
Municipality of South Dundas

**2022 Water and Wastewater Rate Study
& O. Reg 453/07 Water System Financial Plan
(FINAL)**



DFA Infrastructure International Inc.

September 27, 2022



DFA Infrastructure International Inc.

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September 27, 2022

Lachlan McDonald
Acting Treasurer
Director of Operation
Municipality of South Dundas
34 Ottawa Street
Morrisburg, Ontario
K0C 1X0

Re: 2022 Water and Wastewater Rate Study and O. Reg 453/07 Water System Financial Plan

Dear Lachlan:

We are pleased to submit to you the above noted final report entitled: "2022 Water and Wastewater Rate Study and O. Reg 453/07 Water System Financial Plan". Please let me know if you have any further questions.

Yours truly,

A handwritten signature in black ink, appearing to read 'Derek Ali', is written over a faint, light-colored signature line.

DFA Infrastructure International Inc.

Derek Ali, MBA, P.Eng.

President

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Transmittal Letter

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1 Introduction

1.1 Background

The Municipality of South Dundas (Municipality) is responsible for water treatment and for a local water distribution system. There are approximately 2,100 connected properties in the Municipality. Additionally, the Municipality is responsible for local wastewater collection and treatment with approximately 2,000 individual accounts.

The Municipality recovers its water and wastewater costs through a flat rate and per cubic rate system depending on various classifications. The Municipality contracts all the meter reading, billing, and collections to Rideau St. Lawrence Utilities which collect the user charges on behalf of the Municipality. The current rate structure is based on several past rate review exercises, but now requires an in-depth analysis as to current rates and long-term funding requirements of operational and capital infrastructure needs.

The Municipality is also required to prepare and submit an updated Water System Financial Plan to meet the requirements of the Drinking Water Quality Management System as defined under O.Reg. 453/07 for renewal of its water distribution system license.

DFA Infrastructure International Inc. (DFA) was retained by the Municipality to undertake a Rate Study and prepare the O. Reg. 453/07 Water System Financial Plan in accordance with the drinking water licensing requirements. The rate study includes an assessment of full costs to manage the water and wastewater systems over a 20-year period from 2022 to 2041 and the recovery of full costs through appropriate rates and charges.

1.2 Purpose

The primary purpose of this Water and Wastewater Rate Study is to:

- Identify the full costs of managing the Municipality's drinking water system and wastewater system over the study period based on the most recent available information;
- Update the Municipality's current rates and charges to its customers starting in 2023 that will recover the full costs of supplying and distributing drinking water, and collection and treatment of wastewater; and
- Prepare an updated Water System Financial Plan in accordance with the requirements of O.Reg. 453/07 for the renewal of the licence for the Municipality's water distribution system.

2 Regulatory Requirements

2.1 Provincial Regulations

Provincial requirements governing water and wastewater services primarily include the following:

- The Environmental Assessment Act (EAA);
- The Safe Drinking Water Act (SDWA);
- The Municipal Act (MA);
- The Development Charges Act (DCA); and
- The Water Opportunities and Conservation Act, 2010 (WOA).

The first two (2) set out the technical requirements related to service delivery. The EA Act applies to the expansion of existing facilities and the establishment of new capacity such as the installation of new pipes to service growth in customers.

The Safe Drinking Water Act, 2002 (SDWA) has significant implications to the daily operations as it sets out the water sampling and other operational requirements (in O. Reg. 170/03) for ensuring that the water delivered to consumers is of high quality and safe for consumption. The SDWA has been a major influence over the past decade in terms of adjustments to operational practices and water quality assurance. In addition, there is also a requirement under this Act (O.Reg. 188/07) for drinking water providers to establish a Drinking Water Quality Management System (DWQMS) and obtain licences for their respective water systems. As part of the DWQMS, and as required under O. Reg. 453/07 (Financial Plans Regulation), operating authorities must submit a financial plan for their respective water systems as a condition of licensing. There are also many regulations and guidelines that deal with design and operation standards that mandate certain activities be undertaken as part of service delivery.

The Municipal Act, Part VII, Section 293 requires municipalities to establish reserves for dealing with long-term liabilities. This applies directly to the water systems and the future liabilities associated with their age and condition. The Municipal Act also permits the municipalities to establish fees for cost recovery and requires public input prior to any fee adjustments. The Development Charges Act and regulations establishes the requirements for the recovery of portions of future growth-related capital expenditures to be incurred by municipalities. The Sustainable Water and Sewage Systems Act, 2002 requires that water systems be financially sustainable. The Water Opportunities and Conservation Act, 2010 is the most recent legislation to be enacted influencing water system management. It requires sustainability plans to be prepared for water systems and overlaps somewhat with the SWSA.

The Water Opportunities and Conservation Act, 2010

The WOA was enacted in November 2010 and the regulations are pending. This legislation promotes water conservation and requires municipalities to develop:

- Water conservation plans;
- Sustainability plans for water, wastewater & stormwater management; and

- Asset management plans.

Financial plans are required as a component of the water sustainability and asset management plans.

The DWQMS Requirements

Regulation 188/07 under the Safe Drinking Water Act requires Ontario municipalities to apply for and obtain Drinking Water System Licences as part of their overall DWQMS. One of the requirements to obtain a drinking water licence is to prepare and submit a financial plan in accordance with O.Reg. 453/07.

2.2 Municipality of South Dundas Water and Wastewater Rate By-Law

The Municipality's By-law No. 2022-03 establishes the water and wastewater rates and charges that apply to the various customer classes for 2022. By-law 2022-03 is attached as Appendix A-1. The Municipality also charges a Water Capital Levy charge for current and future users of the South Dundas Water Treatment Plant under By-law 2021-61. By-law 2021-61 is attached as Appendix A-2.

3 Methodology

The Rate Study gives consideration to the full costs (or the required investment) associated with managing the Municipality's water and wastewater systems over a twenty (20) year period from 2022 to 2041 inclusive, and the recovery of those costs (or revenue plan) through proposed rates and charges to customers. The life cycle costs of assets from the Municipality's Capital Asset Inventory and the 2022 Asset Management Plan capital funding recommendations were also considered in determining the full replacement and/or rehabilitation needs given that some water and wastewater system assets (e.g. water mains and sewer mains) can have life expectancies in the 50 to 100 year range. Rates are then developed that recover the full costs of water and wastewater services.

3.1 Full Cost Considerations

Calculation of the Municipality's full cost of managing the water and wastewater systems is based on the 2022 budgets related to the primary activities required to deliver water and wastewater services to Municipal customers. Higher costs are generally expected in the future as the water and wastewater business environment changes. The impact can be mitigated however by fully understanding, assessing and planning for future water and wastewater system costs.

Determination of the full cost of managing the Municipality's water and wastewater systems takes into account the factors that have a bearing on the cost of providing reliable water and wastewater services to the customers over the long-term. These included both current and future considerations that would influence the cost of managing the systems (and the revenues required to sustain them). Table 3-1 notes the main drivers of cost. The assumptions made are noted in the respective sections of this report.

Table 3-1: Cost Components and Drivers

Cost Component	Cost Drivers	Future Cost Implications
Water and Wastewater systems operations and maintenance (O&M)	<p>This is the annual cost of operating and maintaining the current system including direct (e.g. operations staff) and indirect costs (e.g overhead, charge backs etc).</p> <p>Changes in regulations can result in additional (O&M) activities and added costs. This was evident when the regulations under the Safe Drinking Water Act took effect. Municipalities were required to undertake specific activities in the interest of water quality management (e.g sampling, analysis and reporting of water quality). More recently, the DWQMS meant additional costs for water system operational plans and licensing albeit not annually. It is expected that pending regulations under the Water Opportunities Act and greater enforcement of compliance requirements by the Ministry of the Environment, Conservation and Parks (MECP) would require more actions to be undertaken (and increased costs) by municipalities.</p>	<p>This is a direct annual cost that is reasonably consistent (fixed) from year to year but requires adjustment to account for non-recurring items, operational changes, variable cost (e.g. chemical use) changes and inflation. Non-rate revenues from administrative fees, third party recoveries, connection fees and reserve transfers offset these costs.</p> <p>The long term impact of new regulations on costs are difficult to predict. However, the costs are expected to rise as more stringent requirements are established and compliance enforcement by the MECP increases.</p> <p>Operating costs are assumed to increase by 2% annually.</p>
Customer Growth	<p>As the existing urban areas are developed, the addition of new customers would increase the total demand for water. A corresponding rise in wastewater volume requiring treatment would also be expected</p>	<p>The increase in demand, if significant, would increase volumes of water consumed and wastewater treated, and variable costs in the year the new customers are added.</p> <p>Customer Growth is based on projections provided by the Municipality future development information .</p>
Consumption Volume (m3)	<p>Consumption is a function of the number of customers (existing and new growth), weather conditions and the economic environment. The weather conditions have a significant influence on how much water is consumed in a given year. For example, lower temperatures and wet weather tend to result in less water consumption. Dry weather and higher temperatures increase water consumption. Wet weather would also mean more stormwater entering the wastewater system (known as inflow and infiltration) The loss of large (commercial or industrial) customers perhaps due to economic climate would reduce demand.</p>	<p>The annual consumption volume is unpredictable. Fluctuations can result in higher than anticipated costs or lower revenues and lead to budget deficits. An operating reserve would minimize the risk of deficits and stabilize rates (i.e. minimize rate spikes) It is assumed that consumption will continue to increase as a result of new customer growth.</p>
New growth related services	<p>This refers to installation of new assets to increase the system capacity to facilitate new development and build out of the approved service areas within the Municipality</p>	<p>Would result in capital investments in the year the new infrastructure is needed. Note that financing of these costs can be through debt or cash from reserves after third party contributions</p>

Cost Component	Cost Drivers	Future Cost Implications
		are considered (e.g. grants, developer contributions etc.)
Asset preservation and renewal	This is mainly the replacement of aging Tangible Capital Assets (TCA) e.g. old water mains, plant components, well components etc. that have exceeded their service life.	<p>Would result in future capital expenditures in the year in which the assets require replacement or rehabilitation to extend their useful lives. Allowances must be made as part of the annual costs to account for the future replacement of these assets. Financing can be through a combination of debt and reserve funds.</p> <p>Asset renewal needs are as provided from the Municipality's Capital Budget, and supplemented with additional lifecycle needs as determined by the Municipality's 2022 Tangible Capital Asset Inventory and 2022 Asset Management Plan (AMP) capital funding recommendations</p>
Other capital expenditures	These are capital expenditures other than those needed for growth and asset renewal. These would include cost of studies and implementation of operational improvements of the water and wastewater systems such as water loss reduction measures and wastewater I & I reduction programs.	Would increase costs in the year the expenditure is required. Financing can be through a combination of debt and reserves.
Capital Financing	Capital financing for projects can be from four (4) main sources: Debt financing, reserves, annual rates and third party contributions (grants etc.). Grant funding is available only when approved and is therefore not a predictable source of financing for financial planning purposes. The greater the debt financing, the higher the annual amount (costs) needed to repay the principal and interest on any current or future debt. Financing from reserves can only be used if sufficient funds are available. Therefore annual contributions to reserves are required to build balances for use in future years. Financing from rates do not increase annual costs but tend to drive up rates in the year the capital expenditure is required.	<p>Annual costs would increase to provide for reserve contributions and debt repayment. It should be noted that using debt financing would minimize spikes in funding required for capital projects and allocates cost to future users</p> <p>It is assumed that debt financing will be used when funds from other sources (reserves, grants, etc) are insufficient to finance the current year's capital program</p> <p>Net surpluses/ (deficits) generated annually from user revenues are allocated to or drawn from capital reserves</p>
Inflation	This is the annual rate of inflation as reported by Statistics Canada for the provision for cost of living adjustments each year.	Annual inflation of operating costs is assumed to be 2%. Annual inflation of capital cost is assumed to be 4%.

Cost Component	Cost Drivers	Future Cost Implications
Market competition and pricing	The level of competition within the market place depends on the number of service providers available. Additionally, the capacity of industry service providers to meet the increasing demand for their services may tend to increase prices. Tender prices for future capital projects would be influenced by the market conditions at the time of tendering.	Potential higher prices dependent on the future behaviour of the industry.

3.2 Full Cost Assessment

The full cost assessment identifies the current and future costs (i.e. the full costs) associated with the management of the water and wastewater systems over the next twenty (20) years (2022 to 2041). The key cost areas include:

- Operations & Maintenance (O&M) cost projections;
- Capital Budget forecast based on the results of the lifecycle needs analysis of the Municipality’s Tangible Capital Asset (TCA) Registry;
- Capital Funding Strategy based on the Municipality’s 2022 Asset Management Plan’s recommendations
- Debt servicing requirements; and
- Reserve fund requirements.

The non-rate revenues associated with the systems are also identified. These are defined as revenues that are routinely generated each year by the daily operations and include administrative revenues such as service connection fees, penalties, operating grants and other direct user fees and service charges. It is important to note that the non-rate revenues do not include the revenues generated by the water and wastewater user rates. The full cost developed through the various analyses in this study identify the revenue requirements for the water and wastewater systems and form the basis for the future rates and charges.

3.3 Data Sources

The primary sources of data used in this review are listed in Table 3-2. In addition, information was also developed from discussions with input from Municipal staff, as required.

Table 3-2: Data Sources

Item	Data Source
Asset Life Expectancy	<ul style="list-style-type: none"> • Municipality's TCA Policy • Information Provided by the Municipality
Asset Replacement Costs	<ul style="list-style-type: none"> • Municipality's TCA Policy • Historical Costs Provided by the Municipality indexed to 2022 • 2022 Asset Management Plan
Asset Values	<ul style="list-style-type: none"> • Municipality's TCA Policy • Information Provided by the Municipality
O & M Costs and Revenue Projections	<ul style="list-style-type: none"> • Municipality's 2022 Water and Wastewater Operating Budgets
Capital Cost Projections	<ul style="list-style-type: none"> • Municipality's 2022 Water and Wastewater Capital Budgets
Debt	<ul style="list-style-type: none"> • Municipality's 2022 Water and Wastewater Operating Budgets and 2022 Capital Budgets
Investments, Reserve balances etc.	<ul style="list-style-type: none"> • Information provided by the Municipality
Existing Customers	<ul style="list-style-type: none"> • Municipality's Customer count Provided by the Municipality
Growth	<ul style="list-style-type: none"> • Customer Growth is based on projections provided by the Municipality's future development information
Water and Wastewater Volumes	<ul style="list-style-type: none"> • Municipality's actual historical Consumption Volumes provided by the Municipality

4 Customer and Consumption Growth

The cost of service depends on the number and type of customers and corresponding demand. Although most costs are fixed, variable costs such as annual chemical use and hydro costs can increase depending on the level of customer growth and water consumption and wastewater treated. Capital costs related to increasing system capacity to accommodate customer growth can also be influenced by growth and demand. In addition, the rate structure for customers is comprised of a fixed charge (base charge) plus a consumption charge based on the metered volume of water consumed (and billed wastewater flows), therefore forecasting customer growth and annual water consumption volumes is essential to projecting future costs, revenue requirements and rates.

4.1 Current Customers and Water Consumption/Billed Wastewater Flows

In 2022 there are approximately 2140 water customers and 2038 wastewater customers in both the Morrisburg and Iroquois Systems based on information provided by the Municipality. The corresponding total water consumption is projected to be 425,655 cubic metres with billed wastewater flows projected to be 328,665 cubic metres. These numbers are expected to increase over the 2023 – 2041 forecast period. Table 4-1 shows by system the current total number of customers and their corresponding consumption.

Table 4-1: 2022 Customer Count and Consumption

System	Water		Wastewater	
	Customers	Consumption	Customers	Consumption
Morrisburg	1,377	312,643	1,301	221,352
Iroquois	763	113,012	737	107,313
Total	2,140	425,655	2,038	328,665

4.2 Projected Customer Growth

Table 4-2 shows the increase in total customers over the 2022-2041 forecast period. Customer growth projections reflect the customer growth as provided by the Municipality’s future development information. Water and wastewater customer growth over the forecast period is projected to be 167 new water and wastewater customers. Detailed customer growth is provided in Appendix B.

Table 4-2: 2022-2041 Customer Growth Projection

System	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Water Customers	2140	2150	2160	2170	2183	2196	2209	2222	2235	2243
Total Wastewater Customers	2038	2048	2058	2068	2081	2094	2107	2120	2133	2141

System	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total Water Customers	2250	2257	2264	2271	2277	2283	2289	2294	2299	2307
Total Wastewater Customers	2148	2155	2162	2169	2175	2181	2187	2192	2197	2205

4.3 Projected Water Consumption and Billed Wastewater Flows

Projected water consumption and billed wastewater flow increases are based on projected customer growth by customer type/system multiplied by the estimated average customer consumption in that customer class/system. The 2022-2041 volume projections are shown below in Table 4-3.

Table 4-3: 2022-2041 Water and Wastewater Projected Volumes (m³)

System	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Water Consumption	425,655	427,131	428,607	430,083	432,001	433,920	435,839	437,757	439,676	440,857
Billed Wastewater Flows	328,665	330,141	330,141	330,141	330,584	330,584	330,584	330,584	330,584	329,846

System	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Water Consumption	441,890	442,923	443,956	444,989	445,875	446,760	447,646	448,384	449,122	450,303
Billed Wastewater Flows	329,698	329,698	329,698	329,698	329,551	329,551	329,551	329,403	329,403	329,846

5 Capital Budget Requirements

The detailed water and wastewater 2022 capital budget requirements and 2023-2041 capital needs forecast are presented in Appendices C-1 and C-2 respectively. These appendices reflect the projects identified by the Municipality’s in its 2022 Capital Budget and supplemented with forecasted asset renewal needs as determined by the Municipality’s 2022 Tangible Capital Asset Inventory and the 2022 Asset Management Plan (AMP) capital funding recommendations.

There is approximately \$10.4 million in projected water related capital expenditure requirements and approximately \$9.3 million in projected wastewater related capital related expenditure requirements between 2022 and 2041.

Appendices C-1 and C-2 also show the projected sources of capital financing for the annual water and wastewater capital requirements. The level of water and wastewater rates have a direct impact on the mix of capital financing. The Municipality will continue to finance its’ capital requirements through cash from capital reserves with no need for the use of long-term debt.

5.1 Debt Financing

Issuance of debt allows for funds to be available in the year the project is required to proceed, with repayment of the debt occurring in future years. This approach supports the principle of user pay such that the beneficiaries of the new assets pay for their use through the debt repayment. Financing from capital reserve requires that sufficient funds be available in the reserve in the year the project is undertaken, through annual contributions from the operating budget to the reserve in prior years. Therefore, without debt or reserve financing, major rate increases, or “spikes” would be required in the project year to raise sufficient funds to cover the project expenditures.

The Municipality will not be required to borrow over the 2022-2041 forecast to fund the projected capital program. There is however existing debt for both water and wastewater previously issued for the funding of capital projects such as the water treatment plant, water tower and wastewater pumping station. Existing water debt matures in 2036, whereas existing wastewater debt matures in 2041. Appendix D shows the debt continuity for both water and wastewater debt from 2022 - 2041.

5.2 Reserve Requirements

There are separate reserves identified in this study for both water and wastewater for which projections are made:

- The Water and Wastewater Capital Reserves;
- Wastewater Dutch Meadows and Debt Reserves; and
- Water and Wastewater Rate Stabilization Reserves.

In as much as the wastewater capital reserves consist of separate reserves for Williamsburg, Morrisburg and Iroquois, for purposes of our rate analysis these capital reserves were not differentiated when funding the wastewater capital needs forecast.

Appendix E-1 shows the continuity schedule for each reserve fund projection. These schedules show the transfers to and from the respective reserves and the opening and closing balances.

5.2.1 Water and Wastewater Capital Reserves

Funds contained in the water and wastewater capital reserves are used in funding the annual capital needs reflected in the capital needs forecast and beyond, and to provide an account to transfer any projected revenue surpluses, as well as to offset any projected operating deficits in the operating budget. For presentation in our analysis annual surpluses and deficits were presented separately in a Rate Stabilization Reserve.

The water and wastewater capital replacement reserves are funded by annual operating budget transfers. The 2022 operating budget currently provides for approximately \$0.5 million for water capital replacement needs, and approximately \$0.4 million for wastewater capital replacement needs.

