	826
New	125	174	204	244	287	329	377	432	482
<b>Total Customers</b>	<b>951</b>	<b>1,000</b>	<b>1,030</b>	<b>1,070</b>	<b>1,113</b>	<b>1,155</b>	<b>1,203</b>	<b>1,258</b>	<b>1,308</b>
<b>Total Annual Revenue</b>	<b>\$398,808</b>	<b>\$424,291</b>	<b>\$442,774</b>	<b>\$465,816</b>	<b>\$490,698</b>	<b>\$515,800</b>	<b>\$544,116</b>	<b>\$576,212</b>	<b>\$606,941</b>

15mm/18mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	818	818	818	818	818	818	818	818	818
New	125	174	204	244	287	329	377	432	482
<b>Subtotal Customers</b>	<b>943</b>	<b>992</b>	<b>1,022</b>	<b>1,062</b>	<b>1,105</b>	<b>1,147</b>	<b>1,195</b>	<b>1,250</b>	<b>1,300</b>
Monthly Base Charge	\$32.68	\$33.17	\$33.66	\$34.17	\$34.68	\$35.20	\$35.73	\$36.26	\$36.81
Annual Base Charge	\$392.10	\$397.98	\$403.95	\$410.01	\$416.16	\$422.40	\$428.74	\$435.17	\$441.70
<b>Total Annual Revenue</b>	<b>\$369,750</b>	<b>\$394,798</b>	<b>\$412,838</b>	<b>\$435,431</b>	<b>\$459,858</b>	<b>\$484,496</b>	<b>\$512,343</b>	<b>\$543,963</b>	<b>\$574,207</b>

25mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	3	3	3	3	3	3	3	3	3
New									
<b>Subtotal Customers</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Monthly Base Charge	\$59.67	\$60.57	\$61.47	\$62.40	\$63.33	\$64.28	\$65.25	\$66.22	\$67.22
Annual Base Charge	\$716.04	\$726.78	\$737.68	\$748.75	\$759.98	\$771.38	\$782.95	\$794.69	\$806.61
<b>Total Annual Revenue</b>	<b>\$2,148</b>	<b>\$2,180</b>	<b>\$2,213</b>	<b>\$2,246</b>	<b>\$2,280</b>	<b>\$2,314</b>	<b>\$2,349</b>	<b>\$2,384</b>	<b>\$2,420</b>

40mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1	1	1	1	1	1	1	1	1
New									
<b>Subtotal Customers</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Monthly Base Charge	\$135.74	\$137.78	\$139.84	\$141.94	\$144.07	\$146.23	\$148.42	\$150.65	\$152.91
Annual Base Charge	\$1,628.88	\$1,653.31	\$1,678.11	\$1,703.28	\$1,728.83	\$1,754.77	\$1,781.09	\$1,807.80	\$1,834.92
<b>Total Annual Revenue</b>	<b>\$1,629</b>	<b>\$1,653</b>	<b>\$1,678</b>	<b>\$1,703</b>	<b>\$1,729</b>	<b>\$1,755</b>	<b>\$1,781</b>	<b>\$1,808</b>	<b>\$1,835</b>

50mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	3	3	3	3	3	3	3	3	3
New									
<b>Subtotal Customers</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Monthly Base Charge	\$316.23	\$320.97	\$325.78	\$330.67	\$335.63	\$340.66	\$345.77	\$350.96	\$356.23
Annual Base Charge	\$3,794.70	\$3,851.62	\$3,909.39	\$3,968.04	\$4,027.56	\$4,087.97	\$4,149.29	\$4,211.53	\$4,274.70
<b>Total Annual Revenue</b>	<b>\$11,384</b>	<b>\$11,555</b>	<b>\$11,728</b>	<b>\$11,904</b>	<b>\$12,083</b>	<b>\$12,264</b>	<b>\$12,448</b>	<b>\$12,635</b>	<b>\$12,824</b>

100mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1	1	1	1	1	1	1	1	1
New									
<b>Subtotal Customers</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Monthly Base Charge	\$1,158.07	\$1,175.44	\$1,193.07	\$1,210.96	\$1,229.13	\$1,247.56	\$1,266.28	\$1,285.27	\$1,304.55
Annual Base Charge	\$13,896.78	\$14,105.23	\$14,316.81	\$14,531.56	\$14,749.54	\$14,970.78	\$15,195.34	\$15,423.27	\$15,654.62
<b>Total Annual Revenue</b>	<b>\$13,897</b>	<b>\$14,105</b>	<b>\$14,317</b>	<b>\$14,532</b>	<b>\$14,750</b>	<b>\$14,971</b>	<b>\$15,195</b>	<b>\$15,423</b>	<b>\$15,655</b>



**Table 9-2  
Base Charge Forecast – Wastewater**

Wastewater	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	814	814	814	814	814	814	814	814	814
New	125	174	204	244	287	329	377	432	482
<b>Subtotal Customers</b>	<b>939</b>	<b>988</b>	<b>1,018</b>	<b>1,058</b>	<b>1,101</b>	<b>1,143</b>	<b>1,191</b>	<b>1,246</b>	<b>1,296</b>
<b>Total Annual Revenue</b>	<b>\$735,483</b>	<b>\$782,605</b>	<b>\$816,771</b>	<b>\$859,374</b>	<b>\$905,382</b>	<b>\$951,795</b>	<b>\$1,004,158</b>	<b>\$1,063,514</b>	<b>\$1,120,338</b>

15mm/18mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	807	807	807	807	807	807	807	807	807
New	125	174	204	244	287	329	377	432	482
<b>Subtotal Customers</b>	<b>932</b>	<b>981</b>	<b>1,011</b>	<b>1,051</b>	<b>1,094</b>	<b>1,136</b>	<b>1,184</b>	<b>1,239</b>	<b>1,289</b>
Monthly Base Charge	\$60.47	\$61.38	\$62.30	\$63.23	\$64.18	\$65.14	\$66.12	\$67.11	\$68.12
Annual Base Charge	\$725.64	\$736.52	\$747.57	\$758.79	\$770.17	\$781.72	\$793.45	\$805.35	\$817.43
<b>Total Annual Revenue</b>	<b>\$676,296</b>	<b>\$722,531</b>	<b>\$755,796</b>	<b>\$797,484</b>	<b>\$842,564</b>	<b>\$888,034</b>	<b>\$939,440</b>	<b>\$997,826</b>	<b>\$1,053,665</b>

25mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	2	2	2	2	2	2	2	2	2
New									
<b>Subtotal Customers</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
Monthly Base Charge	\$112.33	\$114.01	\$115.73	\$117.46	\$119.22	\$121.01	\$122.83	\$124.67	\$126.54
Annual Base Charge	\$1,347.96	\$1,368.18	\$1,388.70	\$1,409.53	\$1,430.68	\$1,452.14	\$1,473.92	\$1,496.03	\$1,518.47
<b>Total Annual Revenue</b>	<b>\$2,696</b>	<b>\$2,736</b>	<b>\$2,777</b>	<b>\$2,819</b>	<b>\$2,861</b>	<b>\$2,904</b>	<b>\$2,948</b>	<b>\$2,992</b>	<b>\$3,037</b>

40mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1	1	1	1	1	1	1	1	1
New									
<b>Subtotal Customers</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Monthly Base Charge	\$279.32	\$283.50	\$287.76	\$292.07	\$296.45	\$300.90	\$305.42	\$310.00	\$314.65
Annual Base Charge	\$3,351.78	\$3,402.06	\$3,453.09	\$3,504.88	\$3,557.46	\$3,610.82	\$3,664.98	\$3,719.96	\$3,775.76
<b>Total Annual Revenue</b>	<b>\$3,352</b>	<b>\$3,402</b>	<b>\$3,453</b>	<b>\$3,505</b>	<b>\$3,557</b>	<b>\$3,611</b>	<b>\$3,665</b>	<b>\$3,720</b>	<b>\$3,776</b>

50mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	3	3	3	3	3	3	3	3	3
New									
<b>Subtotal Customers</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
Monthly Base Charge	\$662.34	\$672.27	\$682.35	\$692.59	\$702.98	\$713.52	\$724.23	\$735.09	\$746.12
Annual Base Charge	\$7,948.02	\$8,067.24	\$8,188.25	\$8,311.07	\$8,435.74	\$8,562.27	\$8,690.71	\$8,821.07	\$8,953.39
<b>Total Annual Revenue</b>	<b>\$23,844</b>	<b>\$24,202</b>	<b>\$24,565</b>	<b>\$24,933</b>	<b>\$25,307</b>	<b>\$25,687</b>	<b>\$26,072</b>	<b>\$26,463</b>	<b>\$26,860</b>

100mm Meter Size	2021	2022	2023	2024	2025	2026	2027	2028	2029
Existing	1	1	1	1	1	1	1	1	1
New									
<b>Subtotal Customers</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
Monthly Base Charge	\$2,441.25	\$2,477.87	\$2,515.04	\$2,552.76	\$2,591.05	\$2,629.92	\$2,669.37	\$2,709.41	\$2,750.05
Annual Base Charge	\$29,295.00	\$29,734.43	\$30,180.44	\$30,633.15	\$31,092.65	\$31,559.03	\$32,032.42	\$32,512.91	\$33,000.60
<b>Total Annual Revenue</b>	<b>\$29,295</b>	<b>\$29,734</b>	<b>\$30,180</b>	<b>\$30,633</b>	<b>\$31,093</b>	<b>\$31,559</b>	<b>\$32,032</b>	<b>\$32,513</b>	<b>\$33,001</b>





## 10. Volume Rate Calculations

This chapter provides for the calculation of the volume rates over the forecast period. These calculations are based on the net operating expenditures provided in Section 8.1 and 8.3, divided by the water and wastewater volume forecasts provided in Section 3.

### 10.1 Water Rates

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The following analysis provides for the continuance of the present rate structure. As noted above, the rates are calculated by taking the net recoverable amounts from Table 8-1 and dividing them by the volumes presented in Table 3-3. As noted in Section 8.1 the rate increases have been calculated to provide a 1.5% annual increase over the forecast period.

The volume rate calculations are presented in Table 10-1. Detailed calculations of the volume rates are provided in Appendix A. Bulk water rates are included in the calculations and are forecasted to increase at 1.5% annually as well. A summary of the recommended base charges and volume rates along with the total annual bill for an average residential user (who consumes 140 cu.m per year) are presented as follows:



**Table 10-1**  
Average Annual Water Bill Based on 140 cu.m and Bulk Water Rates

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Water</b>									
Base Bi-Monthly Charge	\$65.35	\$66.33	\$67.33	\$68.34	\$69.36	\$70.40	\$71.46	\$72.53	\$73.62
Volume Rate	\$1.82	\$1.85	\$1.88	\$1.90	\$1.93	\$1.96	\$1.99	\$2.02	\$2.05
Annual Base Charge	\$392.10	\$397.98	\$403.95	\$410.01	\$416.16	\$422.40	\$428.74	\$435.17	\$441.70
Annual Volume Charge	\$254.80	\$258.58	\$262.50	\$266.42	\$270.48	\$274.54	\$278.60	\$282.80	\$287.00
<b>Total Annual Water Bill</b>	<b>\$646.90</b>	<b>\$656.56</b>	<b>\$666.45</b>	<b>\$676.43</b>	<b>\$686.64</b>	<b>\$696.94</b>	<b>\$707.34</b>	<b>\$717.97</b>	<b>\$728.70</b>
<b>Total Bi-Monthly Water Bill</b>	<b>\$107.82</b>	<b>\$109.43</b>	<b>\$111.08</b>	<b>\$112.74</b>	<b>\$114.44</b>	<b>\$116.16</b>	<b>\$117.89</b>	<b>\$119.66</b>	<b>\$121.45</b>
Annual % Increase		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
<b>Bulk Water Rates (per cu.m)</b>	<b>\$3.08</b>	<b>\$3.13</b>	<b>\$3.17</b>	<b>\$3.22</b>	<b>\$3.27</b>	<b>\$3.32</b>	<b>\$3.37</b>	<b>\$3.42</b>	<b>\$3.47</b>

## 10.2 Wastewater Rates

Similar to water, the calculation of the wastewater rates takes the net recoverable amounts from Table 8-2 and completes the calculation by dividing those amounts by the billable volumes in Table 3-3. Detailed calculations are provided in Appendix B. Provided in Table 10-2 below is the average annual wastewater bill based on 140 cu.m.

**Table 10-2**  
Average Annual Wastewater Bill Based on 140 cu.m

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Wastewater</b>									
Base Bi-Monthly Charge	\$120.94	\$122.75	\$124.60	\$126.46	\$128.36	\$130.29	\$132.24	\$134.22	\$136.24
Volume Rate	\$2.49	\$2.53	\$2.57	\$2.60	\$2.64	\$2.68	\$2.72	\$2.76	\$2.80
Annual Base Charge	\$725.64	\$736.52	\$747.57	\$758.79	\$770.17	\$781.72	\$793.45	\$805.35	\$817.43
Annual Volume Charge	\$348.60	\$353.78	\$359.10	\$364.42	\$369.88	\$375.48	\$381.08	\$386.82	\$392.56
<b>Total Annual Wastewater Bill</b>	<b>\$1,074.24</b>	<b>\$1,090.30</b>	<b>\$1,106.67</b>	<b>\$1,123.21</b>	<b>\$1,140.05</b>	<b>\$1,157.20</b>	<b>\$1,174.53</b>	<b>\$1,192.17</b>	<b>\$1,209.99</b>
<b>Total Bi-Monthly Wastewater Bill</b>	<b>\$179.04</b>	<b>\$181.72</b>	<b>\$184.45</b>	<b>\$187.20</b>	<b>\$190.01</b>	<b>\$192.87</b>	<b>\$195.75</b>	<b>\$198.69</b>	<b>\$201.66</b>
Annual % Increase		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%

## 10.3 Forecast of Combined Water and Wastewater Impact for the Average Customer

Based on the foregoing information, the combined impact of the water and wastewater base charge and volume rates equal an increase of 1.5% annually from 2022 to 2029. Table 10-3 presents the forecast combined annual bill for customers with a 5/8" meter based on 140 cu.m of volume.



**Table 10-3**  
Average Annual Water and Wastewater Bill Based on 140 cu.m

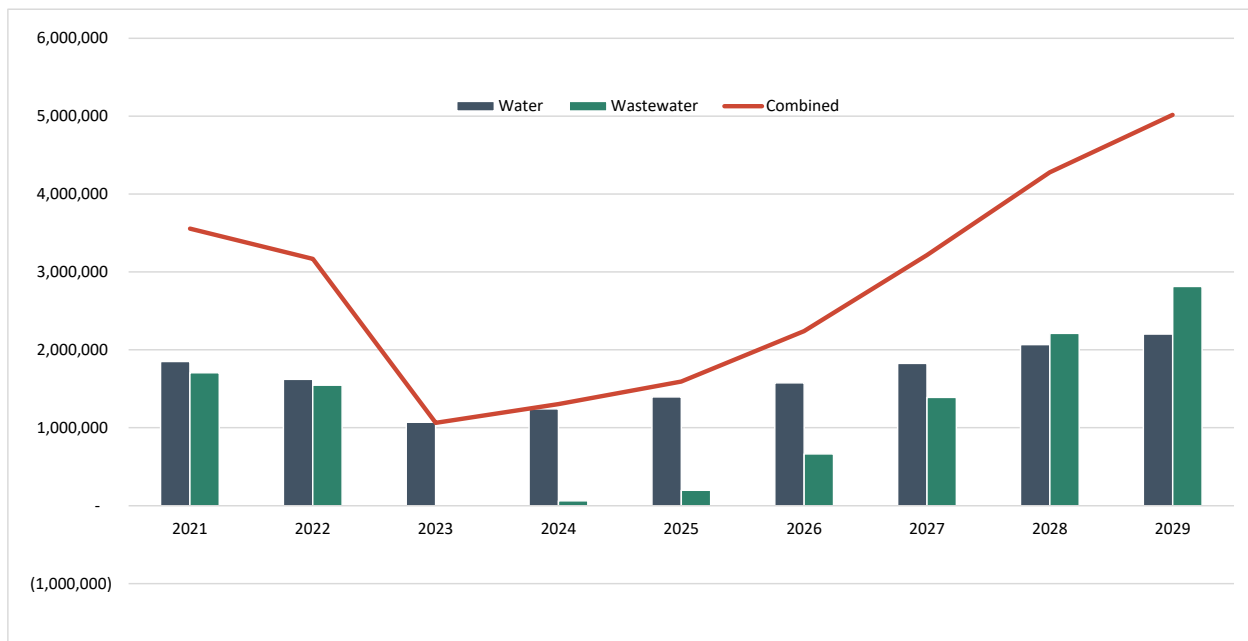
Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Water</b>									
Base Bi-Monthly Charge	\$65.35	\$66.33	\$67.33	\$68.34	\$69.36	\$70.40	\$71.46	\$72.53	\$73.62
Volume Rate	\$1.82	\$1.85	\$1.88	\$1.90	\$1.93	\$1.96	\$1.99	\$2.02	\$2.05
Annual Base Charge	\$392.10	\$397.98	\$403.95	\$410.01	\$416.16	\$422.40	\$428.74	\$435.17	\$441.70
Annual Volume Charge	\$254.80	\$258.58	\$262.50	\$266.42	\$270.48	\$274.54	\$278.60	\$282.80	\$287.00
<b>Total Annual Water Bill</b>	<b>\$646.90</b>	<b>\$656.56</b>	<b>\$666.45</b>	<b>\$676.43</b>	<b>\$686.64</b>	<b>\$696.94</b>	<b>\$707.34</b>	<b>\$717.97</b>	<b>\$728.70</b>
<b>Total Bi-Monthly Water Bill</b>	<b>\$107.82</b>	<b>\$109.43</b>	<b>\$111.08</b>	<b>\$112.74</b>	<b>\$114.44</b>	<b>\$116.16</b>	<b>\$117.89</b>	<b>\$119.66</b>	<b>\$121.45</b>
<b>Wastewater</b>									
Base Bi-Monthly Charge	\$120.94	\$122.75	\$124.60	\$126.46	\$128.36	\$130.29	\$132.24	\$134.22	\$136.24
Volume Rate	\$2.49	\$2.53	\$2.57	\$2.60	\$2.64	\$2.68	\$2.72	\$2.76	\$2.80
Annual Base Charge	\$725.64	\$736.52	\$747.57	\$758.79	\$770.17	\$781.72	\$793.45	\$805.35	\$817.43
Annual Volume Charge	\$348.60	\$353.78	\$359.10	\$364.42	\$369.88	\$375.48	\$381.08	\$386.82	\$392.56
<b>Total Annual Wastewater Bill</b>	<b>\$1,074.24</b>	<b>\$1,090.30</b>	<b>\$1,106.67</b>	<b>\$1,123.21</b>	<b>\$1,140.05</b>	<b>\$1,157.20</b>	<b>\$1,174.53</b>	<b>\$1,192.17</b>	<b>\$1,209.99</b>
<b>Total Bi-Monthly Wastewater Bill</b>	<b>\$179.04</b>	<b>\$181.72</b>	<b>\$184.45</b>	<b>\$187.20</b>	<b>\$190.01</b>	<b>\$192.87</b>	<b>\$195.75</b>	<b>\$198.69</b>	<b>\$201.66</b>
<b>Total Annual Water and Wastewater Bill</b>	<b>\$1,721.14</b>	<b>\$1,746.87</b>	<b>\$1,773.12</b>	<b>\$1,799.64</b>	<b>\$1,826.69</b>	<b>\$1,854.14</b>	<b>\$1,881.87</b>	<b>\$1,910.14</b>	<b>\$1,938.69</b>
<b>Total Bi-Monthly Water and Wastewater Bill</b>	<b>\$286.86</b>	<b>\$291.14</b>	<b>\$295.52</b>	<b>\$299.94</b>	<b>\$304.45</b>	<b>\$309.02</b>	<b>\$313.64</b>	<b>\$318.36</b>	<b>\$323.11</b>
Annual % Increase		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%



## 11. Reserves and Reserve Funds

A concern which was expressed during the 2020 rate study was that significant deficits are anticipated for the development charge reserve funds for both water and wastewater. This occurs as a result of the Township having to construct water and wastewater infrastructure well in advance of growth occurring. The deficits in these reserve funds will continue in the future. As an offset to those negative balances, the forecast has provided for significantly higher balances in the capital reserve funds such that the combined reserve/reserve funds remain in an overall positive position. The graph below provides for the water and wastewater reserve/reserve fund balances over the forecast period.

