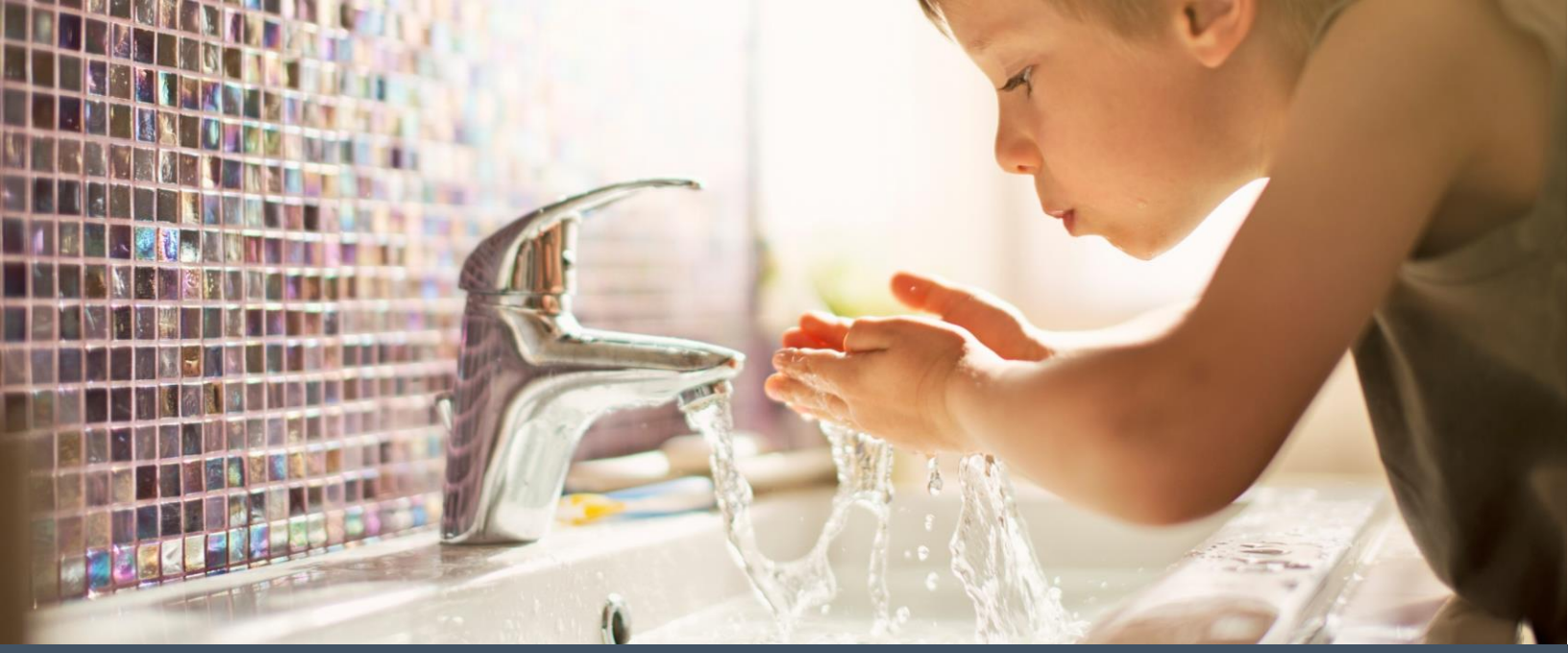

Water and Wastewater Rate Study and Ontario Regulation 453/07 Financial Plan

City of Kawartha Lakes

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
D.C.	Development Charges
O. Reg.	Ontario Regulation
PSAB	Public Sector Accounting Board
S.D.W.A.	Safe Drinking Water Act
T.C.A.	Tangible Capital Assets

Report

Chapter 1
Introduction

1. Introduction

1.1 Background

The City of Kawartha Lakes (City) is a single-tier municipality which provides water and wastewater services to municipally serviced areas of the City. In 2020, there were approximately 13,306 metered water customers receiving treatment, distribution, and storage services across 21 municipal water systems and 11,666 wastewater customers with water meters receiving treatment and collection services across six wastewater systems.

Most of the water and wastewater customers are metered, as there are currently only 7 non-metered water customers and 744 non-metered wastewater customers. In addition, the City also charges mandatory connect fees to customers with access to municipal services but have not opted to connect to municipal water and wastewater services. In total, 106 water customers and 55 wastewater customers are charged the mandatory connect fees. Table 1-1 summarizes the current metered customers (differentiated by meter size) and non-metered water and wastewater customers.

Table 1-1
City of Kawartha Lakes Water and Wastewater Customer Profile

Description	Water	Wastewater
Metered Customers by Meter Size		
5/8" - 3/4"	12,916	10,512
1"	139	118
1 ½"	92	86
2"	126	119
3"	25	25
4"	6	5
6"	1	1
8"	1	1
Total Metered Customers	**13,306**	**10,867**
Flat Rate Customers		
Unmetered/Flat Rate	7	744
Mandatory Connects	106	55
Grand Total	**13,419**	**11,666**

Metered customers are charged a rate comprised of two separate components. Rates include a consumptive rate (i.e. $ per cubic metre of water consumption) and a monthly

base charge which varies depending on the size of the customer's water meter. Rates for unmetered customers and mandatory connect fees are charged a flat rate per month. Council recently approved new water and wastewater rates for 2021 as part of the annual budget process. These recently approved rates are summarized in Table 1-2.

Table 1-2
City of Kawartha Lakes
2021 Water and Wastewater Rates

Metered Customers			Metered Customers		
Base Charge			Base Charge		
5/8" - 3/4"	$	31.58	5/8" - 3/4"	$	31.02
1"	$	41.09	1"	$	41.14
1 ½"	$	52.83	1 ½"	$	54.46
2"	$	85.10	2"	$	87.72
3"	$	322.81	3"	$	332.73
4"	$	410.84	4"	$	423.48
6"	$	616.23	6"	$	635.73
8"	$	850.98	8"	$	877.13
10"			10"		
Volume Charge			Volume Charge		
$ 2.80	per m^3		$ 1.52	per m^3	
Unmetered/Flat Rate Customers			Unmetered/Flat Rate Customers		
$ 73.16	per month		$ 53.57	per month	
Mandatory Connects			Mandatory Connects		
$ 16.88	per month		$ 17.31	per month	

1.2 Study Process

Watson & Associates Economists Ltd. (Watson) was retained by the City to update the 2016 Water and Wastewater Rate Study. The objectives of the study and the steps involved in carrying out this assignment are summarized below:

- update water and wastewater service demand assumptions based on analysis of historical water consumption and recent trends;
- estimate future consumption levels by applying revised demand assumptions to forecast system growth;
- develop a capital program consisting of lifecycle needs arising from the City's 10-year water and wastewater capital plan Asset Management Plan, and 2019 Development Charges (D.C.) Background Study;

- forecast annual operating costs and rate-based funding requirements;
- develop an annual water and wastewater rate forecast and assess the impacts on the rate payers; and
- prepare the Financial Plan required under the Municipal Drinking Water Licensing Program, as prescribed by the *Safe Drinking Water Act* (Ontario Regulation (O. Reg.) 453/07).

In developing this study, the following analysis is provided herein:

Chapter 1 – Introduction;
Chapter 2 – Forecast Growth and Service Demands;
Chapter 3 – Capital Infrastructure Needs;
Chapter 4 – Capital Cost Financing Options;
Chapter 5 – Operating Expenditure Forecast; and
Chapter 6 – Forecast Water and Wastewater Rates.

1.3 Regulatory Changes in Ontario

Resulting from the water crisis in Walkerton, significant regulatory changes have been made in Ontario. These changes arose as a result of the Walkerton Commission and the 93 recommendations made by the Walkerton Inquiry Part II report. Areas of recommendation included:

- watershed management and source protection;
- quality management;
- preventative maintenance;
- research and development;
- new performance standards;
- sustainable asset management; and
- lifecycle costing.

The following sections describe significant applicable regulatory areas.

1.4 Sustainable Water and Sewage Systems Act

The *Sustainable Water and Sewage Systems Act* was passed on December 13, 2002. The intent of the Act was to introduce the requirement for municipalities to undertake an assessment of the "full cost" of providing their water and wastewater services. In total, there were 40 areas within the Act to which the Minister may make regulations; however, regulations were never issued. On December 31, 2012, the *Sustainable Water and Sewage Systems Act* was repealed.

1.5 Safe Drinking Water Act

The *Safe Drinking Water Act* was passed in December 2002. The *Safe Drinking Water Act* provides for 50 of the 93 Walkerton Part II recommendations. It focuses on the administrative and operational aspects of the provision of water. The *Safe Drinking Water Act* is being implemented in stages.

> "The purpose of the Safe Drinking Water Act is to protect human health through the control and regulation of drinking-water systems and drinking-water testing. Building on existing policy and practice in Ontario's treatment and distribution of drinking water, the Safe Drinking Water Act requires that all municipal drinking water systems obtain an approval from the Director of the Ministry of the Environment in order to operate. Operators are required to be trained and certified to provincial standards. The act also provides legally binding standards for testing of drinking water and requires that testing be done in licensed and accredited laboratories."[1]

The following is a brief summary of the key elements included in the *Safe Drinking Water Act*:

- Mandatory licensing and accreditation of testing laboratories;
- New standards for treatment, distribution quality and testing;
- Mandatory operator training and certification;
- Mandatory licensing of municipal water providers;
- Stronger enforcement and compliance provisions; and

[1] The Ministry of Environment
http://www.ene.gov.on.ca/environment/en/legislation/safe_drinking_water_act/index.html

- “Standard of care” requirements for municipalities.

This legislation impacts the costs of operating a water system with the need for higher skilled operators including increased training costs, increased reporting protocols and requirements, continuing enhancements to quality standards and the costs to licence each water system.

1.6 Financial Plans Regulation

On August 16, 2007, the Ministry of Environment introduced O. Reg. 453/07 which requires the preparation of financial plans for water systems (and municipalities are encouraged to prepare plans for wastewater systems). The Ministry of Environment has also provided a Financial Plan Guideline to assist municipalities with preparing the plans. A brief summary of the key elements of the regulation is provided below.

- The financial plan will represent one of the key elements to obtain a Drinking Water Licence.
- The plan is to be completed, approved by Council Resolution and submitted to the Ministry of Municipal Affairs and Housing as part of the application for receiving approval of a water licence.
- The financial plans shall be for a period of at least six years but longer planning horizons are encouraged.
- As the regulation is under the *Safe Drinking Water Act*, the preparation of the plan is mandatory for water services and encouraged for wastewater services.
- The plan is considered a living document (i.e. can be updated if there are significant changes to budgets) but a review will need to be undertaken at a minimum every five years.
- The plans generally require the forecasting of capital, operating and reserve fund positions, as well as the provision of detailed capital inventories. In addition, Public Sector Accounting Board full accrual information on the system must be provided for each year of the forecast (i.e. total non-financial assets, tangible capital asset acquisitions, tangible capital asset construction, betterments, write-downs, disposals, total liabilities, net debt, etc.).

- The financial plans must be made available to the public (at no charge) upon request and be available on the municipality's web site. The availability of this information must also be advertised.

In general, the financial principles of this regulation follow the intent of the Sustainable Water and Sewage Systems Act, 2002 to move municipalities towards financial sustainability for water services. Many of the prescriptive requirements, however, have been removed (e.g. preparation of two separate documents for provincial approval, auditor opinions, engineer certifications, etc.).

A guideline ("Towards Financially Sustainable Drinking-Water and Wastewater Systems") has been developed to assist municipalities in understanding the Province's direction and provides a detailed discussion on possible approaches to sustainability. The Province's Principles of Financially Sustainable Water and Wastewater Services are provided below:

Principle #1: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.

Principle #2: An integrated approach to planning among water, wastewater, and stormwater systems is desirable given the inherent relationship among these services.

Principle #3: Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.

Principle #4: Lifecycle planning with mid-course corrections is preferable to planning over the short term, or not planning at all.

Principle #5: An asset management plan is a key input to the development of a financial plan.

Principle #6: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.

Principle #7: Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.

Principle #8: Financial Plans are "living" documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.

Principle #9: Financial plans benefit from the close collaboration of various groups, including engineers, accountants, auditors, utility staff and municipal Council.

1.7 Water Opportunities Act

The *Water Opportunities Act* received Royal Assent on November 29, 2010. The Act provides for the following elements:

- Foster innovative water, wastewater and stormwater technologies, services and practices in the private and public sectors;
- Prepare water conservation plans to achieve water conservation targets established by the regulations; and
- Prepare sustainability plans for municipal water services, municipal wastewater services and municipal stormwater services.

With regard to the sustainability plans:

- The Bill extends from the water financial plan and requires a more detailed review of the water financial plan and requires a full plan for wastewater and stormwater services; and
- Regulations (when issued) will provide performance targets for each service – these targets may vary based on the jurisdiction of the regulated entity or the class of entity.

The Financial Plan shall include:

- An asset management plan for the physical infrastructure;

- A financial plan;
- For water, a water conservation plan;
- Assessment of risks that may interfere with the future delivery of the municipal service, including, if required by the regulations, the risks posed by climate change and a plan to deal with those risks; and
- Strategies for maintaining and improving the municipal service, including strategies to ensure the municipal service can satisfy future demand, consider technologies, services and practices that promote the efficient use of water and reduce negative impacts on Ontario's water resources, and increase cooperation with other municipal service providers.

Performance indicators will be established by service:

- May relate to the financing, operation, or maintenance of a municipal service or to any other matter in respect of which information may be required to be included in a plan; and
- May be different for different municipal service providers or for municipal services in different areas of the Province.