The Municipality's 2022 Asset Management Plan (AMP) however recommends that to ensure long-term sustainable funding of capital replacement needs the following level of annual water and wastewater operating budget contributions to capital reserves is required:

- Water \$1.4 million
- Wastewater \$1.1 million

To avoid the significant impact on rates and charges that would result with the immediate implementation of the AMP's recommended capital funding levels it was decided to phase in the recommended level of operating budget contributions to the capital reserves. Water would see the AMP's recommendation of \$1.4 million in annual contributions achieved by 2032, whereas wastewater would see the AMP's recommendation of \$1.1 million in annual contributions achieved by 2036.

While phasing in the recommended levels of capital funding would allow for water and wastewater rates to be increased annually at an acceptable level, phasing in would also create a capital funding shortfall that would need to be addressed in future years. The capital funding shortfall could be reduced in future years by any

annual surpluses or through unexpected provincial or federal capital grants. It should be noted, no capital grants are projected over the forecast period.

The continuity of the accumulated capital funding shortfall is presented in Appendix E-2

5.2.2 Wastewater Dutch Meadows and Debt Reserves

Two specific internal reserves were established by the Municipality to track receipts for development connection fees and payments of debt specific to the Dutch Meadows pumping station. The continuity of these reserves is presented in Appendix E.

5.2.3 Water and Wastewater Rate Stabilization Reserves

Each year will produce either a revenue surplus or deficit. Projected annual surpluses and deficits are presented separately in this analysis by way of rate stabilization reserves. While these reserves remain in a negative balance until the end of the forecast period, the negative balances are more than offset by the significant positive balances in the capital reserves. Appendix E presents the 2022-2041 water and wastewater rate stabilization reserve balances. Section 7.4 (Water and Wastewater Customer Revenues) provides an explanation of the accumulated balances in this reserve for both water and wastewater.

5.2.4 Target Reserve Balances

It is best practice among municipalities to have target balances to ensure that funds are available to meet funding of planned capital replacements, unforeseen capital needs, and the stabilization of rates when necessary. Target balances are usually set based on a Municipality's capital replacement values, with a minimum target balance of 5% and maximum target balance of 10% of the respective water and wastewater capital asset replacement values. According to the 2022 Asset Management Plan, current total water and wastewater capital asset replacement values are \$191 million.

Water capital assets have an estimated current replacement value of \$105 million, which would see an appropriate water capital replacement reserve balance of between \$5.25 million and \$10.5 million. By 2041 the level of net water capital reserves is projected to be \$13.8 million.

The current replacement value of wastewater assets is estimated at \$91 million, which would see an appropriate wastewater capital replacement reserve levels of between \$4.55 million and \$9.1 million. By 2041 the level of net wastewater reserve is projected to be \$7.8 million.

When combined, total water and wastewater capital reserves by 2041 are estimated to be approximately \$21.6 million, or approximately 11% of the water and wastewater systems current replacement value of \$191 million.

6 Operations & Maintenance (O&M) Cost Projections

The annual operating budgets are based on the operations and maintenance needs of the Municipality's various water and wastewater systems. These include operations and maintenance costs related to the water system (i.e. water treatment and water distribution), and the wastewater system (i.e. wastewater treatment and wastewater collection). These costs generally include the staffing, materials, utilities and other costs related to the following:

- Administration;
- Contracted Services (including meter reading);
- Minor Capital; and
- Maintenance.

Transfers to reserves and debt servicing are typically included in the annual O&M budgets. These costs have however been addressed separately for the purposes of this report and are noted in Section 5.

A portion of the O&M costs is offset by non-rate revenues. These include:

- Administrative service fees and charges;
- Third party recoveries;
- Reserve transfers; and
- Connection fees.

The projection of the gross costs and non-rate revenues over the study period is based on the Municipality's 2022 Operating Budget. It has been assumed that for 2023 and beyond, O&M costs (not including non-recurring costs, reserve transfers and debt servicing) will increase annually by 2%. It should be noted however that the 2023 renewal of the RSL meter reading/billing contract will see costs increase significantly in 2023 from \$71,948 in 2022, to a projected \$212,192 in 2023.

Table 6.1 and Table 6.2 summarizes the Municipality's 2022 operating budgets for water and wastewater services respectively including the net amount to be recovered from customers. The net amount to be recovered from customer will used in establishing the projected rates and charges as detailed in Section 7.

Table 6-1:Water Operating Budget

2022 Operating Budget	
Iroquois Morrisburg Water	
W.TREAT - WAGES	211,942
W.TREAT - BENEFITS	58,583
W.D. - TWP WAGES	86,584
W.D. - BENEFITS	24,550
W-TREAT - HEATING FUEL	25,000
W-TREAT - HYDRO	112,000
W-TREAT - PHONE/ALARM	24,200
W-TREAT - COMPUTER SERVICES	2,800
W.D. - SAMPLING	13,400
W.TREAT - CHEMICALS	13,000
W-TREAT - SMALL TOOLS	1,000
W-TREAT - BLDG REPAIRS & MAINT	65,000
WATER DIST. - SMALL TOOLS	2,000
W-TREAT - SNOW REMOVAL	4,500
W.D - LOCATE FEES	5,600
W.D. - SNOW REMOVAL	3,500
MORR/IROQ H2O DIST. - Truck Charges	10,000
W.D. - LINE REPAIR & MAINT - PARTS	80,000
W-TREAT - PROF. DEVELOPMENT	4,000
W-TREAT - MEMBERSHIPS	800
W-TREAT PLANT - HEALTH & SAFETY	10,000
W.D. - MATERIALS- H2O METERS	20,000
WATER PLANT - MUNICIPAL TAXES	30,707
W-TREAT - INSURANCE	36,000
W-TREAT - AUDIT	4,000
W-TREAT - LEGAL	10,000
W-TREAT - ADMIN O.H.	50,000
S.D. WATER - RSL METER READING	71,948
MORR/IROQ. WATER - ADVERTISING	1,400
W-TREAT - CONTRACTS	35,618
W.D. - HYDRANTS	17,500
W.D. - HYDRANTS	18,000
Sub Total Operating Expenditures	1,053,632
Capital-Related	
Existing Debt (Principal) - Non-Growth Related	378,353
Existing Debt (Interest) - Non-Growth Related	117,271
Transfer to Capital Budget	382,190
Transfer to Capital Reserves and Reserve Funds	120,000
Sub Total Capital Related Expenditures	997,815
Total Expenditures	2,051,447
Non-Rate Revenues	
RECOVERABLE FROM OSTAR GRANT	16,708
WATER CONNECTION CHARGES	1,600
IRO/MOR WATER - RETAIL	6,500
IRO/MOR WATER - PROV	
IRO/MOR WATER - PROV	2,800
IRO/MORR WATER - GROWTH COMP LEVY	40,000
Dutch Meadows Connection Fees	40,000
IRO/MORR WATER - LOAN	-
IRO/MORR WATER - INTEREST	3,000
IRO/MOR WATER - METER & ASSET SALES	4,700
Water Transfer From UCO	
Evonik Rohmax Canada Debt Reimbursement	23,889
Growth Loan interest Funded From Property Tax	29,395
Total Operating Revenue	168,592
Net Water Costs To Be Recovered From Users	1,882,855

Table 6-2: Wastewater Operating Budget

2022 Operating Budget	
Morrisburg Sewer	
MORR.SEWER - WAGES	62,256
MORR.SEWER - BENEFITS	17,998
MORR.SEW.COLLECT - TWP WAGES	7,729
MORR.SEW.COLLECT - BENEFITS	2,178
MORRIS SEWER - HEATING	20,000
MORRIS SEWER - HYDRO	95,000
MORRIS SEWER - COMMUNICATIONS	10,500
MORR.SEWER - SAMPLING	10,000
MORRIS. STP - CHEMICALS	12,000
MORRIS. SEWER - SMALL TOOLS	500
MORRIS SEWER -SNOW REMOVAL	2,500
MORRIS SEWER -BLDG REPAIR/MAIN'T	60,000
MORRIS SEWER -MAINT DMP'S	5,000
MORRIS SEWER - SLUDGE REMOVAL	17,000
MORRIS.SEWER COLL.-Truck Charges	2,500
MORR.SEW.COLLECT - LINE REPAIRS/MAIN'T	8,000
MORR SEWER - PROF. DEVELOPMENT	3,000
MORRIS SEWER - CONTRACTS & SERVICES	19,480
MORRIS SEWER - GENERAL COST RECOVERY 50%	23,500
MORRIS SEWER - MUN. TAXES	56,410
Iroquois Sewer	
IROQ SEWER - WAGES	42,395
IROQ SEWER - BENEFITS	11,907
IROQ.SEW.COLLECT - TWP WAGES	18,853
IROQ.SEW.COLLECT - BENEFITS	5,186
IROQ SEWER - HEATING	13,000
IROQ SEWER - HYDRO	120,000
IROQ SEWER - COMMUNICATIONS	9,900
IROQ.SEWER - SAMPLING	8,000
IROQ STP - CHEMICALS	10,000
IROQ.SEWER - SMALL TOOLS	800
IROQ.SEWER - SNOW REMOVAL	7,000
IROQ.SEWER - SLUDGE REMOVAL	10,000
IROQ SEWER - BLDG REPAIRS & MAIN'T	55,000
IROQ.SEW.COLLECT - TRUCK CHARGES	2,000
IROQ.SEW.COLLECT - LINE REPAIR/MAIN'T	24,000
IROQ SEWER - CONTRACTS & SERVICES	19,480
IROQ SEWER - GEN COST RECOVERY 40%	19,000
IROQ. SEWER - MUN. TAXES	35,159
Williamsburg Sewer	
WMBG SEWER - WAGES	4,384
WMBG SEWER - BENEFITS	1,188
WMBG SEWER - HEATING	300
WMBG SEWER - HYDRO	3,600
WMBG SEWER - COMMUNICATIONS	4,000
WMBG. SEW/LAGOON - SAMPLING	2,000
WMBG SEWER - SNOW REMOVAL	2,000
WMBG SEWER - BLDG REPAIR/MAIN'T	7,000
WMBG SEWER - CONTRACTS & SERVICES	8,351
WMBG SEWER - GENERAL COST RECOVERY 10%	4,700
Sub Total Operating Expenditures	884,754
Capital-Related	
Existing Debt (Principal) - Non-Growth Related	49,954
Existing Debt (Interest) - Non-Growth Related	21,931
Transfer to Capital Budget	55,000
Transfer to Williamsburg Capital Reserve	13,597
Transfer to Morrisburgh Capital Reserve	248,127
Transfer to Iroquois Capital Reserve	97,782
Sub Total Capital Related Expenditures	486,390
Total Expenditures	1,371,144
Non-Rate Revenues	
MORRIS SEWER - CONNECTION FEE	40,000
MORRIS SEWER - Dutch Meadows Pumping Station Reserve	31,885
MORRIS SEWER - CONNECTION FEE-Excluding Dutch Meadows	35,000
IROQ. SEWER - CONNECTION FEE	20,000
WMBG SEWER - S.A.R. TAX LEVY	51,120
Total Operating Revenue	178,005
Net Wastewater Costs To Be Recovered From Users	1,193,139

Appendix F details the projected 2022 – 2041 water systems gross operating & maintenance costs, non-rate revenues and net costs to be recovered from customers through the Municipality's water rates and charges. The net annual costs of the water system are expected to increase by \$1.2 million, from \$1.9 million in 2022 to approximately \$3.1 million by 2041. The \$1.2 million increase in net water costs over the forecast period is, to a large extent, the result of the \$0.9 million increase in annual contributions to capital reserves, from \$0.5 million in 2022 to \$1.4 million in 2041.

Appendix G details the projected 2022 – 2041 wastewater systems gross operating & maintenance costs, non-rate revenues and net costs to be recovered from customers through the Municipality's wastewater rates and charges. The net annual costs of the wastewater system are expected to double, from approximately \$1.2 million in 2022 to approximately \$2.4 million by 2041. The \$1.2 million increase in net wastewater costs over the forecast period, like water, is to a large extent, the result of the increase in annual contributions to capital reserves. Contributions to wastewater capital reserves increase approximately \$0.7 million over the forecast period, or from \$0.4 million in 2022 to \$1.1 million in 2041.

7 Sustainable User Rates and Charges and Customer Revenues

The sustainable water and wastewater rates and charges and corresponding customer revenues are detailed in this section. The capital costs and sources of capital financing contained in Section 5 (Capital Budget Requirements) and costs and non-rate revenues contained in Section 6 (Operating & Maintenance Cost Projections), and the projected growth contained in Section 4 (Customer Growth and Volume Projections) were considered in calculating the sustainable water and wastewater rates and charges and customer revenues as presented in this section.

While the rates and charges are based on the Municipality's current water and wastewater rate structure, consideration was given to looking at alternative rates structures in this rate review. However, based on an assessment of the current billing system employed by Rideau St. Lawrence Utilities (RSL) to read meters, and to bill and collect the water and wastewater charges on behalf of the Municipality, RSL's billing system could not accommodate any changes in the current rate structure. As such, it is recommended that, due to the lack of RSL's billing system functionality, along with expected significant increase in cost of the billing contract with RSL, consideration be given to assessing the feasibility of undertaking the water and wastewater billing process internally.

7.1 Current Rates and Charges

The Municipality's 2022 water and wastewater rate structure and rates are shown in Table 7-1.

The water rate structure includes:

- A Flat Charge based on meter size
- A Uniform Volumetric Rate based on volume of water consumed
- A Capital Levy (Water Customers Only)

The wastewater rate structure is based on a surcharge on the water charges. Iroquois wastewater customers pay a 100% surcharge of water charges, whereas Morrisburg wastewater customers pay a 75% surcharge of water charges.

Table 7-1: Current 2022 Water and Wastewater Rates and Charges

Meter Size	Water	Wastewater Surcharge	
	Municipal Wide	Iroquois -(100%)	Morrisburg (75%)
5/8" Residential	\$ 540.00	\$ 540.00	\$ 405.00
1" Residential	\$ 756.00	\$ 756.00	\$ 567.00
5/8" Non-Residential	\$ 540.00	\$ 540.00	\$ 405.00
1 " Non-Residential	\$ 756.00	\$ 756.00	\$ 567.00
1 1/2 " Non-Residential	\$ 972.00	\$ 972.00	\$ 729.00
2 " Non-Residential	\$ 1,566.00	\$ 1,566.00	\$ 1,174.50
3 " Non-Residential	\$ 1,566.00	\$ 1,566.00	\$ 1,174.50
4 " Non-Residential	\$ 1,566.00	\$ 1,566.00	\$ 1,174.50
Consumption Charge (per m3)	\$ 0.70	\$ 0.70	\$ 0.53
Water Capital Levy (WTP Repayment)	\$ 1.03	N/A	N/A

As noted in Table 7-1, the base charge for metered customers is based on a 5/8" meter. For customers with larger meters the 5/8" meter base charge is multiplied by a meter ratio based on the meter size as listed in Table 7-2.

Table 7-2: Meter Ratios

Meter Equivalency Ratio	
Meter Size	Ratio
5/8" Residential	1
1" Residential	1.4
5/8" Non-Residential	1
1 " Non-Residential	1.4
1 1/2 " Non-Residential	1.8
2 " Non-Residential	2.9
3 " Non-Residential	2.9
4 " Non-Residential	2.9

7.2 Water Rates and Charges Projection

Table 7-3 presents the projected sustainable water rates and charges for the six (6) year period 2022 – 2027. The twenty (20) year detailed projection of water rates and charges and customer revenues is presented in Appendix H. The water base charges, and volumetric rates are recommended to be increased by 4% each year over the forecast period. There is no recommended increase in the Water Capital Levy over the forecast period. The water rates and charges as projected are required to ensure a sustainable level of water funding over the twenty (20) year forecast period. As noted above, the projected water rates and charges are based on the Municipality’s current rate structure.

Table 7-3: Projected Water Rates and Charges

Projected Annual Base Charges						
Customer Type	2022	2023	2024	2025	2026	2027
Annual Increase % Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	540.00	561.60	584.06	607.43	631.72	656.99
1" Residential	756.00	786.24	817.69	850.40	884.41	919.79
5/8" Non-Residential	540.00	561.60	584.06	607.43	631.72	656.99
1 " Non-Residential	756.00	786.24	817.69	850.40	884.41	919.79
1 1/2 " Non-Residential	972.00	1,010.88	1,051.32	1,093.37	1,137.10	1,182.59
2 " Non-Residential	1,566.00	1,628.64	1,693.79	1,761.54	1,832.00	1,905.28
3 " Non-Residential	1,566.00	1,628.64	1,693.79	1,761.54	1,832.00	1,905.28
4 " Non-Residential	1,566.00	1,628.64	1,693.79	1,761.54	1,832.00	1,905.28

Projected Annual Uniform Rates						
Customer Type	2022	2023	2024	2025	2026	2027
Annual Increase % Increases		4.0%	4.0%	4.0%	4.0%	4.0%
Rate	\$ 0.70	0.73	0.76	0.79	0.82	0.85

Projected Annual Capital Levy						
Customer Type	2022	2023	2024	2025	2026	2027
Annual Increase % Increases		0.0%	0.0%	0.0%	0.0%	0.0%
Rate	\$ 1.03	1.03	1.03	1.03	1.03	1.03

7.3 Wastewater Rates and Charges Projection

Table 7.4 presents the current and projected sustainable wastewater rates and charges for the six (6) year period 2022 – 2027. The twenty (20) year projection of wastewater rates and charges is detailed in Appendix I. Because the current rate structure ties the wastewater rates and charges to the water rates and charges (surcharge), the wastewater base charges and volumetric rates are also recommended to be increased by 4% each year over the forecast period. The wastewater rates and charges as projected will also ensure a sustainable level of wastewater funding over the forecast period.

Table 7-4: Projected Wastewater Rates and Charges

Projected Annual Base Charges - Morrisburg (75% Surcharge)

Customer Type	2022	2023	2024	2025	2026	2027
Annual Increase %Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	405.00	421.20	438.05	455.57	473.79	492.74
1" Residential	567.00	589.68	613.27	637.80	663.31	689.84
5/8" Non-Residential	405.00	421.20	438.05	455.57	473.79	492.74
1" Non-Residential	567.00	589.68	613.27	637.80	663.31	689.84
1 1/2" Non-Residential	729.00	758.16	788.49	820.03	852.83	886.94
2" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96
3" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96
4" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96

Projected Annual Uniform Rates - Morrisburg (75% Surcharge)

	2022	2023	2024	2025	2026	2027
Annual Increase %Increases		4.0%	4.0%	4.0%	4.0%	4.0%
Rate	\$ 0.53	0.55	0.57	0.59	0.61	0.64

Projected Annual Base Charges - Iroquois (100% Surcharge)

Customer Type	2022	2023	2024	2025	2026	2027
Annual Increase %Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99
1" Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79
5/8" Non-Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99
1" Non-Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79
1 1/2" Non-Residential	\$ 972.00	\$ 1,010.88	\$ 1,051.32	\$ 1,093.37	\$ 1,137.10	\$ 1,182.59
2" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28
3" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28
4" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28

Projected Annual Uniform Rates - Iroquois (100% Surcharge)

	2022	2023	2024	2025	2026	2027
Annual Increase %Increases		4.0%	4.0%	4.0%	4.0%	4.0%
Rate	\$ 0.70	0.73	0.76	0.79	0.82	0.85

7.4 Water and Wastewater Customer Revenues

The water and wastewater rates and charges discussed in Sub-Sections 7.3 and 7.4 generate revenues to recover the net costs of water and wastewater services as detailed in Section 6. Table 7-5 presents the 2022-2027 annual water revenues generated, net water costs to be recovered from users and the annual water revenue surpluses/(deficits). Table 7-6 presents the 2022-2027 annual wastewater revenues generated, net wastewater costs to be recovered from users and annual wastewater surpluses/(deficits). Appendices H and I present the detailed water and wastewater customer revenue calculations.