Figure 11-1  
Combined Water and Wastewater Reserve/Reserve Funds





## 12. Recommendations

As presented within this report, capital and operating expenditures have been identified and forecast to 2029 for water and wastewater services.

Based upon the information provided in Chapters 1 to 11, the following recommendations are presented for consideration by Township Council:

1. That Council provide for the recovery of all water and wastewater costs through full cost recovery rates.
2. That Council consider the Capital Plan for water and wastewater as provided in Tables 4-1 and 4-2 and the associated Capital Financing Plans as set out in Tables 6-1 and 6-2.
3. That Council consider the base charges provided in Tables 9-1 for water and Tables 9-2 for wastewater.
4. That Council consider the volume rates for water and wastewater as provided in Tables 10-1 and 10-2 respectively.
5. That Council consider the bulk water rate as provided in Table 10-1.



# Appendix A

## Detailed Water Rate Calculation



Table A-1  
Capital Budget Forecast (uninflated 2020 \$)

Description	Budget 2020	Total	Forecast									
			2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Capital Expenditures</b>												
<b>Water Distribution System (4830)</b>		-										
Water Main Replacement Main Street	\$ 200,000	-										
Watermain Replacement (various locations)		\$ 3,000,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 350,000	\$ 350,000	\$ 400,000	\$ 400,000	
Replacement of Well and Pump		\$ 150,000		\$ 150,000								
<b>Studies:</b>		-										
Water Rate Study & Financial Plan	\$ 30,000	-										
<b>Growth Related:</b>		-										
Water Master Servicing Study	\$ 50,000	\$ 20,000	\$ 20,000									
Duke Street from King Street Southwards		\$ 153,000		\$ 153,000								
King Street from Queen Street to IO Property		\$ 51,000					\$ 51,000					
Water Servicing Studies - Future Development Areas		\$ 102,000										\$ 102,000
Future Watermain Booster Pumping Station		\$ 663,000			\$ 663,000							
Future Trunk Watermain Costs (Oversizing)	\$ 76,500	-										
<b>Total Capital Expenditures</b>	<b>\$ 356,500</b>	<b>\$ 4,139,000</b>	<b>\$ 320,000</b>	<b>\$ 603,000</b>	<b>\$ 963,000</b>	<b>\$ 300,000</b>	<b>\$ 351,000</b>	<b>\$ 350,000</b>	<b>\$ 350,000</b>	<b>\$ 400,000</b>	<b>\$ 502,000</b>	



**Table A-2  
Capital Budget Forecast (Inflated 2021 \$)**

Description	Budget 2020	Total	Forecast									
			2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Capital Expenditures</b>												
<b>Water Distribution System (4830)</b>												
Water Main Replacement Main Street	\$ 200,000											
Watermain Replacement (various locations)	\$ -	\$ 3,335,000	\$ 306,000	\$ 312,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000	
Replacement of Well and Pump	\$ -	\$ 156,000	\$ -	\$ 156,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Growth Related:</b>												
Water Master Servicing Study	\$ 50,000	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Duke Street from King Street Southwards	\$ -	\$ 159,000	\$ -	\$ 159,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
King Street from Queen Street to IO Property	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ -	
Water Servicing Studies - Future Development Areas	\$ -	\$ 122,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 122,000	
Future Watermain Booster Pumping Station	\$ -	\$ 704,000	\$ -	\$ -	\$ 704,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Future Trunk Watermain Costs (Oversizing)	\$ 76,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Total Capital Expenditures</b>	<b>\$ 356,500</b>	<b>\$ 4,552,000</b>	<b>\$ 326,000</b>	<b>\$ 627,000</b>	<b>\$ 1,022,000</b>	<b>\$ 325,000</b>	<b>\$ 387,000</b>	<b>\$ 394,000</b>	<b>\$ 402,000</b>	<b>\$ 469,000</b>	<b>\$ 600,000</b>	
<b>Capital Financing</b>												
Provincial/Federal Grants		\$ -										
Development Charges Reserve Fund	\$ 126,500	\$ 1,061,000	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000	
Non-Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Operating Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Lifecycle Reserve Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Water Reserve	\$ 230,000	\$ 3,491,000	\$ 306,000	\$ 468,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000	
<b>Total Capital Financing</b>	<b>\$ 356,500</b>	<b>\$ 4,552,000</b>	<b>\$ 326,000</b>	<b>\$ 627,000</b>	<b>\$ 1,022,000</b>	<b>\$ 325,000</b>	<b>\$ 387,000</b>	<b>\$ 394,000</b>	<b>\$ 402,000</b>	<b>\$ 469,000</b>	<b>\$ 600,000</b>	

**Table A-3  
Schedule of Non-growth-Related Debenture Repayments**

Debenture Year	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
2021									
2022		-							
2023			-						
2024				-					
2025					-				
2026						-			
2027							-		
2028								-	
2029									-
2030									
<b>Total Annual Debt Charges</b>	-	-	-	-	-	-	-	-	-





Table A-4  
Schedule of Growth-Related Debenture Repayments

Debenture Year	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
2021		-	-	-	-	-	-	-	-
2022			-	-	-	-	-	-	-
2023				-	-	-	-	-	-
2024					-	-	-	-	-
2025						-	-	-	-
2026							-	-	-
2027								-	-
2028									-
2029									
2030									
<b>Total Annual Debt Charges</b>	-	-	-	-	-	-	-	-	-

Table A-5  
Water Reserve Continuity

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,541,406	\$ 1,620,279	\$ 1,564,962	\$ 1,693,000	\$ 1,851,864	\$ 2,047,623	\$ 2,222,051	\$ 2,441,127	\$ 2,649,814
Transfer from Operating	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
Transfer to Capital	\$ 306,000	\$ 468,000	\$ 318,000	\$ 325,000	\$ 331,000	\$ 394,000	\$ 402,000	\$ 469,000	\$ 478,000
Transfer to Operating	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Closing Balance</b>	<b>\$ 1,612,218</b>	<b>\$ 1,553,312</b>	<b>\$ 1,676,237</b>	<b>\$ 1,829,001</b>	<b>\$ 2,017,362</b>	<b>\$ 2,183,834</b>	<b>\$ 2,393,262</b>	<b>\$ 2,591,505</b>	<b>\$ 2,832,514</b>
Interest	\$ 8,061	\$ 11,650	\$ 16,762	\$ 22,863	\$ 30,260	\$ 38,217	\$ 47,865	\$ 58,309	\$ 68,547

Table A-6  
Water Development Charges Reserve Fund Continuity

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 164,290	\$ 240,042	\$ 67,526	\$ (611,240)	\$ (595,389)	\$ (629,901)	\$ (618,611)	\$ (579,064)	\$ (536,011)
Development Charge Proceeds	\$ 181,094	\$ 75,238	\$ 123,350	\$ 118,163	\$ 128,748	\$ 122,965	\$ 155,120	\$ 162,353	\$ 139,343
Transfer to Capital	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000
Transfer to Operating	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
<b>Closing Balance</b>	<b>\$ 238,848</b>	<b>\$ 67,023</b>	<b>\$ (605,189)</b>	<b>\$ (588,039)</b>	<b>\$ (620,592)</b>	<b>\$ (607,971)</b>	<b>\$ (567,710)</b>	<b>\$ (524,216)</b>	<b>\$ (629,562)</b>
Interest	\$ 1,194	\$ 503	\$ (6,052)	\$ (7,350)	\$ (9,309)	\$ (10,640)	\$ (11,354)	\$ (11,795)	\$ (15,235)
Required from Development Charges	\$ 20,000	\$ 159,000	\$ 704,000	\$ -	\$ 56,000	\$ -	\$ -	\$ -	\$ 122,000



**Table A-7  
Operating Budget Forecast**

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Expenditures</b>									
<b>Operating Costs</b>									
Gross Wages - Full Time	\$ 45,000	\$ 45,900	\$ 46,800	\$ 47,700	\$ 48,700	\$ 49,700	\$ 50,700	\$ 51,700	\$ 52,700
Benefits – OMERS	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400
Benefits – EI Reduced Premium	\$ 425	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400
Benefits – CPP	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200
Benefits – EHT	\$ 650	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700
Benefits – WSIB	\$ 1,125	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100
Manulife Group Benefits	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400
Mileage Reimbursement / Travel	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100
Staff Training & Development	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Uniforms / Clothing	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100
Legal Expense	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Corporate Insurance	\$ 10,578	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600	\$ 11,800	\$ 12,000	\$ 12,200
Water Meters	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800
Radio Licenses	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Office Supplies	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Allocated Phone Service	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300
Advertising	\$ 50	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
Allocated Vehicle Costs	\$ 1,250	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300
Property taxes	\$ 22,800	\$ 23,300	\$ 23,800	\$ 24,300	\$ 24,800	\$ 25,300	\$ 25,800	\$ 26,300	\$ 26,800
Toilet Rebate Program	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800
<b>Millbrook Water Distribution System</b>									
Hydrant Maintenance	\$ 4,000	\$ 4,100	\$ 4,200	\$ 4,300	\$ 4,400	\$ 4,500	\$ 4,600	\$ 4,700	\$ 4,800
Materials and Supplies	\$ 1,000	\$ 1,100	\$ 1,200	\$ 1,300	\$ 1,400	\$ 1,500	\$ 1,600	\$ 1,700	\$ 1,800
Locates	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Contracted Services	\$ 50,000	\$ 51,000	\$ 52,000	\$ 53,000	\$ 54,100	\$ 55,200	\$ 56,300	\$ 57,400	\$ 58,500
<b>Millbrook Water Treatment &amp; Supply</b>									
Audit Fees	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Operator Contract	\$ 125,000	\$ 127,500	\$ 130,100	\$ 132,700	\$ 135,400	\$ 138,100	\$ 140,900	\$ 143,700	\$ 146,600
Phone	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800
Managed Router & VDSL Servi	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800
Hydro	\$ 15,000	\$ 15,800	\$ 16,600	\$ 17,400	\$ 18,300	\$ 19,200	\$ 20,200	\$ 21,200	\$ 22,300
Contracted Services	\$ 6,000	\$ 6,100	\$ 6,200	\$ 6,300	\$ 6,400	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800
<b>Millbrook Water - Standpipe Tower</b>									
Phone	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Managed Router & VDSL Servi	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Hydro	\$ 9,000	\$ 9,500	\$ 10,000	\$ 10,500	\$ 11,000	\$ 11,600	\$ 12,200	\$ 12,800	\$ 13,400
Contracted Services	\$ 4,000	\$ 4,100	\$ 4,200	\$ 4,300	\$ 4,400	\$ 4,500	\$ 4,600	\$ 4,700	\$ 4,800
<b>Water Capacity Monitoring</b>									
Contracted Services	\$ 20,000	\$ 20,400	\$ 20,800	\$ 21,200	\$ 21,600	\$ 22,000	\$ 22,400	\$ 22,800	\$ 23,300



Table A-7 (continued)  
Operating Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Bulk Water Sale</b>									
Material and Supplies	\$ 1,000	\$ 1,050	\$ 1,103	\$ 1,158	\$ 1,216	\$ 1,277	\$ 1,341	\$ 1,408	\$ 1,478
Hydro	\$ 1,000	\$ 1,050	\$ 1,103	\$ 1,158	\$ 1,216	\$ 1,277	\$ 1,341	\$ 1,408	\$ 1,478
Contracted Services	\$ 500	\$ 510	\$ 520	\$ 530	\$ 541	\$ 552	\$ 563	\$ 574	\$ 585
Interdepartmental Charge - Wat	\$ 23,000	\$ 23,500	\$ 24,000	\$ 24,500	\$ 25,000	\$ 25,500	\$ 26,000	\$ 26,500	\$ 27,000
<b>Sub Total Operating</b>	<b>\$ 369,778</b>	<b>\$ 378,210</b>	<b>\$ 386,526</b>	<b>\$ 394,846</b>	<b>\$ 403,573</b>	<b>\$ 412,406</b>	<b>\$ 421,445</b>	<b>\$ 430,490</b>	<b>\$ 439,841</b>
<b>Capital-Related</b>									
Existing Debt (Principal) - Growth Related	\$ 43,146	\$ 44,526	\$ 45,950	\$ 47,420	\$ 48,936	\$ 50,501	\$ 52,117	\$ 53,784	\$ 55,504
Existing Debt (Interest) - Growth Related	\$ 43,391	\$ 44,731	\$ 46,114	\$ 47,541	\$ 49,014	\$ 50,534	\$ 52,102	\$ 53,721	\$ 55,391
New Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt (Principal) - Non-Growth Related	\$ 9,883	\$ 10,217	\$ 10,563	\$ 10,920	\$ 11,289	\$ 11,671	\$ 12,065	\$ 12,473	\$ 12,895
Existing Debt (Interest) - Non-Growth Related	\$ 14,005	\$ 13,671	\$ 13,326	\$ 12,968	\$ 12,599	\$ 12,217	\$ 11,823	\$ 11,415	\$ 10,993
New Non-Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Non-Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital Reserve	\$ 376,812	\$ 401,033	\$ 429,276	\$ 461,002	\$ 496,498	\$ 530,211	\$ 573,211	\$ 619,378	\$ 660,700
<b>Sub Total Capital Related</b>	<b>\$ 487,237</b>	<b>\$ 514,178</b>	<b>\$ 545,228</b>	<b>\$ 579,851</b>	<b>\$ 618,337</b>	<b>\$ 655,135</b>	<b>\$ 701,318</b>	<b>\$ 750,771</b>	<b>\$ 795,483</b>
<b>Total Expenditures</b>	<b>\$ 857,015</b>	<b>\$ 892,388</b>	<b>\$ 931,754</b>	<b>\$ 974,697</b>	<b>\$ 1,021,910</b>	<b>\$ 1,067,541</b>	<b>\$ 1,122,763</b>	<b>\$ 1,181,261</b>	<b>\$ 1,235,324</b>
<b>Revenues</b>									
Base Charge	\$ 398,808	\$ 424,291	\$ 442,774	\$ 465,816	\$ 490,698	\$ 515,800	\$ 544,116	\$ 576,212	\$ 606,941
Misc. Base Charge from New Development	\$ 15,292	\$ 3,980	\$ 8,079	\$ 8,200	\$ 9,364	\$ 8,448	\$ 11,790	\$ 11,967	\$ 9,938
Public Utility Grant Program (M	\$ 18,700	\$ 19,100	\$ 19,500	\$ 19,900	\$ 20,300	\$ 20,700	\$ 21,100	\$ 21,500	\$ 21,900
Miscellaneous Revenue - Sysco	\$ 2,500	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300
Rent Revenue	\$ 4,600	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400
Meter Installation Revenue	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600
User Fees and Service Charge	\$ 8,400	\$ 8,600	\$ 8,800	\$ 9,000	\$ 9,200	\$ 9,400	\$ 9,600	\$ 9,800	\$ 10,000
Water Connection /Other Charg	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water & Sewer Account Set Up	\$ 11,750	\$ 12,000	\$ 12,200	\$ 12,400	\$ 12,600	\$ 12,900	\$ 13,200	\$ 13,500	\$ 13,800
Locates & User Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Write off - Contra Revenue Acc	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Penalty and Interest Income -	\$ 13,000	\$ 13,300	\$ 13,600	\$ 13,900	\$ 14,200	\$ 14,500	\$ 14,800	\$ 15,100	\$ 15,400
Bulk Water Sale	\$ 30,067	\$ 30,518	\$ 30,976	\$ 31,441	\$ 31,912	\$ 32,391	\$ 32,877	\$ 33,370	\$ 33,871
<b>Other Revenue</b>									
Contributions from Development Charges Reserve Fund	\$ 86,537	\$ 89,257	\$ 92,064	\$ 94,961	\$ 97,950	\$ 101,035	\$ 104,219	\$ 107,504	\$ 110,895
Contributions from Reserves / Reserve Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Operating Revenue</b>	<b>\$ 600,154</b>	<b>\$ 619,047</b>	<b>\$ 646,394</b>	<b>\$ 674,418</b>	<b>\$ 705,425</b>	<b>\$ 734,775</b>	<b>\$ 771,703</b>	<b>\$ 809,354</b>	<b>\$ 843,544</b>
<b>Water Billing Recovery - Total</b>	<b>\$ 256,861</b>	<b>\$ 273,342</b>	<b>\$ 285,360</b>	<b>\$ 300,278</b>	<b>\$ 316,485</b>	<b>\$ 332,766</b>	<b>\$ 351,060</b>	<b>\$ 371,907</b>	<b>\$ 391,780</b>