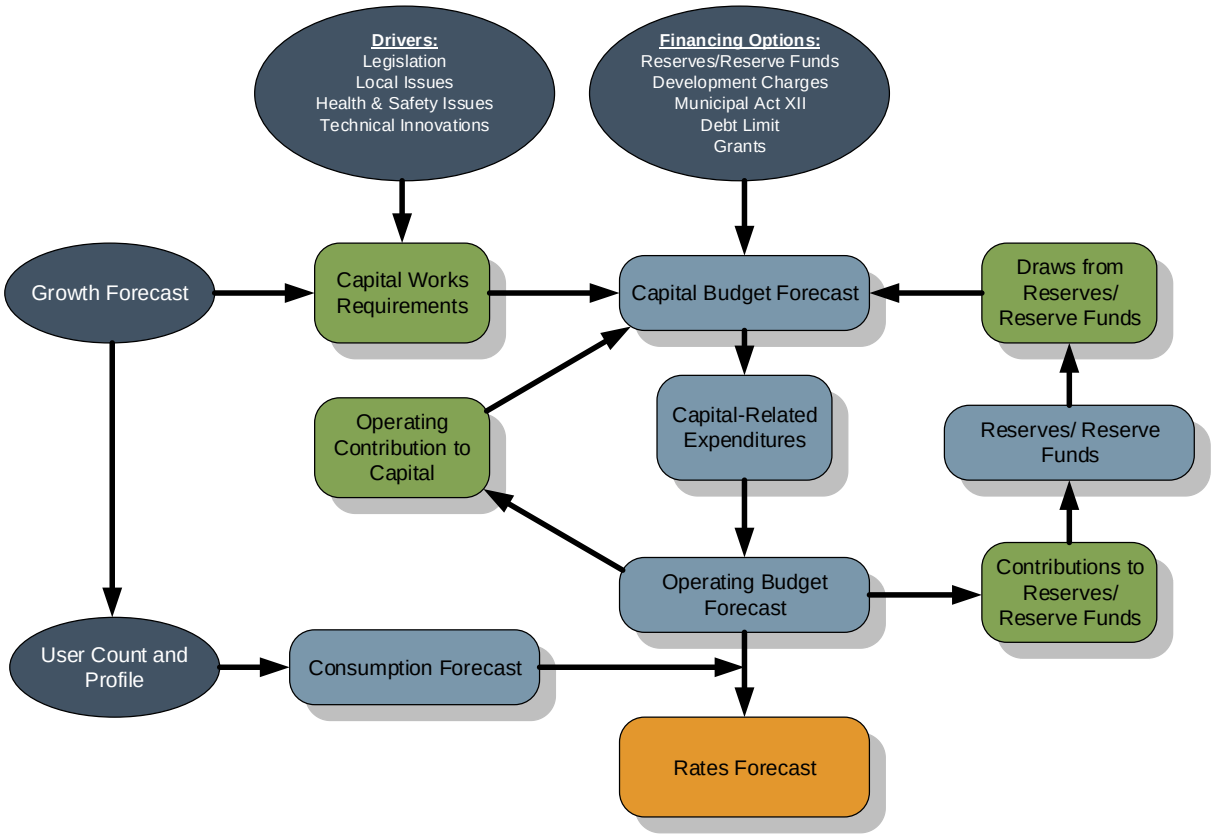
Regulations will prescribe:

- Timing;
- Contents of the plans;
- What portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

1.8 Water and Wastewater Rate Calculation Methodology

Figure 1-1 illustrates the general methodology used in determining the full cost recovery water and wastewater rate forecast.

Figure 1-1
Water and Wastewater Rate Calculation Methodology



The methodology employed generally consists of 5 major elements:

1. Customer Demands and Consumption Forecast

As noted in section 1.1, the City employs a rate structure consisting of a monthly base charge and a consumptive rate. The base charge is differentiated by water meter size with higher charges imposed on larger meters, generally reflective of higher capital infrastructure demands. The consumptive rate is imposed at a constant rate based on water consumption.

This first step in the analysis is important as it produces the current base revenue by source and assumptions for forecasting purposes. The base charge revenues are forecast with customer growth. The customer profile forecast is modelled based on the City's expected growth, applying generally witnessed metered size assumptions by use.

Moreover, the customer forecast is modelled for the water and wastewater systems independently to identify differences in service demands.

The water consumption forecast is prepared by applying average annual consumption estimates to future development. The forecast may adjust the base consumption levels for anticipated water conservation based on historical trends and industry witnessed practices. Consumption estimates are based on average consumption levels by customer type drawn from municipal billing records for 2019. The non-residential consumption estimates are generally adjusted to net out large consuming water customers that may skew anticipated consumption levels of future growth. Consistent with the customer forecast, the water consumption forecast used to determine the wastewater consumptive rates is adjusted to reflect differences in service demands. The detailed description of the demands and customer forecast are provided in Chapter 2 of this report.

2. Capital Needs Forecast

The capital needs forecast is developed to measure program/service level adjustments, lifecycle requirements and growth-related needs. The City's 10-year (2021-2030) water and wastewater capital plan for replacement works and the City's 2019 D.C. study for growth-related projects provide the base capital forecast. Capital expenditures are forecast with inflationary adjustments.

3. Capital Funding Plan

The capital funding plan considers the potential funding sources available to address the capital needs forecast. The sources of capital funding include rate-based support, reserves/reserve funds, provincial conditional grants, connection charges, and debt for program/service level improvements. Growth-related sources of funding include provincial/federal grants, connection charges/D.C.s, and debt. The use of rate-based funding is measured against the revenue projections and affordability impacts. The reserve/reserve fund sources are measured against the sustainability of these funds relative to lifecycle demands, revenue projections and affordability impacts. Debt financing is considered for significant capital expenditures, where funding is required beyond long-term lifecycle needs or to facilitate rate transition policies. Debt financing is measured against the City's debt policies and annual repayment limits to ensure a practical and sustainable funding mix.

4. Operating Budget Forecast

The operating budget forecast considers adjustments to the City's base budget reflecting program/service level changes, operating fund impacts associated with infrastructure and financing for capital needs. The operating expenditures are forecast with inflationary adjustments and growth in service demand. The operating budget forecast ties the capital funding plan and reserve/reserve fund continuity forecast to the rate-based revenue projections. This ensures sufficient funding for both the ongoing annual operation and maintenance of water and wastewater services, as well as the capital cost requirements to ensure service sustainability. Operating revenues are projected to identify the base charge and consumptive rate components net of anticipated operating revenues, such as bulk water sales, miscellaneous recoveries, and other miscellaneous revenues.

5. Rate Forecast and Structure

The rate forecast and structure component of the analysis considers various rate structures to recover the forecast rate-based revenue from the projected customer demands. The full costs of service are measured against the customer growth and consumption demands to determine full cost recovery rates. The results are quantified to measure the impacts on a range of customer types and in relation to other municipalities to provide context to the rate forecast.

Chapter 2
Forecast Growth and Service Demands

2. Forecast Growth and Service Demands

2.1 Current Service Demands

In preparing the demands forecast for water and wastewater services, the City provided a summary of the number of customers by meter size, metered consumption by customer meter size and the number for non-metered and unconnected customers for the municipal water and wastewater system. This information is contained in Table 1-1.

Compared with projections in the 2016 Rate Study, the actual growth in water and wastewater customers between 2016 and 2019 was been higher than expected. In the 2016 Rate Study, water customers were projected to grow by approximately 123 per year and reach 13,139 customers by the end of 2019. The actual number of water customers for the same period were 280 higher, totalling 13,419 customers. Similarly, the wastewater customers at the end of 2019 totalled 11,666, which exceeded the 2016 Rate Study forecast of 11,338 by 328 customers.

2.2 Forecast Service Demands

The City's 2019 D.C. Background Study and actual historical growth witnessed since the last rate study were consulted to determine the growth forecast estimates for this rate study. The 2019 D.C. Background Study projects approximately 623 new water and wastewater customers per year over the next 10 years within the City's urban serviced areas. This with a five-year historical average growth of 193 customers per year. After reviewing the D.C. Background Study projections and historical growth with City staff, it was determined that the five-year historical average customer growth would be appropriate for rate calculation purposes. This forecast represents a more conservative approach that would minimize the financial risks related to achieving a slower pace of growth than forecast in the City's 2019 D.C. Background Study. If system growth is realized at a higher that forecast rate, then the water and wastewater systems will likely be in a stronger financial position and may require either lower rate increase in future years or will have accumulated a more sustainable reserve fund position.

Table 2-1 provides the water and wastewater customer growth forecast for the 2021-2030 period based on the City's 2021 customer profile and average annual growth of the historical five-year period.

The water consumption forecast is prepared based on the historic consumption data provided by the City and applying the average annual consumption per customer to the customer growth forecast in Table 2-1. Groups of large volume customers were isolated and netted out of the annual water consumption average, to recognize estimate typical water demands for new customers. The City intends to maintain its practice of charging uniform water and wastewater rates across all municipal systems, as such, the average annual water consumption per customer of 173 m^3 was applied. Wastewater billing is calculated using metered water consumption, therefore average annual water consumption is used for forecasting future wastewater flows.

Average annual water consumption per customer (net of large volume users) has decreased by approximately 4% compared to the estimates contained in the City's 2016 Rate Study (180 m^3 in 2015 vs. 173 m^3 currently). Applying the average volume of usage estimates to new customers results in an estimated increase in water consumption of 334,731 m^3 by 2030 (an average annual increase of 1.2%). Table 2-2 provides the detailed water consumption and wastewater flow forecast.

Table 2-1
City of Kawartha Lakes
Water and Wastewater Customer Forecast

Water Customer Forecast	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	13,419	13,419	13,419	13,419	13,419	13,419	13,419	13,419	13,419	13,419
New - Growth	-	97	290	483	676	869	1,062	1,255	1,448	1,641
Total	**13,419**	**13,516**	**13,709**	**13,902**	**14,095**	**14,288**	**14,481**	**14,674**	**14,867**	**15,060**

Wastewater Customer Forecast	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	11,666	11,666	11,666	11,666	11,666	11,666	11,666	11,666	11,666	11,666
New - Growth	-	97	290	483	676	869	1,062	1,255	1,448	1,641
Total	**11,666**	**11,763**	**11,956**	**12,149**	**12,342**	**12,535**	**12,728**	**12,921**	**13,114**	**13,307**

Table 2-2
City of Kawartha Lakes
Water and Wastewater Consumption Forecast

Water Volume Forecast (m^3)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676	2,656,676
New	-	16,823	50,296	83,770	117,243	150,716	184,189	217,662	251,135	284,608
Total	**2,656,676**	**2,673,500**	**2,706,973**	**2,740,446**	**2,773,919**	**2,807,392**	**2,840,865**	**2,874,338**	**2,907,812**	**2,941,285**

Wastewater Flows Forecast (m^3)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Existing	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607	2,499,607
New	-	16,823	50,296	83,770	117,243	150,716	184,189	217,662	251,135	284,608
Total	**2,499,607**	**2,516,430**	**2,549,903**	**2,583,377**	**2,616,850**	**2,650,323**	**2,683,796**	**2,717,269**	**2,750,742**	**2,784,215**

Note: Above flows are water flows on which the wastewater billing will be calculated

Chapter 3
Capital Infrastructure Needs

3. Capital Infrastructure Needs

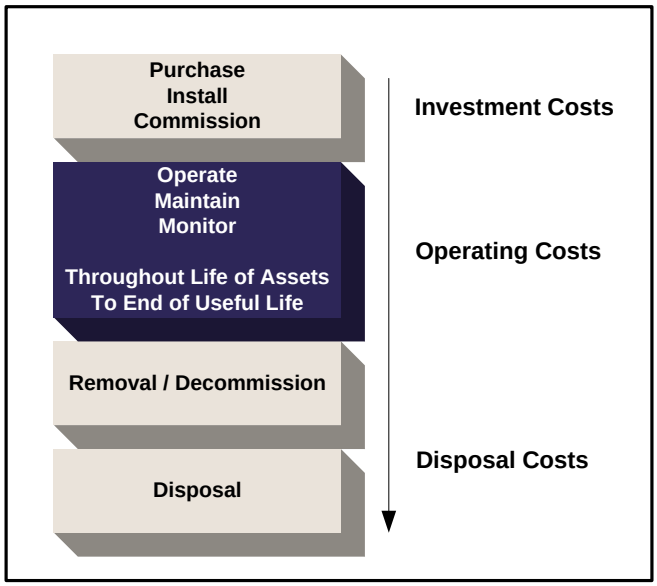
3.1 Overview of Lifecycle Costing

3.1.1 Definition

For many years, lifecycle costing has been used in the field of maintenance engineering and to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use in the areas of industrial decision-making and the management of physical assets.

By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The stages which the asset goes through in its lifecycle are specification, design, manufacture (or build), installation, commissioning, operation, maintenance, and disposal. Figure 3-1 depicts these stages in a schematic form.

Figure 3-1
Lifecycle Costing



3.1.2 Financing Costs

This section will focus on financing mechanisms in place to fund the costs incurred throughout the asset's life.