Table 7-5: Projected Water Customer Revenue

	2022	2023	2024	2025	2026	2027
Base Charge Revenues	1,187,946	1,241,080	1,296,564	1,354,500	1,416,893	1,482,110
Uniform Rate Revenues	\$ 297,959	\$ 310,951	\$ 324,507	\$ 338,649	\$ 353,766	\$ 369,551
Capital Levy Revenues	\$ 356,997	\$ 358,517	\$ 360,037	\$ 361,558	\$ 363,534	\$ 365,510
Total Water Revenues	\$1,842,901	\$1,910,548	\$1,981,108	\$2,054,707	\$2,134,193	\$2,217,171
Total Water Expenditures	\$1,882,855	\$2,129,047	\$2,229,058	\$2,330,930	\$2,435,603	\$2,558,774
Projected Surplus/ (Deficit)	\$ (39,953)	\$ (218,499)	\$ (247,951)	\$ (276,223)	\$ (301,410)	\$ (341,603)

Table 7-6: Projected Wastewater Customer Revenue

	2022	2023	2024	2025	2026	2027
Total Base Charge Revenues	\$ 952,196	\$ 994,776	\$1,039,240	\$1,085,669	\$1,135,571	\$1,187,728
Total Uniform Rate Revenues	\$ 191,329	\$ 199,842	\$ 207,835	\$ 216,149	\$ 225,067	\$ 234,069
Total Wastewater Revenues	\$1,143,524	\$1,194,618	\$1,247,075	\$1,301,817	\$1,360,637	\$1,421,797
Total Wastewater Expenditures	\$1,193,139	\$1,245,262	\$1,300,546	\$1,359,238	\$1,421,714	\$1,488,121
Projected Surplus/ (Deficit)	\$ (49,615)	\$ (50,644)	\$ (53,471)	\$ (57,420)	\$ (61,076)	\$ (66,324)

As noted in Tables 7-5 and 7-6, each year will produce either a revenue surplus or deficit. Revenue deficits are noted in each of the 2022-2027 years. Appendix J provides the detailed surplus/(deficit) over the 2022-2041 forecast period. Also provided in Appendix J is the combined total accumulated surplus/(deficit) for both the water and wastewater systems.

There is a total accumulated water revenue surplus over the 2022-2041 forecast period of \$859 thousand dollars, whereas there is a total accumulated wastewater deficit over the 2022-2041 forecast period of \$709 thousand dollars, for a total combined accumulated surplus of \$150 thousand over the 2022-2041 forecast period. The reason for the disparity of the accumulated surpluses/deficits between the water and wastewater systems is that the current rate structure ties the wastewater rates (surcharge) to the water rates. Whereas each of the water and wastewater system have their own respective cost drivers, the water and wastewater rates are tied to the same increases or decreases, thereby creating a disparity in the potential annual surpluses or deficits between the two systems. In this analysis rates increases were set to minimize the overall accumulated surplus/(deficit) over the 2022-2041 forecast period.

8 O.Reg 453/07 Water System Financial Plan

Regulation 188/07 under the Safe Drinking Water Act requires Ontario municipalities to apply for and obtain Drinking Water System Licences as part of their overall DWQMS. One of the requirements of holding a valid drinking water licence is preparing and submitting to the Province an updated financial plan in accordance with O.Reg. 453/07. The financial plan must include financial statements on the following:

- The proposed or projected financial position of the drinking water systems;
- The proposed or projected gross cash receipts and gross cash payments;
- The proposed or projected financial operations of the drinking water system; and
- Details on the extent to which the above information applies to the replacement of lead service pipes, if applicable.

The financial plan must apply to a period of at least six (6) years with the first year being the year the existing license expires or the year the financial plan is prepared. In the Municipality’s case an updated Water System Financial Plan will be for the period 2022 to 2027. The financial plan as presented in Appendix K is based on the results of the rate analysis and rate recommendations contained in this report.

9 Recommendations

The following are the recommendations resulting from the water and wastewater rate study:

1. That implementation of Water Rates and Charges as contained in Appendix H be approved to achieve full cost recovery and long-term sustainable financing of the Municipality's water system.
2. That implementation of Wastewater Rates and Charges as contained in Appendix I be approved to achieve full cost recovery and long-term sustainable financing of the Municipality's wastewater system.
3. That consideration be given to assessing the feasibility of undertaking the water and wastewater billing process internally.
4. That the O.Reg. 453/07 Water System Financial Plan as presented in Appendix K, including the Financial Statements contained therein, be approved by Council and submitted to the Province of Ontario in accordance with the Drinking Water System License renewal requirements and O. Reg. 453/07.
5. That a copy of the Water System Financial Plan be posted on the Municipality's website and made available to the public at no charge.

APPENDICES

Appendix A-1

**2022 Water and Wastewater Rate
By-Law No. 2022-03**

THE CORPORATION OF THE MUNICIPALITY OF SOUTH DUNDAS

BY-LAW NO. 2022-03

A By-law to amend Schedule "B" to By-Law No. 2017-58 to enact rules and regulations to inspect, install, repair, replace or alter water meters and related appurtenances, including the penalties for offences.

WHEREAS the *Municipal Act, 2001*, as amended, provides that the powers of the Municipality shall be exercised by By-law;

AND WHEREAS the *Municipal Act, 2001*, as amended, authorizes a Municipality to pass By-laws respecting matters within the sphere of public utilities;

AND WHEREAS the Municipality of South Dundas regulates the supply and use of water and sewer;

AND WHEREAS it is deemed necessary to review the set fees and amend accordingly;

NOW THEREFORE the Council of the Corporation of the Municipality of South Dundas enacts as follows:

1. That Schedule "A" attached to and forming part of this By-law shall replace a portion of Schedule "B" to By-law No. 2017-58.
2. And that all units having access to sewer services shall connect to the service and upon the issuance of the building permit, including adhering to all other Federal, Provincial and Municipal laws, By-laws and regulations, shall be assessed an upfront/service connection charge based upon Schedule "A" to this By-law, and the said charge shall become due and payable immediately prior to the issuance of a building permit.
3. That all other terms and conditions of By-law No. 2017-58 shall remain in effect.
4. That By-law No. 2021-62 is hereby repealed in its entirety.
5. This By-law shall come into force and effect as of January 1, 2022.

READ and passed in open Council, signed and sealed this 10th day of January 2022.

MAYOR

CLERK

SCHEDULE "A"
To By-law No. 2022-03

Annual Water Fixed/Flat Rate

Residential \$ 540.00
Multi-Residential \$ 540.00

Industrial, Commercial, Institutional:

Meter Size	Fixed Rate
5/8" - 3/4"	\$ 540.00
1"	\$ 756.00
1 1/2"	\$ 972.00
2"	\$1,566.00
3"	\$1,566.00
4"	\$1,566.00

Water Metered/Consumption Rate

Residential \$0.70 per m³
Industrial, Commercial, Institutional \$0.70 per m³
Multi-Residential \$0.70 per m³

Sewer Upfront/Service Connection Fee/Unit

Upfront/Service Connection Fee per dwelling unit \$5,000.00

Appendix A-2

**Water Capital Levy
By-Law No. 2021-61**

THE CORPORATION OF THE MUNICIPALITY OF SOUTH DUNDAS

BY-LAW NO. 2021-61

A BY-LAW to amend By-Law No. 2007-57 to establish a capital levy charge for the benefit of current and future users of the South Dundas Water Treatment Plant ("SDWTP").

WHEREAS *the Municipal Act, 2001*, as amended, gives the Municipality the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this Act;

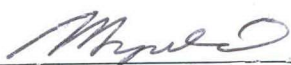
AND WHEREAS the Municipality of South Dundas has imposed a fee for capital costs related to water services;

AND WHEREAS it is deemed necessary to review those fees and amend accordingly;

NOW THEREFORE the Council of the Corporation of the Municipality of South Dundas enacts as follows:

1. That Schedule "A" attached hereto and forming part of this By-law is hereby adopted.
2. And that the definition of "unit" be added.
3. 'Unit' means a residential, commercial, institutional, or industrial establishment, which is separated or capable of being separated, from any other establishment on the assessment roll of the Municipality of South Dundas. If a dispute arises as to whether an establishment is a unit, it shall be determined by reference to the last revised assessment roll of the Corporation.
4. All other terms and conditions of By-Law No. 2007-57 shall remain in effect.
5. That By-law No. 2019-37 be repealed its entirety.
6. This By-law shall come into force and effect as of July 1, 2021.

READ and passed in open Council, signed and sealed this 14th day of June, 2021



MAYOR



CLERK

SCHEDULE "A"
to By-law No. 2021-61

Water Upfront Charge/service connection per unit	\$5,000.00
Consumption Charge/User (no minimum charge)	\$1.03/m ³

Appendix B

Customer Growth Forecast

Appendix B – Customer Growth Forecast

System	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Morrisburg Water										
Residential Customers	1232	1240	1248	1256	1267	1278	1289	1300	1311	1317
annual increase ¹		8	8	8	11	11	11	11	11	6
Non-Residential Customers	145	145	145	145	145	145	145	145	145	145
annual increase ³		0	0	0	0	0	0	0	0	0
Morrisburg Wastewater										
Residential Customers	1160	1168	1176	1184	1195	1206	1217	1228	1239	1245
annual increase ¹		8	8	8	11	11	11	11	11	6
Non-Residential Customers	141	141	141	141	141	141	141	141	141	141
annual increase ³		0	0	0	0	0	0	0	0	0
Iroquois Water										
Residential Customers	689	691	693	695	697	699	701	703	705	707
annual increase ²		2	2	2	2	2	2	2	2	2
Non-Residential Customers	74	74	74	74	74	74	74	74	74	74
annual increase ³		0	0	0	0	0	0	0	0	0
Iroquois Wastewater										
Residential Customers	665	667	669	671	673	675	677	679	681	683
annual increase ²		2	2	2	2	2	2	2	2	2
Non-Residential Customers	72	72	72	72	72	72	72	72	72	72
annual increase ³		0	0	0	0	0	0	0	0	0
Total Water Customers	2140	2150	2160	2170	2183	2196	2209	2222	2235	2243
Total Wastewater Customers	2038	2048	2058	2068	2081	2094	2107	2120	2133	2141

System	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Morrisburg Water										
Residential Customers	1322	1327	1332	1337	1341	1345	1349	1352	1355	1361
annual increase ¹	5	5	5	5	4	4	4	3	3	6
Non-Residential Customers	145	145	145	145	145	145	145	145	145	145
annual increase ³	0	0	0	0	0	0	0	0	0	0
Morrisburg Wastewater										
Residential Customers	1250	1255	1260	1265	1269	1273	1277	1280	1283	1289
annual increase ¹	5	5	5	5	4	4	4	3	3	6
Non-Residential Customers	141	141	141	141	141	141	141	141	141	141
annual increase ³	0	0	0	0	0	0	0	0	0	0
Iroquois Water										
Residential Customers	709	711	713	715	717	719	721	723	725	727
annual increase ²	2	2	2	2	2	2	2	2	2	2
Non-Residential Customers	74	74	74	74	74	74	74	74	74	74
annual increase ³	0	0	0	0	0	0	0	0	0	0
Iroquois Wastewater										
Residential Customers	685	687	689	691	693	695	697	699	701	703
annual increase ²	2	2	2	2	2	2	2	2	2	2
Non-Residential Customers	72	72	72	72	72	72	72	72	72	72
annual increase ³	0	0	0	0	0	0	0	0	0	0
Total Water Customers	2250	2257	2264	2271	2277	2283	2289	2294	2299	2307
Total Wastewater Customers	2148	2155	2162	2169	2175	2181	2187	2192	2197	2205

1. Annual increase according to Municipality's future development information

2. Nominal annual increase assumed

3. No increase in non-residential customers assumed

Appendix C-1

2022-2041 Capital Forecast - Water

Appendix C-1 – 2022 Water Capital Budget and 2023-2041 Forecast

Description	2022 Budget	Forecast								
		2023	2024	2025	2026	2027	2028	2029	2030	2031
-										
-										
-										
W-TREAT - CAPITAL EXPENDITURES - SUV	41,000	-	-	-	-	-	-	-	-	-
Water Rate Study	75,000	-	-	-	-	-	-	-	-	-
Watermain 250m & 150mm	930,000	-	-	-	-	-	-	-	-	-
-										
Total Capital Expenditures - Capital Program	1,046,000	-	-	-	-	-	-	-	-	-
Inventory Replacement from Inventory Sheets	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Lifecycle Needs										
Water Vehicles and Equipment	-	7,949	-	531,352	44,117	204,355	58,238	408,114	47,574	-
Water Buildings	-	-	-	-	-	-	-	-	-	-
Water Hydrants	-	347,023	-	1,664	-	-	-	-	-	4,518
Water Meters	-	156,383	186,005	2,908	6,482	5,350	5,661	-	4,716	16,745
Water Valves	-	223,365	456,712	-	-	-	-	-	81,548	-
Water Lines	-	9,108	-	86,568	-	-	-	-	-	-
Total Capital Expenditures	1,046,000	743,828	642,717	622,492	50,599	209,705	63,899	408,114	133,838	21,263
Capital Financing										
Provincial/Federal Grants										
OCIF	420,000									
External Contributions	75,000									
Development Charges	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Operating Contributions (Capital From Current)	382,190	-	-	-	-	-	-	-	-	-
-										
Water Capital Reserve	168,810	743,828	642,717	622,492	50,599	209,705	63,899	408,114	133,838	21,263
Water Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-
Total Capital Financing	1,046,000	743,828	642,717	622,492	50,599	209,705	63,899	408,114	133,838	21,263

Description	Forecast									
	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Lifecycle Needs										
Water Vehicles and Equipment	-	-	-	8,372	-	-	-	-	-	-
Water Buildings	1,030,160	2,173,540	-	-	-	-	-	-	-	-
Water Hydrants	-	131,999	-	6,520	-	5,837	-	-	-	-
Water Meters	-	-	-	-	-	-	-	-	-	-
Water Valves	-	-	-	-	-	9,080	-	-	110,308	-
Water Lines	-	2,269,048	-	53,267	-	627,025	-	-	-	-
Total Capital Expenditures	1,030,160	4,574,586	-	68,160	-	641,943	-	-	110,308	-
Capital Financing										
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-
OCIF	-	-	-	-	-	-	-	-	-	-
External Contributions										
Development Charges	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Operating Contributions (Capital From Current)	-	-	-	-	-	-	-	-	-	-
-										
Water Capital Reserve	1,030,160	4,574,586	-	68,160	-	641,943	-	-	110,308	-
Water Capital Replacement Reserve										
Total Capital Financing	1,030,160	4,574,586	-	68,160	-	641,943	-	-	110,308	-

Appendix C-2

2022-2041 Capital Forecast - Wastewater

Appendix C-2 – 2022 Wastewater Capital Budget and 2023-2041 Forecast

Description	2022 Budget	Forecast								
		2023	2024	2025	2026	2027	2028	2029	2030	2031
-	-	-	-	-	-	-	-	-	-	-
MORRIS SEWER CAPITAL- Dutch Meadow Pump Station	600,000	-	-	-	-	-	-	-	-	-
MORRIS SEWER CAPITAL-Sewer laterals	45,000	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
IROQ SEWER-CAPITAL EXPENSE-2 Grundfor Dosing Pum	10,000	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures - Capital Program	655,000	-	-	-	-	-	-	-	-	-
Inventory Replacement from Inventory Sheets	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Lifecycle Needs										
Sewer Vehicles and Equipment	-	-	-	27,891	13,379	112,348	89,238	484,029	23,854	-
Sewer Buildings	-	-	-	-	-	-	-	-	461,550	-
Sewer Manholes	-	513,478	-	3,287	-	2,723	-	-	20,063	-
Sewer Force mains	-	-	-	-	-	-	-	-	-	-
Sewer Lines	-	-	-	-	-	-	-	-	24,381	-
Total Capital Expenditures	655,000	513,478	-	31,178	13,379	115,071	89,238	484,029	529,848	-
Capital Financing										
Provincial/Federal Grants										
External Contributions										
Development Charges	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Operating Contributions (Capital From Current)	55,000	-	-	-	-	-	-	-	-	-
Wastewater Iroquois Capital Reserve	-	-	-	-	-	-	-	-	-	-
Wastewater Williamsburg Capital Reserve	-	-	-	-	-	-	-	-	-	-
Wastewater Morrisburg Capital Reserve	600,000	513,478	-	31,178	13,379	115,071	89,238	484,029	529,848	-
Total Capital Financing	655,000	513,478	-	31,178	13,379	115,071	89,238	484,029	529,848	-

Description	Forecast									
	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Lifecycle Needs										
Sewer Vehicles and Equipment	-	-	-	8,372	-	-	-	-	-	-
Sewer Buildings	2,060,321	4,289,535	190,781	-	-	-	-	-	-	-
Sewer Manholes	-	282,327	2,989	6,439	5,283	1,342	-	-	-	-
Sewer Force mains	-	-	-	-	-	-	-	-	-	-
Sewer Lines	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	2,060,321	4,571,862	193,770	14,811	5,283	1,342	-	-	-	-
Capital Financing										
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-
External Contributions										
Development Charges	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Operating Contributions (Capital From Current)	-	-	-	-	-	-	-	-	-	-
Wastewater Iroquois Capital Reserve	-	629,512	-	-	-	-	-	-	-	-
Wastewater Williamsburg Capital Reserve	-	117,136	-	-	-	-	-	-	-	-
Wastewater Morrisburg Capital Reserve	2,060,321	3,825,214	193,770	14,811	5,283	1,342	-	-	-	-
Total Capital Financing	2,060,321	4,571,862	193,770	14,811	5,283	1,342	-	-	-	-

Appendix D

2022-2041 Water and Wastewater Debt Continuity Schedules

Appendix D – Water and Wastewater Debt Continuity Schedules

WATER DEBT CONTINUITY

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Annual Debt Charges	\$495,625	\$485,706	\$475,887	\$465,851	\$455,924	\$422,108	\$188,842	\$81,840	\$81,840	\$81,840
Total Annual Interest Expense	\$117,271	\$100,771	\$84,079	\$66,866	\$49,443	\$31,686	\$14,893	\$10,995	\$9,571	\$8,118
Total Annual Principal Repayments	\$378,353	\$384,935	\$391,808	\$398,985	\$406,481	\$390,422	\$173,949	\$70,845	\$72,269	\$73,722
New Debt Issues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Outstanding Debt	\$2,713,938	\$2,329,003	\$1,937,195	\$1,538,210	\$1,131,729	\$741,307	\$567,358	\$496,512	\$424,243	\$350,521

Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total Annual Debt Charges	\$81,840	\$81,840	\$81,840	\$81,840	\$40,920	\$0	\$0	\$0	\$0	\$0
Total Annual Interest Expense	\$6,636	\$5,125	\$3,583	\$2,010	\$405	\$0	\$0	\$0	\$0	\$0
Total Annual Principal Repayments	\$75,204	\$76,715	\$78,257	\$79,830	\$40,515	\$0	\$0	\$0	\$0	\$0
New Debt Issues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Outstanding Debt	\$275,317	\$198,602	\$120,345	\$40,514	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)

WASTEWATER DEBT CONTINUITY

Year	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Annual Debt Charges	\$71,884	\$71,885	\$71,885	\$71,885	\$71,965	\$71,885	\$71,884	\$71,885	\$71,884	\$71,885
Total Annual Interest Expense	\$21,931	\$21,037	\$20,121	\$19,187	\$18,311	\$17,254	\$16,255	\$15,235	\$14,190	\$13,123
Total Annual Principal Repayments	\$49,954	\$50,848	\$51,764	\$52,699	\$53,654	\$54,631	\$55,629	\$56,651	\$57,694	\$58,762
New Debt Issues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Outstanding Debt	\$1,144,260	\$1,093,412	\$1,041,648	\$988,949	\$935,295	\$880,663	\$825,034	\$768,383	\$710,689	\$651,926

Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total Annual Debt Charges	\$71,885	\$71,884	\$71,885	\$71,885	\$71,884	\$71,885	\$71,885	\$71,884	\$71,884	\$71,885
Total Annual Interest Expense	\$12,032	\$10,915	\$9,774	\$8,607	\$7,413	\$6,193	\$4,943	\$3,666	\$2,359	\$1,022
Total Annual Principal Repayments	\$59,853	\$60,969	\$62,111	\$63,278	\$64,471	\$65,693	\$66,942	\$68,219	\$69,526	\$70,863
New Debt Issues	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Outstanding Debt	\$592,073	\$531,104	\$468,992	\$405,714	\$341,243	\$275,550	\$208,608	\$140,389	\$70,863	\$0

Appendix E-1

2022-2041 Reserve Projections

Appendix E-1– 2022-2041 Reserve Projections

Water Capital Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	214,889	166,079	(0)	16,424	140,842	931,898	1,666,351	2,657,604	3,418,177	4,569,158
Transfer from Operating	120,000	577,749	659,141	746,911	841,655	944,157	1,055,152	1,168,686	1,284,819	1,403,613
Transfer to Capital	168,810	743,828	642,717	622,492	50,599	209,705	63,899	408,114	133,838	21,263
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	166,079	(0)	16,424	140,842	931,898	1,666,351	2,657,604	3,418,177	4,569,158	5,951,509