Table A-8  
Water Rate Forecast

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Water Billing Recovery	\$ 256,861	\$ 273,342	\$ 285,360	\$ 300,278	\$ 316,485	\$ 332,766	\$ 351,060	\$ 371,907	\$ 391,780
Total Metered Volume (m <sup>3</sup> )	\$ 141,132	\$ 147,992	\$ 152,192	\$ 157,792	\$ 163,812	\$ 169,692	\$ 176,412	\$ 184,112	\$ 191,112
Constant Rate	\$ 1.82	\$ 1.85	\$ 1.88	\$ 1.90	\$ 1.93	\$ 1.96	\$ 1.99	\$ 2.02	\$ 2.05
Bulk Water Rate	\$ 3.08	\$ 3.13	\$ 3.17	\$ 3.22	\$ 3.27	\$ 3.32	\$ 3.37	\$ 3.42	\$ 3.47
Annual Percentage Change	0%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%



# Appendix B

## Detailed Wastewater Rate Calculations



Table B-1  
Capital Budget Forecast (uninflated \$)

Description	Budget 2020	Total	Forecast									
			2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Capital Expenditures</b>												
<b>Wastewater Collection System(4811)</b>		\$ -										
Sewer Relining	\$ 349,000	\$ 250,000	\$ 250,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Various Wastewater Facility Upgrades		\$ 300,000		\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -
		\$ -										
<b>Growth Related:</b>		\$ -										
Wastewater Master Servicing Study	\$ 90,000	\$ 274,000	\$ 70,000									\$ 204,000
Cambium Studies		\$ 80,000	\$ 40,000	\$ 40,000								
Infiltration Solutions		\$ 100,000	\$ 50,000	\$ 50,000								
Pump Station and Forcemain between property north of Municipal Office and Larmer Line		\$ 500,000			\$ 500,000							
Duke Street from King Street Southwards		\$ 255,000		\$ 255,000								
King Street from Queen Street to IO Property		\$ 102,000					\$ 102,000					
Future Sanitary Pumping Station - Sewage		\$ 1,122,000			\$ 1,122,000							
Future Trunk Sanitary Sewer (oversizing)		\$ 122,400	\$ 122,400									
Headworks - Wet Well & Stress Test	\$ -	\$ 820,000			\$ 273,333	\$ 273,333	\$ 273,333					
<b>Total Capital Expenditures</b>	<b>\$ 626,200</b>	<b>\$ 3,925,400</b>	<b>\$ 532,400</b>	<b>\$ 445,000</b>	<b>\$ 1,895,333</b>	<b>\$ 373,333</b>	<b>\$ 375,333</b>	<b>\$ 100,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 204,000</b>



**Table B-2  
Capital Budget Forecast (Inflated \$)**

Description	Budget 2020	Total	Forecast									
			2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Capital Expenditures</b>												
<b>Wastewater Collection System(4811)</b>												
Sewer Relining	\$ 349,000	\$ 255,000	\$ 255,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Various Wastewater Facility Upgrades	\$ -	\$ 325,000	\$ -	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000	\$ -	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Growth Related:</b>												
Wastewater Master Servicing Study	\$ 90,000	\$ 315,000	\$ 71,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 244,000
Cambium Studies	\$ -	\$ 83,000	\$ 41,000	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Infiltration Solutions	\$ -	\$ 103,000	\$ 51,000	\$ 52,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pump Station and Forcemain between property north of Municipal Office and Larmer Line	\$ -	\$ 531,000	\$ -	\$ -	\$ 531,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Duke Street from King Street Southwards	\$ -	\$ 265,000	\$ -	\$ 265,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
King Street from Queen Street to IO Property	\$ -	\$ 113,000	\$ -	\$ -	\$ -	\$ -	\$ 113,000	\$ -	\$ -	\$ -	\$ -	\$ -
Nina Court Extension Sanitary Sewer Oversizing	\$ 112,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Servicing Studies - Future Development Areas	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Sanitary Pumping Station - Sewage	\$ -	\$ 1,191,000	\$ -	\$ -	\$ 1,191,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Trunk Sanitary Sewer (oversizing)	\$ -	\$ 125,000	\$ 125,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Headworks - Wet Well & Stress Test	\$ -	\$ 888,000	\$ -	\$ -	\$ 290,000	\$ 296,000	\$ 302,000	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Capital Expenditures</b>	<b>\$ 626,200</b>	<b>\$ 4,194,000</b>	<b>\$ 543,000</b>	<b>\$ 463,000</b>	<b>\$ 2,012,000</b>	<b>\$ 404,000</b>	<b>\$ 415,000</b>	<b>\$ 113,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 244,000</b>
<b>Capital Financing</b>												
Provincial/Federal Grants	\$ 117,424	\$ -										
Development Charges Reserve Fund	\$ 277,200	\$ 3,614,000	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ -	\$ 244,000
Non-Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Growth Related Debenture Requirements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lifecycle Reserve Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Reserve	\$ 231,576	\$ 580,000	\$ 255,000	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000	\$ -	\$ -	\$ -	\$ -
<b>Total Capital Financing</b>	<b>\$ 626,200</b>	<b>\$ 4,194,000</b>	<b>\$ 543,000</b>	<b>\$ 463,000</b>	<b>\$ 2,012,000</b>	<b>\$ 404,000</b>	<b>\$ 415,000</b>	<b>\$ 113,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 244,000</b>

**Table B-3  
Schedule of Non-growth-Related Debenture Repayments**

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	
2021		-	-	-	-	-	-	-	-	-
2022			-	-	-	-	-	-	-	-
2023				-	-	-	-	-	-	-
2024					-	-	-	-	-	-
2025						-	-	-	-	-
2026							-	-	-	-
2027								-	-	-
2028									-	-
2029										-
2030										
<b>Total Annual Debt Charges</b>		-	-	-	-	-	-	-	-	-



**Table B-4**  
**Schedule of Growth-Related Debenture Repayments**

Debenture Year	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
2021		-	-	-	-	-	-	-	-
2022			-	-	-	-	-	-	-
2023				-	-	-	-	-	-
2024					-	-	-	-	-
2025						-	-	-	-
2026							-	-	-
2027								-	-
2028									-
2029									
2030									
<b>Total Annual Debt Charges</b>	-	-	-	-	-	-	-	-	-

**Table B-5**  
**Wastewater Reserve Continuity**

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 1,201,750	\$ 1,385,682	\$ 1,764,594	\$ 2,304,488	\$ 2,800,372	\$ 3,479,861	\$ 4,121,159	\$ 4,973,740	\$ 5,935,697
Transfer from Operating	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
Transfer to Capital	\$ 255,000	\$ 104,000	\$ -	\$ 108,000	\$ -	\$ 113,000			
Transfer to Operating	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Closing Balance</b>	<b>\$ 1,378,788</b>	<b>\$ 1,751,458</b>	<b>\$ 2,281,671</b>	<b>\$ 2,765,800</b>	<b>\$ 3,428,434</b>	<b>\$ 4,050,279</b>	<b>\$ 4,876,215</b>	<b>\$ 5,805,082</b>	<b>\$ 6,834,875</b>
Interest	\$ 6,894	\$ 13,136	\$ 22,817	\$ 34,572	\$ 51,427	\$ 70,880	\$ 97,524	\$ 130,614	\$ 165,404

**Table B-6**  
**Wastewater Development Charges Reserve Fund Continuity**

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	\$ 529,444	\$ 328,320	\$ (206,557)	\$ (2,312,830)	\$ (2,736,927)	\$ (3,280,842)	\$ (3,445,626)	\$ (3,556,848)	\$ (3,674,222)
Development Charge Proceeds	\$ 408,375	\$ 158,493	\$ 271,470	\$ 258,868	\$ 283,406	\$ 269,315	\$ 344,711	\$ 361,384	\$ 306,769
Transfer to Capital	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ 244,000
Transfer to Operating	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
<b>Closing Balance</b>	<b>\$ 326,687</b>	<b>\$ (205,020)</b>	<b>\$ (2,289,931)</b>	<b>\$ (2,703,138)</b>	<b>\$ (3,232,357)</b>	<b>\$ (3,386,365)</b>	<b>\$ (3,487,106)</b>	<b>\$ (3,593,371)</b>	<b>\$ (4,021,450)</b>
Interest	\$ 1,633	\$ (1,538)	\$ (22,899)	\$ (33,789)	\$ (48,485)	\$ (59,261)	\$ (69,742)	\$ (80,851)	\$ (97,319)
Required from Development Charges	\$ 288,000	\$ 359,000	\$ 2,012,000	\$ 296,000	\$ 415,000	\$ -	\$ -	\$ -	\$ 244,000





**Table B-7  
Operating Budget Forecast**

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	
<b>Expenditures</b>										
<b>Operating Costs</b>										
<b>Wastewater Administration</b>										
Gross Wages - Full Time	\$ 45,000	\$ 45,900	\$ 46,800	\$ 47,700	\$ 48,700	\$ 49,700	\$ 50,700	\$ 51,700	\$ 52,700	
Gross Wages – Part Time	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Gross Wages - Vacation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Benefits – OMERS	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Benefits – EI Premium	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Benefits – EI Reduced Premium	\$ 425	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	
Benefits – CPP	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	
Benefits – EHT	\$ 650	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	
Benefits – WSIB	\$ 1,125	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	\$ 1,100	
Manulife Group Benefits	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	
Benefits - Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Meal Allowance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Mileage Reimbursement / Trave	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Staff Training & Development	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Uniforms / Clothing	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Legal Expense	\$ 750	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Corporate Insurance	\$ 10,578	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600	\$ 11,800	\$ 12,000	\$ 12,200	
Software Licensing & Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Water Meters	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400	\$ 5,500	\$ 5,600	\$ 5,700	\$ 5,800	
Radio Licenses	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Office Supplies	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	
Allocated Land Telephone	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Allocated Phone Service	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	
Advertising	\$ 50	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	
Postage/Courier	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	
Contracted Services - Plans & S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Allocated Vehicle Costs	\$ 1,250	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	\$ 1,300	
Property taxes	\$ 22,800	\$ 23,300	\$ 23,800	\$ 24,300	\$ 24,800	\$ 25,300	\$ 25,800	\$ 26,300	\$ 26,800	
Write off Uncollective Accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Recovery from Department-Co	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Depreciation:water & WasteW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	



Table B-7 (continued)  
Operating Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Millbrook Wastewater Plant</b>									
Biosolid management	\$ 24,000	\$ 24,500	\$ 25,000	\$ 25,500	\$ 26,000	\$ 26,500	\$ 27,000	\$ 27,500	\$ 28,100
Operator Contract	\$ 290,000	\$ 295,800	\$ 301,700	\$ 307,700	\$ 313,900	\$ 320,200	\$ 326,600	\$ 333,100	\$ 339,800
Phone	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800	\$ 6,900	\$ 7,000	\$ 7,100	\$ 7,200	\$ 7,300
Managed Router & VDSL Servi	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300	\$ 3,400	\$ 3,500	\$ 3,600
Hydro	\$ 116,000	\$ 118,300	\$ 120,700	\$ 123,100	\$ 125,600	\$ 128,100	\$ 130,700	\$ 133,300	\$ 136,000
Gas - Heating	\$ 15,000	\$ 15,300	\$ 15,600	\$ 15,900	\$ 16,200	\$ 16,500	\$ 16,800	\$ 17,100	\$ 17,400
Contracted Services	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600
<b>Wastewater Collection System</b>									
Locates	\$ 500	\$ 510	\$ 520	\$ 530	\$ 541	\$ 552	\$ 563	\$ 574	\$ 585
Contracted Services	\$ 10,000	\$ 10,200	\$ 10,404	\$ 10,612	\$ 10,824	\$ 11,040	\$ 11,261	\$ 11,486	\$ 11,716
<b>Sysco Oper. Wastewater Agreement</b>									
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contracted Services	\$ 40,000	\$ 40,800	\$ 41,600	\$ 42,400	\$ 43,200	\$ 44,100	\$ 45,000	\$ 45,900	\$ 46,800
Sewer Operator Service Charge	\$ 7,000	\$ 7,100	\$ 7,200	\$ 7,300	\$ 7,400	\$ 7,500	\$ 7,700	\$ 7,900	\$ 8,100
<b>Sysco Oper. Wastewater Agreement Booster Pumping Station</b>									
Phone	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Managed Router & VDSL Servi	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Hydro	\$ 7,200	\$ 7,300	\$ 7,400	\$ 7,500	\$ 7,700	\$ 7,900	\$ 8,100	\$ 8,300	\$ 8,500
Contracted Services	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
<b>Kawartha Downs Wastewater Agreement</b>									
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contracted Services	\$ 40,000	\$ 40,800	\$ 41,600	\$ 42,400	\$ 43,200	\$ 44,100	\$ 45,000	\$ 45,900	\$ 46,800
Sewer Operator Service Charge	\$ 6,000	\$ 6,100	\$ 6,200	\$ 6,300	\$ 6,400	\$ 6,500	\$ 6,600	\$ 6,700	\$ 6,800
<b>Wastewater Capacity Monitoring</b>									
Contracted Services	\$ 20,000	\$ 20,400	\$ 20,800	\$ 21,200	\$ 21,600	\$ 22,000	\$ 22,400	\$ 22,800	\$ 23,300
<b>Sub Total Operating</b>	<b>\$ 705,878</b>	<b>\$ 719,910</b>	<b>\$ 733,924</b>	<b>\$ 748,042</b>	<b>\$ 762,665</b>	<b>\$ 777,592</b>	<b>\$ 792,824</b>	<b>\$ 808,160</b>	<b>\$ 824,001</b>
<b>Capital-Related</b>									
Existing Debt (Principal) - Growth Related	\$ 159,876	\$ 165,000	\$ 170,289	\$ 175,747	\$ 181,381	\$ 187,195	\$ 193,195	\$ 199,387	\$ 205,779
Existing Debt (Interest) - Growth Related	\$ 163,256	\$ 167,833	\$ 172,555	\$ 177,427	\$ 182,455	\$ 187,643	\$ 192,996	\$ 198,519	\$ 204,219
New Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt (Principal) - Non-Growth Related	\$ 48,507	\$ 50,147	\$ 51,843	\$ 53,595	\$ 55,408	\$ 57,281	\$ 59,218	\$ 61,220	\$ 63,290
Existing Debt (Interest) - Non-Growth Related	\$ 68,739	\$ 67,099	\$ 65,403	\$ 63,650	\$ 61,838	\$ 59,964	\$ 58,028	\$ 56,025	\$ 53,955
New Non-Growth Related Debt (Principal)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Non-Growth Related Debt (Interest)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfer to Capital Reserve	\$ 432,038	\$ 469,777	\$ 517,077	\$ 569,312	\$ 628,062	\$ 683,419	\$ 755,056	\$ 831,343	\$ 899,178
<b>Sub Total Capital Related</b>	<b>\$ 872,416</b>	<b>\$ 919,855</b>	<b>\$ 977,167</b>	<b>\$ 1,039,732</b>	<b>\$ 1,109,143</b>	<b>\$ 1,175,502</b>	<b>\$ 1,258,493</b>	<b>\$ 1,346,495</b>	<b>\$ 1,426,422</b>
<b>Total Expenditures</b>	<b>\$ 1,578,294</b>	<b>\$ 1,639,765</b>	<b>\$ 1,711,091</b>	<b>\$ 1,787,774</b>	<b>\$ 1,871,808</b>	<b>\$ 1,953,094</b>	<b>\$ 2,051,317</b>	<b>\$ 2,154,655</b>	<b>\$ 2,250,423</b>



Table B-7 (continued)  
Operating Budget Forecast

Description	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Revenues</b>									
Base Charge	\$ 735,483	\$ 782,605	\$ 816,771	\$ 859,374	\$ 905,382	\$ 951,795	\$ 1,004,158	\$ 1,063,514	\$ 1,120,338
Misc. Base Charge from New Development	\$ 28,300	\$ 7,365	\$ 14,951	\$ 15,176	\$ 17,329	\$ 15,634	\$ 21,820	\$ 22,147	\$ 18,392
Public Utility Grant Program (M	\$ 18,700	\$ 19,100	\$ 19,500	\$ 19,900	\$ 20,300	\$ 20,700	\$ 21,100	\$ 21,500	\$ 21,900
Miscellaneous Revenue - Sysco	\$ 2,500	\$ 2,600	\$ 2,700	\$ 2,800	\$ 2,900	\$ 3,000	\$ 3,100	\$ 3,200	\$ 3,300
Rent Revenue	\$ 4,600	\$ 4,700	\$ 4,800	\$ 4,900	\$ 5,000	\$ 5,100	\$ 5,200	\$ 5,300	\$ 5,400
Meter Installation Revenue	\$ 10,000	\$ 10,200	\$ 10,400	\$ 10,600	\$ 10,800	\$ 11,000	\$ 11,200	\$ 11,400	\$ 11,600
User Fees and Service Charge	\$ 8,400	\$ 8,600	\$ 8,800	\$ 9,000	\$ 9,200	\$ 9,400	\$ 9,600	\$ 9,800	\$ 10,000
Local Improvements - Water/Se	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water & Sewer Account Set Up	\$ 11,750	\$ 12,000	\$ 12,200	\$ 12,400	\$ 12,600	\$ 12,900	\$ 13,200	\$ 13,500	\$ 13,800
Locates & User Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Write off - Contra Revenue Acc	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Penalty and Interest Income -	\$ 13,000	\$ 13,300	\$ 13,600	\$ 13,900	\$ 14,200	\$ 14,500	\$ 14,800	\$ 15,100	\$ 15,400
Miscellaneous Revenue - Sysco Oper. Wastewater Agreement	\$ 47,000	\$ 47,900	\$ 48,900	\$ 49,900	\$ 50,900	\$ 51,900	\$ 52,900	\$ 54,000	\$ 55,100
Miscellaneous Revenue - Kawartha Downs Wastewater Agreement Revenue	\$ 52,000	\$ 53,000	\$ 54,100	\$ 55,200	\$ 56,300	\$ 57,400	\$ 58,500	\$ 59,700	\$ 60,900
<b>Other Revenue</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions from Development Charges Reserve Fund	\$ 323,132	\$ 332,833	\$ 342,844	\$ 353,175	\$ 363,836	\$ 374,837	\$ 386,191	\$ 397,907	\$ 409,997
Contributions from Reserves / Reserve Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Operating Revenue</b>	<b>\$ 1,255,365</b>	<b>\$ 1,294,704</b>	<b>\$ 1,350,067</b>	<b>\$ 1,406,825</b>	<b>\$ 1,469,247</b>	<b>\$ 1,528,667</b>	<b>\$ 1,602,268</b>	<b>\$ 1,677,568</b>	<b>\$ 1,746,628</b>
<b>Wastewater Billing Recovery - Total</b>	<b>\$ 322,928</b>	<b>\$ 345,062</b>	<b>\$ 361,024</b>	<b>\$ 380,949</b>	<b>\$ 402,562</b>	<b>\$ 424,427</b>	<b>\$ 449,048</b>	<b>\$ 477,087</b>	<b>\$ 503,795</b>

Table B-8  
Wastewater Rate Forecast

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Wastewater Billing Recovery	\$ 322,928	\$ 345,062	\$ 361,024	\$ 380,949	\$ 402,562	\$ 424,427	\$ 449,048	\$ 477,087	\$ 503,795
Total Volume (m <sup>3</sup> )	\$ 129,690	\$ 136,550	\$ 140,750	\$ 146,350	\$ 152,370	\$ 158,250	\$ 164,970	\$ 172,670	\$ 179,670
<b>Constant Rate</b>	<b>\$ 2.49</b>	<b>\$ 2.53</b>	<b>\$ 2.57</b>	<b>\$ 2.60</b>	<b>\$ 2.64</b>	<b>\$ 2.68</b>	<b>\$ 2.72</b>	<b>\$ 2.76</b>	<b>\$ 2.80</b>
<b>Annual Percentage Change</b>	<b>0%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>	<b>1.50%</b>

**The Township of Cavan Monaghan**

**By-law No. 2021-67**

**Being a by-law to impose Water and Wastewater User Fees and Charges**

**Whereas** Section 391 of the Municipal Act, 2001, S.O. c.25 as amended, authorizes municipalities and local boards to impose fees or charges on persons for services or activities provided or done by or on behalf of it; for costs payable by it for services or activities provided or done by or on behalf of any other municipality or any local board; and for the use of its property including property under its control;

**And Whereas** the costs included in a fee or charge may include costs incurred by the municipality or local board related to administration, enforcement and the establishment, acquisition and replacement of capital assets;

**And Whereas** a fee or charge may be imposed whether or not it is mandatory for the municipality or local board imposing the fee or charge to provide or do the service or activity, pay the costs or allow the use of the property;

**Now Therefore** the Council for the Township of Cavan Monaghan hereby enacts as follows:

1. That Schedule "A" attached hereto shall be comprised of the list of fees and charges for Water and Wastewater User Fees and Charges By-law for the years 2022 - 2025 for the Township of Cavan Monaghan.
2. That By-law No. 2020-66 being a by-law to impose Water and Wastewater User Fees and Charges be repealed in its entirety.
3. That this By-law shall be effective the 15<sup>th</sup> day of November, 2021.