In a municipal context, services are provided to benefit tax/rate payers. Acquisition of assets is normally timed in relation to direct needs within the community. At times, economies of scale or technical efficiencies will lead to oversizing an asset to accommodate future growth within the municipality. Over the past few decades, new financing techniques such as connection charges or D.C.s have been employed based on the underlying principle of having tax/rate payers who benefit directly from the service paying for that service. Operating costs which reflect the cost of the service for that year are charged directly to all existing tax/rate payers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

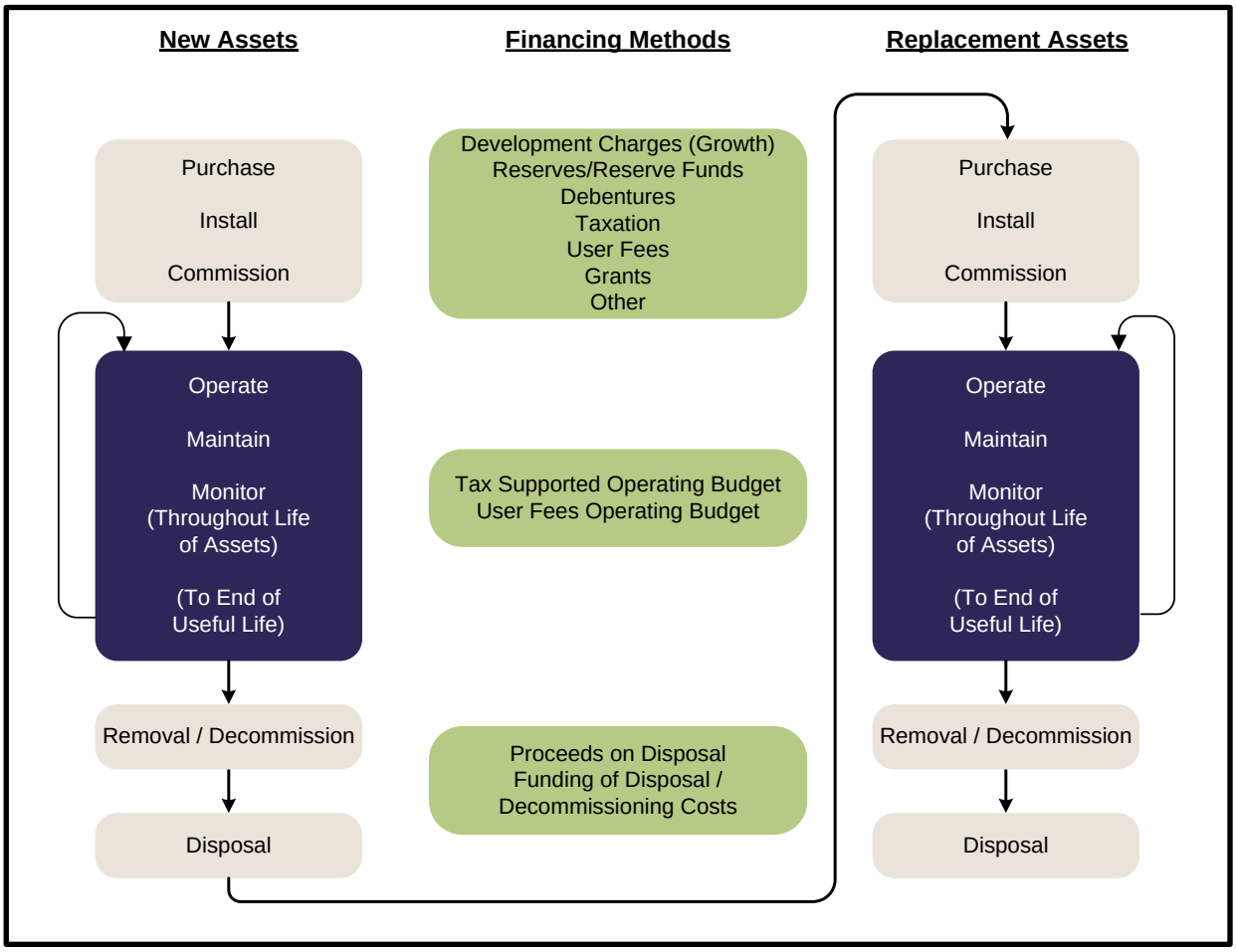
Capital expenditures are recouped through several methods, the most common being operating budget contributions, connection charges, D.C.s, reserves, developer contributions and debentures.

New construction related to growth could produce connection charges, D.C.s and developer contributions (e.g. works internal to a subdivision which are the responsibility of the developer to construct) to fund a significant portion of projects, where new assets are being acquired to allow growth within the municipality to continue. As well, debentures could be used to fund such works, with the debt charge carrying costs recouped from taxpayers in the future.

Capital construction to replace existing infrastructure, however, is largely not growth-related and will, therefore, not yield D.C.s or developer contributions to assist in financing these works. Hence, a municipality will be dependent upon debentures, reserves, and contributions from the operating budget to fund these works. Using connection charges as opposed to D.C.s as a cost recovery mechanism allows the costs of replacing existing infrastructure, in addition to growth-related costs, to be included in the calculation of the charge, thereby lessening the burden on existing rate payers.

Figure 3-2 depicts the costs of an asset from its initial conception through to replacement and then continues to follow the associated costs through to the next replacement.

Figure 3-2
Financing Lifecycle Costs



As referred to earlier, growth-related financing methods such as D.C.s and developer contributions could be utilized to finance the growth-related component of new assets. These revenues are collected (indirectly) from growth which benefits directly from the installation of such assets. Other financing methods may be used as well to finance the non-growth-related component of such assets, including reserves which have been collected from past tax/rate payers, operating budget contributions which are collected from existing tax/rate payers, connection charges collected from new development, and debenturing which will be carried by future tax/rate payers. Ongoing costs for monitoring, operating, and maintaining such assets will be charged annually to the existing tax/rate payers.

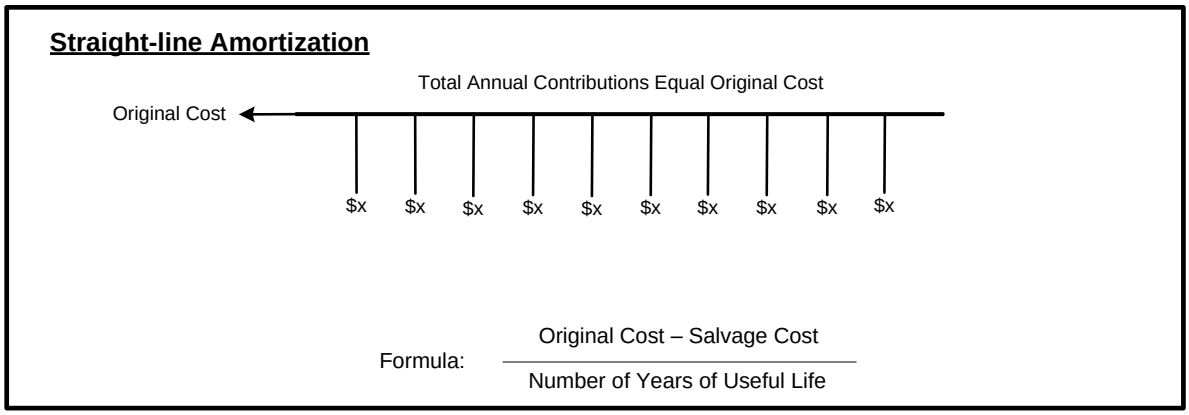
When such assets require replacement, the sources of financing will be limited to connection charges, reserves, debentures, and contributions from the operating budget. At this point, the question is raised: "If the cost of replacement is to be assessed against the tax/rate payer who benefits from the replacement of the asset, should the past tax/rate payer pay for this cost or should future rate payers assume this cost?" If the position is taken that the past user has used up the asset and hence he should pay for the cost of replacement, then a charge should be assessed annually through the life of the asset to have funds available to replace it when the time comes. If the position is taken that the future tax/rate payer should assume this cost, then debenturing and possibly a contribution from the operating budget should be used to fund this work.

Charging for the cost of using up an asset is the fundamental concept behind amortization methods utilized by the private sector. This concept allows for expending the asset as it is used up in the production process. The tracking of these costs forms part of the product's selling price and, hence, end users are charged for the asset's amortization. The same concept can be applied in a municipal setting to charge existing users for the asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

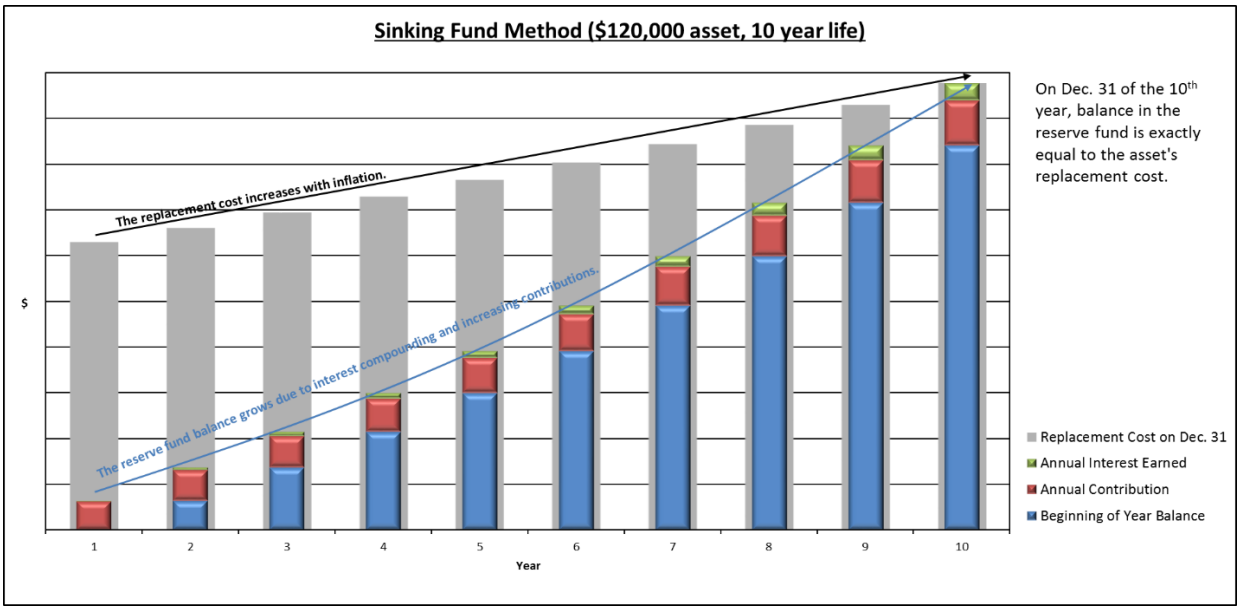
3.1.3 Costing Methods

There are two fundamental methods of calculating the cost of the usage of an asset and for the provision of the revenue required when the time comes to retire and replace it. The first method is the Amortization Method. This method recognizes the reduction in the value of the asset through wear and tear, and aging. There are two commonly used forms of amortization: the straight-line method; and the reducing balance method.

The straight line method is based on taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is disposed of) and dividing this by the estimated number of years of useful life. The reducing balance method is based on utilizing a fixed percentage rate and applying it annually to the undepreciated balance of the asset value.



The second method of lifecycle costing is the Sinking Fund Method. This method first estimates the future value of the asset at the time of replacement. This is done by inflating the original cost of the asset at an assumed annual inflation rate. A calculation is then performed to determine annual contributions (equal or otherwise) which, when invested, will grow with interest to equal the future replacement cost.



3.2 Asset Inventory

City staff provided a detailed water and wastewater capital asset inventory from the City's Asset Registry, inclusive of lifecycle contribution amounts. These determine the level of capital investment to be included in the full cost assessment and rate forecast.

Table 3-1 summarizes the current asset replacement value (Replacement Cost) and annualized lifecycle replacement costs (Annualized Replacement Cost) in 2020 $ values.

Table 3-1
City of Kawartha Lakes
Summary of Water and Wastewater Asset Portfolio (2020 $)

Water

Asset Type	Replacement Cost	Annualized Replacement Cost
Building	$ 43,050	$ 1,076
Building Envelope	$ 18,090,459	$ 301,508
Building Sitework	$ 15,868,996	$ 217,840
Interiors	$ 526,769	$ 31,748
Process Equipment	$ 72,129,520	$ 1,998,915
Services	$ 1,412,967	$ 41,748
Shell	$ 2,730,480	$ 62,566
Substructure	$ 1,169,027	$ 23,381
Water Hydrant	$ 4,981,162	$ 99,623
Watermain	$ 223,956,247	$ 2,097,111
Total	**$ 340,908,677**	**$ 4,875,516**

Wastewater

Asset Type	Replacement Cost	Annualized Replacement Cost
Building	$ 94,300	$ 1,179
Building Envelope	$ 9,220,230	$ 153,670
Building Sitework	$ 16,461,935	$ 237,578
Building, Interiors, Process Equipment, Shell, Substructure, Envelope, Sitework	$ 28,308,260	$ 471,804
Interiors	$ 376,163	$ 23,047
Process Equipment	$ 48,237,761	$ 1,223,319
Sanitary Sewer	$ 1,959,000	$ 15,672
Sanitary Sewer Forcemain	$ 42,747,657	$ 477,052
Sanitary Sewer Gravity Main	$ 234,393,722	$ 2,412,273
Services	$ 1,044,818	$ 29,570
Shell	$ 1,390,223	$ 29,527
Substructure	$ 384,058	$ 7,681
Total	**$ 384,618,127**	**$ 5,082,373**

3.3 Capital Forecasts

Ten-year capital forecasts have been developed to address capital needs across all areas for the water and wastewater systems. The information from the City's Asset Management Plan, 2019 D.C. Background Study, Capital Budget, and specific needs identified by staff were used to develop the ten-year capital forecast. The timing of D.C., or growth-related, projects was adjusted to reflect slower pace of customer growth relative to the D.C. Background Study. The capital forecast also includes lifecycle renewal/replacement needs, major maintenance, and level of service/capacity improvements informed by the City's Asset Management Plan and Capital Budget.