Water Rate Stabilization Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	-	-	(39,953)	(258,452)	(506,403)	(782,626)	(1,084,036)	(1,425,639)	(1,508,277)	(1,573,390)
Prior Year Operating Surplus/ (Deficit)	-	(39,953)	(218,499)	(247,951)	(276,223)	(301,410)	(341,603)	(82,638)	(65,113)	(108,739)
Transfer to Capital Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	(39,953)	(258,452)	(506,403)	(782,626)	(1,084,036)	(1,425,639)	(1,508,277)	(1,573,390)	(1,682,128)

Wastewater Williamsburg Capital Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	103,539	117,136	117,136	117,136	117,136	117,136	117,136	117,136	117,136	117,136
Transfer from Operating	13,597	-	-	-	-	-	-	-	-	-
Transfer from Stabilization Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Closing Balance	117,136	117,136	117,136	117,136	117,136	117,136	117,136	117,136	117,136	117,136

Wastewater Morrisburg Capital Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	561,234	209,361	145,838	634,071	1,132,471	1,693,374	2,201,026	2,787,038	3,031,986	3,286,074
Transfer from Operating	248,127	449,955	488,233	529,578	574,282	622,723	675,250	728,978	783,936	840,154
Transfer to Capital	600,000	513,478	-	31,178	13,379	115,071	89,238	484,029	529,848	-
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	209,361	145,838	634,071	1,132,471	1,693,374	2,201,026	2,787,038	3,031,986	3,286,074	4,126,228

Wastewater Iroquois Capital Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	531,730	629,512	629,512	629,512	629,512	629,512	629,512	629,512	629,512	629,512
Transfer from Operating	97,782	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	629,512	629,512	629,512	629,512	629,512	629,512	629,512	629,512	629,512	629,512

Wastewater Dutch Meadows Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	130,371	98,486	66,601	34,716	22,831	22,831	22,831	22,831	22,831	22,831
Transfer from Operating	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	31,885	31,885	31,885	11,885	-	-	-	-	-	11,885
Closing Balance	98,486	66,601	34,716	22,831	22,831	22,831	22,831	22,831	22,831	10,946

Wastewater Debt Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	-	-	-	-	-	10,614	21,228	31,842	42,456	93,070
Transfer from Operating	-	-	-	-	10,614	10,614	10,614	10,614	50,614	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	10,614	21,228	31,842	42,456	93,070	93,070

Wastewater Rate Stabilization Reserve

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance	-	-	(49,615)	(100,259)	(153,730)	(211,150)	(272,226)	(338,551)	(411,934)	(491,112)
Prior Year Operating Surplus/ (Deficit)	-	(49,615)	(50,644)	(53,471)	(57,420)	(61,076)	(66,324)	(73,383)	(79,178)	(83,616)
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	(49,615)	(100,259)	(153,730)	(211,150)	(272,226)	(338,551)	(411,934)	(491,112)	(574,728)

Total Water and Wastewater Reserves

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TOTAL WATER RESERVES	166,079	(39,953)	(242,028)	(365,560)	149,273	582,315	1,231,965	1,909,900	2,995,769	4,269,380
TOTAL WASTEWATER RESERVES	1,054,495	909,472	1,315,176	1,748,220	2,262,317	2,719,506	3,249,808	3,431,988	3,657,512	4,402,164
TOTAL WATER AND WASTEWATER RESERVES	1,220,574	869,519	1,073,148	1,382,660	2,411,590	3,301,822	4,481,773	5,341,888	6,653,280	8,671,545

Appendix E-1– 2022-2041 Reserve Projections

Water Capital Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	5,951,509	6,329,161	3,162,387	4,570,199	5,909,851	7,317,663	8,083,532	9,491,344	10,899,156	12,196,660
Transfer from Operating	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Transfer to Capital	1,030,160	4,574,586	-	68,160	-	641,943	-	-	110,308	-
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	6,329,161	3,162,387	4,570,199	5,909,851	7,317,663	8,083,532	9,491,344	10,899,156	12,196,660	13,604,472

Water Rate Stabilization Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	(1,682,128)	(1,873,874)	(2,006,713)	(2,067,936)	(2,053,874)	(1,955,687)	(1,744,704)	(1,406,815)	(978,638)	(462,086)
Prior Year Operating Surplus/ (Deficit)	(191,746)	(132,838)	(61,223)	14,062	98,187	210,983	337,890	428,176	516,552	614,526
Transfer to Capital Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	(1,873,874)	(2,006,713)	(2,067,936)	(2,053,874)	(1,955,687)	(1,744,704)	(1,406,815)	(978,638)	(462,086)	152,440

Wastewater Williamsburg Capital Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	117,136	117,136	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-
Transfer from Stabilization Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	117,136	-	-	-	-	-	-	-	-
Closing Balance	117,136	-	-	-	-	-	-	-	-	-

Wastewater Morrisburg Capital Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	4,126,228	2,963,453	94,367	916,526	1,978,694	3,100,870	4,226,987	5,354,445	6,481,904	7,609,363
Transfer from Operating	897,546	956,128	1,015,930	1,076,978	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459
Transfer to Capital	2,060,321	3,825,214	193,770	14,811	5,283	1,342	-	-	-	-
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	2,963,453	94,367	916,526	1,978,694	3,100,870	4,226,987	5,354,445	6,481,904	7,609,363	8,736,822

Wastewater Iroquois Capital Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	629,512	629,512	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	629,512	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	629,512	-	-	-	-	-	-	-	-	-

Wastewater Dutch Meadows Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	10,946	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	10,946	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-

Wastewater Debt Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	93,070	82,132	60,247	38,362	76,476	44,591	12,706	0	0	0
Transfer from Operating	-	-	-	38,114	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	10,938	21,885	21,885	-	31,885	31,885	12,706	-	-	-
Closing Balance	82,132	60,247	38,362	76,476	44,591	12,706	0	0	0	0

Wastewater Rate Stabilization Reserve

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance	(574,728)	(664,772)	(759,998)	(858,807)	(959,625)	(1,060,771)	(1,149,455)	(1,171,927)	(1,144,082)	(1,066,956)
Prior Year Operating Surplus/ (Deficit)	(90,044)	(95,226)	(98,809)	(100,818)	(101,146)	(88,684)	(22,472)	27,845	77,126	152,780
Transfer to Capital	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	(664,772)	(759,998)	(858,807)	(959,625)	(1,060,771)	(1,149,455)	(1,171,927)	(1,144,082)	(1,066,956)	(914,176)

Total Water and Wastewater Reserves

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
TOTAL WATER RESERVES	4,455,286	1,155,674	2,502,263	3,855,977	5,361,976	6,338,828	8,084,530	9,920,518	11,734,574	13,756,913
TOTAL WASTEWATER RESERVES	3,127,461	(605,384)	96,081	1,095,545	2,084,690	3,090,238	4,182,519	5,337,822	6,542,408	7,822,647
TOTAL WATER AND WASTEWATER RESERVES	7,582,747	550,290	2,598,344	4,951,522	7,446,666	9,429,066	12,267,048	15,258,340	18,276,982	21,579,560

Appendix E-2

2022-2041 Capital Funding Shortfall

Appendix E-2 – 2022-2041 Capital Funding Shortfall

Water Capital Funding Shortfall

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance of Capital Funding Shortfall		905,622	1,735,685	2,484,356	3,145,258	3,711,415	4,175,069	4,527,729	4,766,855	4,889,848
Required Annual Capital Funding	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Annual Capital Funding	502,190	577,749	659,141	746,911	841,655	944,157	1,055,152	1,168,686	1,284,819	1,403,613
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Annual Capital Funding Shortfall	905,622	830,063	748,671	660,901	566,157	463,655	352,660	239,126	122,993	4,199
Accumulated Capital Funding Shortfall	905,622	1,735,685	2,484,356	3,145,258	3,711,415	4,175,069	4,527,729	4,766,855	4,889,848	4,894,047

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance of Capital Funding Shortfall	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047
Required Annual Capital Funding	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Annual Capital Funding	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Annual Capital Funding Shortfall	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Accumulated Capital Funding Shortfall	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047	4,894,047

Wastewater Capital Funding Shortfall

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Opening Balance of Capital Funding Shortfall		712,953	1,390,457	2,029,683	2,627,564	3,180,741	3,685,477	4,137,686	4,536,168	4,879,691
Required Annual Capital Funding	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459
Annual Capital Funding	414,506	449,955	488,233	529,578	574,282	622,723	675,250	728,978	783,936	840,154
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Annual Capital Funding Shortfall	712,953	677,504	639,226	597,881	553,177	504,736	452,209	398,481	343,523	287,305
Accumulated Capital Funding Shortfall	712,953	1,390,457	2,029,683	2,627,564	3,180,741	3,685,477	4,137,686	4,536,168	4,879,691	5,166,996

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Opening Balance of Capital Funding Shortfall	5,166,996	5,396,909	5,568,240	5,679,770	5,730,250	5,730,250	5,730,250	5,730,251	5,730,251	5,730,251
Required Annual Capital Funding	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459
Annual Capital Funding	897,546	956,128	1,015,930	1,076,978	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459
Additional Capital Funding (Surplus)	-	-	-	-	-	-	-	-	-	-
Annual Capital Funding Shortfall	229,913	171,331	111,529	50,481	0	0	0	0	0	0
Accumulated Capital Funding Shortfall	5,396,909	5,568,240	5,679,770	5,730,250	5,730,250	5,730,250	5,730,251	5,730,251	5,730,251	5,730,251

Appendix F

2022 Water Operating Budget and 2023-2041 Operating Budget Forecast

Appendix F – Water Operating Budget Forecast (2022-2041)

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Iroquois Morrisburg Water										
W.TREAT - WAGES	211,942	216,181	220,504	224,915	229,413	234,001	238,681	243,455	248,324	253,290
W.TREAT - BENEFITS	58,583	59,755	60,950	62,169	63,412	64,680	65,974	67,293	68,639	70,012
W.D. - TWP WAGES	86,584	88,316	90,082	91,884	93,721	95,596	97,508	99,458	101,447	103,476
W.D. - BENEFITS	24,550	25,041	25,542	26,053	26,574	27,105	27,647	28,200	28,764	29,340
W-TREAT - HEATING FUEL	25,000	25,500	26,010	26,530	27,061	27,602	28,154	28,717	29,291	29,877
W-TREAT - HYDRO	112,000	114,240	116,525	118,855	121,232	123,657	126,130	128,653	131,226	133,850
W-TREAT - PHONE/ALARM	24,200	24,684	25,178	25,681	26,195	26,719	27,253	27,798	28,354	28,921
W-TREAT - COMPUTER SERVICES	2,800	2,856	2,913	2,971	3,031	3,091	3,153	3,216	3,281	3,346
W-TREAT - SAMPLING										
W.D. - SAMPLING	13,400	13,668	13,941	14,220	14,505	14,795	15,091	15,392	15,700	16,014
W.TREAT - CHEMICALS	13,000	13,260	13,525	13,796	14,072	14,353	14,640	14,933	15,232	15,536
W-TREAT - SMALL TOOLS	1,000	1,020	1,040	1,061	1,082	1,104	1,126	1,149	1,172	1,195
W-TREAT - BLDG REPAIRS & MAINT	65,000	66,300	67,626	68,979	70,358	71,765	73,201	74,665	76,158	77,681
WATER DIST. - SMALL TOOLS	2,000	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	2,390
W-TREAT - SNOW REMOVAL	4,500	4,590	4,682	4,775	4,871	4,968	5,068	5,169	5,272	5,378
W.D. - LOCATE FEES	5,600	5,712	5,826	5,943	6,062	6,183	6,307	6,433	6,561	6,693
W.D. - SNOW REMOVAL	3,500	3,570	3,641	3,714	3,789	3,864	3,942	4,020	4,101	4,183
MORR/IROQ H2O DIST. - Truck Charges	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
W.D. - LINE REPAIR & MAINT - PARTS	80,000	81,600	83,232	84,897	86,595	88,326	90,093	91,895	93,733	95,607
W-TREAT - PROF. DEVELOPMENT	4,000	4,080	4,162	4,245	4,330	4,416	4,505	4,595	4,687	4,780
W-TREAT - MEMBERSHIPS	800	816	832	849	866	883	901	919	937	956
W-TREAT PLANT - HEALTH & SAFETY	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
W.D. - MATERIALS- H2O METERS	20,000	20,400	20,808	21,224	21,649	22,082	22,523	22,974	23,433	23,902
WATER PLANT - MUNICIPAL TAXES	30,707	31,321	31,948	32,587	33,238	33,903	34,581	35,273	35,978	36,698
W-TREAT - INSURANCE	36,000	36,720	37,454	38,203	38,968	39,747	40,542	41,353	42,180	43,023
W-TREAT - AUDIT	4,000	4,080	4,162	4,245	4,330	4,416	4,505	4,595	4,687	4,780
W-TREAT - LEGAL	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
W-TREAT - ADMIN O.H.	50,000	51,000	52,020	53,060	54,122	55,204	56,308	57,434	58,583	59,755
S.D. WATER - RSL METER READING	71,948	212,192	216,436	220,765	225,180	229,683	234,277	238,963	243,742	248,617
MORR/IROQ WATER - ADVERTISING	1,400	1,428	1,457	1,486	1,515	1,546	1,577	1,608	1,640	1,673
W-TREAT - CONTRACTS	35,618	36,330	37,057	37,798	38,554	39,325	40,112	40,914	41,732	42,567
W.D. - HYDRANTS	17,500	17,850	18,207	18,571	18,943	19,321	19,708	20,102	20,504	20,914
W.D. - HYDRANTS	18,000	18,360	18,727	19,102	19,484	19,873	20,271	20,676	21,090	21,512
Sub Total Operating Expenditures	1,053,632	1,213,510	1,237,780	1,262,535	1,287,786	1,313,542	1,339,813	1,366,609	1,393,941	1,421,820
Capital-Related										
Existing Debt (Principal) - Non-Growth Related	378,353	384,935	391,808	398,985	406,481	390,422	173,949	70,845	72,269	73,722
Existing Debt (Interest) - Non-Growth Related	117,271	100,771	84,079	66,866	49,443	31,686	14,893	10,995	9,571	8,118
Transfer to Capital Budget	382,190									
Transfer to Capital Reserves and Reserve Funds	120,000	577,749	659,141	746,911	841,655	944,157	1,055,152	1,168,686	1,284,819	1,403,613
Sub Total Capital Related Expenditures	997,815	1,063,455	1,135,028	1,212,762	1,297,579	1,366,265	1,243,994	1,250,526	1,366,659	1,485,453
Total Expenditures	2,051,447	2,276,965	2,372,808	2,475,297	2,585,365	2,679,807	2,583,807	2,617,135	2,760,601	2,907,273
Non-Rate Revenues										
RECOVERABLE FROM OSTAR GRANT	16,708	-	-	-	-	-	-	-	-	-
WATER CONNECTION CHARGES	1,600	1,632	1,665	1,698	1,732	1,767	1,802	1,838	1,875	1,912
IRO/MOR WATER - RETAIL	6,500	6,630	6,763	6,898	7,036	7,177	7,320	7,466	7,616	7,768
IRO/MOR WATER - PROV	2,800	2,856	2,913	2,971	3,031	3,091	3,153	3,216	3,281	3,346
IRO/MORR WATER - GROWTH COMP LEVY	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Dutch Meadows Connection Fees	40,000	40,000	40,000	45,000	55,000	55,000	55,000	55,000	60,000	30,000
IRO/MORR WATER - INTEREST	3,000	3,060	3,121	3,184	3,247	3,312	3,378	3,446	3,515	3,585
IRO/MORR WATER - METER & ASSET SALES	4,700	4,794	4,890	4,988	5,087	5,189	5,293	5,399	5,507	5,617
Evonik Rohmax Canada Debt Reimbursement	23,889	23,889	23,889	23,889	23,889	-	-	-	-	-
Growth Loan interest Funded From Property Tax	29,395	25,057	20,509	15,740	10,740	5,497				
Total Operating Revenue	168,592	147,918	143,749	144,367	149,762	121,033	115,947	76,366	81,793	52,229
Net Water Costs To Be Recovered From Users	1,882,855	2,129,047	2,229,058	2,330,930	2,435,603	2,558,774	2,467,860	2,540,770	2,678,808	2,855,045

Appendix F – Water Operating Budget Forecast (2022-2041)

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Iroquois Morrisburg Water	-	-	-	-	-	-	-	-	-	-
W.TREAT - WAGES	258,356	263,523	268,794	274,170	279,653	285,246	290,951	296,770	302,705	308,759
W.TREAT - BENEFITS	71,412	72,841	74,297	75,783	77,299	78,845	80,422	82,030	83,671	85,344
W.D. - TWP WAGES	105,545	107,656	109,809	112,006	114,246	116,531	118,861	121,239	123,663	126,137
W.D. - BENEFITS	29,926	30,525	31,135	31,758	32,393	33,041	33,702	34,376	35,063	35,765
W-TREAT - HEATING FUEL	30,475	31,084	31,706	32,340	32,987	33,647	34,320	35,006	35,706	36,420
W-TREAT - HYDRO	136,527	139,258	142,043	144,884	147,782	150,737	153,752	156,827	159,964	163,163
W-TREAT - PHONE/ALARM	29,500	30,090	30,691	31,305	31,931	32,570	33,221	33,886	34,564	35,255
W-TREAT - COMPUTER SERVICES	3,413	3,481	3,551	3,622	3,695	3,768	3,844	3,921	3,999	4,079
W-TREAT - SAMPLING	-	-	-	-	-	-	-	-	-	-
W.D. - SAMPLING	16,335	16,661	16,994	17,334	17,681	18,035	18,395	18,763	19,138	19,521
W.TREAT - CHEMICALS	15,847	16,164	16,487	16,817	17,153	17,496	17,846	18,203	18,567	18,939
W-TREAT - SMALL TOOLS	1,219	1,243	1,268	1,294	1,319	1,346	1,373	1,400	1,428	1,457
W-TREAT - BLDG REPAIRS & MAINT	79,235	80,819	82,436	84,084	85,766	87,481	89,231	91,016	92,836	94,693
WATER DIST. - SMALL TOOLS	2,438	2,487	2,536	2,587	2,639	2,692	2,746	2,800	2,856	2,914
W-TREAT - SNOW REMOVAL	5,485	5,595	5,707	5,821	5,938	6,056	6,178	6,301	6,427	6,556
W.D. - LOCATE FEES	6,826	6,963	7,102	7,244	7,389	7,537	7,688	7,841	7,998	8,158
W.D. - SNOW REMOVAL	4,266	4,352	4,439	4,528	4,618	4,711	4,805	4,901	4,999	5,099
MORR/IROQ H2O DIST. - Truck Charges	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
W.D. - LINE REPAIR & MAINT - PARTS	97,520	99,470	101,459	103,489	105,558	107,669	109,823	112,019	114,260	116,545
W-TREAT - PROF. DEVELOPMENT	4,876	4,973	5,073	5,174	5,278	5,383	5,491	5,601	5,713	5,827
W-TREAT - MEMBERSHIPS	975	995	1,015	1,035	1,056	1,077	1,098	1,120	1,143	1,165
W-TREAT PLANT - HEALTH & SAFETY	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
W.D. - MATERIALS- H2O METERS	24,380	24,867	25,365	25,872	26,390	26,917	27,456	28,005	28,565	29,136
WATER PLANT - MUNICIPAL TAXES	37,432	38,180	38,944	39,723	40,517	41,328	42,154	42,997	43,857	44,734
W-TREAT - INSURANCE	43,884	44,761	45,657	46,570	47,501	48,451	49,420	50,409	51,417	52,445
W-TREAT - AUDIT	4,876	4,973	5,073	5,174	5,278	5,383	5,491	5,601	5,713	5,827
W-TREAT - LEGAL	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
W-TREAT - ADMIN O.H.	60,950	62,169	63,412	64,680	65,974	67,293	68,639	70,012	71,412	72,841
S.D. WATER - RSL METER READING	253,589	258,661	263,834	269,111	274,493	279,983	285,582	291,294	297,120	303,062
MORR/IROQ WATER - ADVERTISING	1,707	1,741	1,776	1,811	1,847	1,884	1,922	1,960	2,000	2,040
W-TREAT - CONTRACTS	43,418	44,287	45,172	46,076	46,997	47,937	48,896	49,874	50,871	51,889
W.D. - HYDRANTS	21,332	21,759	22,194	22,638	23,091	23,553	24,024	24,504	24,994	25,494
W.D. - HYDRANTS	21,942	22,381	22,828	23,285	23,751	24,226	24,710	25,204	25,708	26,223
Sub Total Operating Expenditures	1,450,256	1,479,262	1,508,847	1,539,024	1,569,804	1,601,200	1,633,224	1,665,889	1,699,207	1,733,191
Capital-Related										
Existing Debt (Principal) - Non-Growth Related	75,204	76,715	78,257	79,830	40,515	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	6,636	5,125	3,583	2,010	405	-	-	-	-	-
Transfer to Capital Budget										
Transfer to Capital Reserves and Reserve Funds	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Sub Total Capital Related Expenditures	1,489,652	1,489,652	1,489,652	1,489,652	1,448,732	1,407,812	1,407,812	1,407,812	1,407,812	1,407,812
Total Expenditures	2,939,908	2,968,914	2,998,499	3,028,676	3,018,536	3,009,012	3,041,036	3,073,701	3,107,019	3,141,003
Non-Rate Revenues										
RECOVERABLE FROM OSTAR GRANT	-	-	-	-	-	-	-	-	-	-
WATER CONNECTION CHARGES	1,950	1,989	2,029	2,070	2,111	2,153	2,196	2,240	2,285	2,331
IRO/MOR WATER - RETAIL	7,923	8,082	8,244	8,408	8,577	8,748	8,923	9,102	9,284	9,469
IRO/MOR WATER - PROV	3,413	3,481	3,551	3,622	3,695	3,768	3,844	3,921	3,999	4,079
IRO/MORR WATER - GROWTH COMP LEVY										
Dutch Meadows Connection Fees	25,000	25,000	25,000	30,000	20,000	20,000	20,000	15,000	15,000	
IRO/MORR WATER - INTEREST	3,657	3,730	3,805	3,881	3,958	4,038	4,118	4,201	4,285	4,370
IRO/MORR WATER - METER & ASSET SALES	5,729	5,844	5,961	6,080	6,202	6,326	6,452	6,581	6,713	6,847
Evonik Rohmax Canada Debt Reimbursement	-	-	-	-	-	-	-	-	-	-
Growth Loan interest Funded From Property Tax										
Total Operating Revenue	47,673	48,127	48,589	54,061	44,542	45,033	45,534	41,044	41,565	27,097
Net Water Costs To Be Recovered From Users	2,892,235	2,920,787	2,949,910	2,974,615	2,973,994	2,963,979	2,995,502	3,032,656	3,065,453	3,113,906