Read a first, second and third time and passed this 15<sup>th</sup> day of November, 2021.

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**Scott McFadden**  
Mayor

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**Cindy Page**  
Clerk

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2021-67

Water service rates to impose upon owners or occupants of land - Bi Monthly

#### Millbrook Water Service Rate - Part A

	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 1.82	\$ 1.82	\$ 1.85	\$ 1.88	\$ 1.91	\$ 1.94
Bulk Water Rate	\$ 3.08	\$ 3.08	\$ 3.13	\$ 3.18	\$ 3.23	\$ 3.28
<b>Meter Size (mm) - Fixed Charge - Base</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15/18 mm meter	\$ 65.35	\$ 65.35	\$ 66.33	\$ 67.32	\$ 68.33	\$ 69.35
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 119.34	\$ 119.34	\$ 121.13	\$ 122.95	\$ 124.79	\$ 126.66
40 mm meter	\$ 271.48	\$ 271.48	\$ 275.55	\$ 279.68	\$ 283.88	\$ 288.14
50 mm meter	\$ 632.45	\$ 632.45	\$ 641.94	\$ 651.57	\$ 661.34	\$ 671.26
75 mm meter	\$ 1,306.04	\$ 1,306.04	\$ 1,325.63	\$ 1,345.51	\$ 1,365.69	\$ 1,386.18
100 mm meter	\$ 2,316.13	\$ 2,316.13	\$ 2,350.87	\$ 2,386.13	\$ 2,421.92	\$ 2,458.25

#### Millbrook Ward Water Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	\$ 298.86	\$ 303.34	\$ 307.89	\$ 312.51
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 395.36	\$ 395.36	\$ 401.29	\$ 407.31	\$ 413.42	\$ 419.62
40 mm meter	\$ 604.48	\$ 604.48	\$ 613.55	\$ 622.75	\$ 632.09	\$ 641.57
50 mm meter	\$ 967.58	\$ 967.58	\$ 982.09	\$ 996.82	\$ 1,011.77	\$ 1,026.95
75 mm meter	\$ 1,932.03	\$ 1,932.03	\$ 1,961.01	\$ 1,990.43	\$ 2,020.29	\$ 2,050.59
100 mm meter	\$ 4,827.46	\$ 4,827.46	\$ 4,899.87	\$ 4,973.37	\$ 5,047.97	\$ 5,123.69

#### Millbrook Ward Water Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Penalty of late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Installation of a new 15 mm water meter	\$ 412.00	\$ 412.00	\$ 418.18	\$ 424.45	\$ 430.82	\$ 437.28
Installation of a new 18 mm water meter	\$ 470.27	\$ 470.27	\$ 477.32	\$ 484.48	\$ 491.75	\$ 499.13
Installation of a new 25 mm water meter	\$ 528.53	\$ 528.53	\$ 536.46	\$ 544.51	\$ 552.68	\$ 560.97
Installation of a new 50 mm water meter	\$ 1,407.67	\$ 1,407.67	\$ 1,428.79	\$ 1,450.22	\$ 1,471.97	\$ 1,494.05
Connection Fee for existing water service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of water service to property line	As per municipal contractor for time and materials paid by property owner.					

#### Water & Sewer Miscellaneous Charges - Part D

Remote Read Touchpad (new)	\$150.00 minimum fee or cost recovery, as amended					
Touch Pad Repair Fee	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Meter Accuracy Test (If meter meets specifications)	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Meter Accuracy Test (If meter does not meet specifications)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Application for Water/Wastewater Allocation Assignment	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Relocate Touch Pad Admin. Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Smart Card Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Visa Charge (non cash discounted)	3% of payment					
Penalty of Late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Returned Payment Fee	Please refer to the current User Fees and Charges By-law					
Duplicate Invoice or Statement						
Payment Transfer between Accounts (Customer Error)						
PAP Cancellation (< 21 Calendar Days before Due Date)						
Transfer to Tax Roll for Collection (arrears 90 days or greater)						

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2021-67

Sewer service rates to impose upon owners or occupants of land - Bi Monthly

Sewer Rates	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 2.49	\$ 2.49	\$ 2.53	\$ 2.57	\$ 2.61	\$ 2.65
<b>Meter Size (mm) - Fixed Charge - Base Rate</b>						
15/18 mm meter	\$ 120.94	\$ 120.94	\$ 122.75	\$ 124.59	\$ 126.46	\$ 128.36
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 224.66	\$ 224.66	\$ 228.03	\$ 231.45	\$ 234.92	\$ 238.44
40 mm meter	\$ 558.63	\$ 558.63	\$ 567.01	\$ 575.52	\$ 584.15	\$ 592.91
50 mm meter	\$ 1,324.67	\$ 1,324.67	\$ 1,344.54	\$ 1,364.71	\$ 1,385.18	\$ 1,405.96
75 mm meter	\$ 2,747.49	\$ 2,747.49	\$ 2,788.70	\$ 2,830.53	\$ 2,872.99	\$ 2,916.08
100 mm meter	\$ 4,882.50	\$ 4,882.50	\$ 4,955.74	\$ 5,030.08	\$ 5,105.53	\$ 5,182.11

Any person(s) discharging and/or depositing clean water either from weeping tiles and/or sump pumps into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

Any person(s) discharging and/or depositing substances other than those intended to be discharged and/or deposited into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

#### Millbrook Ward Sewer Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	\$ 298.86	\$ 303.34	\$ 307.89	\$ 312.51
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 395.36	\$ 395.36	\$ 401.29	\$ 407.31	\$ 413.42	\$ 419.62
40 mm meter	\$ 604.48	\$ 604.48	\$ 613.55	\$ 622.75	\$ 632.09	\$ 641.57
50 mm meter	\$ 967.58	\$ 967.58	\$ 982.09	\$ 996.82	\$ 1,011.77	\$ 1,026.95
75 mm meter	\$ 1,932.03	\$ 1,932.03	\$ 1,961.01	\$ 1,990.43	\$ 2,020.29	\$ 2,050.59
100 mm meter	\$ 4,827.46	\$ 4,827.46	\$ 4,899.87	\$ 4,973.37	\$ 5,047.97	\$ 5,123.69

#### Millbrook Ward Sewer Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Connection Fee for existing sewer service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of sewer service to property line	As per municipal contractor for time and materials paid by property owner.					

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2020-66

Water service rates to impose upon owners or occupants of land - Bi Monthly

#### Millbrook Water Service Rate - Part A

	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 1.82	\$ 1.82	<i>pending Council Review September 2021</i>			
Bulk Water Rate	\$ 3.08	\$ 3.08				
<b>Meter Size (mm) - Fixed Charge - Base</b>	\$ -	\$ -				
15/18 mm meter	\$ 65.35	\$ 65.35				
18 mm meter (inactive)	\$ -	\$ -				
25 mm meter	\$ 119.34	\$ 119.34				
40 mm meter	\$ 271.48	\$ 271.48				
50 mm meter	\$ 632.45	\$ 632.45				
75 mm meter	\$ 1,306.04	\$ 1,306.04				
100 mm meter	\$ 2,316.13	\$ 2,316.13				

#### Millbrook Ward Water Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	<i>pending Council Review September 2021</i>			
18 mm meter (inactive)	\$ -	\$ -				
25 mm meter	\$ 395.36	\$ 395.36				
40 mm meter	\$ 604.48	\$ 604.48				
50 mm meter	\$ 967.58	\$ 967.58				
75 mm meter	\$ 1,932.03	\$ 1,932.03				
100 mm meter	\$ 4,827.46	\$ 4,827.46				

#### Millbrook Ward Water Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Penalty of late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Installation of a new 15 mm water meter	\$ 412.00	\$ 412.00	<i>pending Council Review September 2021</i>			
Installation of a new 18 mm water meter	\$ 470.27	\$ 470.27				
Installation of a new 25 mm water meter	\$ 528.53	\$ 528.53				
Installation of a new 50 mm water meter	\$ 1,407.67	\$ 1,407.67				
Connection Fee for existing water service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of water service to property line	As per municipal contractor for time and materials paid by property owner.					

#### Water & Sewer Miscellaneous Charges - Part D

Remote Read Touchpad (new)	\$150.00 minimum fee or cost recovery, as amended					
Touch Pad Repair Fee	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Meter Accuracy Test (If meter meets specifications)	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Meter Accuracy Test (If meter does not meet specifications)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Application for Water/Wastewater Allocation Assignment	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Relocate Touch Pad Admin. Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Smart Card Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Visa Charge (non cash discounted)	3% of payment					
Penalty of Late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Returned Payment Fee	Please refer to the current User Fees and Charges By-law					
Duplicate Invoice or Statement						
Payment Transfer between Accounts (Customer Error)						
PAP Cancellation (< 21 Calendar Days before Due Date)						
Transfer to Tax Roll for Collection (arrears 90 days or greater)						

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2020-66

Sewer service rates to impose upon owners or occupants of land - Bi Monthly

Sewer Rates	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 2.49	\$ 2.49	<i>pending Council Review September 2021</i>			
<b>Meter Size (mm) - Fixed Charge - Base Rate</b>						
15/18 mm meter	\$ 120.94	\$ 120.94	<i>pending Council Review September 2021</i>			
18 mm meter (inactive)		\$ -				
25 mm meter	\$ 224.66	\$ 224.66				
40 mm meter	\$ 558.63	\$ 558.63				
50 mm meter	\$ 1,324.67	\$ 1,324.67				
75 mm meter	\$ 2,747.49	\$ 2,747.49				
100 mm meter	\$ 4,882.50	\$ 4,882.50				

Any person(s) discharging and/or depositing clean water either from weeping tiles and/or sump pumps into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

Any person(s) discharging and/or depositing substances other than those intended to be discharged and/or deposited into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

#### Millbrook Ward Sewer Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	<i>pending Council Review September 2021</i>			
18 mm meter (inactive)		\$ -				
25 mm meter	\$ 395.36	\$ 395.36				
40 mm meter	\$ 604.48	\$ 604.48				
50 mm meter	\$ 967.58	\$ 967.58				
75 mm meter	\$ 1,932.03	\$ 1,932.03				
100 mm meter	\$ 4,827.46	\$ 4,827.46				

#### Millbrook Ward Sewer Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Connection Fee for existing sewer service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of sewer service to property line	As per municipal contractor for time and materials paid by property owner.					

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.





**Regular Council Meeting**

<b>To:</b>	Mayor and Council
<b>Date:</b>	November 15, 2021
<b>From:</b>	Wayne Hancock, Director of Public Works
<b>Report Number:</b>	Public Works 2021-18
<b>Subject:</b>	RFP- PW-21-02 for Design and Engineering Services for Main Street Watermain Replacement

**Recommendation:**

That Council authorize staff to retain the services of Engage Engineering Ltd. for the design and engineering services for Main Street Watermain in the amount of \$42,130.00 plus net H.S.T.in the amount of \$741.49 for a total amount of \$42,871.49.

**Overview:**

On August 26, 2021, Township staff circulated and posted a Request for Proposal (RFP) for Design and Engineering Services for Main Street Watermain Replacement. The bidding for this RFP closed September 28, 2021.

This project has previously been approved under the water/wastewater capital works in the 2021 budget, but was subject to receiving funding under one of the programs available from either the Province or Federal governments. To date, applications for Main Street Watermain and Urbanization have been unsuccessful.

We have most recently applied under the Ministry of Infrastructure’s Investing in Canada Infrastructure Program: Green Infrastructure Stream and awaiting a formal response from the Province on this application.

The RFP outlined the following requirements:

- a. Data Collection and Review
- b. Subconsultant Requirements
- c. Property Considerations
- d. Utilities Requirements
- e. Detailed Design
- f. Tendering
- g. Provisional: Permits and Approvals

- h. Provisional: Contract Administration and Inspection Administration
- i. Provisional: Inspection

The Township asked proponents to outline these items to be addressed in the proposal and to provide a description of the firm, associated sub consultants with at least three references and relevant work experience. All consultants were to submit their detailed proposals including financial break down that would be associated with their design plans.

The RFP outlined the evaluating criteria. As per the RFP, proposals were evaluated using the following criteria:

Category	Weight
A. Company and Key Personnel	
<ul style="list-style-type: none"> <li>• Direct company and principal staff experience with relevant experience</li> </ul>	5 %
<ul style="list-style-type: none"> <li>• The experience of the project team members that will be assigned to the project</li> </ul>	20 %
<ul style="list-style-type: none"> <li>• Appropriate reference information gathered from customers that the vendor has provided like services</li> </ul>	5 %
B. Technical Approach	
<ul style="list-style-type: none"> <li>• Quality of overall approach, work methodology, identification of project consultants</li> </ul>	20 %
<ul style="list-style-type: none"> <li>• Work plan and schedule (responsiveness to meet or exceed requirements)</li> </ul>	20 %
C. Consulting service Cost	
<ul style="list-style-type: none"> <li>• Cost of consulting services with details as to the method and basis of compensation including a breakdown of overall costs including all fees and other charges</li> </ul>	30 %

The Township received four (4) proposals from qualified consultants. A list of qualified consultants and associated score, rank and pre-tax costs of design and engineering services are provided below:

<b>Company</b>	<b>Score</b>	<b>Rank</b>	<b>Pre-tax Cost</b>
Engage Engineering Ltd.	86	1	\$42,130.00
Jewell Engineering	78	2	\$56,625.00
D.M. Wills Associates Ltd.	76	3	\$61,112.00
Greer Galloway Consulting Eng.	68	4	\$72,692.00

Senior staff completed the review of the proposals. As noted in the recommendation, staff are recommending to proceed with the proposal provided by Engage Engineering.

**Financial Impact:**

The capital budget for water/wastewater included the capital amount of \$250,000.00. Staff are recommending that we complete the design for this project to the amount of \$42,871.49 that includes net municipal H.S.T. All remaining funds will be rolled over into the 2022 Capital Budget. Staff will report back on the outcome of the application for funding for this project.

**Attachment:**

None

Respectfully Submitted by,

Reviewed by,

Wayne Hancock  
Director of Public Works

Yvette Hurley  
Chief Administrative Officer



## Regular Council Meeting

<b>To:</b>	Mayor and Council
<b>Date:</b>	November 15, 2021
<b>From:</b>	Wayne Hancock, Director of Public Works
<b>Report Number:</b>	Public Works 2021-19
<b>Subject:</b>	Former Millbrook Correctional Facility Groundwater Investigation

### Recommendations:

1. That Council receive Public Works Report No. 2021-19 as information; and
2. That Council direct staff to meet with MECP and IO to ensure testing continues at the former correctional facility and the municipal wells; and
3. That Council direct staff to seek legal advice and identify the Municipality’s liability related to future testing and treatment of the Municipal Supply Wells; and
4. That Council request in writing to be notified of the Stage 3 Circulation as we have expressed a formal interest on the property.

### Overview:

The Province of Ontario manages the lands that make-up the former Millbrook Correctional Facility (Site) on County Road 21 on the western extent of Millbrook. Infrastructure Ontario (IO), a government corporation that reports to Ontario’s Minister of Infrastructure, manages the Site and all contracts related to its demolition and environmental works. The facility was closed in 2003 and the buildings were demolished in 2015. In preparation for demolition, the Site was investigated for potential contamination through a process that paralleled the Record of Site Condition (RSC) process, a regulatory process provided by the Ministry of Environment, Conservation, and Parks (MECP) (O.Reg 153/04).

Staff have reported on this regularly and are again providing Council with an update, the previous Public Works Report 2019-10 is attached. (Attachment No. 1)

IO selected a new environmental consultant for 2020, GHD Group. IO’s goal is to reduce their liability and provide a future owner with information about the risks associated with on-site contamination.

IO indicated that the timing of offering the site for disposition is yet to be determined depending on the result of the continued environmental monitoring. According to IO, they believe the groundwater monitoring will be continued for an unknown number of years.

With regards to the eventual surplus sale of the lands, IO indicate that the circulation of the property (referred to as Stages 1 and 2) to other ministries and agencies has been completed; and they have re-confirmed that the property is indeed surplus to provincial needs. However, IO has not initiated what they refer to as Stage 3 Circulation, in which other levels of government (including the local municipality), not for profit organizations, eligible indigenous groups and other entities in the broader public sector are offered the property at fair value. Without having a specific timeline figured out as to when provincial responsibility for the site will be completed, IO stated that it is difficult to target when the Stage 3 Circulation will begin.