The capital forecasts in current (2020 $) dollars are summarized in Tables 3-2 and 3-3 for water and wastewater services, respectively. The detailed list of projects is provided in Appendix A.

The 2021-2030 water capital plan totals $54.8 million. Growth-related capital needs account for $6.7 million of which $3.6 million is D.C. funded and the remaining $3.2 million non-growth portion of these works will be funded through water and wastewater rates. Combining the non-growth portion of the D.C. projects and the need for the City's Asset Management Plan and Capital Budget, the rate-base funded capital program for water services averages $5.1 million annually over the forecast period. This amount is comparable to the City's annual lifecycle requirement costs of $4.9 million as defined by the Asset Management Plan. This indicates that the City's forecast needs for the 10-year period are generally in-line with the long-term sustainability funding requirements of the system.

For wastewater services, the capital plan totals $57.1 million over the ten-year forecast period (2021-2030). Growth-related capital needs account for $10.2 million of which $8.1 million is D.C. funded and the remaining $2.1 million non-growth portion of these works will be funded through water and wastewater rates. Combining the non-growth portion of the D.C. projects and the need for the City's Asset Management Plan and Capital Budget, the rate-base funded capital program for water services averages $4.9 million annually over the forecast period. This amount is comparable to the City's annual lifecycle requirement costs of $5.1 million as defined by the Asset Management Plan. This indicates that the City's forecast needs for the 10-year period are generally in-line with the long-term sustainability funding requirements of the system.

Costs for projects approved in prior budgets but not yet financed, such as the Lindsay Water Pollution Control Plant (W.P.C.P.) have not been included in the capital forecast, however, the debt financing associated with these unfinanced projects is included in the calculations. The debt financing costs for the Lindsay W.P.C.P. is included in the wastewater rate calculations commencing in 2023.

For rate determination purposes, the capital needs forecast presented in Tables 3-2 and 3-3 has been inflated at 3.4% annually. This is reflective of the annual capital cost inflation witnessed in the Statistics Canada Building Construction Price Index over the past 20 years. These inflated capital forecast estimates are included in the detailed appendix.

Table 3-2
City of Kawartha Lakes
Water Service Capital Budget Forecast – Uninflated $

Description	Total	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Capital Expenditures											
Lifecycle	47,941,655	4,864,636	4,694,019	4,258,000	3,281,000	5,440,000	3,277,000	4,432,000	6,041,000	6,910,000	4,744,000
Studies	175,000	130,000	-	-	-	22,500	-	-	-	-	22,500
Growth-Related	6,709,373	-	1,341,639	1,260,000	1,188,234	-	1,987,500	300,000	-	132,000	500,000
Total Capital Financing	**54,826,028**	**4,994,636**	**6,035,658**	**5,518,000**	**4,469,234**	**5,462,500**	**5,264,500**	**4,732,000**	**6,041,000**	**7,042,000**	**5,266,500**

Table 3-3
City of Kawartha Lakes
Wastewater Service
Capital Budget Forecast – Uninflated $

Description	Total	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Capital Expenditures											
Lifecycle	46,867,371	1,191,720	6,066,151	3,779,000	4,465,000	6,581,000	5,508,500	5,391,000	3,475,000	3,736,000	6,674,000
Studies	95,000	50,000	-	-	-	22,500	-	-	-	-	22,500
Growth-Related	10,157,644	2,221,644	300,000	-	-	-	-	300,000	1,398,000	1,674,000	4,264,000
Total	**57,120,015**	**3,463,364**	**6,366,151**	**3,779,000**	**4,465,000**	**6,603,500**	**5,508,500**	**5,691,000**	**4,873,000**	**5,410,000**	**10,960,500**

Chapter 4
Capital Cost Financing Options

4. Capital Cost Financing Options

4.1 Summary of Capital Cost Financing Alternatives

The *Municipal Act*, Part XII and Ontario Regulation 584/06 govern a municipality's ability to impose fees and charges. This Act provides municipalities with broadly defined powers and provides the ability to impose fees for both operating and capital purposes. Under s. 484 of the *Municipal Act, 2001*, the *Local Improvement Act* was repealed with the in-force date of the *Municipal Act* (January 1, 2003). The municipal powers granted under the *Local Improvement Act* now fall under the jurisdiction of the *Municipal Act*.

The methods of capital cost recovery available to municipalities are provided as follows:

Recovery Methods	Section Reference
• *Development Charges Act, 1997*	4.2

• *Municipal Act*
  ○ Fees and Charges
  ○ Local Improvements
	4.3

• Grant Funding	4.4
• Reserves/Reserve Funds	4.5
• Debenture Financing	4.6

4.2 Development Charges Act, 1997

The *Development Charges Act* received Royal Assent on December 8, 1997. The Province's stated intentions were to "create new construction jobs and make home ownership more affordable" by reducing the charges and to "make municipal Council decisions more accountable and more cost effective." The basis for this Act is to allow municipalities to recover the growth-related capital cost of infrastructure necessary to accommodate new growth within the municipality. The *Development Charges Act* provides for limitations and ceilings on services that can be included in the charges.

The City imposes D.C.s on new development for water and wastewater services. The capital funding plan identifies D.C.s as a source of funding for anticipated capital needs.

Specifically, $3.6 million for water services and $8.1 million for wastewater services is forecast to be funded from D.C.s over the forecast period, 2021-2030. These figures exclude any projects that have approved in pre-2021 capital budgets.

The City's D.C. reserve fund balances have been forecast to account for D.C. revenues based on the forecast growth, transfers to capital for growth-related works and transfers to operating for new growth-related debt payments. These estimates are highly dependent on the level of growth realized by the City and the timing of the capital needs. If the pace of development is slower than identified in the rate study, the amount of D.C.s collected would be less than what is estimated in this study. Furthermore, the timing of the needs would impact the reserve fund balances and debt funding. As a result, it is recommended that the City monitors the pace of development and update the timing of the growth-related needs appropriately. The City could also consider entering into "frontending agreements" with developers where the developers emplace the required capital infrastructure and are provided with D.C. credits in return. This would alleviate some of the pressure on the reserve funds and mitigate the use of debt.

The reserve fund continuity forecasts are detailed in Tables 4-1 and 4-2 for water and wastewater, respectively. Based on the growth and capital needs identified herein, the balances in D.C. reserve fund for water services would be sufficient to cover the growth-related costs in the capital forecast. For wastewater services, the reserve fund would continue to be in a deficit position ($5.2 million) by the end of the forecast, although smaller than the existing deficit balance of $7.7 million. This study assumes that interim funding support for the wastewater D.C. reserve fund will be provided from a source other than the water and wastewater rates.

Table 4-1
Water Development Charges Reserve Fund Continuity

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	2,296,068	3,005,603	2,708,753	3,141,118	3,032,358	3,829,907	3,663,954	4,137,561	5,034,387	5,840,809
Development Charge Proceeds	1,020,702	1,041,076	1,061,913	1,083,213	1,104,821	1,126,893	1,149,428	1,172,426	1,195,887	1,219,811
Transfer to Capital	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Transfer to Operating	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Closing Balance	**2,946,669**	**2,655,640**	**3,079,528**	**2,972,900**	**3,754,810**	**3,592,112**	**4,056,432**	**4,935,673**	**5,726,284**	**6,131,000**
Interest	58,933	53,113	61,591	59,458	75,096	71,842	81,129	98,713	114,526	122,620
Required from Development Charges	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800

Table 4-2
Wastewater Development Charges Reserve Fund Continuity

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	(19,440,202)	(20,541,513)	(20,381,577)	(19,851,250)	(19,270,546)	(18,636,725)	(17,948,722)	(17,592,623)	(18,668,278)	(19,425,881)
Development Charge Proceeds	1,263,228	1,288,513	1,314,222	1,340,472	1,367,339	1,394,747	1,422,580	1,451,030	1,480,020	1,509,628
Transfer to Capital	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580
Transfer to Operating	795,302	407,938	394,656	381,914	368,092	354,809	341,527	328,640	314,964	301,682
Closing Balance	**(20,138,738)**	**(19,981,938)**	**(19,462,010)**	**(18,892,692)**	**(18,271,299)**	**(17,596,786)**	**(17,247,669)**	**(18,302,233)**	**(19,044,982)**	**(22,278,515)**
Interest	(402,775)	(399,639)	(389,240)	(377,854)	(365,426)	(351,936)	(344,953)	(366,045)	(380,900)	(445,570)
Required from Development Charges	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580

4.3 Municipal Act, 2001

The *Municipal Act, 2001* came into force January 1, 2003. Part XII Fees and Charges gives municipalities the statutory authority to recover the costs of services, including capital costs, through by-law. Municipalities have used these types of charges to recover infrastructure costs associated with the extension of municipal services to private service users, to recover capital improvement costs from existing developments, and to recover growth-related costs of service extension. These by-laws are typically used where development charges would not be applicable (e.g. recovery from existing developments) or where existing and growth-related cost recovery would be simplified under the administration of one by-law.

The following subsections provide reference to the relevant statutory provisions of the *Municipal Act* and associated regulation.

4.3.1 Municipal Act – Part XII

"By-laws re: fees and charges

391.

1) Without limiting sections 9, 10 and 11, those sections authorize a municipality to impose fees or charges on persons,

   a) for services or activities provided or done by or on behalf of it;

   b) for costs payable by it for services or activities provided or done by or on behalf of any other municipality or any local board; and

   c) for the use of its property including property under its control.

Local board

1.1) A local board may impose fees or charges on persons,

   a) for services or activities provided or done by or on behalf of it;

   b) for costs payable by it for services or activities provided or done by or on behalf of any municipality or other local board; and

   c) for the use of its property including property under its control.

Deferred benefit

2) A fee or charge imposed for capital costs related to services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time.

Costs related to administration, etc.

3) The costs included in a fee or charge may include costs incurred by the municipality or local board related to administration, enforcement and the establishment, acquisition and replacement of capital assets."

The above-referenced sections of the *Municipal Act* indicate that it is permissible for municipalities to impose charges for the recovery of capital costs associated with services that are provided either directly or on its behalf. These capital costs can include costs associated with the initial establishment or acquisition of capital or for the replacement of existing capital assets. Moreover, the Act permits the imposition of capital charges on persons who receive an immediate benefit or a benefit at some later point (i.e. deferred benefit).

Section 391 of the *Municipal Act* does not define a methodology for calculating the fee or charge quantum, nor for determining its distribution among the benefiting landowners. As such, fees and charges may be determined at the reasonable discretion of Council following some general restrictions.

"Restriction, poll tax

393. No fee or charge by-law shall impose a poll tax or similar fee or charge, including a fee or charge which is imposed on an individual by reason only of his or her presence or residence in the municipality or part of it.

Restriction, fees and charges

394.

1) No fee or charge by-law shall impose a fee or charge that is based on, is in respect of or is computed by reference to,

a) the income of a person, however it is earned or received, except that a municipality or local board may exempt, in whole or in

part, any class of persons from all or part of a fee or charge on the basis of inability to pay;

b) the use, purchase or consumption by a person of property other than property belonging to or under the control of the municipality or local board that passes the by-law;

c) the use, consumption or purchase by a person of a service other than a service provided or performed by or on behalf of or paid for by the municipality or local board that passes the by-law;

d) the benefit received by a person from a service other than a service provided or performed by or on behalf of or paid for by the municipality or local board that passes the by-law; or

e) the generation, exploitation, extraction, harvesting, processing, renewal or transportation of natural resources."

There are no public process requirements under Part XII for adopting a charge by-law (although it is a prudent process recommendation). Part XII charges cannot be appealed to the O.M.B. on the grounds that the fees or charges are unfair or unjust; however, they may be challenged in court on the basis that the municipality is not operating within its statutory authority.

The City imposes a *Municipal Act* charge in the Northwest Lindsay Development Area for the costs of wastewater collection works. These charges have been included in the financial plan and rate projections based on the underlying pace of development.

4.3.2 Ontario Regulation 584/06

O. Reg. 584/06 governs the fees and charges provision of the *Municipal Act*. The fees and charges regulation was revised in 2006 by the *Municipal Statute Law Amendment Act*. The regulation in its present form is less prescriptive than its predecessor. The previous regulation (i.e. O. Reg. 244/02) limited by-laws for water and waste services to a 1-year period, required public process notification and meetings to substantiate any charges and expressly limited any charges to the costs of service. Furthermore, the previous restrictions whereby a municipality did not have the power to impose fees or charges under Part XII of the Act relating to the allocation of sewage and water capacity have been removed. These changes to the fees and charges regulation provide municipalities with greater flexibility in determining its use.

It should be noted that in applying section 391 of the *Municipal Act* for the recovery of capital costs, a municipality must have regard for the associated regulation. Section 2 (1) of the regulation indicates that a fee under the Act cannot be imposed to recover capital costs that are also included in a D.C. or front-ending agreement which is in effect before the imposition of the fee. This clause is provided to avoid a duplication of fees and charges for the same works.

> "Capital costs
>
> 2. (1) A municipality and a local board do not have power under the Act to impose fees or charges to obtain revenue to pay capital costs, if as a result of development charges by-laws or front-ending agreements under the Development Charges Act, 1997 or a predecessor of that Act that was passed or entered into before the imposition of the fees or charges, payments have been, will be or could be made to the municipality or local board to pay those costs."