Appendix G

**2022 Wastewater Operating Budget and
2023-2041 Operating Budget Forecast**

Appendix G – Wastewater Operating Budget Forecast (2022-2041)

Description	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Morrisburg Sewer										
MORR.SEWER - WAGES	62,256	63,501	64,771	66,067	67,388	68,736	70,110	71,513	72,943	74,402
MORR.SEWER - BENEFITS	17,998	18,358	18,725	19,100	19,482	19,871	20,269	20,674	21,088	21,509
MORR.SEW.COLLECT - TWP WAGES	7,729	7,884	8,041	8,202	8,366	8,533	8,704	8,878	9,056	9,237
MORR.SEW.COLLECT - BENEFITS	2,178	2,222	2,266	2,311	2,358	2,405	2,453	2,502	2,552	2,603
MORRIS SEWER - HEATING	20,000	20,400	20,808	21,224	21,649	22,082	22,523	22,974	23,433	23,902
MORRIS SEWER - HYDRO	95,000	96,900	98,838	100,815	102,831	104,888	106,985	109,125	111,308	113,534
MORRIS SEWER - COMMUNICATIONS	10,500	10,710	10,924	11,143	11,366	11,593	11,825	12,061	12,302	12,548
MORRIS SEWER - SAMPLING	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
MORRIS.STP - CHEMICALS	12,000	12,240	12,485	12,734	12,989	13,249	13,514	13,784	14,060	14,341
MORRIS.SEWER - SMALL TOOLS	500	510	520	531	541	552	563	574	586	598
MORRIS SEWER -SNOW REMOVAL	2,500	2,550	2,601	2,653	2,706	2,760	2,815	2,872	2,929	2,988
MORRIS SEWER -BLDG REPAIR/MAINT	60,000	61,200	62,424	63,672	64,946	66,245	67,570	68,921	70,300	71,706
MORRIS SEWER -MAINT DMPS	5,000	5,100	5,202	5,306	5,412	5,520	5,631	5,743	5,858	5,975
MORRIS SEWER - SLUDGE REMOVAL	17,000	17,340	17,687	18,041	18,401	18,769	19,145	19,528	19,918	20,317
MORRIS.SEWER COLL.-Truck Charges	2,500	2,550	2,601	2,653	2,706	2,760	2,815	2,872	2,929	2,988
MORR.SEW.COLLECT - LINE REPAIRS/MAINT	8,000	8,160	8,323	8,490	8,659	8,833	9,009	9,189	9,373	9,561
MORR SEWER - PROF. DEVELOPMENT	3,000	3,060	3,121	3,184	3,247	3,312	3,378	3,446	3,515	3,585
MORRIS SEWER - CONTRACTS & SERVICES	19,480	19,870	20,267	20,672	21,086	21,507	21,938	22,376	22,824	23,280
MORRIS SEWER - GENERAL COST RECOVERY 50%	23,500	23,970	24,449	24,938	25,437	25,946	26,465	26,994	27,534	28,085
MORRIS SEWER - MUN. TAXES	56,410	57,538	58,689	59,863	61,060	62,281	63,527	64,797	66,093	67,415
Iroquois Sewer										
IROQ SEWER - WAGES	42,395	43,243	44,108	44,990	45,890	46,808	47,744	48,699	49,672	50,666
IROQ SEWER - BENEFITS	11,907	12,145	12,388	12,636	12,889	13,146	13,409	13,677	13,951	14,230
IROQ.SEW.COLLECT - TWP WAGES	18,853	19,230	19,615	20,007	20,407	20,815	21,232	21,656	22,089	22,531
IROQ.SEW.COLLECT - BENEFITS	5,186	5,290	5,396	5,503	5,613	5,726	5,840	5,957	6,076	6,198
IROQ SEWER - HEATING	13,000	13,260	13,525	13,796	14,072	14,353	14,640	14,933	15,232	15,536
IROQ SEWER - HYDRO	120,000	122,400	124,848	127,345	129,892	132,490	135,139	137,842	140,599	143,411
IROQ SEWER - COMMUNICATIONS	9,900	10,098	10,300	10,506	10,716	10,930	11,149	11,372	11,599	11,831
IROQ.SEWER - SAMPLING	8,000	8,160	8,323	8,490	8,659	8,833	9,009	9,189	9,373	9,561
IROQ STP - CHEMICALS	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
IROQ.SEWER - SMALL TOOLS	800	816	832	849	866	883	901	919	937	956
IROQ.SEWER - SNOW REMOVAL	7,000	7,140	7,283	7,428	7,577	7,729	7,883	8,041	8,202	8,366
IROQ.SEWER - SLUDGE REMOVAL	10,000	10,200	10,404	10,612	10,824	11,041	11,262	11,487	11,717	11,951
IROQ SEWER - BLDG REPAIRS & MAINT	55,000	56,100	57,222	58,366	59,534	60,724	61,939	63,178	64,441	65,730
IROQ.SEW.COLLECT - BLDG/GRD OPERATIONS										
IROQ.SEW.COLLECT - TRUCK CHARGES	2,000	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	2,390
IROQ.SEW.COLLECT - LINE REPAIR/MAINT	24,000	24,480	24,970	25,469	25,978	26,498	27,028	27,568	28,120	28,682
IROQ SEWER - CONTRACTS & SERVICES	19,480	19,870	20,267	20,672	21,086	21,507	21,938	22,376	22,824	23,280
IROQ SEWER - GEN COST RECOVERY 40%	19,000	19,380	19,768	20,163	20,566	20,978	21,397	21,825	22,262	22,707
IROQ SEWER - MUN. TAXES	35,159	35,862	36,579	37,311	38,057	38,818	39,595	40,387	41,194	42,018
Williamsburg Sewer										
WMBG SEWER - WAGES	4,384	4,472	4,561	4,652	4,745	4,840	4,937	5,036	5,137	5,239
WMBG SEWER - BENEFITS	1,188	1,212	1,236	1,261	1,286	1,312	1,338	1,365	1,392	1,420
WMBG SEWER - HEATING	300	306	312	318	325	331	338	345	351	359
WMBG SEWER - HYDRO	3,600	3,672	3,745	3,820	3,897	3,975	4,054	4,135	4,218	4,302
WMBG SEWER - COMMUNICATIONS	4,000	4,080	4,162	4,245	4,330	4,416	4,505	4,595	4,687	4,780
WMBG.SEW/LAGOON - SAMPLING	2,000	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	2,390
WMBG SEWER - SNOW REMOVAL	2,000	2,040	2,081	2,122	2,165	2,208	2,252	2,297	2,343	2,390
WMBG SEWER - BLDG REPAIR/MAINT	7,000	7,140	7,283	7,428	7,577	7,729	7,883	8,041	8,202	8,366
WMBG SEWER - CONTRACTS & SERVICES	8,351	8,518	8,688	8,862	9,039	9,220	9,405	9,593	9,785	9,980
WMBG SEWER - GENERAL COST RECOVERY 10%	4,700	4,794	4,890	4,988	5,087	5,189	5,293	5,399	5,507	5,617
Sub Total Operating Expenditures	884,754	902,449	920,498	938,908	957,686	976,840	996,377	1,016,304	1,036,630	1,057,363
Capital-Related										
Existing Debt (Principal) - Non-Growth Related	49,954	50,848	51,764	52,699	53,654	54,631	55,629	56,651	57,694	58,762
Existing Debt (Interest) - Non-Growth Related	21,931	21,037	20,121	19,187	18,311	17,254	16,255	15,235	14,190	13,123
Transfer to Capital Budget	55,000									
Transfer to Debt Reserve					10,614	10,614	10,614	10,614	50,614	
Transfer to Williamsburg Capital Reserve	13,597									
Transfer to Morrisburh Capital Reserve	248,127	449,955	488,233	529,578	574,282	622,723	675,250	728,978	783,936	840,154
Transfer to Iroquois Capital Reserve	97,782									
Sub Total Capital Related Expenditures	486,390	521,840	560,118	601,464	656,861	705,222	757,748	811,477	906,434	912,039
Total Expenditures	1,371,144	1,424,289	1,480,616	1,540,372	1,614,548	1,682,062	1,754,125	1,827,781	1,943,064	1,969,402
Non-Rate Revenues										
MORRIS SEWER - CONNECTION FEE	40,000	40,000	40,000	60,000	82,500	82,500	82,500	82,500	122,500	60,000
MORRIS SEWER Dutch Meadows Pump Station Reserve	31,885	31,885	31,885	11,885	-	-	-	-	-	11,885
MORRIS SEWER - Debt Reserve	-	-	-	-	-	-	-	-	-	-
MORRIS SEWER CONNECT FEE-Excluding Dutch Medow	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
IROQ SEWER - CONNECTION FEE	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
WMBG SEWER - S.A.R. TAX LEVY	51,120	52,142	53,185	54,249	55,334	56,441	57,569	58,721	59,895	61,093
Total Operating Revenue	178,005	179,027	180,070	181,134	192,834	193,941	195,069	196,221	237,395	187,978
Net Wastewater Costs To Be Recovered From Users	1,193,139	1,245,262	1,300,546	1,359,238	1,421,714	1,488,121	1,559,056	1,631,561	1,705,669	1,781,424

Appendix G – Wastewater Operating Budget Forecast (2022-2041)

Description	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Morrisburg Sewer	-	-	-	-	-	-	-	-	-	-
MORR.SEWER - WAGES	75,890	77,408	78,956	80,535	82,145	83,788	85,464	87,173	88,917	90,695
MORR.SEWER - BENEFITS	21,939	22,378	22,826	23,282	23,748	24,223	24,707	25,202	25,706	26,220
MORR.SEW.COLLECT - TWP WAGES	9,422	9,610	9,802	9,998	10,198	10,402	10,610	10,822	11,039	11,260
MORR.SEW.COLLECT - BENEFITS	2,655	2,708	2,762	2,817	2,874	2,931	2,990	3,050	3,111	3,173
MORRIS SEWER - HEATING	24,380	24,867	25,365	25,872	26,390	26,917	27,456	28,005	28,565	29,136
MORRIS SEWER - HYDRO	115,804	118,121	120,483	122,893	125,350	127,857	130,415	133,023	135,683	138,397
MORRIS SEWER - COMMUNICATIONS	12,799	13,055	13,317	13,583	13,855	14,132	14,414	14,703	14,997	15,297
MORR.SEWER - SAMPLING	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
MORRIS. STP - CHEMICALS	14,628	14,920	15,219	15,523	15,834	16,150	16,473	16,803	17,139	17,482
MORRIS. SEWER - SMALL TOOLS	609	622	634	647	660	673	686	700	714	728
MORRIS SEWER - SNOW REMOVAL	3,047	3,108	3,171	3,234	3,299	3,365	3,432	3,501	3,571	3,642
MORRIS SEWER -BLDG REPAIR/MAINT	73,140	74,602	76,095	77,616	79,169	80,752	82,367	84,014	85,695	87,409
MORRIS SEWER -MAINT DMPS	6,095	6,217	6,341	6,468	6,597	6,729	6,864	7,001	7,141	7,284
MORRIS SEWER - SLUDGE REMOVAL	20,723	21,137	21,560	21,991	22,431	22,880	23,337	23,804	24,280	24,766
MORRIS.SEWER COLL.-Truck Charges	3,047	3,108	3,171	3,234	3,299	3,365	3,432	3,501	3,571	3,642
MORR.SEW.COLLECT - LINE REPAIRS/MAINT	9,752	9,947	10,146	10,349	10,556	10,767	10,982	11,202	11,426	11,654
MORR SEWER - PROF. DEVELOPMENT	3,657	3,730	3,805	3,881	3,958	4,038	4,118	4,201	4,285	4,370
MORRIS SEWER - CONTRACTS & SERVICES	23,746	24,221	24,705	25,199	25,703	26,217	26,742	27,277	27,822	28,379
MORRIS SEWER - GENERAL COST RECOVERY 50%	28,646	29,219	29,804	30,400	31,008	31,628	32,260	32,906	33,564	34,235
MORRIS SEWER - MUN. TAXES	68,763	70,139	71,542	72,972	74,432	75,920	77,439	78,988	80,567	82,179
Iroquois Sewer	-	-	-	-	-	-	-	-	-	-
IROQ SEWER - WAGES	51,679	52,713	53,767	54,842	55,939	57,058	58,199	59,363	60,550	61,762
IROQ SEWER - BENEFITS	14,515	14,805	15,101	15,403	15,711	16,025	16,346	16,673	17,006	17,346
IROQ.SEW.COLLECT - TWP WAGES	22,982	23,441	23,910	24,388	24,876	25,374	25,881	26,399	26,927	27,465
IROQ.SEW.COLLECT - BENEFITS	6,322	6,448	6,577	6,709	6,843	6,980	7,119	7,262	7,407	7,555
IROQ SEWER - HEATING	15,847	16,164	16,487	16,817	17,153	17,496	17,846	18,203	18,567	18,939
IROQ SEWER - HYDRO	146,279	149,205	152,189	155,233	158,337	161,504	164,734	168,029	171,390	174,817
IROQ SEWER - COMMUNICATIONS	12,068	12,309	12,556	12,807	13,063	13,324	13,591	13,862	14,140	14,422
IROQ.SEWER - SAMPLING	9,752	9,947	10,146	10,349	10,556	10,767	10,982	11,202	11,426	11,654
IROQ STP - CHEMICALS	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
IROQ.SEWER - SMALL TOOLS	975	995	1,015	1,035	1,056	1,077	1,098	1,120	1,143	1,165
IROQ.SEWER - SNOW REMOVAL	8,533	8,704	8,878	9,055	9,236	9,421	9,609	9,802	9,998	10,198
IROQ.SEWER - SLUDGE REMOVAL	12,190	12,434	12,682	12,936	13,195	13,459	13,728	14,002	14,282	14,568
IROQ SEWER - BLDG REPAIRS & MAINT	67,045	68,386	69,753	71,148	72,571	74,023	75,503	77,013	78,554	80,125
IROQ.SEW.COLLECT - BLDG/GRD OPERATIONS	-	-	-	-	-	-	-	-	-	-
IROQ.SEW.COLLECT - TRUCK CHARGES	2,438	2,487	2,536	2,587	2,639	2,692	2,746	2,800	2,856	2,914
IROQ.SEW.COLLECT - LINE REPAIR/MAINT	29,256	29,841	30,438	31,047	31,667	32,301	32,947	33,606	34,278	34,963
IROQ SEWER - CONTRACTS & SERVICES	23,746	24,221	24,705	25,199	25,703	26,217	26,742	27,277	27,822	28,379
IROQ SEWER - GEN COST RECOVERY 40%	23,161	23,624	24,097	24,579	25,070	25,571	26,083	26,605	27,137	27,679
IROQ SEWER - MUN. TAXES	42,859	43,716	44,590	45,482	46,392	47,319	48,266	49,231	50,216	51,220
Williamsburg Sewer	-	-	-	-	-	-	-	-	-	-
WMBG SEWER - WAGES	5,344	5,451	5,560	5,671	5,785	5,900	6,018	6,139	6,261	6,387
WMBG SEWER - BENEFITS	1,448	1,477	1,507	1,537	1,568	1,599	1,631	1,663	1,697	1,731
WMBG SEWER - HEATING	366	373	380	388	396	404	412	420	428	437
WMBG SEWER - HYDRO	4,388	4,476	4,566	4,657	4,750	4,845	4,942	5,041	5,142	5,245
WMBG SEWER - COMMUNICATIONS	4,876	4,973	5,073	5,174	5,278	5,383	5,491	5,601	5,713	5,827
WMBG.SEW/LAGOON - SAMPLING	2,438	2,487	2,536	2,587	2,639	2,692	2,746	2,800	2,856	2,914
WMBG SEWER - SNOW REMOVAL	2,438	2,487	2,536	2,587	2,639	2,692	2,746	2,800	2,856	2,914
WMBG SEWER - BLDG REPAIR/MAINT	8,533	8,704	8,878	9,055	9,236	9,421	9,609	9,802	9,998	10,198
WMBG SEWER - CONTRACTS & SERVICES	10,180	10,383	10,591	10,803	11,019	11,239	11,464	11,693	11,927	12,166
WMBG SEWER - GENERAL COST RECOVERY 10%	5,729	5,844	5,961	6,080	6,202	6,326	6,452	6,581	6,713	6,847
Sub Total Operating Expenditures	1,078,510	1,100,080	1,122,082	1,144,523	1,167,414	1,190,762	1,214,577	1,238,869	1,263,646	1,288,919
Capital-Related										
Existing Debt (Principal) - Non-Growth Related	59,853	60,969	62,111	63,278	64,471	65,693	66,942	68,219	69,526	70,863
Existing Debt (Interest) - Non-Growth Related	12,032	10,915	9,774	8,607	7,413	6,193	4,943	3,666	2,359	1,022
Transfer to Capital Budget										
Transfer to Debt Reserve				38,114						
Transfer to Williamsburg Capital Reserve										
Transfer to Morrisburgh Capital Reserve	897,546	956,128	1,015,930	1,076,978	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459	1,127,459
Transfer to Iroquois Capital Reserve										
Sub Total Capital Related Expenditures	969,431	1,028,012	1,087,815	1,186,978	1,199,343	1,199,344	1,199,344	1,199,343	1,199,343	1,199,344
Total Expenditures	2,047,941	2,128,093	2,209,897	2,331,501	2,366,757	2,390,107	2,413,922	2,438,212	2,462,990	2,488,263
Non-Rate Revenues										
MORRIS SEWER - CONNECTION FEE	50,000	50,000	50,000	110,000	40,000	40,000	40,000	30,000	30,000	-
MORRIS SEWER Dutch Meadows Pump Station Reserve	10,946	-	-	-	-	-	-	-	-	-
MORRIS SEWER - Debt Reserve	10,938	21,885	21,885	-	31,885	31,885	12,706	-	-	-
MORRIS SEWER CONNECT FEE-Excluding Dutch Medow	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
IROQ. SEWER - CONNECTION FEE	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
WMBG SEWER - S.A.R. TAX LEVY	62,315	63,561	64,833	66,129	67,452	68,801	70,177	71,580	73,012	74,472
Total Operating Revenue	189,199	190,446	191,718	231,129	194,337	195,686	177,883	156,580	158,012	129,472
Net Wastewater Costs To Be Recovered From Users	1,858,742	1,937,646	2,018,179	2,100,372	2,172,421	2,194,421	2,236,039	2,281,632	2,304,978	2,358,791