The MECP was consulted and have indicated that they are presently testing at the Municipal Wells semi-annually. They have indicated that they would like the Township to start and continue with this testing at the same interval of every six months. Staff continue to take the position that this should not be the Municipality's responsibility and believe it should remain at the Provincial level. Ideally the MECP will continue to undertake testing and oversight of the former correctional facility until a record of site condition (RSC) for the site has been filed and audited. This should be a minimum requirement of the Province on these lands before they offer them for sale, though this process is voluntary and to date IO has indicated that they are mirroring the environmental site assessment process but not filing a RSC. The Municipality should seek legal advice to evaluate options and next steps for Council to consider with regards to future testing of the Municipal Wells and related liability for treatment should future testing indicate the presence of contaminants in the raw water supply.

Public Works Report No. 2019-10 was presented in 2019 outlining the key findings from the 2019 Groundwater Monitoring Report - Former Millbrook Correctional Centre - Millbrook, ON, date December, 2019 (Cole, 2019), which was commissioned by Infrastructure Ontario (IO) on the former Millbrook Correctional Facility property, MECP Sampling of the Millbrook Municipal Supply Wells, and their recommendations for future works.

Since the 2019 Information Update, Infrastructure Ontario (IO) continues to undertake the onsite sampling through their contracted environmental consultant GHD Limited as summarized in the report 2020-2021 Groundwater Monitoring Report - Former Millbrook Correctional Centre - Millbrook, ON, date April 21, 2021 (GHD, 2021). This report is too large to be illustrated as an attachment and is available upon request (Attachment No. 2). The MECP continues to undertake sampling from the Millbrook Municipal Supply Wells using internal staff, though at a reduced frequency in 2020 and 2021, of one sampling event annually.

The most recent annual monitoring report (GHD, 2021) spans the monitoring period from April 2020 through February 2021. During this period, four rounds of groundwater sampling were conducted at 25 sampling intervals spanning 10 locations distributed across the site, concentrated on the site boundary nearest the Municipal Wells. The intervals may have the same surface location but are sampled from varying depths. The intervals target a distinct subsurface horizon or layer, there are three main layers

identified at the site. The uppermost, Layer 1, is an unconfined water table aquifer. Layer 2, the intermediate layer, is an aquitard that holds water in the water table (Layer 1) above by restricting downward movement while also confining the lower unit (Layer 3) by restricting the upwards movement of water. Layer 3 is the lower confined aquifer. The aquifers (geological units in the subsurface that allow movement of water through their pore space) are predominantly sands of varying grain size with some silts and gravel. The aquitard (a geological unit in the subsurface that restrict the movement of water given its relatively small pore spaces) is predominantly clay with silts and stones. A complete description of the site and the hydrogeological layers are provided in the 2020-2021 Groundwater Monitoring Report (GHD, 2021).

The water levels recorded from the site were used to verify the direction of groundwater flow in the two aquifers. In 2017 through 2020, the groundwater direction in Layer 1 follows the topography from the local high ground in the vicinity of the former Millbrook Correctional Facility outwards and, in the area of study, is predominantly East to Southeast (Feb 2021 data). The direction of groundwater flow in Layer 3 is towards the Southeast (Feb. 2021 data).

The Millbrook Municipal Supply Wells pump water from layer 3 and are located southeast of the former correctional facility site.

The water quality sampling on the Infrastructure Ontario property and trend analysis to February 2021 indicates that the concentrations of PCE are declining since the peak concentrations observed in November 2014 on the whole. The highest concentrations up until April 2020 were observed in MW 3-14 which is installed at the south east corner of the property in the upper Layer 3 interval. Since April 2020 MW 3-14, and for the first time since monitoring began, has been non-detect for PCE (three subsequent events). Concentrations of PCE at MW 3-14 ranged from 3.4 to 5.6 micrograms per liter (ug/L) or parts per billion in ten samples from 2014 through 2016, and from 1.1 to 3.1 ug/L in ten samples from 2017 through 2019, with only one detection of PCE at a concentration of 2.65 ug/L through to 2021. One other well on site, MW 6-16, had concentrations that exceeded the Site Condition Standard (SCS) of 1.6 ug/L at the uppermost interval of Layer 3. MW 6-16 has three discreet sampling intervals and only the upper most has observed concentrations of PCE. The concentrations at this location ranged from 1.5 to 3.8 ug/L in 2016 and non-detect to 2.6 ug/L in 2017 through 2019, MW 6-16 uppermost interval was non-detect in 2020-2021. MW 15-5 has an upper, middle, and lower sampling interval in Layer 3, the uppermost interval had a single detection in 2015 and has since been non-detect. The middle interval (represented by sampling ports 5 and 6 in MW 15-5) had two detections prior to 2020-2021, both in 2016 ranging from 2.3 to 3.2 ug/L of PCE. In May 2020, this interval was sampled in triplicate and exhibited concentrations ranging from 5.39 to 6.12 ug/L of PCE. This was the highest detected concentration of PCE in any of the sampling intervals since monitoring began in 2014. The three subsequent sampling events at this location and interval were non-detect (Aug. 2020, Oct. 2020, and Jan. 2021). The remaining four wells installed in Layer 3 which include thirteen screened intervals, including the remaining three intervals at MW 5-15, had no exceedances of the SCS in 2020-2021. In all cases the peak concentrations analyzed in 2019 are consistent or slightly higher than the previous year concentrations in Layer 1 and consistent or slightly lower than the previous year concentrations in Layer 3, with the exception of the May 2020 event at MW 5-15 as discussed above.

The SCS of 1.6 ug/L is determined based on the lowest level acceptable to the most sensitive receptor. The receptor in this case is the migration of vapour to indoor spaces. In comparison the highest acceptable level considered safe in drinking water is 10 ug/L, which to date, has not been observed in any of the onsite wells. Soil vapour sampling was recommended in previous comments from the Township, and was to be undertaken in 2020. The report (GHD, 2021) indicates the locations of the soil vapour probes, suggesting they were installed but otherwise the report does not mention them. Email correspondence from IO in May 2020 indicated that soil vapour sampling would commence in June.

The Millbrook Municipal Supply Wells were sampled quarterly through 2017 and 2019 and on one occasion each in 2020 and 2021 by the MECP. The sampling includes raw water samples retrieved from each of the three wells that supply drinking water to the Millbrook serviced area. Neither of the events (August 11, 2020 and August 3, 2021) reported detectable levels of Perchloroethylene (PCE) in the groundwater (the contaminant found in groundwater at the former correctional facility). MECP sampling includes a longer list of volatile compounds and the August 2020 sampling indicated a detectable concentration of Benzene in the raw water samples. MECP was asked for comment by the Township regarding this detection. MECP indicated that Benzene was also observed in the trip blank (bottles filled with distilled water at site) and as such the Ministry indicated that it was an issue with the bottle preservatives and not representative of the raw water quality. In 2021 samples were collected in un-preserved bottles and there were no detections of any parameters from the Municipal Supply Wells.

The 2020-2021 annual report included additional information related to aquifer tests completed in Layer 1 and Layer 3 to identify the hydraulic conductivity of the aquifer at the screened interval. These tests are physical in nature and provided a quantified evaluation of the hydraulic conductivity and aquifer groundwater velocities that improved upon the previous assumptions which were based on inferred velocities from grain size analyses. The updated velocities indicate that the groundwater velocity in Layer 1 is 45 meters per year and in Layer 3 are 90 meter per year, this increased velocity from the 2019 report (Cole, 2019) is related to increased accuracy of the hydraulic gradient and effective porosity estimations. For reference, the previously calculated velocity in Layer 1 was 10 meters per year and in Layer 3 were 41 meter per year. This information indicates that groundwater and its dissolved contaminants move quicker than previously expected, however; given the nature of the contaminant of concern this doesn't mean the PCE travels at the same rate. PCE is a Dense Non-Aqueous Phase Liquid (DNAPL) and is not readily dissolved in water, it remains in a separate phase and pools in the subsurface. Therefore PCE does not necessarily move with the groundwater in its non-aqueous (original state) form, only when small fractions of it are dissolved in groundwater would they be expected to migrate at the velocities indicated.

In 2020, automatic dataloggers were installed in six wells, four in Layer 1 (MW 1-14, MW 17, MW 22, and MW 37) as well as two in Layer 3 (MW 2-14 and MW 3-14). The dataloggers sense the pressure in each well and through barometric compensation and level correction from manual measurements, provides a record of groundwater levels on 15 minute intervals over the period from April 27, 2020 through October 30, 2020. The data indicated that the Layer 3 wells showed cyclical drawdowns consistent with pumping cycles from the Municipal Wells, as would be expected given these wells intercept the same unit (Layer 3) as the Municipal Wells. The wells in Layer 1 however,

showed no signs of response from pumping at the Municipal Wells. This indicates that the confining Layer 2, the aquitard between Layer 1 and Layer 3, is in fact competent and extensive (at least at the local scale – IO property to the Municipal Wells) and as such validates the concept that Layer 2 acts as an aquitard and restricts the movement of water and contaminants between Layer 1 and Layer 3.

Infrastructure Ontario (IO) has provided an Annual Monitoring Report for the lands from 2020-2021 (GHD, 2021) though, unlike previous years, it does not include any recommendations or future work plans. IO was contacted to determine the scope of work for the remainder of 2021 and 2022, as well as clarification regarding the lack of data or discussions regarding the soil vapour analyses from 2020 and early 2021, no response has been received to date.

The Township continues to engage Cambium Inc. to provide technical review and comments on the monitoring undertaken by both the MECP and Infrastructure Ontario for the Municipal Supply Wells and the on-site monitoring wells respectively. Cambium Inc. is satisfied with the monitoring report provided for 2020-2021 and has requested clarification from Infrastructure Ontario, through the Township, with respect to the future work program and soil vapour analysis. MECP sampling was reduced from quarterly to Annually in 2020 as a result of Covid-19 limitations, additional dialogue between the Township and the MECP is warranted to determine the fate of this sampling and the frequency going forward.

#### **Financial Impact:**

The Township engaged Cambium to provide professional opinion and technical review of the information, data, analysis, conclusions and work plans provided by Infrastructure Ontario in 2020 through 2021. The contract is on an as needed basis and based on hourly effort at a pre-approved hourly rate. In 2020 the cost to the Township for Cambium's involvement was \$2,880.

Should the Township choose to incur the sampling and analytical costs for PCE analysis of the raw water from the Millbrook Supply Wells, a quarterly cost of \$750 or annual cost of \$3,000 is estimated. The estimate is based on sampling 3 wells on a quarterly basis and analysis for a full suite of VOCs, including Perchloroethylene (PCE) and its breakdown products.

#### **Attachments:**

1. PW Report 2019-10 - Former Millbrook Correctional Facility Groundwater Investigation
2. 2020-2021 Groundwater Monitoring Report - Former Millbrook Correctional Centre - Millbrook, ON, date April 21, 2021 (GHD, 2021) \*available upon request

Respectfully Submitted by,

Reviewed by,

Wayne Hancock  
Director of Public Works

Yvette Hurley  
Chief Administrative Officer





## Regular Council Meeting

<b>To:</b>	Mayor and Council
<b>Date:</b>	May 21, 2019
<b>From:</b>	Wayne Hancock, Director of Public Works
<b>Report Number:</b>	Public Works 2019-10
<b>Subject:</b>	Former Millbrook Correctional Facility Groundwater Investigation

### Recommendation:

That Council receive Public Works Report No. 2019-10 Former Millbrook Correctional Facility Groundwater Investigation for information.

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### Overview:

The Province of Ontario manages the lands that make-up the former Millbrook Correctional Facility (Site) on County Road 21 on the western extent of Millbrook. Infrastructure Ontario (IO), a government corporation that reports to Ontario's Minister of Infrastructure, manages the Site and all contracts related to its demolition and environmental works. The facility was closed in 2003 and the buildings were demolished in 2015. In preparation for demolition, the Site was investigated for potential contamination through a process that paralleled the Record of Site Condition (RSC) process, a regulatory process provided by the Ministry of Environment, Conservation, and Parks (MOECP) (O.Reg 153/04).

Public Works Report No. 2018-13 was presented in 2018 outlining the key findings from studies commissioned by Infrastructure Ontario (IO) on the former Millbrook Correctional Facility property, Ministry of Environment, Conservation, and Parks (MOECP) Sampling of the Millbrook Municipal Supply Wells, and their recommendations for future works.

Since the 2017 Information Update, the province has continued to undertake sampling and analysis of groundwater for Chlorinated Volatile Organic Compounds (CVOC), including the contaminant of concern, Tetrachloroethylene (also known as Perchloroethylene or PCE). Infrastructure Ontario (IO) continues to undertake the onsite sampling through their contracted environmental consultant Cole Engineering Group Ltd. (Cole, 2019), while the Ministry of Environment, Conservation, and Parks (MOECP) continues to undertake quarterly sampling from the Millbrook Municipal Supply Wells using internal staff.

In 2017, four rounds of sampling were conducted at 22 sampling intervals spanning 11 locations distributed across the site, concentrated on the site boundary nearest the

Municipal Wells. Two of the intervals were installed in 2017 by Cole Engineering Group Ltd. (Cole, 2019), beside the south east property boundary and between the former facility and the Municipal Wells. The intervals may have the same surface location but are sampled from varying depths. The intervals target a distinct subsurface horizon or layer, there are three main layers identified at the site. The uppermost, Layer 1, is an unconfined water table aquifer. Layer 2, the intermediate layer, is an aquitard that holds water in the water table (Layer 1) above by restricting downward movement while also confining the lower unit (Layer 3) by restricting the upwards movement of water. Layer 3 is the lower confined aquifer. The aquifers (geological units in the subsurface that allow movement of water through their pore space) are predominantly sands of varying grain size with some silts and gravel. The aquitard (a geological unit in the subsurface that restrict the movement of water given its relatively small pore spaces) is predominantly clay with silts and stones. A complete description of the site and the hydrogeological layers are provided in the 2018 Groundwater Monitoring Report (Cole, 2019).

The water levels recorded from the site were used to verify the direction of groundwater flow in the two aquifers. In 2017 through 2018 the groundwater direction in Layer 1 follows the topography from the local high ground in the vicinity of the former Millbrook Correctional Facility outwards. The direction of groundwater flow in Layer 3 is towards the south east.

The Millbrook Municipal Supply Wells pump water from layer 3 and are located south east of the former correctional facility site.

The water quality sampling on the Infrastructure Ontario property to October 2018 indicates that the concentrations of PCE are declining since the peak concentrations observed in November 2014. The highest concentrations continue to be observed in MW 3-14 which is installed at the south east corner of the property in the upper Layer 3 interval. Concentrations ranged from 3.4 to 5.6 micrograms per liter (ug/L) or parts per billion in ten samples from 2014 through 2016, and from 1.1 to 3.1 ug/L in seven samples from 2017 and 2018. One other well on site, MW 6-16, had concentrations that exceeded the Site Condition Standard (SCS) of 1.6 ug/L at the uppermost interval of Layer 3. MW 6-16 has three discreet sampling intervals and only the upper most has observed concentrations of PCE. The concentrations at this location ranged from 1.5 to 3.8 ug/L in 2016 and non-detect to 2.6 ug/L in 2017 through 2018. The remaining four wells installed in Layer 3 which include twelve screened intervals as well as the remaining two intervals at MW 6-16 had no exceedances of the SCS in 2017 through 2018. The SCS of 1.6 ug/L is determined based on the lowest level acceptable to the most sensitive receptor. The receptor in this case is the migration of vapour to indoor spaces. In comparison the highest acceptable level considered safe in drinking water is 10 ug/L, which to date, has not been observed in any of the onsite wells.

The Millbrook Municipal Supply Wells were sampled quarterly through 2017 and 2018 by the Ministry of Environment, Conservation, and Parks (MOECP). The sampling includes raw water samples retrieved from each of the three wells that supply drinking water to the Millbrook serviced area. None of the events reported detectable levels of Perchloroethylene (PCE) in the groundwater. Ministry of Environment, Conservation, and Parks (MOECP) continues to sample the Municipal Wells until a long-term arrangement is in place.

Infrastructure Ontario (IO) has yet to provide an update with respect to the continuation of monitoring past 2019 but has committed to continue sampling through 2019 with three events; spring, summer, and fall and the circulation of a monitoring report in 2020.

The Township continues to engage Cambium Inc. to provide technical review and comments on the monitoring undertaken by both the Ministry of Environment, Conservation, and Parks (MOECP) and Infrastructure Ontario (IO) for the Municipal Supply Wells and the on-site monitoring wells respectively. Cambium Inc. is satisfied with the monitoring report provided for 2018 though has requested clarification from Infrastructure Ontario (IO) through the Township with respect to source identification, off-site vapour monitoring, and future work plans.

**Financial Impact:**

The Township engaged Cambium to provide professional opinion and technical review of the information, data, analysis, conclusions and work plans provided by Infrastructure Ontario (IO) in 2018 through 2019. The contract is on an as needed basis and based on hourly effort at a pre-approved hourly rate. In 2018 the cost to the Township for Cambium's involvement was \$1,140 and included discussions with Otonabee Region Conservation Authority (ORCA) with respect to a Source Protection Plan update concerning the site.

Should the Township choose to incur the sampling and analytical costs for PCE analysis of the raw water from the Millbrook Supply Wells, a quarterly cost of \$700 or annual cost of \$2,800 is estimated. The estimate was based on sampling 3 wells on a quarterly basis and analysis for a full suite of VOCs, including Perchloroethylene (PCE) and its breakdown products.

**Attachments:**

Attachment # 1 – 2018 Groundwater Monitoring Report - Former Millbrook Correctional Centre - Millbrook, ON, date January 2019 (Cole, 2019)

Attachment # 2 – Summary of Municipal Well Sampling 2017 – 2018

Attachment # 3 – Public Works Report No. 2018-13 Update for Information – Groundwater Monitoring

Respectfully Submitted by,

Reviewed by,

Wayne Hancock  
Director of Public Works

Yvette Hurley  
Chief Administrative Officer



**Regular Council Meeting**

<b>To:</b>	Mayor and Council
<b>Date:</b>	November 15, 2021
<b>From:</b>	Wayne Hancock, Director of Public Works
<b>Report Number:</b>	Public Works 2021-20
<b>Subject:</b>	Municipal Solar Units Update Revised

**Recommendations:**

1. That Council receive Public Works Report 2021-20 for information; and
2. That Council approve a reduced interest rate on the internal Solar units loan, from the Asset Replacement Reserve, to two percent (2%) interest from six percent (6%) on the principal of \$161,161.56 remaining at December 31, 2021 under the existing term ending January 1, 2025; and
3. That Staff report back to Council after the one year period on the success of the ongoing maintenance program, monitoring of the system and revenues by Generation Solar.