4.3.3 Ontario Regulation 581/06

O. Reg. 581/06 provides priority lien status for fees and charges imposed for certain services. Under this regulation, fees and charges imposed for the use of a sewage system may be added to the tax roll, as a debt to the municipality, and will have priority lien status. These powers allow the treasurer of the municipality to add fees and charges to the tax roll and collect them in the same manner as taxes. Priority lien status provides for the recovery of interest costs associated with the debt from the assessed owner at the time of the fee or charge being imposed or from a subsequent property owner, and may be included in the cancellation price.

> "Certain public utility fees and charges
>
> 1. Fees and charges that are imposed by a municipality or local board under the Act for the following services and added to the tax roll under subsection 398 (2) of the Act have priority lien status as described in section 1 of the Act:
>
>   1. For the supply of water.
>
>   2. For the supply of artificial or natural gas.
>
>   3. For the supply of steam or hot water.
>
>   4. For the use of a sewage system.

5. For the use of a waste management system."

4.4 Grant Funding Availability

Limited grant funding has been shown as an expected funding source over the forecast period. To the extent that the City is successful in securing additional grant funding for future infrastructure needs and the financial impacts are material, the rate forecast may be revisited.

4.5 Existing Reserves/Reserve Funds

The City has established water and wastewater infrastructure renewal reserves for water and wastewater capital costs. The established water and wastewater reserves are utilized for non-growth-related capital purposes and to supplement operating costs (i.e. annual debt servicing costs). Summarized in Table 4-3 are the water and wastewater reserves utilized in this analysis and the respective 2019 closing balances.

Table 4-3
City of Kawartha Lakes
Water and Wastewater Reserve/Reserve Fund Balances

Reserve/Reserve Fund	Estimated Balance as at Dec. 31, 2020
Water	
Water Infrastructure Reserve	$ 6,026,217
Water D.C. Reserve Funds	
Water Distribution	$ 236,567
Water Treatment	$ 2,059,500
Total Water D.C. Reserve Funds	**$ 2,296,068**
Total - Water	**$ 8,322,285**
Wastewater	
Wastewater Infrastructure Reserve	$ 6,090,641
Wastewater D.C. Reserve Fund	
Wasterwater Collection	$ 3,899,729
Wastewater Treatment	$ (23,339,931)
Total Wastewater D.C. Reserve Funds	**$ (19,440,202)**
Total - Wastewater	**$ (13,349,561)**

For the purposes of projecting water and wastewater infrastructure reserve continuity a minimum balance of $500,000 for each service was maintained as a "floor" in the calculations.

4.6 Debenture Financing

Although it is not a direct method of minimizing the overall cost to the ratepayer, debentures are used by municipalities to assist in cash flowing large capital expenditures.

The Ministry of Municipal Affairs regulates the level of debt incurred by Ontario municipalities through its powers established under the *Municipal Act*. O. Reg. 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own-purpose revenue may be allotted for servicing the debt (i.e. debt charges).

The City also maintains a self-imposed limit for outstanding rate-supported water and wastewater debt principal. This limit was established in 2011 at $36 million with the goal of achieving a reserve fund balance to debt ratio of 1:1 by the year 2030. The self-imposed limit was subsequently increased to the current level of $49.5 million in 2016 and is not subject to annual indexing for inflationary increases. As existing debt is repaid and retired, additional borrowing room within the City's self-imposed borrowing limit is created.

The City has outstanding rate-supported debt principal for water and wastewater services as of December 31, 2019 was $40.9 million. In addition, the City plans to issue additional rate supported debt for committed water and wastewater projects approved in 2017-2019 Capital Budgets. The incremental debt on the committed projects totals $9.3 million ($4.8 million for water and $4.5 million for wastewater). This additional debt principal can be accommodated within the City's current limit with the planned principal repayments in 2020 and 2021.

The water capital funding plan proposes additional debt financing for the forecast period totalling $21.7 million for rate-based capital needs. The wastewater capital funding plan proposes debt financing of $39.4 million. Including projects approved as part of the 2020 budget process increases the total amount debt financing required for the period

to approximately $75.1 million. Debt incurred for growth-related capital needs (D.C.s) is not subject to the City's self-imposed debt limit. Moreover, debt financing for the Lindsay W.P.C.P. project ($10.0 million in rate-based funding) is not subject to the City's self-imposed debt limit policy.

Debt has been assumed for a 20-year term consistent with the City's current debt forecasting practice and financed at 1.95% annual interest (Infrastructure Ontario's 20-year lending rate as at August 18, 2020).

The additional debt principal that is forecast could be accommodated within the self-imposed debt limit during the period 2020-2024. However, the debt limit would be exceeded for the remainder of the forecast period (i.e. 2025-2030). As previously mentioned, capital cost inflation has been modelled at 3.4% per year. The City would potentially exceed its self- imposed debt limit in part due to capital cost inflation applied to the capital program and the debt borrowing limit remaining constant (i.e. not adjusted for inflation).

To continue to use the issuance of debt as a means to fund the forecast capital needs, it is recommended that the City revise its self-imposed debt policy to so that the annual inflationary increases are made to the borrowing limit at the same rate as the capital cost inflation. This would allow for the 'real' value of debt to be maintained as the underlying capital costs increase for inflation. If indexing was not applied to the debt limit, either the proposed rates herein would have to increase to provide more capital funding or the amount of capital expenditures forecast would have to be reduced. For the purposes is study, the City's borrowing limit has been indexed at 3.4% per year, consistent with the capital cost inflation used in the rate study.

4.7 Recommended Approach

Tables 4-4 and 4-5 provide for the full capital expenditure and funding program in aggregate and by year for water and wastewater services, respectively. These capital funding plans are provided in inflated dollars.

Table 4-4
City of Kawartha Lakes
2021-2030 Water Capital Funding and Reserve Plan

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Financing										
Provincial/Federal Grants	1,008,633	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Non-Growth Related Debenture Requirements	3,772,003	-	-	-	2,743,787	1,401,583	1,174,921	2,950,380	3,899,433	738,788
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Water Reserve	214,000	5,456,460	5,803,651	4,249,751	3,723,213	4,060,389	4,439,079	4,963,620	5,509,107	6,082,412
Total Capital Financing	**4,994,636**	**6,457,000**	**6,107,000**	**5,116,000**	**6,467,000**	**6,447,000**	**5,994,000**	**7,914,000**	**9,541,000**	**7,382,000**
Reserve Balance										
Opening Balance	6,090,641	8,136,174	4,948,785	1,808,764	567,321	510,000	510,000	510,000	510,000	510,000
Closing Balance	7,976,641	4,851,750	1,773,298	556,197	500,000	500,000	500,000	500,000	500,000	500,000

Table 4-5
City of Kawartha Lakes
2021-2030 Wastewater Capital Funding and Reserve Plan

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Financing										
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580
Non-Growth Related Debenture Requirements	2,070,901	-	1,343,344	4,215,927	6,453,037	5,200,858	5,127,428	2,594,836	3,638,562	8,788,518
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	226,000	6,489,000	2,838,656	895,073	1,363,963	1,544,142	1,700,572	1,957,164	2,148,678	2,514,902
Total Capital Financing	**3,463,364**	**6,810,000**	**4,182,000**	**5,111,000**	**7,817,000**	**6,745,000**	**7,208,000**	**6,384,000**	**7,329,000**	**15,364,000**
Reserve Balance										
Opening Balance	6,026,217	7,701,222	2,844,400	510,000	510,000	510,000	510,000	510,000	510,000	510,000
Closing Balance	7,550,217	2,788,627	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000

Chapter 5
Operating Expenditure Forecast

5. Operating Expenditure Forecast

5.1 Operating Expenditures

The operating budget forecasts for water and wastewater services are based on the City's 2021 operating budgets and discussions with staff. Inflationary increases have been set at 2% annually based on target inflation.

Capital-related operating expenditures in the forecast include annual debt repayments, and contributions to reserves and reserve funds to support the forecast and longer-term capital needs. Forecast capital-related operating expenditures are measured relative to the long-term lifecycle funding needs identified in the City's Asset Management Plan. Targeting these funding levels, with inflation, by the end of the forecast period provides a financial plan that is sustainable and balances inter-generational equity. While operating aspects identified above generally increase with inflation over the period, the capital-related aspects tend to increase more specifically with the increase in capital funding requirements.

As a result, gross operating expenditures for water services are anticipated to increase from $13.4 million in 2021 to $18.2 million by 2030. The operating budget expenditures a forecast to increase from $7.8 million in 2021 to $9.3 million by 2030. Rate-based capital-related expenditures (i.e. excluding D.C. debt payments) are forecast to increase from $5.6 million in 2021 to $8.4 million by 2030.

Similarly, for wastewater services, annual gross operating expenditures are forecast to increase from $9.7 million in 2020 to $13.8 million by 2030. The operating budget expenditures a forecast to increase from $5.3 million in 2021 to $6.4 million by 2030. Rate-based capital-related expenditures are forecast to increase from $4.4 million in 2021 to $6.4 million by 2030.

5.2 Operating Revenues

The City has operating revenue sources such as connection fees, miscellaneous revenues, internal charges, D.C. reserve fund financing and transfers from water/wastewater reserves to recover some of the annual operating costs. Furthermore, the City also has revenue from bulk water users and bulk sewage carriers.

Bulk water and bulk sewage revenues have been forecast to increase at inflationary levels reflective of inflationary increases in associated fees. Internal charges have also been forecast to increase with inflation, while water meter fees have been forecast to increase proportionately with expected new water system connections.

The annual operating revenues (excluding transfers from D.C. reserve funds to offset growth-related debt payments) for water services are forecast to increase from $342,000 in 2021 to $408,000 by 2030. For wastewater services, annual operating revenues, excluding transfers from D.C. reserve funds, are forecast to increase from $500,000 in 2021 to $600,000 by 2030.

Billing revenues consisting of the base charge and consumptive rate make up the remainder of the water and wastewater system revenues. Water billing revenues are forecast to increase from $12.7 million in 2021 to $17.4 million in 2030. Similarly, for the wastewater system, billing revenues are forecast to increase from $8.4 million in 2021 to $12.9 million in 2030.

Tables 5-1 to 5-2 provide the water and wastewater operating budget forecasts. The forecast operating budgets are provided in inflated dollars.

Table 5-1
City of Kawartha Lakes
Water Service
Operating Budget Forecast – Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures										
Operating Costs										
WATER - EMILY - BIRCH POINT	146,451	149,400	152,400	155,400	158,500	161,700	164,900	168,200	171,600	175,000
WATER - LINDSAY	1,684,028	1,717,700	1,752,100	1,787,100	1,822,800	1,859,300	1,896,500	1,934,400	1,973,100	2,012,600
WATER - LINDSAY - THORNHILL	191,208	195,000	198,900	202,900	207,000	211,100	215,300	219,600	224,000	228,500
WATER - LINDSAY - VERULAM TANK	24,763	25,300	25,800	26,300	26,800	27,300	27,800	28,400	29,000	29,600
WATER-LINDSAY-OAKWOOD WATER	73,945	75,400	76,900	78,400	80,000	81,600	83,200	84,900	86,600	88,300
WATER - FEN TWP-STHVIEW ESTATES	246,853	251,800	256,800	261,900	267,100	272,400	277,800	283,400	289,100	294,900
WATER - MARIPOSA - SONYA	95,591	97,500	99,500	101,500	103,500	105,600	107,700	109,900	112,100	114,300
WATER-MARIPOSA-CANADIANA SHR	236,455	241,200	246,000	250,900	255,900	261,000	266,200	271,500	276,900	282,400
WATER-MARIPOSA-WOODS/MANILLA	95,991	97,900	99,900	101,900	103,900	106,000	108,100	110,300	112,500	114,800
WATER - MARIPOSA - MARIPOSA EST	156,256	159,400	162,600	165,900	169,200	172,600	176,100	179,600	183,200	186,900
WATER - MARIPOSA-PLEASANT POINT	142,918	145,800	148,700	151,700	154,700	157,800	161,000	164,200	167,500	170,900
WATER - MARIPOSA - KINGS BAY	155,781	158,900	162,100	165,300	168,600	172,000	175,400	178,900	182,500	186,200
WATER - ELDON-WESTERN TRENT	175,779	179,300	182,900	186,600	190,300	194,100	198,000	202,000	206,000	210,100
WATER - FENELON FALLS	584,029	595,700	607,600	619,800	632,200	644,800	657,700	670,900	684,300	698,000
WATER - NORLAND	239,905	244,700	249,600	254,600	259,700	264,900	270,200	275,600	281,100	286,700
WATER - KINMOUNT - DOWNTOWN	217,159	221,500	225,900	230,400	235,000	239,700	244,500	249,400	254,400	259,500
WATER - OMEMEE - VICTORIA GLEN	89,423	91,200	93,000	94,900	96,800	98,700	100,700	102,700	104,800	106,900
WATER - WOODVILLE	213,631	217,900	222,300	226,700	231,200	235,800	240,500	245,300	250,200	255,200
WATER - BOBCAYGEON	719,459	733,800	748,500	763,500	778,800	794,400	810,300	826,500	843,000	859,900
WATER - BOBCAYGN-VICTORIA PL	132,740	135,400	138,100	140,900	143,700	146,600	149,500	152,500	155,600	158,700
WATER - MANVERS - JANETVILLE	140,795	143,600	146,500	149,400	152,400	155,400	158,500	161,700	164,900	168,200
WATER - MANVERS-MANORVIEW	126,643	129,200	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
WATER - MANVERS - WOODFIELD	109,480	111,700	113,900	116,200	118,500	120,900	123,300	125,800	128,300	130,900
WATER - MANVERS - PINEWOOD P/P	129,138	131,700	134,300	137,000	139,700	142,500	145,400	148,300	151,300	154,300
WATER-SEWER - ADMINISTRATION	1,672,532	1,706,000	1,740,100	1,774,900	1,810,400	1,846,600	1,883,500	1,921,200	1,959,600	1,998,800
Sub Total Operating	**7,800,953**	**7,957,000**	**8,116,200**	**8,278,500**	**8,443,800**	**8,612,600**	**8,784,700**	**8,960,700**	**9,140,000**	**9,323,000**