Appendix H

2022-2041 Sustainable Water Rates, Charges and Customer Revenues

Appendix H – 2022-2041 Sustainable Water Rates, Charges and Customer Revenues

BASE RATE CALCULATION

Projected Number of Accounts

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	1,920	1,930	1,940	1,950	1,963	1,976	1,989	2,002	2,015	2,023
1" Residential	1	1	1	1	1	1	1	1	1	1
5/8" Non-Residential	171	171	171	171	171	171	171	171	171	171
1" Non-Residential	16	16	16	16	16	16	16	16	16	16
1 1/2" Non-Residential	7	7	7	7	7	7	7	7	7	7
2" Non-Residential	21	21	21	21	21	21	21	21	21	21
3" Non-Residential	2	2	2	2	2	2	2	2	2	2
4" Non-Residential	2	2	2	2	2	2	2	2	2	2
Total	2,140	2,150	2,160	2,170	2,183	2,196	2,209	2,222	2,235	2,243

Projected Annual Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase %Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99	\$ 683.27	\$ 710.60	\$ 739.03	\$ 768.59
1" Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79	\$ 956.58	\$ 994.84	\$ 1,034.64	\$ 1,076.02
5/8" Non-Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99	\$ 683.27	\$ 710.60	\$ 739.03	\$ 768.59
1" Non-Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79	\$ 956.58	\$ 994.84	\$ 1,034.64	\$ 1,076.02
1 1/2" Non-Residential	\$ 972.00	\$ 1,010.88	\$ 1,051.32	\$ 1,093.37	\$ 1,137.10	\$ 1,182.59	\$ 1,229.89	\$ 1,279.09	\$ 1,330.25	\$ 1,383.46
2" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91
3" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91
4" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91

Projected Annual Revenue Generated from Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	\$1,036,800	\$1,083,888	\$1,133,084	\$1,184,482	\$1,240,073	\$1,298,217	\$1,359,029	\$1,422,628	\$1,489,140	\$1,554,854
1" Residential	\$ 756	\$ 786	\$ 818	\$ 850	\$ 884	\$ 920	\$ 957	\$ 995	\$ 1,035	\$ 1,076
5/8" Non-Residential	\$ 92,340	\$ 96,034	\$ 99,875	\$ 103,870	\$ 108,025	\$ 112,346	\$ 116,840	\$ 121,513	\$ 126,374	\$ 131,429
1" Non-Residential	\$ 12,096	\$ 12,580	\$ 13,083	\$ 13,606	\$ 14,151	\$ 14,717	\$ 15,305	\$ 15,918	\$ 16,554	\$ 17,216
1 1/2" Non-Residential	\$ 6,804	\$ 7,076	\$ 7,359	\$ 7,654	\$ 7,960	\$ 8,278	\$ 8,609	\$ 8,954	\$ 9,312	\$ 9,684
2" Non-Residential	\$ 32,886	\$ 34,201	\$ 35,569	\$ 36,992	\$ 38,472	\$ 40,011	\$ 41,611	\$ 43,276	\$ 45,007	\$ 46,807
3" Non-Residential	\$ 3,132	\$ 3,257	\$ 3,388	\$ 3,523	\$ 3,664	\$ 3,811	\$ 3,963	\$ 4,121	\$ 4,286	\$ 4,458
4" Non-Residential	\$ 3,132	\$ 3,257	\$ 3,388	\$ 3,523	\$ 3,664	\$ 3,811	\$ 3,963	\$ 4,121	\$ 4,286	\$ 4,458
Total Base Charge Revenues	\$1,187,946	\$1,241,080	\$1,296,564	\$1,354,500	\$1,416,893	\$1,482,110	\$1,550,276	\$1,621,525	\$1,695,994	\$1,769,982

UNIFORM RATE CALCULATION

Projected Annual Uniform Rates & Revenues

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase %Increases		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	0.70	0.73	0.76	0.79	0.82	0.85	0.89	0.92	0.96	1.00
Consumption	\$ 425,655	\$ 427,131	\$ 428,607	\$ 430,083	\$ 432,001	\$ 433,920	\$ 435,839	\$ 437,757	\$ 439,676	\$ 440,857
total Uniform Rate Revenues	\$ 297,959	\$ 310,951	\$ 324,507	\$ 338,649	\$ 353,766	\$ 369,551	\$ 386,033	\$ 403,241	\$ 421,209	\$ 439,234

CAPITAL LEVY CALCULATION

Projected Annual Uniform Rates & Revenues

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase %Increases		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate	\$ 1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Consumption	346,599	348,075	349,551	351,027	352,945	354,864	435,839	437,757	439,676	440,857
Total Annual Capital Levy Revenues	\$ 356,997	\$ 358,517	\$ 360,037	\$ 361,558	\$ 363,534	\$ 365,510	\$ 448,914	\$ 450,890	\$ 452,866	\$ 454,082

REVENUE SUMMARY

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base Rate Revenues	1,187,946	1,241,080	1,296,564	1,354,500	1,416,893	1,482,110	1,550,276	1,621,525	1,695,994	1,769,982
Uniform Rate Revenues	\$ 297,959	\$ 310,951	\$ 324,507	\$ 338,649	\$ 353,766	\$ 369,551	\$ 386,033	\$ 403,241	\$ 421,209	\$ 439,234
Capital Levy Revenues	\$ 356,997	\$ 358,517	\$ 360,037	\$ 361,558	\$ 363,534	\$ 365,510	\$ 448,914	\$ 450,890	\$ 452,866	\$ 454,082
Total Water Revenues	\$1,842,901	\$1,910,548	\$1,981,108	\$2,054,707	\$2,134,193	\$2,217,171	\$2,385,223	\$2,475,657	\$2,570,069	\$2,663,298

Appendix H – 2022-2041 Sustainable Water Rates, Charges and Customer Revenues

BASE RATE CALCULATION

Projected Number of Accounts

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	2,030	2,037	2,044	2,051	2,057	2,063	2,069	2,074	2,079	2,087
1" Residential	1	1	1	1	1	1	1	1	1	1
5/8" Non-Residential	171	171	171	171	171	171	171	171	171	171
1" Non-Residential	16	16	16	16	16	16	16	16	16	16
1 1/2" Non-Residential	7	7	7	7	7	7	7	7	7	7
2" Non-Residential	21	21	21	21	21	21	21	21	21	21
3" Non-Residential	2	2	2	2	2	2	2	2	2	2
4" Non-Residential	2	2	2	2	2	2	2	2	2	2
Total	2,250	2,257	2,264	2,271	2,277	2,283	2,289	2,294	2,299	2,307

Projected Annual Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase %Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	\$ 799.33	\$ 831.31	\$ 864.56	\$ 899.14	\$ 935.11	\$ 972.51	\$ 1,011.41	\$ 1,051.87	\$ 1,093.94	\$ 1,137.70
1" Residential	\$ 1,119.06	\$ 1,163.83	\$ 1,210.38	\$ 1,258.80	\$ 1,309.15	\$ 1,361.51	\$ 1,415.97	\$ 1,472.61	\$ 1,531.52	\$ 1,592.78
5/8" Non-Residential	\$ 799.33	\$ 831.31	\$ 864.56	\$ 899.14	\$ 935.11	\$ 972.51	\$ 1,011.41	\$ 1,051.87	\$ 1,093.94	\$ 1,137.70
1" Non-Residential	\$ 1,119.06	\$ 1,163.83	\$ 1,210.38	\$ 1,258.80	\$ 1,309.15	\$ 1,361.51	\$ 1,415.97	\$ 1,472.61	\$ 1,531.52	\$ 1,592.78
1 1/2" Non-Residential	\$ 1,438.80	\$ 1,496.35	\$ 1,556.20	\$ 1,618.45	\$ 1,683.19	\$ 1,750.52	\$ 1,820.54	\$ 1,893.36	\$ 1,969.09	\$ 2,047.86
2" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33
3" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33
4" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33

Projected Annual Revenue Generated from Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	\$1,622,644	\$1,693,369	\$1,767,155	\$1,844,136	\$1,923,512	\$2,006,287	\$2,092,607	\$2,181,571	\$2,274,303	\$2,374,377
1" Residential	\$ 1,119	\$ 1,164	\$ 1,210	\$ 1,259	\$ 1,309	\$ 1,362	\$ 1,416	\$ 1,473	\$ 1,532	\$ 1,593
5/8" Non-Residential	\$ 136,686	\$ 142,153	\$ 147,839	\$ 153,753	\$ 159,903	\$ 166,299	\$ 172,951	\$ 179,869	\$ 187,064	\$ 194,546
1" Non-Residential	\$ 17,905	\$ 18,621	\$ 19,366	\$ 20,141	\$ 20,946	\$ 21,784	\$ 22,656	\$ 23,562	\$ 24,504	\$ 25,484
1 1/2" Non-Residential	\$ 10,072	\$ 10,474	\$ 10,893	\$ 11,329	\$ 11,782	\$ 12,254	\$ 12,744	\$ 13,254	\$ 13,784	\$ 14,335
2" Non-Residential	\$ 48,679	\$ 50,626	\$ 52,652	\$ 54,758	\$ 56,948	\$ 59,226	\$ 61,595	\$ 64,059	\$ 66,621	\$ 69,286
3" Non-Residential	\$ 4,636	\$ 4,822	\$ 5,014	\$ 5,215	\$ 5,424	\$ 5,641	\$ 5,866	\$ 6,101	\$ 6,345	\$ 6,599
4" Non-Residential	\$ 4,636	\$ 4,822	\$ 5,014	\$ 5,215	\$ 5,424	\$ 5,641	\$ 5,866	\$ 6,101	\$ 6,345	\$ 6,599
Total Base Charge Revenues	\$1,846,377	\$1,926,051	\$2,009,145	\$2,095,805	\$2,185,248	\$2,278,492	\$2,375,701	\$2,475,988	\$2,580,497	\$2,692,819

UNIFORM RATE CALCULATION

Projected Annual Uniform Rates & Revenues

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase %Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	1.04	1.08	1.12	1.17	1.21	1.26	1.31	1.36	1.42	1.47
Consumption	\$ 441,890	\$ 442,923	\$ 443,956	\$ 444,989	\$ 445,875	\$ 446,760	\$ 447,646	\$ 448,384	\$ 449,122	\$ 450,303
total Uniform Rate Revenues	\$ 457,874	\$ 477,302	\$ 497,552	\$ 518,658	\$ 540,478	\$ 563,213	\$ 586,903	\$ 611,385	\$ 636,887	\$ 664,104

CAPITAL LEVY CALCULATION

Projected Annual Uniform Rates & Revenues

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase %Increases	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rate	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Consumption	441,890	442,923	443,956	444,989	445,875	446,760	447,646	448,384	449,122	450,303
Total Annual Capital Levy Revenues	\$ 455,147	\$ 456,211	\$ 457,275	\$ 458,339	\$ 459,251	\$ 460,163	\$ 461,075	\$ 461,835	\$ 462,595	\$ 463,812

REVENUE SUMMARY

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Base Rate Revenues	1,846,377	1,926,051	2,009,145	2,095,805	2,185,248	2,278,492	2,375,701	2,475,988	2,580,497	2,692,819
Uniform Rate Revenues	\$ 457,874	\$ 477,302	\$ 497,552	\$ 518,658	\$ 540,478	\$ 563,213	\$ 586,903	\$ 611,385	\$ 636,887	\$ 664,104
Capital Levy Revenues	\$ 455,147	\$ 456,211	\$ 457,275	\$ 458,339	\$ 459,251	\$ 460,163	\$ 461,075	\$ 461,835	\$ 462,595	\$ 463,812
Total Water Revenues	\$2,759,397	\$2,859,564	\$2,963,972	\$3,072,802	\$3,184,976	\$3,301,869	\$3,423,679	\$3,549,208	\$3,679,980	\$3,820,734

Appendix I

2022-2041 Sustainable Wastewater Rates, Charges and Customer Revenues

Appendix I – 2022-2041 Sustainable Wastewater Rates, Charges and Customer Revenues

BASE RATE CALCULATION - Morrisburg (75% Surcharge)

Projected Number of Accounts

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	1,160	1,168	1,176	1,184	1,195	1,206	1,217	1,228	1,239	1,245
1" Residential	-	-	-	-	-	-	-	-	-	-
5/8" Non-Residential	110	110	110	110	110	110	110	110	110	110
1" Non-Residential	10	10	10	10	10	10	10	10	10	10
1 1/2" Non-Residential	6	6	6	6	6	6	6	6	6	6
2" Non-Residential	12	12	12	12	12	12	12	12	12	12
3" Non-Residential	2	2	2	2	2	2	2	2	2	2
4" Non-Residential	1	1	1	1	1	1	1	1	1	1
Total	1,301	1,309	1,317	1,325	1,336	1,347	1,358	1,369	1,380	1,386

Projected Annual Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase % Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	405.00	421.20	438.05	455.57	473.79	492.74	512.45	532.95	554.27	576.44
1" Residential	567.00	589.68	613.27	637.80	663.31	689.84	717.44	746.13	775.98	807.02
5/8" Non-Residential	405.00	421.20	438.05	455.57	473.79	492.74	512.45	532.95	554.27	576.44
1" Non-Residential	567.00	589.68	613.27	637.80	663.31	689.84	717.44	746.13	775.98	807.02
1 1/2" Non-Residential	729.00	758.16	788.49	820.03	852.83	886.94	922.42	959.31	997.69	1,037.59
2" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96	1,486.12	1,545.56	1,607.38	1,671.68
3" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96	1,486.12	1,545.56	1,607.38	1,671.68
4" Non-Residential	1,174.50	1,221.48	1,270.34	1,321.15	1,374.00	1,428.96	1,486.12	1,545.56	1,607.38	1,671.68

Projected Annual Revenue Generated from Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	\$ 469,800	\$ 491,962	\$ 515,144	\$ 539,395	\$ 566,182	\$ 594,250	\$ 623,657	\$ 654,466	\$ 686,741	\$ 717,669
1" Residential	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5/8" Non-Residential	\$ 44,550	\$ 46,332	\$ 48,185	\$ 50,113	\$ 52,117	\$ 54,202	\$ 56,370	\$ 58,625	\$ 60,970	\$ 63,409
1" Non-Residential	\$ 5,670	\$ 5,897	\$ 6,133	\$ 6,378	\$ 6,633	\$ 6,898	\$ 7,174	\$ 7,461	\$ 7,760	\$ 8,070
1 1/2" Non-Residential	\$ 4,374	\$ 4,549	\$ 4,731	\$ 4,920	\$ 5,117	\$ 5,322	\$ 5,535	\$ 5,756	\$ 5,986	\$ 6,226
2" Non-Residential	\$ 14,094	\$ 14,658	\$ 15,244	\$ 15,854	\$ 16,488	\$ 17,148	\$ 17,833	\$ 18,547	\$ 19,289	\$ 20,060
3" Non-Residential	\$ 2,349	\$ 2,443	\$ 2,541	\$ 2,642	\$ 2,748	\$ 2,858	\$ 2,972	\$ 3,091	\$ 3,215	\$ 3,343
4" Non-Residential	\$ 1,175	\$ 1,221	\$ 1,270	\$ 1,321	\$ 1,374	\$ 1,429	\$ 1,486	\$ 1,546	\$ 1,607	\$ 1,672
Total Base Charge Revenues	\$ 542,012	\$ 567,062	\$ 593,248	\$ 620,623	\$ 650,660	\$ 682,106	\$ 715,027	\$ 749,491	\$ 785,568	\$ 820,449

BASE RATE CALCULATION - Iroquois (100% Surcharge)

Projected Number of Accounts

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	665	667	669	671	673	675	677	679	681	683
1" Residential	1	1	1	1	1	1	1	1	1	1
5/8" Non-Residential	54	54	54	54	54	54	54	54	54	54
1" Non-Residential	6	6	6	6	6	6	6	6	6	6
1 1/2" Non-Residential	1	1	1	1	1	1	1	1	1	1
2" Non-Residential	9	9	9	9	9	9	9	9	9	9
3" Non-Residential	-	-	-	-	-	-	-	-	-	-
4" Non-Residential	1	1	1	1	1	1	1	1	1	1
Total	737	739	741	743	745	747	749	751	753	755

Projected Annual Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase % Increases	RATES	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99	\$ 683.27	\$ 710.60	\$ 739.03	\$ 768.59
1" Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79	\$ 956.58	\$ 994.84	\$ 1,034.64	\$ 1,076.02
5/8" Non-Residential	\$ 540.00	\$ 561.60	\$ 584.06	\$ 607.43	\$ 631.72	\$ 656.99	\$ 683.27	\$ 710.60	\$ 739.03	\$ 768.59
1" Non-Residential	\$ 756.00	\$ 786.24	\$ 817.69	\$ 850.40	\$ 884.41	\$ 919.79	\$ 956.58	\$ 994.84	\$ 1,034.64	\$ 1,076.02
1 1/2" Non-Residential	\$ 972.00	\$ 1,010.88	\$ 1,051.32	\$ 1,093.37	\$ 1,137.10	\$ 1,182.59	\$ 1,229.89	\$ 1,279.09	\$ 1,330.25	\$ 1,383.46
2" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91
3" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91
4" Non-Residential	\$ 1,566.00	\$ 1,628.64	\$ 1,693.79	\$ 1,761.54	\$ 1,832.00	\$ 1,905.28	\$ 1,981.49	\$ 2,060.75	\$ 2,143.18	\$ 2,228.91

Projected Annual Revenue Generated from Base Charges

Customer Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8" Residential	\$ 359,100	\$ 374,587	\$ 390,739	\$ 407,583	\$ 425,150	\$ 443,470	\$ 462,575	\$ 482,500	\$ 503,278	\$ 524,946
1" Residential	\$ 756	\$ 786	\$ 818	\$ 850	\$ 884	\$ 920	\$ 957	\$ 995	\$ 1,035	\$ 1,076
5/8" Non-Residential	\$ 29,160	\$ 30,326	\$ 31,539	\$ 32,801	\$ 34,113	\$ 35,478	\$ 36,897	\$ 38,373	\$ 39,907	\$ 41,504
1" Non-Residential	\$ 4,536	\$ 4,717	\$ 4,906	\$ 5,102	\$ 5,306	\$ 5,519	\$ 5,739	\$ 5,969	\$ 6,208	\$ 6,456
1 1/2" Non-Residential	\$ 972	\$ 1,011	\$ 1,051	\$ 1,093	\$ 1,137	\$ 1,183	\$ 1,230	\$ 1,279	\$ 1,330	\$ 1,383
2" Non-Residential	\$ 14,094	\$ 14,658	\$ 15,244	\$ 15,854	\$ 16,488	\$ 17,148	\$ 17,833	\$ 18,547	\$ 19,289	\$ 20,060
3" Non-Residential	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4" Non-Residential	\$ 1,566	\$ 1,629	\$ 1,694	\$ 1,762	\$ 1,832	\$ 1,905	\$ 1,981	\$ 2,061	\$ 2,143	\$ 2,229
Total Base Charge Revenues	\$ 410,184	\$ 427,715	\$ 445,991	\$ 465,046	\$ 484,911	\$ 505,621	\$ 527,213	\$ 549,723	\$ 573,190	\$ 597,654

Appendix I – 2022-2041 Sustainable Wastewater Rates, Charges and Customer Revenues

UNIFORM RATE CALCULATION - Morrisburg (75% Surcharge)

Projected Annual Uniform Rates & Revenues

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase % Increases		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	\$ 0.53	0.55	0.57	0.59	0.61	0.64	0.66	0.69	0.72	0.75
Consumption	\$ 221,352	\$ 222,533	\$ 222,533	\$ 222,533	\$ 222,975	\$ 222,975	\$ 222,975	\$ 222,975	\$ 222,975	\$ 222,238
Total Uniform Rate Revenues	\$ 116,210	\$ 121,503	\$ 126,363	\$ 131,417	\$ 136,946	\$ 142,424	\$ 148,121	\$ 154,046	\$ 160,208	\$ 166,064

UNIFORM RATE CALCULATION - Iroquois (100% Surcharge)

Projected Annual Uniform Rates & Revenues

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Increase % Increases		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	\$ 0.70	0.73	0.76	0.79	0.82	0.85	0.89	0.92	0.96	1.00
Consumption	\$ 107,313	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608
Total Uniform Rate Revenues	\$ 75,119	\$ 78,339	\$ 81,472	\$ 84,731	\$ 88,120	\$ 91,645	\$ 95,311	\$ 99,124	\$ 103,088	\$ 107,212