**Overview:**

On June 7, 2021 Public Works presented the Municipal Solar Units Update Report 2021-11, to bring forward an information report on the present feed in tariff MicroFIT contracts with Hydro One and several of the issues staff have been dealing with over the last number of years.

Council passed a motion “that Council receive the Municipal Solar Units Update for information; and that staff report back to Council with additional information with a comprehensive review and financial breakdown on the solar unit program to date including the expenses and revenues and the impact of the interest rate at three percent (3%) vs. six percent (6%)”. The Public Works department has reviewed the operations, the ongoing costs incurred to operate the solar units, the revenues achieved and possible improvements to the performance of these solar units.

When the Township first entered into the MicroFIT contracts with Hydro One, we had projected revenues estimated at \$8,000.00/unit per year and a projected loan repayment plan of twelve years, which included an interest rate of 6% payment to the Asset Replacement Reserve, which was the a standard lending rate at that time. The schedule of projected revenue estimates and repayment terms is attached to this report

(Attachment No.1) and was previously provided on historical reports. This schedule included the loan amount, repayment of principle, payment of interest and payment of a reserve fund for the ultimate disposition of the units. This ultimate disposition will be determined at a later date, nearing the end of the present contracts and should be a Report to Council on options on disposition.

During the last number of years, costs have been increasing with increased maintenance costs, and reduced revenues. To compound the problem, the solar industry has changed and many companies who originally installed solar units or maintained them are no longer in business. Staff had worked with various companies on reviewing individual problems and concluded with mixed success. Attachment No. 2 shows the revenues versus costs for the last seven years.

Annually in the budget process, the revenue shortfalls on the solar units budget are reported and have been historically covered by any surplus remaining under the Public Works Department.

In 2019, our Department contacted and hired a company to provide some specific maintenance to our solar units. They are local company and have great expertise in their support staff. The company has arranged to replace key parts to the operation including such parts as inverters, which were under warranty.

Through 2020 and 2021, we have had them review the individual sites to provide comments/recommendations on the sites themselves and review our revenues to date. In Attachment No. 3, the company has provided a Report "Pathway Report for the Township of Cavan Monaghan Toward Maximizing Revenues from Existing Assets". This report outlines the revenues of each site on the second page of the report and it is noted that all sites have fallen short of expectations. It sets out recommendations to correct some issues, such as shading. These issues have been corrected earlier this year. Concerning other operational matters, we have entered into a one-year contract with Generation Solar to ensure proper monitoring is occurring with regular maintenance in place. The annual cost of the contract is \$5,102.00 for all eight units, plus applicable H.S.T.

This company has also projected annual revenues should be at \$7,800.00 per year, which is comparable to our original estimate of \$8,000.00 per year. To monitor our performance through these units, we would have the company perform O & M for the one-year period and report back to Council on the results as it relates to revenues.

### **Financial Impact:**

The original capital cost, in 2013, of eight (8) 10kw Solar Units was \$461,258.88 and was internally financed at the lending rate of six percent (6%) through the Asset Replacement Reserve. A principal value of \$161,161.56 will be remaining as of December 31, 2021 under the existing term with final payment on January 1, 2025.

Attachment No. 1 outlines the original loan, annual loan repayments, disposal reserve transfers and annual maintenance as estimated.

As per Council's motion the Director of Finance, Kimberley Pope, has provided "the impact of the interest rate at three percent (3%) vs. six percent (6%)" comparison. However, we are recommending a two percent (2%) comparison which aligns with current lending rates and matches the internal rate for Development Charges & Federal Gas Tax Reserve balances, as approved by the Auditors, which represents a more current fiscal economic reality.

The following comparators below maintain a principal balance of \$161,161.56 for the Solar Units as of December 31, 2021, with the reduced rate to commence on January 1, 2022 the term ending date of January 1, 2025.

Interest Rate reduced to 3% from 6% (as per motion of Council information request);

- The 3% interest would be reduced the remaining interest revenues to \$7,562.27 from the original \$15,768.25 as projected under the original 6% ARR loan.
- The loss of interest revenue to the ARR reserve will be \$8,205.98 and will also reduce the corresponding interest expense under the Public Works Solar Budget.

Interest Rate reduced to 2% from 6% (as per current lending rates and internal interest rates, as approved by Auditors, used in DC Reserve & Federal Gas Tax Reserve);

- The 2% interest would be reduced the remaining interest revenues to \$5,017.42 from the original \$15,768.25 as projected under the original 6% ARR loan.
- The loss of interest revenue to the ARR reserve will be \$10,750.83 and will also reduce the corresponding interest expense under the Public Works Solar Budget.

Over the past eight years, the Solar Disposal Reserve has accumulated \$20,000 as of December 31, 2021. The annual disposal transfer of \$2,500 will continue for 12 more years to reach the original \$50,000 disposal commitment to the reserve.

Staff are recommending that any future annual surpluses generated, after loan repayment, disposal reserve transfers and operating expenses, to be placed in a separate reserve for Council's future consideration.

**Attachments:**

1. Original Loan Details, Projected Estimated Revenues & Repayment Terms
2. Revenue to Costs Summary 2013-2020
3. Generation Solar Report On Maximizing Revenues

Respectfully Submitted by,

Wayne Hancock,  
Director of Public Works

Kimberley Pope,  
Director of Finance/Treasurer

Reviewed by,

Yvette Hurley  
Chief Administrative Officer

# Attachment No. 1 - Original Loan Details, Projected Estimated Revenues & Repayment Terms

## Solar Power on Municipal Properties (ARR Loan)

### with Estimated Revenues & Repayment Terms

20 year calculation (11 year payback on principal)

Eight (8) \$10 Kw ground Mount (based on estimated revenue of \$0.445 per kW generated)

revised Nov. 2021 with reduced interest to 2% (2022-2025)

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>Combined 2027-2033 (same as 2026)</u>	<u>TOTAL</u>	
<b>PW 2013-26, MicroFIT Projects on 2 Municipal Properties</b>																	
Revenue of two (2) 10kw Units	\$ -	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 16,020.00	\$ 15,600.00	\$ 15,600.00	\$ 15,600.00	\$ 15,600.00	\$ 15,600.00	\$ 109,200.00	\$ 315,360.00	
Equipment, Installation & Warranty per 10kw Unit	\$ 51,490.56																
Capital Cost for two (2) 10kw Units	\$ 102,981.12																
<b>PW 2013-29, Solar Power on 6 (revised) Municipal Properties</b>																	
Revenue of Six (6) 10kw Units	\$ -	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 46,800.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 48,060.00	\$ 336,420.00	\$ 959,940.00	
Equipment, Installation & Warranty	\$ 51,490.56																
Hydro One	\$ 2,000.00																
Fencing	\$ 3,000.00																
Capital Cost per 10kw Unit	\$ 56,490.56																
Capital Cost for Nine (6) 10kw Units	\$ 338,943.36																
Plus: Additional Hydro Line	\$ 19,334.40																
<b>Total Cost of Eight (8) 10kw Units</b>	<b>\$ 461,258.88</b>																
Loan Repayment - Principal		\$ (27,922.62)	\$ (32,260.03)	\$ (34,249.76)	\$ (36,362.21)	\$ (38,604.95)	\$ (40,986.02)	\$ (43,513.95)	\$ (46,017.24)	\$ (48,222.80)	\$ (53,713.37)	\$ (54,797.54)	\$ (4,608.40)	\$ -	\$ -	\$ (461,258.88)	
Loan Repayment - Interest (6% up to 2021, 2% thereafter)		\$ (29,460.02)	\$ (25,122.61)	\$ (23,132.88)	\$ (21,020.43)	\$ (18,777.69)	\$ (16,396.62)	\$ (13,868.69)	\$ (11,365.40)	\$ (2,554.08)	\$ (1,679.59)	\$ (595.42)	\$ -	\$ -	\$ -	\$ (163,973.44)	
\$5,000/unit (6 units) Disposal Allocation to Reserve		\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (1,500.00)	\$ (10,500.00)	\$ (30,000.00)	
\$10,000/unit (2 units) Disposal Allocation to Reserve		\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (1,000.00)	\$ (7,000.00)	\$ (20,000.00)	
Total Annual Maintenance		\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (3,200.00)	\$ (10,000.00)	\$ (10,000.00)	\$ (4,800.00)	\$ (4,800.00)	\$ (4,800.00)	\$ (33,600.00)	\$ (93,600.00)	
Estimated Annual Revenue / (Cost)	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ 997.36	\$ (876.88)	\$ (4,232.96)	\$ 967.04	\$ 51,751.60	\$ 56,360.00	\$ 56,360.00		
Total Estimated Revenue of Installation	\$ 997.36	\$ 1,994.72	\$ 2,992.08	\$ 3,989.44	\$ 4,986.80	\$ 5,984.16	\$ 6,981.52	\$ 7,978.88	\$ 7,102.00	\$ 2,869.04	\$ 3,836.08	\$ 55,587.68	\$ 111,947.68	\$ 506,467.68	\$ 506,467.68		
																<i>Average Estimated Revenue of Installation/10 Kw unit</i>	\$ 63,308.46

## Asset Replacement Reserve

Loan @ 6% up to 2021, 2% thereafter	\$ 461,258.88															
Loan Repayment (11 years) - Principal		\$ (27,922.62)	\$ (32,260.03)	\$ (34,249.76)	\$ (36,362.21)	\$ (38,604.95)	\$ (40,986.02)	\$ (43,513.95)	\$ (46,017.24)	\$ (48,222.80)	\$ (53,713.37)	\$ (54,797.54)	\$ (4,608.40)	\$ -	\$ -	\$ -
Balance of Principal Owing	\$ 461,258.88	\$ 433,336.26	\$ 401,076.23	\$ 366,826.47	\$ 330,464.26	\$ 291,859.31	\$ 250,873.30	\$ 207,359.35	\$ 161,342.11	\$ 113,119.31	\$ 59,405.94	\$ 4,608.40	\$ (0.00)	\$ -	\$ -	\$ -
Total Loan Interest Revenue 6% up to 2021, 2% thereafter)		\$ 29,460.02	\$ 54,582.63	\$ 77,715.51	\$ 98,735.94	\$ 117,513.63	\$ 133,910.26	\$ 147,778.95	\$ 159,144.35	\$ 161,698.43	\$ 163,378.02	\$ 163,973.44	\$ 163,973.44	\$ -	\$ -	\$ -

## Attachment No. 2 - Revenue to Costs Summary 2013-2020

Site	2014(revenue)	2014 (expense)	2015 (revenue)	2015 (expense)	2016 (revenue)	2016 (expense)	2017 (revenue)	2017 (expense)
920 Larmer Line	\$14,474.74	\$7,757.60	\$7,760.11	\$7,828.87	\$7,945.70	\$8,179.94	\$6,782.89	\$7,421.83
1256 Syer Line	\$13,629.22	\$7,757.59	\$7,157.14	\$7,828.87	\$6,702.79	\$7,989.14	\$4,917.01	\$7,421.83
1470 County Rd 10	\$13,047.73	\$7,836.32	\$7,856.91	\$7,828.87	\$7,594.50	\$7,989.14	\$5,454.91	\$7,421.83
25 Centennial Lane	\$13,253.30	\$7,825.79	\$4,889.75	\$7,828.87	\$4,413.60	\$7,828.00	\$6,233.65	\$7,421.83
988 County Rd 10	\$12,852.80	\$7,864.38	\$6,322.65	\$7,421.83	\$6,193.88	\$8,724.28	\$5,081.10	\$7,786.14
415 County Rd 21	\$12,712.64	\$7,836.74	\$6,378.75	\$8,408.90	\$6,944.49	\$7,828.87	\$6,004.48	\$7,420.01
Tapley 1/4 Line	\$12,145.24	\$7,836.78	\$6,713.39	\$7,828.87	\$6,809.51	\$7,828.87	\$4,554.69	\$8,017.13
1047 Mount Pleasant Rd	\$13,907.47	\$7,868.44	\$7,443.18	\$7,796.98	\$8,027.93	\$9,646.10	\$5,949.76	\$7,421.83
<b>Totals</b>	\$106,023.14	\$62,583.64	\$54,521.88	\$62,772.06	\$54,632.40	\$66,014.34	\$44,978.49	\$60,332.43
<b>Difference</b>	\$43,439.50		-\$8,250.18		-\$11,381.94		-\$15,353.94	

Site	2018 (revenue)	2018 (expense)	2019 (revenue)	2019 (expense)	2020 (revenue)	2020 (expense)
920 Larmer Line	\$6,136.76	\$7,437.09	\$6,571.07	\$7,813.99	\$5,045.18	\$7,410.85
1256 Syer Line	\$4,708.75	\$11,725.56	\$3,493.90	\$7,813.99	\$4,583.25	\$8,434.56
1470 County Rd 10	\$5,146.54	\$7,437.09	\$5,525.68	\$7,813.99	\$3,376.78	\$7,410.86
25 Centennial Lane	\$6,380.50	\$7,442.58	\$5,779.75	\$7,813.98	\$3,296.45	\$9,766.42
988 County Rd 10	\$5,081.10	\$7,437.09	\$5,214.60	\$7,813.98	\$4,266.75	\$9,400.94
415 County Rd 21	\$5,372.59	\$8,485.33	\$5,968.00	\$8,006.31	\$5,001.91	\$7,684.87
Tapley 1/4 Line	\$6,311.99	\$7,452.35	\$6,057.90	\$7,813.98	\$6,124.22	\$7,670.84
1047 Mount Pleasant Rd	\$4,023.35	\$7,421.83	\$4,448.34	\$7,813.98	\$4,457.69	\$7,410.86
<b>Totals</b>	\$43,161.58	\$64,838.92	\$43,059.24	\$62,704.20	\$36,152.23	\$65,190.20
<b>Difference</b>	-\$21,677.34		-\$19,644.96		-\$29,037.97	





## **Pathway Report for the Township of Cavan Monaghan Toward Maximizing Solar Revenues from Existing Assets**



**Generation Solar Renewable Energy Systems Inc.**

**705-741-1700**

## Purpose

To identify realistic targets for MicroFIT revenue going forward and identify the safest and most economical pathway to reach those targets.

## Background

Eight ground-mounted Deger tracking systems were installed at various Township owned sites under the provincial MicroFIT program in 2013 & 2014. Arrays are comprised of 10kW of solar connected to 10kW of inverters. Each system is grid-connected to Hydro One's network and generation is recorded by utility meters at each site. The Township receives payment for the generation directly from Hydro One under the terms of their Connection Agreement and MicroFIT contract. Each system is also monitored via a cellular internet connection to a third party solar monitoring system called: SolarVu by Cachelan. The MicroFIT contracts are for \$0.445/kWh of energy delivered to Hydro One and are paid out monthly directly to the Township.

Eight sites:

- 920 Larmer Line (Lion's Centre)
- 1256 Syer Line
- 1470 County Rd 10 (Township yard)
- 25 Centennial Lane (Water treatment plant)
- 988 County Rd 10 (Township office)
- 425 County Rd 21 (Old Landfill)
- Tapley ¼ Line (Old gravel pit)
- 1047 Mount Pleasant Rd (Firehall)

The Estimated revenue from original installer was set at \$8000/year per site.

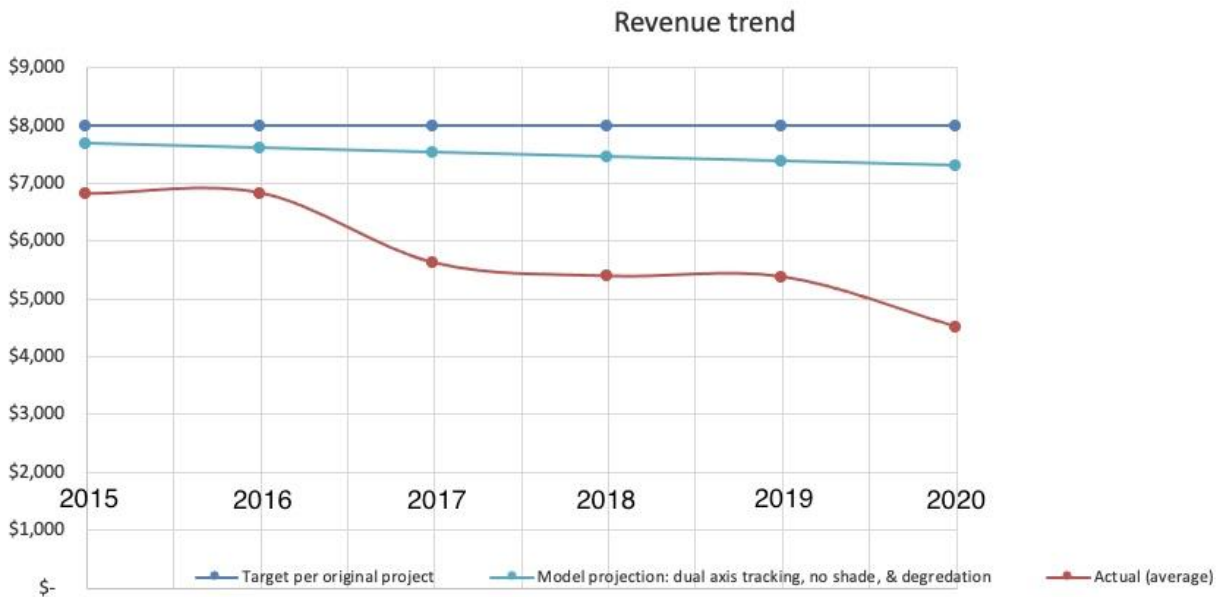
## Review of Township Revenue Data

Site	2014	2015	2016	2017	2018	2019	2020
920 Larmer Line	\$14,475	\$7,760	\$7,946	\$6,783	\$6,137	\$6,571	\$5,045
+/- expected	irregular	-3%	-1%	-15%	-23%	-18%	-37%
1256 Syer Line	\$13,629	\$7,157	\$6,703	\$4,917	\$4,709	\$3,494	\$4,583
+/- expected	irregular	-11%	-16%	-39%	-41%	-56%	-43%
1470 County Rd 10	\$13,048	\$7,857	\$7,595	\$5,455	\$5,147	\$5,526	\$3,377
+/- expected	irregular	-2%	-5%	-32%	-36%	-31%	-58%
25 Centennial Lane	\$13,253	\$4,890	\$4,414	\$6,234	\$6,381	\$5,780	\$3,296
+/- expected	irregular	-39%	-45%	-22%	-20%	-28%	-59%
988 County Rd 10	\$12,853	\$6,323	\$6,194	\$5,081	\$5,081	\$5,215	\$4,267
+/- expected	irregular	-21%	-23%	-36%	-36%	-35%	-47%
425 County Rd 21	\$12,713	\$6,379	\$6,944	\$6,004	\$5,373	\$5,968	\$5,002
+/- expected	irregular	-20%	-13%	-25%	-33%	-25%	-37%
Tapley 1/4 Line	\$12,145	\$6,713	\$6,810	\$4,555	\$6,312	\$6,058	\$6,124
+/- expected	irregular	-16%	-15%	-43%	-21%	-24%	-23%
1047 Mount Pleasant Rd	\$13,907	\$7,443	\$8,028	\$5,950	\$4,023	\$4,448	\$4,458
+/- expected	irregular	-7%	0%	-26%	-50%	-44%	-44%
<b>Totals</b>	<b>\$106,023</b>	<b>\$54,521</b>	<b>\$54,631</b>	<b>\$44,976</b>	<b>\$43,159</b>	<b>\$43,057</b>	<b>\$36,149</b>