Table 5-1 (continued)
City of Kawartha Lakes
Water Service
Operating Budget Forecast – Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital-Related										
Existing Debt (Principal) - Growth Related		348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119
Existing Debt (Interest) - Growth Related		42,380	39,670	37,063	34,250	31,541	28,831	26,194	23,411	20,701
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related		2,357,661	2,088,449	2,140,730	1,915,943	1,958,822	1,865,313	1,720,026	1,574,206	1,280,911
Existing Debt (Interest) - Non-Growth Related		805,751	713,912	629,306	544,759	469,291	392,323	315,948	247,218	204,255
New Non-Growth Related Debt (Principal)		22,915	179,380	182,877	186,444	190,079	287,732	346,221	395,139	517,987
New Non-Growth Related Debt (Interest)		10,803	83,910	80,413	76,846	73,211	113,795	133,113	146,242	192,820
Existing Debt (Principal)	2,505,407									
Existing Debt (Interest)	1,013,191									
Transfer to Capital Reserve	2,100,000	2,281,861	2,741,194	3,113,501	3,775,582	4,173,541	4,584,539	5,120,219	5,678,906	6,266,188
Sub Total Capital Related	**5,618,599**	**5,869,490**	**6,194,634**	**6,532,008**	**6,881,943**	**7,244,604**	**7,620,652**	**8,009,840**	**8,413,241**	**8,830,981**
Total Expenditures	**13,419,551**	**13,826,490**	**14,310,834**	**14,810,508**	**15,325,743**	**15,857,204**	**16,405,352**	**16,970,540**	**17,553,241**	**18,153,981**
Revenues										
Base Charge	5,268,537	5,384,882	5,541,012	5,700,614	5,863,758	6,030,513	6,200,952	6,375,148	6,553,175	6,735,108
BUILDING/PROPERTY RENTAL	31,000	31,600	32,200	32,800	33,500	34,200	34,900	35,600	36,300	37,000
WATER CONNECTION FEE	9,500	9,700	9,900	10,100	10,300	10,500	10,700	10,900	11,100	11,300
WATER METER FEE	18,070	18,400	18,800	19,200	19,600	20,000	20,400	20,800	21,200	21,600
BULK WATER SALES	121,500	123,900	126,400	128,900	131,500	134,100	136,800	139,500	142,300	145,100
OTHER WATER USER CHARGES	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WASTEWATER USER CHARGES	10,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800
RECOVERIES - OTHER	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100	9,300
MISCELLANEOUS REVENUE	142,650	145,500	148,400	151,400	154,400	157,500	160,700	163,900	167,200	170,500
Contributions from Development Charges Reserve Fund	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Total Operating Revenue	**5,980,857**	**6,124,381**	**6,284,801**	**6,448,896**	**6,616,527**	**6,787,973**	**6,963,302**	**7,142,461**	**7,325,505**	**7,512,528**
Water Billing Recovery - Total	**7,438,694**	**7,702,109**	**8,026,034**	**8,361,612**	**8,709,217**	**9,069,231**	**9,442,050**	**9,828,079**	**10,227,736**	**10,641,453**

Table 5-2
City of Kawartha Lakes
Wastewater Service
Operating Budget Forecast – Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures										
Operating Costs										
SEWER - LINDSAY	2,379,169	2,426,800	2,475,300	2,524,800	2,575,300	2,626,800	2,679,300	2,732,900	2,787,600	2,843,400
SEWER - BOBCAYGEON	962,312	981,600	1,001,200	1,021,200	1,041,600	1,062,400	1,083,600	1,105,300	1,127,400	1,149,900
SEWER - OMEMEE	295,514	301,400	307,400	313,500	319,800	326,200	332,700	339,400	346,200	353,100
SEWER - FENELON FALLS	764,252	779,500	795,100	811,000	827,200	843,700	860,600	877,800	895,400	913,300
SEWER - MARIPOSA - KINGS BAY	191,013	194,800	198,700	202,700	206,800	210,900	215,100	219,400	223,800	228,300
SEWER - COBOCONK	178,975	182,600	186,300	190,000	193,800	197,700	201,700	205,700	209,800	214,000
WATER-SEWER - ADMINISTRATION	557,511	568,700	580,100	591,700	603,500	615,600	627,900	640,500	653,300	666,400
Sub Total Operating	**5,328,746**	**5,435,400**	**5,544,100**	**5,654,900**	**5,768,000**	**5,883,300**	**6,000,900**	**6,121,000**	**6,243,500**	**6,368,400**
Capital-Related										
Existing Debt (Principal) - Growth Related		187,649	187,649	187,649	187,649	187,649	187,649	187,649	187,649	187,649
Existing Debt (Interest) - Growth Related		220,289	207,007	194,265	180,443	167,160	153,878	140,991	127,315	114,033
New Growth Related Debt (Principal)		-	509,580	519,517	529,648	539,976	550,505	561,240	572,184	583,342
New Growth Related Debt (Interest)		-	240,240	230,303	220,173	209,844	199,315	188,580	177,636	166,478
Existing Debt (Principal) - Non-Growth Related		1,449,848	1,438,808	1,464,060	1,350,046	1,365,132	1,287,979	1,207,143	1,214,972	1,222,282
Existing Debt (Interest) - Non-Growth Related		557,679	508,462	458,114	406,688	360,577	315,729	272,967	234,522	200,577
Existing Debt (Principal)	1,812,034									
Existing Debt (Interest)	789,513									
New Non-Growth Related Debt (Principal)	-	163,260	669,030	682,076	750,939	939,962	1,225,202	1,464,211	1,704,844	1,845,417
New Non-Growth Related Debt (Interest)	-	76,968	310,727	297,681	310,576	378,143	485,648	563,174	634,606	651,961
Transfer to Capital Reserve	1,750,000	1,576,405	494,256	885,073	1,353,963	1,534,142	1,690,572	1,947,164	2,138,678	2,504,902
Sub Total Capital Related	**4,351,547**	**4,232,098**	**4,565,759**	**4,918,737**	**5,290,124**	**5,682,587**	**6,096,477**	**6,533,119**	**6,992,406**	**7,476,640**
Total Expenditures	**9,680,292**	**9,667,498**	**10,109,859**	**10,573,637**	**11,058,124**	**11,565,887**	**12,097,377**	**12,654,119**	**13,235,906**	**13,845,040**
Revenues										
Base Charge	4,584,462	4,781,858	5,025,721	5,280,783	5,547,528	5,826,461	6,118,107	6,423,015	6,741,755	7,074,920
SEWER & WATER CONNECTION CHRGS	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
WASTE MANAGEMENT COLLECTION CHARGES	187,075	190,800	194,600	198,500	202,500	206,600	210,700	214,900	219,200	223,600
SEWER CONNECTION	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
OTHER WASTEWATER USER CHARGES	260,000	265,200	270,500	275,900	281,400	287,000	292,700	298,600	304,600	310,700
RECOVERIES - OTHER	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
MISCELLANEOUS REVENUE	47,550	48,500	49,500	50,500	51,500	52,500	53,600	54,700	55,800	56,900
Contributions from Development Charges Reserve Fund	795,302	407,938	394,656	381,914	368,092	354,809	341,527	328,640	314,964	301,682
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**5,880,889**	**5,700,996**	**5,941,877**	**6,194,697**	**6,458,320**	**6,734,870**	**7,024,334**	**7,327,755**	**7,644,419**	**7,976,102**
Wastewater Billing Recovery - Total	**3,799,403**	**3,966,502**	**4,167,981**	**4,378,940**	**4,599,804**	**4,831,017**	**5,073,042**	**5,326,364**	**5,591,487**	**5,868,938**

Chapter 6
Forecast Water and Wastewater Rates

6. Forecast Water and Wastewater Rates

6.1 Introduction

To summarize the analysis undertaken thus far, Chapter 3 reviewed capital-related needs for all customers within the water and wastewater systems and responds to the lifecycle needs of the systems. Chapter 4 provided a review of capital financing options of which debt and transfers from reserves will be the predominant basis for financing future capital needs. Chapter 5 established the operating forecast of expenditures and revenues for water and wastewater systems. The following calculations will be based on the total water and wastewater base charge and billing revenues shown in Tables 5-1 and 5-2, respectively customers and water/wastewater demands forecast provided in Chapter 2.

The recommended rate forecasts are designed to provide for full-cost recovery for the municipal water and wastewater systems, including annual operating and capital expenditures from both a lifecycle and growth-related perspective while maintaining affordability for the City's resident. As noted in the introduction, the City imposes water and wastewater rates comprising a monthly base charge per customer based on meter size and a consumptive rate based on metered water consumption. The recommended rates seek to recover the annual capital-related expenditures identified in Chapter 5 from the monthly base charge component of the rate structure. This is recommended to ensure that the fixed costs of maintaining the water and wastewater infrastructure in accordance with the City's Asset Management Plan have sustainable and predictable funding over the long-term. The annual operating expenditures, which may have some variability due to changes in demand for service (i.e. consumption), are to be recovered from the consumptive component of the rate structure.

The principal objective of the rate study is to provide recommended rates that will achieve full cost recovery of the services and provide for sustainable funding of the services over their lifecycle. To achieve this objective, decisions are required principally with respect to the capital funding of the lifecycle needs. Typically, a rate study seeks to measure the long-term lifecycle funding obligations of the services relative to current rate-base capital funding levels and adjust the funding gradually over the forecast period to provide a gradual transition in rates to full cost recovery. This gradual transition however can be disrupted by limiting factors such as:

- The amount and timing of capital expenditures relative to long-term lifecycle funding levels. If the 10-year forecast expenditures are higher than long-term lifecycle levels, or if timing is front-ended within the forecast period the use of debt may be required to finance the needs over the rate transition period. However, if the ability to use debt is limited (due to a debt cap limitation) than the rate transition to full cost recovery will not be linear, but rather require more significant increases earlier in the forecast period.

- The availability of reserve/reserve funds to meet the capital expenditure requirements. If rates have been established to meet the annual funding needs at levels below the long-term lifecycle funding levels, this will provide little provision reserve/reserve funds in periods where annual spending is below the long-term funding requirements. In periods when capital expenditures spike above historic average spending levels, more in line with future lifecycle needs, the increase in capital funding demands will fall to either increases in debt or increases in rates to provide sufficient funding.

- The affordability of current rates and ability of rate payers to absorb full cost recovery rates. If current rates present affordability concerns for ratepayers, the ability to move to full cost recovery levels may be unachievable. As such, the implications of not funding the services at full cost recovery levels is that asset management activities can not be performed due to a lack of funding and consequently the level of service declines and operational/environmental risks to the service increase. Alternatively, if rates are unaffordable funding support from non rate-based sources may be required ensure sustainable services.

In light of these decisions, a number of rate sensitivity scenarios were prepared and discussed with the City's Project Team members to arrive at the recommended rates herein. These scenarios considered the balance between funding requirements of the service, affordability to rate payers and potential risks. The following rate sensitivity scenarios were considered:

- Scenario 1 – Increase in funding to achieve City's Lifecycle Funding Target by 2030 and no restrictions on the issuance of new debt;

- Scenario 2 – Fund capital program from rates with no additional debt (i.e. additional debt for wastewater D.C. and Lindsay WPCP);

- Scenario 3 – Maintain 2015-2020 historic annual water and wastewater annual bill increase of 3.0% for a typical residential customer (i.e. water 2.3% annually and wastewater 3.8% annually) and no restrictions on the issuance of new debt;

- Scenario 4A – Maintain historical annual residential water and wastewater bill increases (3.0%), observe the City's Debt Policy Limit fixed at $49.5 million, resulting in deferred annual capital spending;

- Scenario 4B – Maintain historical annual residential water and wastewater bill increases (3.0%), index the City's Debt Policy Limit ($69.4 million), resulting in additional debt issuance;

- Scenario 5A – Observe the City's Debt Policy Limit fixed at $49.5 million, and allow bill increases greater than historic annual averages (i.e. no deferred capital spending); and

- Scenario 5B – Index the City's Debt Policy Limit ($69.4 million), resulting in bill increases lower than historic annual averages due to increased debt issuance.

Scenario 4B was the preferred scenario in discussions with the City Project Team. The proposed annual increases are discussed in the following sections.

6.2 Water Rates

Annual increases of 1.5% to the monthly base charges would be required to ensure the fixed charges are sufficient to fund the long-term lifecycle replacement costs. These revisions are to ensure consistency with the notion that fixed charges are geared toward capital, recognizing lifecycle costs include capital and operating. To achieve full cost recovery as identified above and maintain historical average annual rate increases, the consumptive rate would be required to increase by approximately 3% per year throughout the forecast period. This level of annual increases is consistent with the historical water bill increases in the City for typical residential customers.

The resultant rate forecast is presented in Table 6-1 below. The detailed financial forecast and rate calculations for water services are provided in Appendix A to this report.

6.3 Wastewater Rates

To achieve full cost recovery identified above, including lifecycle replacement costs, base charges would be required to increase by approximately 3% annually over the forecast period to 2030. By 2030, the annual revenues produced by the monthly base charges would approximate the lifecycle replacement costs. The consumptive rate would be required to increase also by approximately 4% per year over the forecast period 2022-2030. The level of annual increases achieves full cost recovery and is consistent with the historical wastewater bill increases in the City for typical residential customers.