Wastewater Revenue Summary

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Base Charge Revenues	\$ 952,196	\$ 994,776	\$1,039,240	\$1,085,669	\$1,135,571	\$1,187,728	\$1,242,240	\$1,299,214	\$1,358,757	\$1,418,103
Total Uniform Rate Revenues	\$ 191,329	\$ 199,842	\$ 207,835	\$ 216,149	\$ 225,067	\$ 234,069	\$ 243,432	\$ 253,169	\$ 263,296	\$ 273,276
Total Wastewater Revenues	\$1,143,524	\$1,194,618	\$1,247,075	\$1,301,817	\$1,360,637	\$1,421,797	\$1,485,672	\$1,552,383	\$1,622,053	\$1,691,380

Appendix I – 2022-2041 Sustainable Wastewater Rates, Charges and Customer Revenues

BASE RATE CALCULATION - Morrisburg (75% Surcharge)

Projected Number of Accounts

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	1,250	1,255	1,260	1,265	1,269	1,273	1,277	1,280	1,283	1,289
1" Residential	-	-	-	-	-	-	-	-	-	-
5/8" Non-Residential	110	110	110	110	110	110	110	110	110	110
1" Non-Residential	10	10	10	10	10	10	10	10	10	10
1 1/2" Non-Residential	6	6	6	6	6	6	6	6	6	6
2" Non-Residential	12	12	12	12	12	12	12	12	12	12
3" Non-Residential	2	2	2	2	2	2	2	2	2	2
4" Non-Residential	1	1	1	1	1	1	1	1	1	1
Total	1,391	1,396	1,401	1,406	1,410	1,414	1,418	1,421	1,424	1,430

Projected Annual Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase % Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	599.50	623.48	648.42	674.35	701.33	729.38	758.56	788.90	820.46	853.27
1" Residential	839.30	872.87	907.79	944.10	981.86	1,021.13	1,061.98	1,104.46	1,148.64	1,194.58
5/8" Non-Residential	599.50	623.48	648.42	674.35	701.33	729.38	758.56	788.90	820.46	853.27
1" Non-Residential	839.30	872.87	907.79	944.10	981.86	1,021.13	1,061.98	1,104.46	1,148.64	1,194.58
1 1/2" Non-Residential	1,079.10	1,122.26	1,167.15	1,213.84	1,262.39	1,312.89	1,365.40	1,420.02	1,476.82	1,535.89
2" Non-Residential	1,738.55	1,808.09	1,880.41	1,955.63	2,033.85	2,115.21	2,199.82	2,287.81	2,379.32	2,474.49
3" Non-Residential	1,738.55	1,808.09	1,880.41	1,955.63	2,033.85	2,115.21	2,199.82	2,287.81	2,379.32	2,474.49
4" Non-Residential	1,738.55	1,808.09	1,880.41	1,955.63	2,033.85	2,115.21	2,199.82	2,287.81	2,379.32	2,474.49

Projected Annual Revenue Generated from Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	\$ 749,374	\$ 782,466	\$ 817,007	\$ 853,059	\$ 889,986	\$ 928,503	\$ 968,678	\$ 1,009,792	\$ 1,052,645	\$ 1,099,870
1" Residential	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5/8" Non-Residential	\$ 65,945	\$ 68,583	\$ 71,326	\$ 74,179	\$ 77,146	\$ 80,232	\$ 83,441	\$ 86,779	\$ 90,250	\$ 93,860
1" Non-Residential	\$ 8,393	\$ 8,729	\$ 9,078	\$ 9,441	\$ 9,819	\$ 10,211	\$ 10,620	\$ 11,045	\$ 11,486	\$ 11,946
1 1/2" Non-Residential	\$ 6,475	\$ 6,734	\$ 7,003	\$ 7,283	\$ 7,574	\$ 7,877	\$ 8,192	\$ 8,520	\$ 8,861	\$ 9,215
2" Non-Residential	\$ 20,863	\$ 21,697	\$ 22,565	\$ 23,468	\$ 24,406	\$ 25,382	\$ 26,398	\$ 27,454	\$ 28,552	\$ 29,694
3" Non-Residential	\$ 3,477	\$ 3,616	\$ 3,761	\$ 3,911	\$ 4,068	\$ 4,230	\$ 4,400	\$ 4,576	\$ 4,759	\$ 4,949
4" Non-Residential	\$ 1,739	\$ 1,808	\$ 1,880	\$ 1,956	\$ 2,034	\$ 2,115	\$ 2,200	\$ 2,288	\$ 2,379	\$ 2,474
Total Base Charge Revenues	\$ 856,264	\$ 893,632	\$ 932,620	\$ 973,296	\$ 1,015,033	\$ 1,058,552	\$ 1,103,929	\$ 1,150,452	\$ 1,198,932	\$ 1,252,009

BASE RATE CALCULATION - Iroquois (100% Surcharge)

Projected Number of Accounts

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	685	687	689	691	693	695	697	699	701	703
1" Residential	1	1	1	1	1	1	1	1	1	1
5/8" Non-Residential	54	54	54	54	54	54	54	54	54	54
1" Non-Residential	6	6	6	6	6	6	6	6	6	6
1 1/2" Non-Residential	1	1	1	1	1	1	1	1	1	1
2" Non-Residential	9	9	9	9	9	9	9	9	9	9
3" Non-Residential	-	-	-	-	-	-	-	-	-	-
4" Non-Residential	1	1	1	1	1	1	1	1	1	1
Total	757	759	761	763	765	767	769	771	773	775

Projected Annual Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase % Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
5/8" Residential	\$ 799.33	\$ 831.31	\$ 864.56	\$ 899.14	\$ 935.11	\$ 972.51	\$ 1,011.41	\$ 1,051.87	\$ 1,093.94	\$ 1,137.70
1" Residential	\$ 1,119.06	\$ 1,163.83	\$ 1,210.38	\$ 1,258.80	\$ 1,309.15	\$ 1,361.51	\$ 1,415.97	\$ 1,472.61	\$ 1,531.52	\$ 1,592.78
5/8" Non-Residential	\$ 799.33	\$ 831.31	\$ 864.56	\$ 899.14	\$ 935.11	\$ 972.51	\$ 1,011.41	\$ 1,051.87	\$ 1,093.94	\$ 1,137.70
1" Non-Residential	\$ 1,119.06	\$ 1,163.83	\$ 1,210.38	\$ 1,258.80	\$ 1,309.15	\$ 1,361.51	\$ 1,415.97	\$ 1,472.61	\$ 1,531.52	\$ 1,592.78
1 1/2" Non-Residential	\$ 1,438.80	\$ 1,496.35	\$ 1,556.20	\$ 1,618.45	\$ 1,683.19	\$ 1,750.52	\$ 1,820.54	\$ 1,893.36	\$ 1,969.09	\$ 2,047.86
2" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33
3" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33
4" Non-Residential	\$ 2,318.06	\$ 2,410.79	\$ 2,507.22	\$ 2,607.51	\$ 2,711.81	\$ 2,820.28	\$ 2,933.09	\$ 3,050.41	\$ 3,172.43	\$ 3,299.33

Projected Annual Revenue Generated from Base Charges

Customer Type	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
5/8" Residential	\$ 547,542	\$ 571,107	\$ 595,680	\$ 621,306	\$ 648,028	\$ 675,894	\$ 704,953	\$ 735,255	\$ 766,853	\$ 799,802
1" Residential	\$ 1,119	\$ 1,164	\$ 1,210	\$ 1,259	\$ 1,309	\$ 1,362	\$ 1,416	\$ 1,473	\$ 1,532	\$ 1,593
5/8" Non-Residential	\$ 43,164	\$ 44,890	\$ 46,686	\$ 48,554	\$ 50,496	\$ 52,516	\$ 54,616	\$ 56,801	\$ 59,073	\$ 61,436
1" Non-Residential	\$ 6,714	\$ 6,983	\$ 7,262	\$ 7,553	\$ 7,855	\$ 8,169	\$ 8,496	\$ 8,836	\$ 9,189	\$ 9,557
1 1/2" Non-Residential	\$ 1,439	\$ 1,496	\$ 1,556	\$ 1,618	\$ 1,683	\$ 1,751	\$ 1,821	\$ 1,893	\$ 1,969	\$ 2,048
2" Non-Residential	\$ 20,863	\$ 21,697	\$ 22,565	\$ 23,468	\$ 24,406	\$ 25,382	\$ 26,398	\$ 27,454	\$ 28,552	\$ 29,694
3" Non-Residential	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4" Non-Residential	\$ 2,318	\$ 2,411	\$ 2,507	\$ 2,608	\$ 2,712	\$ 2,820	\$ 2,933	\$ 3,050	\$ 3,172	\$ 3,299
Total Base Charge Revenues	\$ 623,159	\$ 649,748	\$ 677,467	\$ 706,364	\$ 736,489	\$ 767,893	\$ 800,632	\$ 834,761	\$ 870,339	\$ 907,428

Appendix I – 2022-2041 Sustainable Wastewater Rates, Charges and Customer Revenues

UNIFORM RATE CALCULATION - Morrisburg (75% Surcharge)

Projected Annual Uniform Rates & Revenues

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase % Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	0.78	0.81	0.84	0.87	0.91	0.95	0.98	1.02	1.06	1.11
Consumption	\$ 222,090	\$ 222,090	\$ 222,090	\$ 222,090	\$ 221,942	\$ 221,942	\$ 221,942	\$ 221,795	\$ 221,795	\$ 222,238
Total Uniform Rate Revenues	\$ 172,592	\$ 179,496	\$ 186,676	\$ 194,143	\$ 201,774	\$ 209,845	\$ 218,239	\$ 226,818	\$ 235,891	\$ 245,816

UNIFORM RATE CALCULATION - Iroquois (100% Surcharge)

Projected Annual Uniform Rates & Revenues

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Annual Increase % Increases	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate	1.04	1.08	1.12	1.17	1.21	1.26	1.31	1.36	1.42	1.47
Consumption	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608	\$ 107,608
Total Uniform Rate Revenues	\$ 111,500	\$ 115,960	\$ 120,599	\$ 125,423	\$ 130,440	\$ 135,657	\$ 141,084	\$ 146,727	\$ 152,596	\$ 158,700

Wastewater Revenue Summary

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total Base Charge Revenues	\$1,479,423	\$1,543,380	\$1,610,087	\$1,679,660	\$1,751,522	\$1,826,446	\$1,904,561	\$1,985,214	\$2,069,271	\$2,159,437
Total Uniform Rate Revenues	\$ 284,093	\$ 295,457	\$ 307,275	\$ 319,566	\$ 332,214	\$ 345,503	\$ 359,323	\$ 373,545	\$ 388,487	\$ 404,516
Total Wastewater Revenues	\$1,763,516	\$1,838,837	\$1,917,362	\$1,999,226	\$2,083,737	\$2,171,949	\$2,263,884	\$2,358,758	\$2,457,758	\$2,563,953

Appendix J

2022-2041 Water and Wastewater Revenue Surpluses/(Deficits)

Appendix J – 2022-2041 Water and Wastewater Revenue Surpluses/(Deficits)

Water Revenue Summary

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Base Charge Revenues	\$ 1,187,946	\$ 1,241,080	\$ 1,296,564	\$ 1,354,500	\$ 1,416,893	\$ 1,482,110	\$ 1,550,276	\$ 1,621,525	\$ 1,695,994	\$ 1,769,982
Uniform Rate Revenues	\$ 297,959	\$ 310,951	\$ 324,507	\$ 338,649	\$ 353,766	\$ 369,551	\$ 386,033	\$ 403,241	\$ 421,209	\$ 439,234
Capital Levy Revenues	\$ 356,997	\$ 358,517	\$ 360,037	\$ 361,558	\$ 363,534	\$ 365,510	\$ 448,914	\$ 450,890	\$ 452,866	\$ 454,082
Total Water Revenues	\$ 1,842,901	\$ 1,910,548	\$ 1,981,108	\$ 2,054,707	\$ 2,134,193	\$ 2,217,171	\$ 2,385,223	\$ 2,475,657	\$ 2,570,069	\$ 2,663,298
Total Water Expenditures	\$ 1,882,855	\$ 2,129,047	\$ 2,229,058	\$ 2,330,930	\$ 2,435,603	\$ 2,558,774	\$ 2,467,860	\$ 2,540,770	\$ 2,678,808	\$ 2,855,045
Projected Surplus/ (Deficit)	\$ (39,953)	\$ (218,499)	\$ (247,951)	\$ (276,223)	\$ (301,410)	\$ (341,603)	\$ (82,638)	\$ (65,113)	\$ (108,739)	\$ (191,746)
Accumulated Water Surplus/ (Deficit)	(39,953)	(258,452)	(506,403)	(782,626)	(1,084,036)	(1,425,639)	(1,508,277)	(1,573,390)	(1,682,128)	(1,873,874)

Wastewater Revenue Summary

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total Base Charge Revenues	\$ 952,196	\$ 994,776	\$ 1,039,240	\$ 1,085,669	\$ 1,135,571	\$ 1,187,728	\$ 1,242,240	\$ 1,299,214	\$ 1,358,757	\$ 1,418,103
Total Uniform Rate Revenues	\$ 191,329	\$ 199,842	\$ 207,835	\$ 216,149	\$ 225,067	\$ 234,069	\$ 243,432	\$ 253,169	\$ 263,296	\$ 273,276
Total Wastewater Revenues	\$ 1,143,524	\$ 1,194,618	\$ 1,247,075	\$ 1,301,817	\$ 1,360,637	\$ 1,421,797	\$ 1,485,672	\$ 1,552,383	\$ 1,622,053	\$ 1,691,380
Total Wastewater Expenditures	\$ 1,193,139	\$ 1,245,262	\$ 1,300,546	\$ 1,359,238	\$ 1,421,714	\$ 1,488,121	\$ 1,559,056	\$ 1,631,561	\$ 1,705,669	\$ 1,781,424
Projected Surplus/ (Deficit)	\$ (49,615)	\$ (50,644)	\$ (53,471)	\$ (57,420)	\$ (61,076)	\$ (66,324)	\$ (73,383)	\$ (79,178)	\$ (83,616)	\$ (90,044)
Accumulated Wastewater Surplus/ (Deficit)	(49,615)	(100,259)	(153,730)	(211,150)	(272,226)	(338,551)	(411,934)	(491,112)	(574,728)	(664,772)

Accumulated Surplus/ (Deficit)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Accumulated Water Surplus/(Deficit)	(39,953)	(258,452)	(506,403)	(782,626)	(1,084,036)	(1,425,639)	(1,508,277)	(1,573,390)	(1,682,128)	(1,873,874)
Accumulated Wastewater Surplus/(Deficit)	\$ (49,615)	\$ (100,259)	\$ (153,730)	\$ (211,150)	\$ (272,226)	\$ (338,551)	\$ (411,934)	\$ (491,112)	\$ (574,728)	\$ (664,772)
Total Accumulated Surplus/ (Deficit)	\$ (89,568)	\$ (358,711)	\$ (660,133)	\$ (993,776)	\$ (1,356,262)	\$ (1,764,190)	\$ (1,920,211)	\$ (2,064,501)	\$ (2,256,856)	\$ (2,538,646)

Water Revenue Summary

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Base Charge Revenues	\$ 1,846,377	\$ 1,926,051	\$ 2,009,145	\$ 2,095,805	\$ 2,185,248	\$ 2,278,492	\$ 2,375,701	\$ 2,475,988	\$ 2,580,497	\$ 2,692,819
Uniform Rate Revenues	\$ 457,874	\$ 477,302	\$ 497,552	\$ 518,658	\$ 540,478	\$ 563,213	\$ 586,903	\$ 611,385	\$ 636,887	\$ 664,104
Capital Levy Revenues	\$ 455,147	\$ 456,211	\$ 457,275	\$ 458,339	\$ 459,251	\$ 460,163	\$ 461,075	\$ 461,835	\$ 462,595	\$ 463,812
Total Water Revenues	\$ 2,759,397	\$ 2,859,564	\$ 2,963,972	\$ 3,072,802	\$ 3,184,976	\$ 3,301,869	\$ 3,423,679	\$ 3,549,208	\$ 3,679,980	\$ 3,820,734
Total Water Expenditures	\$ 2,892,235	\$ 2,920,787	\$ 2,949,910	\$ 2,974,615	\$ 2,973,994	\$ 2,963,979	\$ 2,995,502	\$ 3,032,656	\$ 3,065,453	\$ 3,113,906
Projected Surplus/ (Deficit)	\$ (132,838)	\$ (61,223)	\$ 14,062	\$ 98,187	\$ 210,983	\$ 337,890	\$ 428,176	\$ 516,552	\$ 614,526	\$ 706,828
Accumulated Water Surplus/ (Deficit)	(2,006,713)	(2,067,936)	(2,053,874)	(1,955,687)	(1,744,704)	(1,406,815)	(978,638)	(462,086)	152,440	859,269

Wastewater Revenue Summary

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Total Base Charge Revenues	\$ 1,479,423	\$ 1,543,380	\$ 1,610,087	\$ 1,679,660	\$ 1,751,522	\$ 1,826,446	\$ 1,904,561	\$ 1,985,214	\$ 2,069,271	\$ 2,159,437
Total Uniform Rate Revenues	\$ 284,093	\$ 295,457	\$ 307,275	\$ 319,566	\$ 332,214	\$ 345,503	\$ 359,323	\$ 373,545	\$ 388,487	\$ 404,516
Total Wastewater Revenues	\$ 1,763,516	\$ 1,838,837	\$ 1,917,362	\$ 1,999,226	\$ 2,083,737	\$ 2,171,949	\$ 2,263,884	\$ 2,358,758	\$ 2,457,758	\$ 2,563,953
Total Wastewater Expenditures	\$ 1,858,742	\$ 1,937,646	\$ 2,018,179	\$ 2,100,372	\$ 2,172,421	\$ 2,194,421	\$ 2,236,039	\$ 2,281,632	\$ 2,304,978	\$ 2,358,791
Projected Surplus/ (Deficit)	\$ (95,226)	\$ (98,809)	\$ (100,818)	\$ (101,146)	\$ (88,684)	\$ (22,472)	\$ 27,845	\$ 77,126	\$ 152,780	\$ 205,162
Accumulated Wastewater Surplus/ (Deficit)	(759,998)	(858,807)	(959,625)	(1,060,771)	(1,149,455)	(1,171,927)	(1,144,082)	(1,066,956)	(914,176)	(709,014)

Accumulated Surplus/ (Deficit)

	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Accumulated Water Surplus/(Deficit)	(2,006,713)	(2,067,936)	(2,053,874)	(1,955,687)	(1,744,704)	(1,406,815)	(978,638)	(462,086)	152,440	859,269
Accumulated Wastewater Surplus/(Deficit)	\$ (759,998)	\$ (858,807)	\$ (959,625)	\$ (1,060,771)	\$ (1,149,455)	\$ (1,171,927)	\$ (1,144,082)	\$ (1,066,956)	\$ (914,176)	\$ (709,014)
Total Accumulated Surplus/ (Deficit)	\$ (2,766,711)	\$ (2,926,743)	\$ (3,013,499)	\$ (3,016,458)	\$ (2,894,159)	\$ (2,578,741)	\$ (2,122,721)	\$ (1,529,042)	\$ (761,735)	\$ 150,255

Appendix K

O.Reg. 453/07 Water Financial Plan

Municipality of South Dundas

O.Reg 453/07 Water System Financial Plan



DFA Infrastructure International Inc.

September 27, 2022



DFA Infrastructure International Inc.

33 Raymond Street St. Catharines Ontario Canada L2R 2T3

Telephone: (905) 938 -0965 Fax: (905) 937-6568

September 27, 2022

Lachlan McDonald
Acting Treasurer
Director of Operation
Municipality of South Dundas
34 Ottawa Street
Morrisburg, Ontario
K0C 1X0

Re: O. Reg 453/07 Water System Financial Plan

Dear Lachlan:

We are pleased to submit to you the above noted report entitled: "O. Reg 453/07 Water System Financial Plan". The water system financial plan is based on the results of the Municipality's water and wastewater rate study that was presented to your Council at the September 21st Council meeting.

Yours truly,

DFA Infrastructure International Inc.

Derek Ali, MBA, P.Eng.