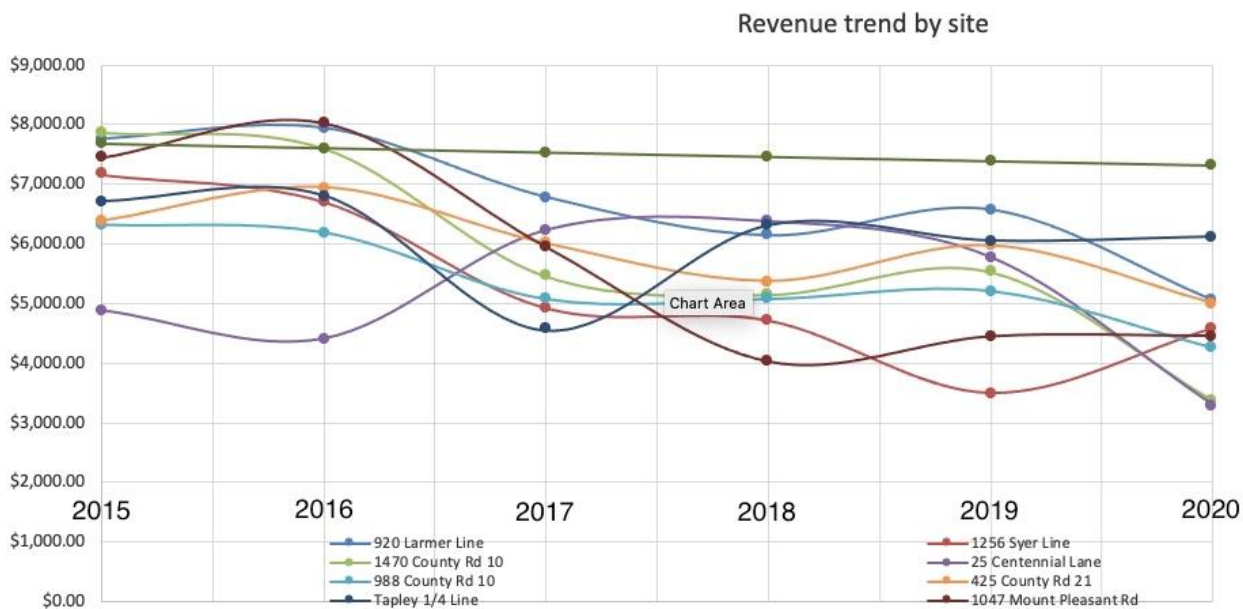
## Review of Expectations

A model was created for an equivalent 10kW system in Millbrook Ontario (dual axis Deger tracker). A simulation was run using System Advisor Model (SAM) by the National Renewable Energy Lab (USA) to compare original performance expectation with the projection of the simulation. Given that all systems are approaching 10 years of age and that tracking repairs are the costliest, it was decided to also look at the revenue effects of tracking. As a comparison, simulations were run to determine expected revenue for the same system with a fixed array (non-tracking) and for a single axis tracker, tracking east west only (AZ tracking). The model assumed no shade and 2014 revenue data was ignored as the values appear to contain more than 1 year of generation.

The first graph looks at average revenue across all 8 sites. It displays the actual production relative to the initial expectation from original installer and the modelled expectation from the SAM model:



The following graph shows the actuals on a site-by-site basis (the flat green line is the modelled expectation):



All sites have fallen below expectations since installation.

## Why is Revenue Not Meeting Expectations?

All solar electric systems decline in performance annually on account of module degradation. The accepted value for module degradation for modules of this vintage is 1% per year. There is also variation in annual performance based on the amount of solar insolation received in a given year. This can vary up or down on a given year making it difficult to see the module degradation on a year over year basis but the trend is still visible over a longer period of time. The Township systems are displaying a decline in revenue far greater than what could be expected for either module degradation or seasonal variation.

The level of decline displayed by the data indicates larger issues. Most likely these issues include:

- Poor tracker performance. A malfunctioning tracker can result in losses that are difficult for remote monitoring alarms to identify. Without a definitive problem like zero production or a specific alarm signal from an inverter, the system may not trigger any email alerts. The SolarVu monitor only flags acute problems.
- Shading. Some shading is unavoidable at some sites owing to geography and unmoveable physical structures. Other shading is from vegetation growth which is usually avoidable.
- Inconsistent review of system performance. The Township does not have a regular Operation and Maintenance program for these systems. The SolarVu monitoring system records basic real-time data and therefore, on its own, is not an adequate O&M program. When systems aren't adequately monitored, they cannot be repaired in a timely manner resulting in the same (or greater) repair expense but with greater revenue loss.

## What Can Be Done?

Not all sites will hit targets every year. There will be factors beyond reasonable control. Some of these factors include:

- Geographic shading
- Inverter or tracker downtime owing to delivery lead times on replacement or warranty parts
- Grid instability or outages

However, most of the Township's systems should be able to achieve modelled targets. If all systems achieved modelled targets, the potential annual revenue gain would be \$58,480/year. This is an increase of \$22,328/year over the 2020 revenue of \$36,152/year. An increase of 62%.

Ways to immediately improve production:

- Immediately act on shading recommendations from previous Generation Solar annual Preventative Maintenance visits. Alternatively, engage Generation Solar to flag the vegetation to be removed.
- Contract out Operation and Maintenance for all systems to solar maintenance contractor like Generation Solar (see Appendix B for Quote). Direct system alerts to O&M contractor and require a minimum monthly review of each site's performance to identify non-alert issues (like tracker issues). Contracting out O&M identifies issues faster and reduces lead time between identifying issue and fixing it.
- Purchase spares to avoid downtime
  - o 5kW inverter (Fronius 5kW Primo or similar)
  - o Common DEGER parts: Actuators, control boards, sensors
- Ensure each site has a reliable internet connection to ensure reliable remote monitoring

Further areas to save on expenditure:

- Modelling shows the most effective tracking is the Azimuth (AZ) direction. Fixing elevation (EL) tilt to 55deg and relying only on the AZ tracking avoids the parts and labour costs of EL actuators while only losing \$200/year in revenue. It also avoids the risk of the tracker failing in an unfavourable position and further compromising revenue.

- Deger EL actuator replacement cost: \$3250 +tx (parts and labour 2021)
- To achieve the highest energy output using AZ tracking the elevation (EL) angle needs to be fixed at 55deg. This exposes the tracker to a high degree of wind during a high wind event. Normally, when the DEGER wind sensor reads high winds, the EL actuator is used to flatten the array to reduce exposure. It is not possible to disable EL tracking yet retain high wind protection. For this reason, disabling EL tracking is not a decision to be taken lightly. Consideration should be made for sites exposed to high wind and to sites where wind failures could result in harm to public or property.
- Replace inverters as they fail out of warranty with an inverter that includes a lifetime remote monitoring platform as part of the initial purchase. Consolidate new inverters together at sites so that existing SolarVu subscription can be reduced.

## Planning For End of Warranty

The only component still under warranty are the inverters. They have a ten-year warranty (2 to 3 years remaining). Once the warranty is up, I recommend purchasing a compatible inverter that does not require a third-party monitoring system. Fronius is one such inverter manufacturer. Fronius have equivalently sized inverters that allow for a simple direct replacement. There is no annual monitoring cost.

The solar module at the Township sites was manufactured by Eclipsall. Eclipsall is no longer in business so there is no more warranty. Fortunately, we have not seen issues with the solar modules at any of the 8 sites. Solar module availability and pricing is constantly changing. I do not recommend holding any non-original spares from a different manufacturer. Should some exact replacement Eclipsall solar modules become available, it would be wise to purchase 5 – 10 as spares.

## Limitations

This analysis only compared the modelled expectations with the average actual output of all 8 sites. Individual site performance will vary. For modelling purposes, shading was assumed to be zero. Site specific shading was beyond the scope of this report.

## Summary

- Remove vegetation shading
- Consider purchase of further spare parts
- Consider third-party O&M

## Appendix A – Tracker vs Fixed Array Performance (For Year 1)

### **Fixed @ 35 deg**

Annual energy: 12,821 kWh (\$5705/yr)

### **2 axis tracking**

Annual energy: 17,448 kWh (\$7763/yr)

### **AZ tracking** (ie tilt permanently fixed at 55 degrees (this yielded maximum annual generation))

Annual energy: 16,952 kWh (\$7544/yr)

We see there is a 35% annual loss when trackers are fixed and a 3% annual loss when tracking in the AZ (east – west) direction only. AZ tracking only results in a loss of \$200/year while no tracking (fixed array) results in revenue loss of \$2000/year.



# Appendix B – Details and Quote for O&M services From Generation Solar



Generation Solar Renewable  
Energy Systems Inc.  
550 Gilchrist Street  
Peterborough, ON K9H 4N9

## Estimate

Date	Estimate #
2020-07-08	16087

Name / Address
Township of Cavan Monaghan Wayne Hancock 988 County Road 10 Millbrook, ON L0A 1G0

Ship To

Terms	FOB	Project
Net 28		

Description	Qty	Cost	Total
Annual O&M Services Contract for Township of Cavan Monaghan PV Sites (Maintenance Contract renews annually based on rates in effect at that time.)			
Annual Preventative Maintenance for the 8 PV sites listed below includes tracker maintenance (per manufacturer's manual) and routine preventative maintenance package (including string testing, electrical inspection and IR).	8	270.00	2,160.00
<ul style="list-style-type: none"> <li>• 920 Larmer Line (Lion's Centre)</li> <li>• 1256 Syer Line</li> <li>• 1470 County Road 10 (Township Yard)</li> <li>• 25 Centennial Lane (Water Treatment Plant)</li> <li>• 988 County Road 10 (Township Office)</li> <li>• 415 County Road 21 (Old Landfill)</li> <li>• Larmer Line west of Tapley ¼ Line (Gravel Pit)</li> <li>• 1047 Mount Pleasant Road (Firehall)</li> </ul>			
Travel	8	56.00	448.00
Discount on line above as we can service multiple sites per trip		-200.00	-200.00
OEM Deger Grease and materials	8	30.00	240.00
<b>Subtotal</b>			<b>2,648.00</b>
Cachelan Monitoring Subscription for 8 sites (annual)	1	1,104.00	1,104.00
Cachelan Admin and Client Support	3	90.00	270.00
Monthly proactive monitoring of each site and remote troubleshooting	12	90.00	1,080.00
<b>Subtotal</b>			<b>2,454.00</b>
HST (ON) on sales		13.00%	663.26
			<b>Subtotal</b> \$5,102.00
Utility fees, if applicable, are in addition to this estimate. Please refer also to the Generation Solar standard terms and conditions. Estimates are subject to change based on actual time and materials; Quotes are firm.			<b>Sales Tax</b> \$663.26
Phone #	E-mail	Web Site	<b>Total</b> \$5,765.26
705-741-1700	info@generationsolar.com	www.generationsolar.com	

GST/HST No.

878943422

Customer Signature \_\_\_\_\_



## Regular Council Meeting

<b>To:</b>	Mayor and Council
<b>Date:</b>	November 15, 2021
<b>From:</b>	John F. Connolly, Executive Director, Planning & Development
<b>Report Number:</b>	Planning 2021-58
<b>Subject:</b>	Update: Status Report - 1066 Syer Line

**Recommendation:**

That Council receive Report Planning 2021-58 Update: Status Report - 1066 Syer Line for information.

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**Overview:**

Staff has been providing regular updates on the activities and milestones for the 1066 Syer Line Project at Regular Council meetings. These updates provide an overview of work (completed to date) as well other work and activities anticipated this calendar year.

Earlier this year, Staff advised that five (5) background studies were identified through pre-consultation to support any proposed amendments to the Official Plan (OP) and Zoning By-law (ZB) of the property from its current Agricultural designation and Agriculture and Natural Linkage zoning to Rural Employment (M2).

The background studies include:

- Agricultural Impact Assessment (AIA);
- Environmental Impact Assessment (EIA/S);
- Hydro Geotechnical Study (Hydro G);
- Traffic Impact Study (TIS); and
- Stormwater Management Study (SWM).

As noted earlier, the three (3) most critical studies (AIA, EIA & Hydro G) were identified as a priority before any amendments to the OP of ZB can proceed. All three (3) studies have been completed and reports have been finalized.

**Project Status:** As of November 15, 2021

- AIA (completed): undergoing peer review with County through Stantec.
- EIS (completed): undergoing peer review with Otonabee Region Conservation Authority (ORCA).
- Hydro-G (completed): undergoing peer review with County through Stantec



**Next Steps:**

- All three (3) studies/reports are undergoing a peer review as per Peterborough County Official Plan Amendment policy.
- As the peer reviews are completed they will be returned to the Township throughout the month of November.
- The original studies along with the results of the peer reviews are needed to support the advancement of the OP and ZB amendments.
- Staff have begun drafting the appropriate Official Plan and Zoning By-law Amendments along with a planning justification report to bring forward to Council as per the legislated process under the Planning Act (Attachment No. 1).
- Notice of the OPA and ZBA and proceeding with a public meeting will now happen in December rather than November – as originally planned.
- That said, if there are no objections, Staff may approach Council to hold the public meeting and approve the applications at the same meeting in December so that they can be adopted and sent to the County for review and approval.
- Based on the foregoing, the work supporting the Syer Line Project remains on schedule.

**Financial Impact:**

None at this time.

**Attachment:**

Attachment No. 1 – Gantt Chart: 1066 Syer Line Project – dated November 15 2021

Respectfully Submitted by,

Reviewed by,

John F. Connolly  
Executive Director, Planning & Development

Yvette Hurley  
Chief Administrative Officer

Project: 1066 Syer Line








Project Period Covered: January 1 to December 31, 2021

Status Update: November 15, 2021

Project Activity	Milestone	Month - 2021												
		January	February	March	April	May	June	July	August	September	October	November	December	
Project Plan	Draft plan	→★												
Pre-Consultation	Conduct Meeting		→★											
Background Studies	Identify Studies		→★											
	Solicit proposals			→★										
	Secure Consultants				→★									
Conduct Studies	AIA				→★									
	EIS				→★									
	Hydro - G				→★									
	TIS (tbd)									→				
	SWM (tbd)									→				
Report Back to Council	Reconvene Mtg with Agencies								→★					
	Present Study Results								→★					
	Seek Direction								→★					
	Peer Review of Studies									→★				
OPA & ZBA	Draft OPA & ZBA											→★		
	Public Notice of OPA & ZBA											→★		
	Report to Council											→★		
	Council Decision (CM)												→★	

# Report and Capital Project Status




## Report Status

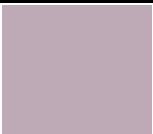






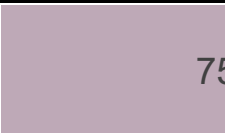

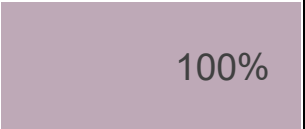
Priority	Directed By	Date Requested	Resolution or Direction	Staff Responsible	Status	Est. Report Date	% Complete
Low	Council	2021-03-15	Remuneration Review with County of Peterborough	K. Pope	In Progress	Dec-21	 50%
High	Council	2018-01-01	County OP/Township OP with County of Peterborough	Ellis/Coulter/Connolly	In Progress	Jul-22	 50%
High	Council	2020-07-06	ZB & OP policies, planning tools and amendments: Cannabis	J. Connolly	In Progress	Dec-21	 75%
High	Council	2019-04-01	OPA & ZBA to consider changes to employment lands (opportunities to permit recreational uses)	K. Ellis / J. Connolly		Jul-21	
High	Council	2019-04-01	Millbrook Arena Feasibility Study & CMCC lands	Y. Hurley	Deferred	2022	 25%
Normal	Council	2020-09-21	ORV use on Township roads	C. Page	In Progress		 50%
Low	Council	2020-12-07	Mobile Kawartha Credit Union Survey Results	K. Pope		Nov-21	 50%
Low	Council	2020-12-10	Solar Program Review 2 Report	W. Hancock / K. Pope	In Progress	Nov-21	 100%
Low	Council	2020-06-15	Tree Preservation Delegated Authority	K. Ellis		2022	
Normal	Council	2020-12-10	Alleyway King Street Improvements	W. Hancock	In Progress	2022	 25%

Priority	Directed By	Date Requested	Resolution or Direction	Staff Responsible	Status	Est. Report Date	% Complete
Normal	CAO	2021-02-02	Township Vacant Land - Property Inventory	B. Ayotte	In Progress	Dec-21	100%
High	Council	2020-12-10	Fire Station / Operations Centre and Millbrook Yard financing options	B. Balfour / K. Pope / W. Hancock	In Progress	2022	25%
Low	Council	2021-05-03	Library Board Motion - Legal Review	Y. Hurley	In Progress	Dec-21	
High	Council		Review County OP	J. Connolly		Dec-21	
Normal	Council	2021-10-18	Noise By-law Review	C. Page / K. Philips		Dec-21	

# Report and Capital Project Status

## Capital Project Status

Project List	Department	Status	Est. Report Date	% Complete
Asset Management Policy and Reporting Phase 2,3,4	Finance	In Progress	Jul 1 2022, 2024, 2025	
Development Charges Study Update & Water/Wastewater User Fees and Charges	Finance	In Progress	Nov-21	 25%
TOMRMS Records Management System/FileHold Management Software	Information Tech / Clerk	In Progress	2022	 50%
Corporate Strategic Plan Update	ECD	Not Started	2023	
2021 Township Wide - Community Improvement Plan (CIP)	ECD	In Progress	Oct-21	 25%
Millbrook Mural (MRHAC)	ECD	Not Started	2022	
Mt. Pleasant Women's Institute Renovations	ECD	Not Started	2022	
IT Modernization Plan, 2nd Phase Funding Pending	ECD	In Progress	2022	
Baxter Creek Floodplain SSA (Special Study Area)	Planning	In Progress	2022	

Project List	Department	Status	Est. Report Date	% Complete
Baxter Creek-Floodplain Mapping	Planning	In Progress	2022	
Official Plan Updates & Syer Line Studies	Planning	In Progress	Dec-21	 50%
GMS (SSA-1) Provincial Update	Planning	In Progress	Dec-21	 75%
Jackson Creek-Floodplain Mapping	Planning	In Progress	2022	 75%
Fire Hall #1 Design	Fire	In Progress	2022	 50%
Recreational Land, Plan & Design (CMCC)	CAO/Parks	In Progress	2022	 25%
Cavan Works Depot & Millbrook Yard Design	Public Works	In Progress	2022	 75%
Millbrook Arena Renovation-Public Consultation-ICIP	CAO/Parks	In Progress	2022	 25%
Millbrook Correctional Facility - Contamination Update	CAO/Public Works	In Progress	Dec-21	
Municipal Office Renovation	CAO/CBO	In Progress	Dec-21	 75%
OMS Renovation/ICIP Funding	CAO/Parks	In Progress	Dec-21	 25%
Sewer System Relining	Water & Wastewater	Complete		 100%

Project List	Department	Status	Est. Report Date	% Complete
Wastewater Master Servicing Study	Water & Wastewater	In Progress	Dec-21	75%

**Operating duties are not included**

**Committee of Councils - MVT, MRHAC, BIA**

**The Township of Cavan Monaghan**

**By-law No. 2021-66**

**Being a by-law to authorize the Clerk and Deputy Clerk to provide Civil Marriage Services to the public**

**Whereas** the Marriage Act authorizes the Clerk of a local municipality to solemnize marriages;

**And Whereas** the Council of the Township of Cavan Monaghan deems it desirable to provide for civil marriage services to the public;

**Now Therefore** the Council of the Township of Cavan Monaghan hereby enacts as follows:

1. That the Clerk and the Deputy Clerk are hereby authorized to provide civil marriage services to the public.
2. That the Civil Ceremony and associated fees for said services are established by Council annually in the Township of Cavan Monaghan User Fees and Charges By-law.
3. That the Civil Ceremony (Non-Regular Hours) and associated fees for attendance at the ceremony rehearsal outside of regular business hours (if required) is established by Council annually in the Township of Cavan Monaghan User Fees and Charges By-law. This fee is distributed as 40% allocated to the Municipality and 60% to the Clerk or Deputy Clerk providing the service.
4. That the rate of mileage paid to the Clerk and Deputy Clerk for ceremonies outside of the boundaries of the Township of Cavan Monaghan shall be calculated at the current rate established by the Municipality.
5. That By-law No. 2019-82 is hereby repealed in its entirety.