The resultant rate forecast is presented in Table 6-2 below. The detailed financial forecast and rate calculations for wastewater services are provided in Appendix B to this report.

Table 6-1
Water Rate Forecast – Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Charge by Meter Size										
5/8" - 3/4"	$ 31.58	$ 32.05	$ 32.53	$ 33.02	$ 33.52	$ 34.02	$ 34.53	$ 35.05	$ 35.57	$ 36.11
1"	$ 41.09	$ 41.71	$ 42.33	$ 42.97	$ 43.61	$ 44.27	$ 44.93	$ 45.60	$ 46.29	$ 46.98
1 ½"	$ 52.83	$ 53.62	$ 54.43	$ 55.24	$ 56.07	$ 56.91	$ 57.77	$ 58.63	$ 59.51	$ 60.41
2"	$ 85.10	$ 86.38	$ 87.67	$ 88.99	$ 90.32	$ 91.68	$ 93.05	$ 94.45	$ 95.87	$ 97.30
3"	$ 322.81	$ 327.65	$ 332.57	$ 337.56	$ 342.62	$ 347.76	$ 352.98	$ 358.27	$ 363.65	$ 369.10
4"	$ 410.84	$ 417.00	$ 423.26	$ 429.61	$ 436.05	$ 442.59	$ 449.23	$ 455.97	$ 462.81	$ 469.76
6"	$ 616.23	$ 625.47	$ 634.86	$ 644.38	$ 654.05	$ 663.86	$ 673.82	$ 683.93	$ 694.19	$ 704.60
8"	$ 850.98	$ 863.75	$ 876.70	$ 889.85	$ 903.20	$ 916.75	$ 930.50	$ 944.46	$ 958.63	$ 973.01
Annual Percentage Change		**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**
Consumptive Rate (per m^3)										
Constant Rate per m^3	$ 2.80	$ 2.88	$ 2.96	$ 3.05	$ 3.14	$ 3.23	$ 3.32	$ 3.42	$ 3.52	$ 3.62
Annual Percentage Change		**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**

Table 6-2
Wastewater Rate Forecast – Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Charge by Meter Size										
5/8" - 3/4"	$ 31.02	$ 32.10	$ 33.22	$ 34.38	$ 35.58	$ 36.83	$ 38.11	$ 39.44	$ 40.82	$ 42.24
1"	$ 41.14	$ 42.58	$ 44.06	$ 45.60	$ 47.19	$ 48.84	$ 50.54	$ 52.31	$ 54.13	$ 56.02
1 ½"	$ 54.46	$ 56.36	$ 58.33	$ 60.36	$ 62.47	$ 64.65	$ 66.91	$ 69.24	$ 71.66	$ 74.16
2"	$ 87.72	$ 90.78	$ 93.95	$ 97.23	$ 100.62	$ 104.14	$ 107.77	$ 111.53	$ 115.43	$ 119.46
3"	$ 332.73	$ 344.34	$ 356.36	$ 368.80	$ 381.68	$ 395.00	$ 408.79	$ 423.06	$ 437.83	$ 453.11
4"	$ 423.48	$ 438.26	$ 453.56	$ 469.39	$ 485.78	$ 502.73	$ 520.28	$ 538.44	$ 557.24	$ 576.69
6"	$ 635.73	$ 657.92	$ 680.89	$ 704.65	$ 729.25	$ 754.71	$ 781.05	$ 808.32	$ 836.53	$ 865.73
8"	$ 877.13	$ 907.75	$ 939.43	$ 972.23	$ 1,006.16	$ 1,041.29	$ 1,077.63	$ 1,115.25	$ 1,154.18	$ 1,194.47
Annual Percentage Change		**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**
Consumptive Rate (per m^3)										
Constant Rate per m^3	$ 1.52	$ 1.58	$ 1.63	$ 1.70	$ 1.76	$ 1.82	$ 1.89	$ 1.96	$ 2.03	$ 2.11
Annual Percentage Change		**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**

6.4 Water and Wastewater Rates Customer Impacts

Summarized in Table 6-3 are the annual impacts to a typical water and wastewater customer. The calculation assumes average annual water consumption of 173 m^3 and a water meter of ⅝" or ¾". The annual water and wastewater bill for a typical customer with this profile would total $1,500 annually (i.e. $865 for water service and $636 for wastewater service) under the 2021 rates.

With the proposed base and consumptive rates, the annual bill would increase to $1,543 in 2022 reflecting an increase of approximately 3%. As previously mentioned, this level of increase is consistent with the level of increases imposed by the City between 2015 and 2020. Similar annual increases are forecast for the remainder of the forecast period i.e. 2023-2030, with annual bills increasing by approximately $48 per year (or 3% annually) on average for water and wastewater services combined.

Table 6-3
Total Annual Water and Wastewater Bill Impacts for a Typical Customer

Water Rate Summary

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	$31.58	$32.05	$32.53	$33.02	$33.52	$34.02	$34.53	$35.05	$35.57	$36.11
Constant Rate	$2.80	$2.88	$2.96	$3.05	$3.14	$3.23	$3.32	$3.42	$3.52	$3.62
Annual Base Rate Bill	**$379**	**$385**	**$390**	**$396**	**$402**	**$408**	**$414**	**$421**	**$427**	**$433**
Volume	173	173	173	173	173	173	173	173	173	173
Annual Volume Bill	**$486**	**$500**	**$514**	**$529**	**$545**	**$560**	**$576**	**$593**	**$610**	**$627**
Total Annual Bill	**$865**	**$884**	**$905**	**$925**	**$947**	**$969**	**$991**	**$1,014**	**$1,037**	**$1,061**
%Increase - Base Rate	1.3%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
%Increase - Volume Rate	3.0%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
%Increase - Total Annual Bill	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
Increase $/year	$19.28	$19.72	$20.35	$20.81	$21.29	$21.78	$22.28	$22.80	$23.32	$23.86

Wastewater Rate Summary

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	$31.02	$32.10	$33.22	$34.38	$35.58	$36.83	$38.11	$39.44	$40.82	$42.24
Constant Rate	$1.52	$1.58	$1.63	$1.70	$1.76	$1.82	$1.89	$1.96	$2.03	$2.11
Annual Base Rate Bill	**$372**	**$385**	**$399**	**$413**	**$427**	**$442**	**$457**	**$473**	**$490**	**$507**
Volume	173	173	173	173	173	173	173	173	173	173
Annual Volume Bill	**$264**	**$273**	**$283**	**$294**	**$305**	**$316**	**$328**	**$340**	**$353**	**$366**
Total Annual Bill	**$636**	**$659**	**$682**	**$707**	**$732**	**$758**	**$785**	**$813**	**$842**	**$873**
%Increase - Base Rate	3.9%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
%Increase - Volume Rate	4.1%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
%Increase - Total Annual Bill	4.0%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
Increase $/year	$24.22	$22.75	$23.56	$24.41	$25.28	$26.19	$27.12	$28.09	$29.10	$30.14

Water and Wastewater Rate Summary

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Annual Bill	**$1,500**	**$1,543**	**$1,587**	**$1,632**	**$1,679**	**$1,727**	**$1,776**	**$1,827**	**$1,879**	**$1,933**
%Increase - Total Annual Bill	3.0%	2.8%	2.8%	2.8%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
Increase $/year	$43.50	$42.47	$43.91	$45.22	$46.57	$47.97	$49.41	$50.89	$52.42	$54.00

6.5 Water and Wastewater System Affordability

The City of Kawartha Lakes currently operates 21 municipal water systems in 13 communities and six municipal wastewater systems in six communities. The City recovers the costs of providing service by imposing a uniform rate structure across the municipality. This uniform rate structure and rates is preferred to an area-specific rate structure as the latter would result in financially unsustainable systems and limited financial flexibility.

Figures 6-1 and 6-2 below present the average net revenue (i.e. total revenue less expenditures) for the water and wastewater systems in each community over the 2021-2030 forecast period, based on the rate structure presented in Tables 6-1 and 6-2.

For water services, Lindsay, Bobcaygeon, and Woodville produce net revenues while the remaining systems produce net expenditures. Under a uniform rate structure, the net revenues in the Lindsay, Bobcaygeon, and Woodville systems are offsetting the under-recovery of costs across the other systems.

For wastewater services, Lindsay produces net revenues and the remaining systems produce net expenditures. Under a uniform rate structure, the net revenues in the Lindsay system offset the under-recovery of costs across the other systems.

Figure 6-1
Water System Net Revenues by Community
2021-2030 Average

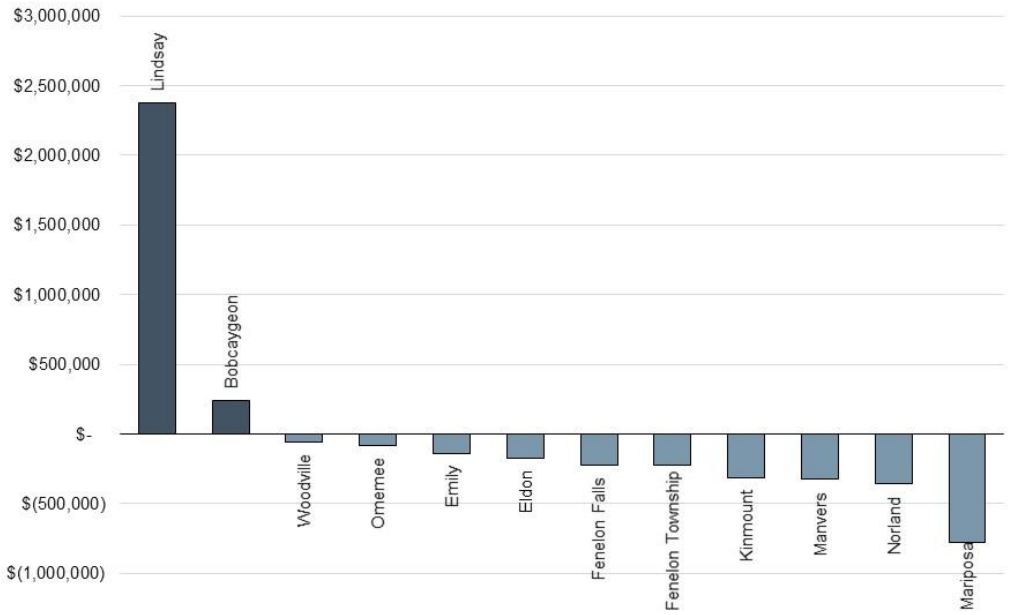
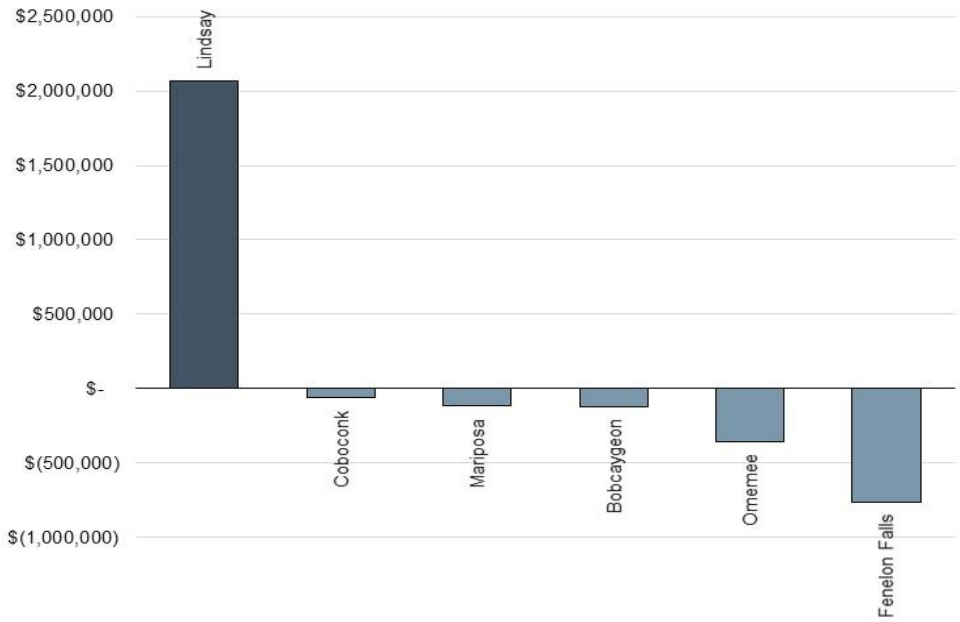


Figure 6-2
Wastewater System Net Revenues by Community
2021-2030 Average



Presented below in Tables 6-4 and 6-5 are area-specific consumptive rates that would allow for the full recovery of costs in each community based on Figures 6-1 and 6-2 (assumes the base charge for each community remain as forecast in Tables 6-1 and 6-2).