President

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Transmittal Letter

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1 Introduction

1.1 Background`

Regulation 188/07 under the Safe Drinking Water Act requires Ontario municipalities to apply for and obtain Drinking Water System Licences as part of their overall DWQMS. One of the requirements of holding a valid drinking water licence is preparing and submitting to the Province an updated financial plan in accordance with O.Reg. 453/07. The financial plan must include financial statements on the following:

- The proposed or projected financial position of the drinking water systems;
- The proposed or projected gross cash receipts and gross cash payments;
- The proposed or projected financial operations of the drinking water system; and
- Details on the extent to which the above information applies to the replacement of lead service pipes, if applicable.

Appendix A lists each requirement of the regulation and references the respective financial statements and other relevant information required under each regulatory requirement. The financial plan must apply to a period of at least six (6) years with the first year being the year the existing license expires or the year the financial plan is updated. It is important to note that the water system financial plan is based on the results of the Municipality's 2022 Water of Wastewater Rate Study.

Upon Council's approval, the financial plans must be made available to the public at no charge and posted on the Municipality's website.

2 O.Reg 453/07 Water System Financial Plan

This section presents an updated water system financial plan as defined in O.Reg. 453/07.

2.1 Water Tangible Capital Assets (TCA) Analysis

As noted in the introduction, the results of the 2022 Water and Wastewater Rate Study are used as the basis for preparing the water system financial plan. The Municipality's Tangible Capital Asset inventories were also used in the preparation of the water system financial plan. The amortization of the tangible capital assets is shown as a "non-cash" annual cost that reflects the annual "use" of assets until the end of their respective useful lives. Allowances are made to finance the replacement and/ or rehabilitation of the existing assets once they "expire" and can no longer play a role in providing the required drinking water service to customers. It should be noted however that since amortization is based on the original (historical) cost at the time the asset was placed in service it does not account for inflation since the year of installation. Therefore, basing asset replacement costs on amortization alone is not sufficient to cover the future replacement needs.

The TCA projections contained in the Municipality’s water system financial plan are based on the following assumptions:

- Amortization of existing assets is based on the Municipality’s Tangible Capital Assets Policies and Procedures. Amortization of new infrastructure investments is based on straight line depreciation with half year depreciation charged in the year of acquisition;
- Historical costs, life expectancy and remaining useful life are as identified in the TCA data provided by the Municipality;
- Fully depreciated assets continue to be used in service i.e. no asset removals; and
- New assets to be acquired are based on the capital forecast presented. The forecast includes projects in the Municipality’s 2022 Capital Budget and asset replacement projections based on an analysis of the Municipality’s tangible capital asset inventories.

Water Asset Value

The water system is comprised of the following asset classes:

- Water Vehicles and Equipment
- Water Buildings
- Water Hydrants
- Water Meters
- Water Valves, and
- Water lines

Table 2-1 shows the current capital asset value based on historical cost and accumulated amortization to 2022. This is reflected as the net book value (NBV) i.e. the “accounting” value, and indicates that the water system as a whole is approximately 24% depreciated or has approximately 76% remaining life based on the TCA data. This suggests that the water system assets are relatively new.

Table 2-1: Water – Asset Amortization and Book Value (NBV)

2022 Water Asset Details		
Historical Costs	\$ 36,871,441	100%
Accumulated Amortization	\$ 8,901,267	24%
Net Book Value	\$ 27,970,174	76%

2.2 Water Financial Statements

This financial plan involves the review, analysis and assessment of financial information contained in the rate study including costs, revenues, debt, cash transactions and Tangible Capital Assets (TCA) to prepare the following three (3) financial statements covering the period 2022 – 2027 as required under O.Reg 453/07:

- Statement of Financial Position;
- Statement of Operations; and
- Statement of Cash Flow

2.2.1 Water - Statement of Financial Position

The Statement of Financial Position is presented in Table 2-2. This statement summarizes the Municipality's water-related financial and non-financial assets i.e. Tangible Capital Assets (TCA) and liabilities, and provides the net financial asset (or net debt) position and accumulated surplus related to managing the water system. The financial assets are primarily cash balances in the water reserves and reserve funds. Liabilities consist of the water long-term debt. The non-financial assets (TCA) include the Municipality's water infrastructure. The historical costs are amortized over the asset life to arrive at the net book value each year from 2022 to 2027. New assets are added in the years acquired, developed or built. Contributed assets are primarily new infrastructure and facilities that would be transferred to the Municipality's ownership and control by developers as they are completed. However this is assumed to be zero. It is also assumed that other non-financial assets such as inventory and prepaid expenses are zero.

Contained within the Statement of Financial Position are important indicators, the first being net financial assets (or net debt) which is defined as the difference between financial assets and liabilities. This indicator provides a measure of the water system's "future revenue requirement". Table 2-2 indicates that in 2022, the Municipality's water system will be in a net debt position of \$2.5 million. This will decrease to a net debt position of \$0.5 million by 2027. The net debt position indicates that additional financial resources will be required to fund future operations. The trend to the reduction of net debt is due to a significant decrease of long-term debt and increase in cash balances.

The next important indicator contained in the Statement of Financial Position is the net book value of TCA. Table 2-2 shows that net TCA are expected to decrease over the forecast period by about \$0.6 million. This indicates that the Municipality has plans to invest in tangible capital assets less than the consumption of existing assets. Further, a consumption ratio consisting of the accumulated amortization of the Municipality's TCA as a percent of historical cost ratio highlights the aged condition of the assets and their potential replacement needs. The Municipality's Water Asset Consumption Ratio increases over the forecast period from 24% to 28%, suggesting that the water system would be greater than a quarter through its life expectancy by 2027.

Another important indicator in the Statement of Financial Position is the accumulated surplus. This indicator provides a measure of the resources available to the Municipality for managing its water system. The accumulated surplus is projected to increase from approximately \$25.4 million in 2022 to approximately \$26.9 million by 2027. The accumulated surplus consists of non-financial assets that are made up of the net TCA balance representing past investments in water infrastructure, offset by the net debt balances.

Table 2-2: Water – Statement of Financial Position

	2022	2023	2024	2025	2026	2027
Financial Assets						
Cash, Receivables and Investment	\$166,079	(\$218,498)	(\$450,025)	(\$601,829)	(\$112,183)	\$280,666
Total Financial Assets	\$166,079	(\$218,498)	(\$450,025)	(\$601,829)	(\$112,183)	\$280,666
Financial Liabilities						
Long-term Liabilities	\$2,713,938	\$2,329,003	\$1,937,195	\$1,538,210	\$1,131,729	\$741,307
Total Financial Liabilities	\$2,713,938	\$2,329,003	\$1,937,195	\$1,538,210	\$1,131,729	\$741,307
Net Financial Assets (Net Debt)	(\$2,547,859)	(\$2,547,501)	(\$2,387,220)	(\$2,140,039)	(\$1,243,912)	(\$460,641)
Non-Financial Assets						
Tangible Capital Assets	\$36,871,441	\$37,371,254	\$37,759,575	\$37,942,604	\$37,953,721	\$37,992,130
Accumulated Amortization	(\$8,901,267)	(\$9,212,237)	(\$9,526,193)	(\$9,669,323)	(\$10,221,363)	(\$10,648,050)
Total Non-Financial Assets	\$27,970,174	\$28,159,017	\$28,233,382	\$28,273,281	\$27,732,359	\$27,344,080
Accumulated Surplus	\$25,422,315	\$25,611,516	\$25,846,162	\$26,133,242	\$26,488,447	\$26,883,439
Financial Indicators						
Increase (Decrease) in Net Financial Assets	\$329,543	\$358	\$160,281	\$247,181	\$896,127	\$783,271
Increase (Decrease) in Tangible Capital Assets	\$429,428	\$188,843	\$74,364	\$39,900	(\$540,923)	(\$388,279)
Increase (Decrease) in Accumulated Surplus	\$758,971	\$189,202	\$234,646	\$287,080	\$355,204	\$394,993
Water Asset Consumption Ratio	24%	25%	25%	25%	27%	28%

2.2.2 Water - Statement of Operations

The Statement of Operations is presented in Table 2-3. It summarizes the annual revenues and expenses associated with managing the Municipality's water system. It provides a report on the transactions and events that have an influence on the accumulated surplus. The main revenue items included are:

- Revenues from water rates and charges, and;
- Other Revenues (water connection fees, third party recoveries, admin service fees and charges).

The main expense items are:

- The annual cost of operating and maintaining the water systems;
- Interest on long-term debt; and
- Amortization expenses on existing and added TCA.

The operating surplus (or deficit) is an important indicator contained in the Statement of Operations. An operating surplus (deficit) measures whether operating revenues generated in a year were sufficient to cover operating expenses incurred in that year. It is important to note that an annual surplus is necessary to ensure funds will be available to address non-expense items such as TCA acquisitions over and above amortization

expenses, reserve/reserve fund contributions for asset replacement and rate stabilization, and repayment of outstanding debt principal. A ratio of operating surplus to total revenue is shown in Table 2-3 and reflects the percent of total revenue that can be allocated to funding the non-expense items noted above.

Table 2-3: Water – Statement of Operation

	2022	2023	2024	2025	2026	2027
Water Revenue						
Rate Revenue	\$1,842,901	\$1,910,548	\$1,981,108	\$2,054,707	\$2,134,193	\$2,217,171
Earned Revenue	\$495,000	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$168,592	\$147,918	\$143,749	\$144,367	\$149,762	\$121,033
Total Revenues	\$2,506,493	\$2,058,466	\$2,124,857	\$2,199,074	\$2,283,955	\$2,338,203
Water Expenses						
Operating Expenses	\$1,053,632	\$1,213,510	\$1,237,780	\$1,262,535	\$1,287,786	\$1,313,542
Non-TCA Capital	\$75,000	\$0	\$0	\$0	\$0	\$0
Interest on Debt	\$117,271	\$100,771	\$84,079	\$66,866	\$49,443	\$31,686
Amortization	\$541,572	\$554,984	\$568,352	\$582,592	\$591,521	\$597,983
Total Expenses	\$1,862,475	\$1,869,265	\$1,890,211	\$1,911,994	\$1,928,750	\$1,943,211
Annual Surplus/(Deficit)	\$644,018	\$189,202	\$234,646	\$287,080	\$355,204	\$394,992
Accumulated Surplus/(Deficit), Beginning of Year	\$24,663,343	\$25,422,315	\$25,611,516	\$25,846,162	\$26,133,242	\$26,488,447
Accumulated Surplus/ (Deficit), End of Year	\$25,422,315	\$25,611,516	\$25,846,162	\$26,133,242	\$26,488,447	\$26,883,439
Operating Surplus Ratio	25.7%	9.2%	11.0%	13.1%	15.6%	16.9%

2.2.3 Water - Statement of Cash Flows

The Statement of Cash Flow is presented in Table 2-4. This statement summarizes the main cash inflows and outflows related to the water system in four (4) main areas - operating, capital, investing and financing, and shows the annual changes in cash.

The operating cash transactions begin with the surplus or deficit identified in the Statement of Operations. This figure is adjusted to add or subtract non-cash items that were included as revenues or expenses (e.g. amortization expenses and earned revenues). It is assumed that there are no “investing activities” over the period. The capital section indicates the amounts to be spent to acquire capital assets (TCA) or to be received from the sale of assets. In the Municipality’s case, it is assumed that there are no assets to be sold to generate cash. The financing section identifies funds from external sources as cash inflows, and the portion of debt repaid as cash outflows.

Table 2-4 indicates that cash is being generated from operations, which is used in funding the acquisition of TCA, repayment of debt principal and towards building internal reserves. The Municipality's cash position is projected to slightly increase over the forecast period from \$166 thousand in 2022 to a \$281 thousand in 2027.

Table 2-4: Water – Statement of Cash Flow

	2022	2023	2024	2025	2026	2027
Cash Provided by:						
Operating Activities						
Annual Surplus/(Deficit)	\$644,018	\$189,202	\$234,646	\$287,080	\$355,204	\$394,992
Non-Cash Items						
Amortization	\$541,572	\$554,984	\$568,352	\$582,592	\$591,521	\$597,983
Earned Revenue	(\$495,000)	\$0	\$0	\$0	\$0	\$0
Net Change in Cash Provided by Operating Activities	\$690,590	\$744,186	\$802,998	\$869,673	\$946,726	\$992,976
Capital Activities						
Purchase of TCA	(\$971,000)	(\$743,828)	(\$642,717)	(\$622,492)	(\$50,599)	(\$209,705)
Net Change in Cash Used in Capital Activities	(\$971,000)	(\$743,828)	(\$642,717)	(\$622,492)	(\$50,599)	(\$209,705)
Financing Activities						
External Financing	\$495,000	\$0	\$0	\$0	\$0	\$0
Proceeds From Long-Term Debt	\$0	\$0	\$0	\$0	\$0	\$0
Repayment of Long-Term Debt	(\$378,353)	(\$384,935)	(\$391,808)	(\$398,985)	(\$406,481)	(\$390,421)
Net Change in Cash Used in Financing Activities	\$116,647	(\$384,935)	(\$391,808)	(\$398,985)	(\$406,481)	(\$390,421)
Net Change in Cash and Cash Equivalents	(\$163,763)	(\$384,577)	(\$231,527)	(\$151,804)	\$489,646	\$392,850
Cash and Cash Equivalents, Beginning of the Year	\$214,889	\$166,079	(\$218,498)	(\$450,025)	(\$601,829)	(\$112,183)
Cash and Cash Equivalents, End of the Year	\$166,079	(\$218,498)	(\$450,025)	(\$601,829)	(\$112,183)	\$280,666

2.3 Lead Service Pipe Removal

The financial plan is also required to detail the extent to which the information described above relates directly to the replacement of lead service pipes. There are no known lead service pipes in the Municipality. There is no dedicated lead service pipe removal program in place. If lead pipe is discovered during normal operations, it is replaced accordingly. Therefore, there are no significant material financial costs associated with lead pipe removal.

3 Conclusions & Recommendations

The following are the main conclusions regarding the water system:

1. The financial statements for the water system are prepared based on the results of the rate study analyses and projections, indicate the following:
 - The accumulated surplus is projected to increase from approximately \$25.4 million in 2022 to approximately \$25.9 million by 2027.
 - The operating surplus ratio is projected to decrease from approximately 25.7% in 2022 to \$16.9% in 2027.
 - The cash position is projected to increase from \$166 thousand in 2022 to a \$281 thousand in 2027.

These indicate that the financial outlook for the water system over the 6-year period 2021 to 2026 is good.

The following are the main recommendations resulting from the O. Reg 453.07 water system financial plan:

2. That the O.Reg. 453/07 Water System Financial Plan including the Financial Statements contained herein be approved by Council and submitted to the Province of Ontario in accordance with the Drinking Water System License renewal requirements and O. Reg. 453/07.
3. That a copy of the Water Financial Plan be posted on the Municipality's website and made available to the public at no charge.

Appendix A

Requirements of O. Reg. 453/07

Appendix A: Requirements of O.Reg. 453/07

Requirements		How Requirements are Met
1.	The financial plan must be approved by a resolution that is passed by,	
	i. The council of the municipality, if the owner of the drinking water system is a municipality.	<ul style="list-style-type: none"> It is expected the Council will approve the updated financial plan on October 11, 2022.
	ii. The governing body of the owner, if the owner of the drinking water system has a governing body and is not a municipality.	<ul style="list-style-type: none"> N/A
2.	The financial plan must apply to a period of at least six years.	<ul style="list-style-type: none"> Applies for 6 years from 2022 to 2027 inclusive.
3.	The first year to which the financial plan must apply must be the year determined in accordance with the following rules:	
	i. If the financial plan is required by subsection 2, the first year to which the financial plan must apply must be the year in which the drinking water system's existing municipal drinking water licence would otherwise expire. Financial Plan can be updated before they otherwise expire.	<ul style="list-style-type: none"> The financial plan is being updated in 2022 to coincide with the results of the water and wastewater rates review.
	ii. If the financial plan is required by a condition that was included in a municipal drinking water licence under subsection 1 (3), the first year to which the financial plans must apply must be the later of 2010 and the year in which the first licence for the system was issued.	<ul style="list-style-type: none"> N/A
4.	Subject to subsection (2), for each year to which the financial plan apply, the financial plan must include the following:	
	i. Details of the proposed or projected financial position of the drinking water system itemized by:	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan.
	a. Total financial assets	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan.
	b. Total liabilities	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan.
	c. Net financial assets (debt)	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan.
	d. Non-financial assets that are tangible capital assets, tangible capital assets under construction, inventories of supplies and prepaid expenses.	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan. TCA Projections in Financial Plan.
	e. Changes in tangible capital assets that are additions, donations, write downs and disposals.	<ul style="list-style-type: none"> See Statement of Financial Position for all water systems combined in Financial Plan. TCA Projections in Financial Plan.

Appendix A: Requirements of O.Reg. 453/07

	ii.	Details of the proposed or projected financial operations of the drinking water system itemized by,	<ul style="list-style-type: none"> See Statement of Operations for all water systems combined in Financial Plan.
		a. Total revenues, further itemized by water rates, user charges and other revenues.	<ul style="list-style-type: none"> See Statement of Operations for all water systems combined in Financial Plan.
		b. Total expenses, further itemized by amortization expenses, interest expenses and other expenses	<ul style="list-style-type: none"> See Statement of Operations for all water systems combined in Financial Plan.
		c. Annual surplus or deficit, and	<ul style="list-style-type: none"> See Statement of Operations for all water systems combined in Financial Plan.
		d. Accumulated surplus or deficit	<ul style="list-style-type: none"> See Statement of Operations for all water systems combined in Financial Plan.
	iii.	Details of the drinking water system's proposed or projected gross cash receipts and gross cash payments itemized by,	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		a. Operating transactions that are cash received from revenues, cash paid for operating expenses and finance charges, - done in full cost report	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		b. Capital transactions that are proceeds on the sale of tangible capital assets and cash used to acquire capital assets,	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		c. Investing transactions that are acquisitions and disposal of investments,	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		d. Financing transactions that are proceeds from the issuance of debt and debt repayment.	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		e. Changes in cash and cash equivalents during the year,	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
		f. Cash and cash equivalents at the beginning and end of the year.	<ul style="list-style-type: none"> See Statement of Cash Flow for all water systems combined in Financial Plan.
	iv.	Details of the extent to which the information described in subparagraphs i, ii and iii relates directly to the replacement of lead service pipes as defined in section 15.1- 3 of Schedule 15.1 to Ontario Regulation 170/03 (Drinking Water Systems), made under the Act.	<ul style="list-style-type: none"> There is no dedicated lead service pipe removal program in place. If lead pipe is discovered during normal operations, it is replaced accordingly. Therefore, there are no significant material financial costs associated with lead pipe removal.
5.		The owner of the drinking water system must.	
	i.	Make the financial plans available, on request, to members of the public who are served by the drinking water system without charge,	<ul style="list-style-type: none"> This will be done by the municipality following Council approval.
	ii.	Make the financial plans available to members of the public without charge through publication on the Internet, if the owner maintains a website on the Internet,	<ul style="list-style-type: none"> The Financial Plan will be posted on the Municipality's website and made available for public review at no charge.

Appendix A: Requirements of O.Reg. 453/07

	iii.	Provide notice advising the public of the availability of the financial plans under subparagraphs i and ii, if applicable, in a manner that, in the opinion of the owner, will bring the notice to the attention of members of the public who are served by the drinking water system.	<ul style="list-style-type: none"> • A notice will be issued following Council approval.
6.		The owner of the drinking water system must give a copy of the financial plans to the Ministry of Municipal Affairs and Housing. O. Reg. 453/07, s. 3 (1).	<ul style="list-style-type: none"> • Will be submitted following Council approval.
		Each of the following sub-subparagraphs applies only if the information referred to in the sub-subparagraph is known to the owner at the time the financial plans are prepared.	<ul style="list-style-type: none"> • The Financial Plan was prepared using available information at the time of preparation and may not contain all desired items. Reasonable assumptions were made and these are noted in the Financial Plan.
	1.	Sub-subparagraphs 4 i A, B and C of subsection (1).	<ul style="list-style-type: none"> • The Financial Plan was prepared using available information at the time of preparation and may not contain all desired items. Reasonable assumptions were made and these are noted in the Financial Plan.
	2.	Sub-subparagraphs 4 iii A, C, E and F of subsection (1). O. Reg. 453/07, s. 3 (2).	<ul style="list-style-type: none"> • The Financial Plan was prepared using available information at the time of preparation and may not contain all desired items. Reasonable assumptions were made and these are noted in the Financial Plan.