Read a first, second and third time and passed this 15<sup>th</sup> day of November, 2021.

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**Scott McFadden**  
Mayor

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**Cindy Page**  
Clerk



## The Township of Cavan Monaghan

### By-law No. 2021-67

#### Being a by-law to impose Water and Wastewater User Fees and Charges

**Whereas** Section 391 of the Municipal Act, 2001, S.O. c.25 as amended, authorizes municipalities and local boards to impose fees or charges on persons for services or activities provided or done by or on behalf of it; for costs payable by it for services or activities provided or done by or on behalf of any other municipality or any local board; and for the use of its property including property under its control;

**And Whereas** the costs included in a fee or charge may include costs incurred by the municipality or local board related to administration, enforcement and the establishment, acquisition and replacement of capital assets;

**And Whereas** a fee or charge may be imposed whether or not it is mandatory for the municipality or local board imposing the fee or charge to provide or do the service or activity, pay the costs or allow the use of the property;

**Now Therefore** the Council for the Township of Cavan Monaghan hereby enacts as follows:

1. That Schedule "A" attached hereto shall be comprised of the list of fees and charges for Water and Wastewater User Fees and Charges By-law for the years 2022 - 2025 for the Township of Cavan Monaghan.
2. That By-law No. 2020-66 being a by-law to impose Water and Wastewater User Fees and Charges be repealed in its entirety.
3. That this By-law shall be effective the 15<sup>th</sup> day of November, 2021.

Read a first, second and third time and passed this 15<sup>th</sup> day of November, 2021.

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**Scott McFadden**  
Mayor

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**Cindy Page**  
Clerk

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2021-67

Water service rates to impose upon owners or occupants of land - Bi Monthly

#### Millbrook Water Service Rate - Part A

	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 1.82	\$ 1.82	\$ 1.85	\$ 1.88	\$ 1.91	\$ 1.94
Bulk Water Rate	\$ 3.08	\$ 3.08	\$ 3.13	\$ 3.18	\$ 3.23	\$ 3.28
<b>Meter Size (mm) - Fixed Charge - Base</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15/18 mm meter	\$ 65.35	\$ 65.35	\$ 66.33	\$ 67.32	\$ 68.33	\$ 69.35
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 119.34	\$ 119.34	\$ 121.13	\$ 122.95	\$ 124.79	\$ 126.66
40 mm meter	\$ 271.48	\$ 271.48	\$ 275.55	\$ 279.68	\$ 283.88	\$ 288.14
50 mm meter	\$ 632.45	\$ 632.45	\$ 641.94	\$ 651.57	\$ 661.34	\$ 671.26
75 mm meter	\$ 1,306.04	\$ 1,306.04	\$ 1,325.63	\$ 1,345.51	\$ 1,365.69	\$ 1,386.18
100 mm meter	\$ 2,316.13	\$ 2,316.13	\$ 2,350.87	\$ 2,386.13	\$ 2,421.92	\$ 2,458.25

#### Millbrook Ward Water Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	\$ 298.86	\$ 303.34	\$ 307.89	\$ 312.51
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 395.36	\$ 395.36	\$ 401.29	\$ 407.31	\$ 413.42	\$ 419.62
40 mm meter	\$ 604.48	\$ 604.48	\$ 613.55	\$ 622.75	\$ 632.09	\$ 641.57
50 mm meter	\$ 967.58	\$ 967.58	\$ 982.09	\$ 996.82	\$ 1,011.77	\$ 1,026.95
75 mm meter	\$ 1,932.03	\$ 1,932.03	\$ 1,961.01	\$ 1,990.43	\$ 2,020.29	\$ 2,050.59
100 mm meter	\$ 4,827.46	\$ 4,827.46	\$ 4,899.87	\$ 4,973.37	\$ 5,047.97	\$ 5,123.69

#### Millbrook Ward Water Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Penalty of late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Installation of a new 15 mm water meter	\$ 412.00	\$ 412.00	\$ 418.18	\$ 424.45	\$ 430.82	\$ 437.28
Installation of a new 18 mm water meter	\$ 470.27	\$ 470.27	\$ 477.32	\$ 484.48	\$ 491.75	\$ 499.13
Installation of a new 25 mm water meter	\$ 528.53	\$ 528.53	\$ 536.46	\$ 544.51	\$ 552.68	\$ 560.97
Installation of a new 50 mm water meter	\$ 1,407.67	\$ 1,407.67	\$ 1,428.79	\$ 1,450.22	\$ 1,471.97	\$ 1,494.05
Connection Fee for existing water service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of water service to property line	As per municipal contractor for time and materials paid by property owner.					

#### Water & Sewer Miscellaneous Charges - Part D

Remote Read Touchpad (new)	\$150.00 minimum fee or cost recovery, as amended					
Touch Pad Repair Fee	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 50.00
Meter Accuracy Test (If meter meets specifications)	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Meter Accuracy Test (If meter does not meet specifications)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Application for Water/Wastewater Allocation Assignment	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Relocate Touch Pad Admin. Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Smart Card Fee	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Visa Charge (non cash discounted)	3% of payment					
Penalty of Late Payment	Please refer to the Water & Sewer Fees & Collection Policy					
Returned Payment Fee	Please refer to the current User Fees and Charges By-law					
Duplicate Invoice or Statement						
Payment Transfer between Accounts (Customer Error)						
PAP Cancellation (< 21 Calendar Days before Due Date)						
Transfer to Tax Roll for Collection (arrears 90 days or greater)						

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.

### Schedule "A" - Water and Wastewater User Fees & Charges By-law No. 2021-67

Sewer service rates to impose upon owners or occupants of land - Bi Monthly

Sewer Rates	2020	2021	2022	2023	2024	2025
<b>Volumetric Charge per cubic meter - Constant Rate</b>	\$ 2.49	\$ 2.49	\$ 2.53	\$ 2.57	\$ 2.61	\$ 2.65
<b>Meter Size (mm) - Fixed Charge - Base Rate</b>						
15/18 mm meter	\$ 120.94	\$ 120.94	\$ 122.75	\$ 124.59	\$ 126.46	\$ 128.36
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 224.66	\$ 224.66	\$ 228.03	\$ 231.45	\$ 234.92	\$ 238.44
40 mm meter	\$ 558.63	\$ 558.63	\$ 567.01	\$ 575.52	\$ 584.15	\$ 592.91
50 mm meter	\$ 1,324.67	\$ 1,324.67	\$ 1,344.54	\$ 1,364.71	\$ 1,385.18	\$ 1,405.96
75 mm meter	\$ 2,747.49	\$ 2,747.49	\$ 2,788.70	\$ 2,830.53	\$ 2,872.99	\$ 2,916.08
100 mm meter	\$ 4,882.50	\$ 4,882.50	\$ 4,955.74	\$ 5,030.08	\$ 5,105.53	\$ 5,182.11

Any person(s) discharging and/or depositing clean water either from weeping tiles and/or sump pumps into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

Any person(s) discharging and/or depositing substances other than those intended to be discharged and/or deposited into the sanitary sewer collection system is guilty of an offence under this by-law and may be subject to penalty.

#### Millbrook Ward Sewer Service Rate Schedule - Part B

Connection Charges	2020	2021	2022	2023	2024	2025
15/18 mm meter	\$ 294.44	\$ 294.44	\$ 298.86	\$ 303.34	\$ 307.89	\$ 312.51
18 mm meter (inactive)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 mm meter	\$ 395.36	\$ 395.36	\$ 401.29	\$ 407.31	\$ 413.42	\$ 419.62
40 mm meter	\$ 604.48	\$ 604.48	\$ 613.55	\$ 622.75	\$ 632.09	\$ 641.57
50 mm meter	\$ 967.58	\$ 967.58	\$ 982.09	\$ 996.82	\$ 1,011.77	\$ 1,026.95
75 mm meter	\$ 1,932.03	\$ 1,932.03	\$ 1,961.01	\$ 1,990.43	\$ 2,020.29	\$ 2,050.59
100 mm meter	\$ 4,827.46	\$ 4,827.46	\$ 4,899.87	\$ 4,973.37	\$ 5,047.97	\$ 5,123.69

#### Millbrook Ward Sewer Service Rate Schedule - Part C

Other Charges	2020	2021	2022	2023	2024	2025
Account Set-up Fee	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
Connection Fee for existing sewer service at property line	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Road extension of sewer service to property line	As per municipal contractor for time and materials paid by property owner.					

\*Taxes not included in the fees and charges. Please add applicable taxes where necessary. The User Fees & Charges quoted within this By-Law has been cash discounted. This cash discount of 3% will not apply to payments made by Credit/Visa.

**The Township of Cavan Monaghan**

**By-law No. 2021-68**

**Being a by-law to authorize the execution of an Environmental Impact Mitigation Measures Agreement between 1972867 Ontario Inc. and the Corporation of the Township of Cavan Monaghan**

**Whereas** the Applicant has applied to the Peterborough County Land Division Committee for a consent to lands in the Municipality under File Number B-83-20;

**And Whereas** the said Peterborough County Land Division Committee or the Director of Planning has signified its decision to grant approval subject to the condition that the Owner enter into an agreement with the Municipality, agreeing to abide by the said conditions imposed by Committee (or the Planning Director) and that such Agreement be registered on title prior to the granting of the Certificate of Consent;

**And Whereas** By-law No. 2021-46 was approved in August 2021 authorizing the Mayor and Clerk to sign the Agreement;

**And Whereas** Schedule “1” attached to By-law No. 2021-46 included a complete copy of the Natural Heritage Evaluation prepared by Beacon Environmental, dated November 2020;

**And Whereas** the Land Registry Office requested an amendment to the Agreement such that only Section 7.2 General Mitigation Measures is included in the Agreement.

**Now Therefore** the Council of the Township of Cavan Monaghan hereby enacts as a By-law as follows:

1. That the Mayor and Clerk be and are hereby directed and authorized on behalf of the Township of Cavan Monaghan to enter into and execute that certain agreement marked Schedule “1” attached hereto and forming part of this By-law.
2. That this By-law shall become effective immediately upon the passing thereof.
3. That By-law No. 2021-46 be repealed in its entirety.

Read a first, second and third time and passed this 15th day of November, 2021.

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Scott McFadden  
Mayor

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Cindy Page  
Clerk

Schedule 1  
**Agreement - Severance**

THIS AGREEMENT made in duplicate this                      day of November, 2021.

BETWEEN:

1972867 Ontario Inc.

Hereinafter called the Applicant

OF THE FIRST PART

AND

THE CORPORATION OF THE TOWNSHIP OF CAVAN-MONAGHAN

Hereinafter called the Corporation

OF THE SECOND PART

WHEREAS the Applicant has applied to the Peterborough County Land Division Committee for consent to sever part of Lot 13, Concession 7, in the Geographic Township of Cavan, in the Township of Cavan Monaghan, in the County of Peterborough.

AND WHEREAS the severed parcel is described on Schedule "A" attached hereto ("the Lands").

AND WHEREAS the Committee File No. is B-83-20.

AND WHEREAS the said Peterborough County Land Division Committee or Planning Director has signified its decision to grant an approval subject to the condition that the Applicants shall enter into an agreement with the Corporation agreeing to abide by the said condition imposed by Committee and that such agreement shall be registered on title prior to the granting of the certificate of consent.

Now therefore this agreement witnesseth that in consideration of the covenants, provisos, and conditions herein contained and pursuant to the condition imposed by the Committee, the Applicants agree with the Corporation both personally and on behalf of their respective heirs, executors, administrators, successors and assigns as follows:

1. This agreement and all conditions herein may be enforced by the Municipality by court action.
2. The Applicants agree that any development of the Lands shall be subject to the Applicants following and adhering to the recommendations set out in Part 7.2 of the Natural Heritage Evaluation prepared by Beacon Environmental Limited dated November 20, 2020. A copy of Part 7.2 is attached hereto as Schedule "B".

3. This agreement shall be registered upon the title of the said lands at the Land Registry Office at the sole expense of the applicants prior to the registration or delivery of any other document and prior to the issuance of certificate of consent to sever and in default thereof the consent to sever shall be deemed to have been refused.
4. The lands affected by this agreement are described in Schedule "A" attached hereto.
5. This agreement shall ensure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators and assigns.
6. The applicants shall be responsible for all costs of preparation, review, registration, and release from title if the same is required.
7. This Agreement is to be registered on title to the Lands pursuant to Section 55(4) of the Planning Act.

IN WITNESS WHEREOF the Applicants have affixed their respective Hands and seals and the Corporation has affixed its corporate seal under the hands of its Mayor and Interim Clerk.

SIGNED, SEALED AND DELIVERED

In the presence of	)	_____
	)	1972867 Ontario Inc.
	)	James David Molloy, President
	)	<i>I have the authority to bind the corporation</i>
	)	
	)	
	)	The Corporation of the Township of Cavan-Monaghan
	)	
	)	_____
	)	Mayor
	)	
	)	_____
	)	Clerk

### **Schedule "A"**

**Description of Severed Parcel:**

Part of Lot 13, Concession 7, Cavan Ward – 987 Syer Line, Fraserville Ontario, K0L 1V0 - Township of Cavan Monaghan.

## SCHEDULE "B"

### Section 7.2: Natural Heritage Evaluation prepared by Beacon Environmental dated November 20, 2020



987 Syer Line, Fraserville  
Natural Heritage Evaluation

#### 7.2 General Mitigation Measures

The following general mitigation measures are recommended to be considered to limit impacts when a new development on the severed lot is being proposed:

- Prior to construction, the perimeter of required construction should be delineated and sediment fencing should be erected to limit the movement of sediment outside the work area.
- Sediment fencing should be checked on a weekly basis and maintained in good condition throughout the duration of construction. Any repairs to the sediment fencing should be completed within 24 hours of being noted.
- A spill kit shall be kept on site readily available and
- Machinery and material storage should be limited to the delineated construction footprint.

##### 7.2.1 Timing of Vegetation Removal

The federal *Migratory Bird Convention Act* (1994) protects the nests, eggs and young of most bird species from harm or destruction. Environment Canada considers the general nesting period of breeding birds in southern Ontario to be between late March and the end of August. This includes times at the beginning and end of the season when only a few species might be nesting. In light of this it is recommended that during the peak period of bird nesting (i.e., between mid-April and mid-July), no vegetation clearing or disturbance to nesting bird habitat should occur.

In the 'shoulder' seasons of April 1 to April 15, and July 16 to August 31, vegetation clearing could occur, but only after an ecologist with appropriate avian knowledge has surveyed the area to confirm lack of nesting. For any proposed clearing of vegetation within the breeding bird season, an ecologist should undertake detailed nest searches immediately prior (within two days) to site alteration to ensure that no active nests are present.

If nesting is found, then vegetation clearing in an area around the nest, the size of which depends on the specific circumstances, should wait until nesting has concluded. The likelihood of nesting birds being present in the 'shoulder' seasons also depends on the habitat type.

From September 1 through to March 31, vegetation clearing can occur without nest surveys, but the need to ensure nest protection still applies (i.e., if an active nest is known to be present it must be protected).



**The Township of Cavan Monaghan**

**By-law No. 2021-69**

**Being a by-law to confirm the proceedings of the regular meeting of the Council of the Township of Cavan Monaghan held on the 15th day of November 2021.**

**Whereas** the Municipal Act, 2001, S.O., 2001, c.25, S.5, S. 8 and S. 11 authorizes Council to pass by-laws;

**Now Therefore** the Council of the Township of Cavan Monaghan hereby enacts as follows:

1. That the actions of the Council at its regular meeting held on the 15th day of November 2021, in respect to each recommendation and action by the Council at its said meetings except where prior approval of the Local Planning Appeal Tribunal or other statutory authority is required are hereby adopted ratified and confirmed.
2. That the Mayor and Clerk of the Township of Cavan Monaghan are hereby authorized and directed to do all things necessary to give effect to the said actions or obtain approvals where required, and to execute all documents as may be necessary and the Clerk is hereby authorized and directed to affix the Corporate Seal to all such documents. Read a first, second and third time and passed this 15th day of November 2021.

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**Scott McFadden**  
**Mayor**

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**Cindy Page**  
**Clerk**