Table 6-4
Water Systems
Area-specific Consumptive Rates ($/m^3)

Community	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lindsay	$ 1.71	$ 1.66	$ 1.75	$ 1.83	$ 1.93	$ 2.02	$ 2.11	$ 2.20	$ 2.30	$ 2.41
Bobcaygeon	$ 2.16	$ 2.16	$ 2.26	$ 2.36	$ 2.50	$ 2.59	$ 2.69	$ 2.81	$ 2.93	$ 3.06
Woodville	$ 3.80	$ 3.84	$ 3.97	$ 4.08	$ 4.25	$ 4.37	$ 4.48	$ 4.63	$ 4.77	$ 4.92
Fenelon Falls	$ 4.26	$ 4.20	$ 4.28	$ 4.36	$ 4.44	$ 4.53	$ 4.63	$ 4.72	$ 4.81	$ 4.91
Manvers	$ 7.93	$ 8.01	$ 8.16	$ 8.29	$ 8.48	$ 8.62	$ 8.76	$ 8.93	$ 9.10	$ 9.27
Omemee	$ 10.86	$ 10.65	$ 10.65	$ 10.73	$ 10.64	$ 10.73	$ 10.82	$ 10.85	$ 10.89	$ 10.92
Mariposa	$ 11.36	$ 11.23	$ 11.28	$ 11.38	$ 11.35	$ 11.46	$ 11.58	$ 11.65	$ 11.72	$ 11.79
Eldon	$ 12.73	$ 12.43	$ 12.38	$ 12.44	$ 12.24	$ 12.31	$ 12.39	$ 12.37	$ 12.35	$ 12.32
Emily	$ 13.43	$ 13.08	$ 13.00	$ 13.04	$ 12.79	$ 12.85	$ 12.91	$ 12.86	$ 12.81	$ 12.75
Fenelon Township	$ 16.76	$ 16.70	$ 16.78	$ 16.90	$ 16.91	$ 17.06	$ 17.20	$ 17.31	$ 17.42	$ 17.53
Norland	$ 39.04	$ 37.66	$ 37.09	$ 37.00	$ 35.69	$ 35.64	$ 35.60	$ 35.10	$ 34.58	$ 34.03
Kinmount	$ 78.08	$ 75.85	$ 74.88	$ 74.74	$ 72.45	$ 72.39	$ 72.36	$ 71.51	$ 70.63	$ 69.69

Table 6-5
Wastewater Systems
Area-specific Consumptive Rates ($/m^3)

Community	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lindsay	$ 0.49	$ 0.75	$ 0.71	$ 0.48	$ 0.56	$ 0.61	$ 0.68	$ 0.76	$ 0.84	$ 1.30
Bobcaygeon	$ 1.80	$ 2.07	$ 2.05	$ 1.83	$ 1.91	$ 1.97	$ 2.05	$ 2.13	$ 2.23	$ 2.70
Coboconk	$ 2.65	$ 2.91	$ 2.91	$ 2.70	$ 2.79	$ 2.80	$ 2.86	$ 2.93	$ 3.02	$ 3.48
Omemee	$ 3.75	$ 4.15	$ 4.02	$ 3.81	$ 3.93	$ 4.28	$ 4.48	$ 4.69	$ 4.84	$ 5.43
Fenelon Falls	$ 5.19	$ 5.53	$ 5.49	$ 5.30	$ 5.41	$ 5.57	$ 5.70	$ 5.84	$ 5.97	$ 6.50
Mariposa	$ 5.97	$ 6.27	$ 6.29	$ 6.11	$ 6.21	$ 6.25	$ 6.33	$ 6.43	$ 6.54	$ 7.02

Applying the area-specific consumptive rates to the typical customer profile shown in Table 6-3 produces the following estimated annual bills for customers in each community.

Table 6-6
Water Systems
Area-specific Customer Bill Under an Area-Specific Rate Structure

Community	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lindsay	$ 676	$ 672	$ 693	$ 714	$ 737	$ 758	$ 780	$ 803	$ 826	$ 851
Bobcaygeon	$ 754	$ 758	$ 783	$ 805	$ 835	$ 858	$ 881	$ 908	$ 935	$ 963
Woodville	$ 1,037	$ 1,050	$ 1,078	$ 1,103	$ 1,139	$ 1,164	$ 1,191	$ 1,222	$ 1,253	$ 1,286
Fenelon Falls	$ 1,117	$ 1,111	$ 1,131	$ 1,152	$ 1,171	$ 1,193	$ 1,215	$ 1,238	$ 1,260	$ 1,283
Manvers	$ 1,752	$ 1,771	$ 1,802	$ 1,832	$ 1,870	$ 1,900	$ 1,931	$ 1,966	$ 2,002	$ 2,038
Omemee	$ 2,258	$ 2,227	$ 2,234	$ 2,254	$ 2,244	$ 2,265	$ 2,288	$ 2,299	$ 2,311	$ 2,322
Mariposa	$ 2,344	$ 2,328	$ 2,342	$ 2,365	$ 2,367	$ 2,392	$ 2,418	$ 2,436	$ 2,455	$ 2,474
Eldon	$ 2,583	$ 2,535	$ 2,533	$ 2,549	$ 2,521	$ 2,539	$ 2,559	$ 2,562	$ 2,564	$ 2,566
Emily	$ 2,704	$ 2,648	$ 2,641	$ 2,653	$ 2,616	$ 2,632	$ 2,648	$ 2,646	$ 2,644	$ 2,640
Fenelon Township	$ 3,278	$ 3,274	$ 3,293	$ 3,321	$ 3,329	$ 3,360	$ 3,391	$ 3,416	$ 3,442	$ 3,467
Norland	$ 7,134	$ 6,900	$ 6,808	$ 6,798	$ 6,577	$ 6,575	$ 6,575	$ 6,494	$ 6,411	$ 6,322
Kinmount	$ 13,887	$ 13,508	$ 13,345	$ 13,326	$ 12,938	$ 12,933	$ 12,933	$ 12,792	$ 12,647	$ 12,491

Table 6-7
Wastewater Systems
Area-specific Customer Bill Under an Area-Specific Rate Structure

Community	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Lindsay	$ 458	$ 516	$ 524	$ 501	$ 530	$ 556	$ 585	$ 617	$ 650	$ 749
Bobcaygeon	$ 684	$ 745	$ 755	$ 733	$ 764	$ 792	$ 822	$ 855	$ 890	$ 990
Omemee	$ 831	$ 890	$ 905	$ 884	$ 915	$ 935	$ 962	$ 993	$ 1,027	$ 1,125
Fenelon Falls	$ 1,021	$ 1,104	$ 1,097	$ 1,076	$ 1,114	$ 1,191	$ 1,243	$ 1,296	$ 1,342	$ 1,463
Mariposa	$ 1,270	$ 1,343	$ 1,352	$ 1,333	$ 1,370	$ 1,414	$ 1,454	$ 1,496	$ 1,538	$ 1,648
Coboconk	$ 1,404	$ 1,471	$ 1,491	$ 1,473	$ 1,508	$ 1,531	$ 1,563	$ 1,597	$ 1,636	$ 1,739

Estimated annual bills resulting from area-specific consumptive rates are presented in Table 6-8. Switching to area-specific rates would result in lower annual bills for a typical customer in Lindsay i.e. for 2021 the bill would be $1,134 versus $1,501 under the unform rate structure, representing a decrease of $31/month (or 24%). Customers in all other areas of the City, however, would experience corresponding increases in their annual water and wastewater bills. For residents with municipal water and wastewater services, Mariposa customers would experience the highest annual bill increase of approximately $176/month compared to the 2021 uniform rate. The largest increase in annual bills for those residents with only municipal water service would be in Kinmount, where customers would experience an increase in their 2021 bill of $1,157/month. The estimated annual bills under area-specific rates vs. uniform rates are summarized in Table 6-8.

Table 6-8
Annual Bill Under an Area-specific Rate Structure vs. Uniform Rate Structure

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water and Wastewater										
Citywide/Uniform Rate Structure	$ 1,501	$ 1,545	$ 1,590	$ 1,637	$ 1,686	$ 1,735	$ 1,787	$ 1,840	$ 1,895	$ 1,951
Lindsay	$ 1,134	$ 1,188	$ 1,217	$ 1,214	$ 1,267	$ 1,314	$ 1,365	$ 1,419	$ 1,476	$ 1,599
Bobcaygeon	$ 1,438	$ 1,504	$ 1,538	$ 1,538	$ 1,599	$ 1,649	$ 1,703	$ 1,762	$ 1,825	$ 1,953
Omemee	$ 3,089	$ 3,117	$ 3,139	$ 3,138	$ 3,160	$ 3,199	$ 3,250	$ 3,291	$ 3,338	$ 3,448
Fenelon Falls	$ 2,138	$ 2,216	$ 2,228	$ 2,228	$ 2,284	$ 2,383	$ 2,459	$ 2,534	$ 2,602	$ 2,747
Mariposa	$ 3,614	$ 3,671	$ 3,694	$ 3,699	$ 3,737	$ 3,806	$ 3,872	$ 3,932	$ 3,993	$ 4,122
Water Only										
Citywide/Uniform Rate Structure	$ 865	$ 885	$ 905	$ 926	$ 947	$ 969	$ 992	$ 1,014	$ 1,038	$ 1,062
Woodville	$ 1,037	$ 1,050	$ 1,078	$ 1,103	$ 1,139	$ 1,164	$ 1,191	$ 1,222	$ 1,253	$ 1,286
Manvers	$ 1,752	$ 1,771	$ 1,802	$ 1,832	$ 1,870	$ 1,900	$ 1,931	$ 1,966	$ 2,002	$ 2,038
Emily	$ 2,704	$ 2,648	$ 2,641	$ 2,653	$ 2,616	$ 2,632	$ 2,648	$ 2,646	$ 2,644	$ 2,640
Eldon	$ 2,583	$ 2,535	$ 2,533	$ 2,549	$ 2,521	$ 2,539	$ 2,559	$ 2,562	$ 2,564	$ 2,566
Fenelon Township	$ 3,278	$ 3,274	$ 3,293	$ 3,321	$ 3,329	$ 3,360	$ 3,391	$ 3,416	$ 3,442	$ 3,467
Norland	$ 7,134	$ 6,900	$ 6,808	$ 6,798	$ 6,577	$ 6,575	$ 6,575	$ 6,494	$ 6,411	$ 6,322
Kinmount	$ 13,887	$ 13,508	$ 13,345	$ 13,326	$ 12,938	$ 12,933	$ 12,933	$ 12,792	$ 12,647	$ 12,491
Wastewater Only										
Citywide/Uniform Rate Structure	$ 636	$ 660	$ 685	$ 711	$ 738	$ 766	$ 795	$ 825	$ 857	$ 889
Coboconk	$ 1,404	$ 1,471	$ 1,491	$ 1,473	$ 1,508	$ 1,531	$ 1,563	$ 1,597	$ 1,636	$ 1,739

6.6 Recommendations

Based on the findings provided in Chapter 6, it is recommended that Council maintain its current rate structure and consider for adoption the forecast water and wastewater rates and financial plan as provided herein. We would further suggest that the financial plan be reviewed periodically to address changes in operation and financial circumstances, paying particular attention to customer growth in relation to customer growth forecast herein.

The following recommendations are put forth for Council's consideration:

1. That Council provide for annual indexing of the City's self-imposed debt limit;
2. That Council maintain the rate structure and policy of imposing uniform water and wastewater rates across service areas;
3. That Council provide for the recovery of all water and wastewater costs through full cost recovery rates;
4. That Council approve the 2021 Water and Wastewater Rate Study and the rates provided in Chapter 6 and direct staff to review rate study in five years; and
5. That Council approve the Rate Study and Water Financial Plan provided in Appendix C and direct staff to submit the Plan and Council resolutions approving the Plan to the Province to maintain the City's Municipal Drinking Water Licence.

Appendices

Appendix A
Detailed Water Rate Calculations

Table A-1
City of Kawartha Lakes
Water Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Colbrone St. Mains - Adelaide St. to Angeline St.	-	-	748,000	-	-	-	-	-	-	-
Huron St. Mains - Russell St. to Durham St.	-	802,000	-	-	-	-	-	-	-	-
Hillside Dr. Mains - Logie St. to Hwy. 36	-	700,000	-	-	-	-	-	-	-	-
Lindsay Water Tower Altitude Value, Pumps and Piping	196,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Filter Media	400,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Chemical Tanks	600,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Recirculation Pumps	45,000	-	-	-	-	-	-	-	-	-
Manilla WTP SCADA System	350,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Envelope, Heaters, Exhaust Fans and Louvres	210,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP High-Lift Pumps	50,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Programmable Logic Controllers	30,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Filter Media	-	193,000	-	-	-	-	-	-	-	-
Mariposa Estates WTP Nitrate Removal System	-	32,000	-	-	-	-	-	-	-	-
Ponytpool WTP High-Lift Pump Header	-	43,000	-	-	-	-	-	-	-	-
Pontypool WTP Generator	75,000	-	-	-	-	-	-	-	-	-
Canadiana Shores WTP Filter Housing and Cartriges	60,000	-	-	-	-	-	-	-	-	-
Norland WTP Backwash Pumps and High-Lift Pumps and VFDs	90,000	-	-	-	-	-	-	-	-	-
Kinmount WTP Backwash Pumps and High-Lift Pumps and VFDs	90,000	-	-	-	-	-	-	-	-	-
Southview Estates WTP Low-Lift, High-Lift and Polymer Pumps	31,000	-	-	-	-	-	-	-	-	-
SCADA System Standards	84,000	-	-	-	-	-	-	-	-	-
Lindsay WTP SCADA System	283,000	-	-	-	-	-	-	-	-	-
Pleasant Point WTP Filter Housing and Cartridges	40,000	-	-	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to Colborne St.	-	684,000	-	-	-	-	-	-	-	-
William St. Mains - Russell St. to Peel St.	-	627,000	-	-	-	-	-	-	-	-
York St./Peel St. Mains - Russell St. to William St.	-	561,000	-	-	-	-	-	-	-	-
Lindsay St. Mains - Russell St. to Glenelg St.	-	278,000	-	-	-	-	-	-	-	-
Glenelg St. Mains - Lindsay St. to Cambridge St.	-	691,000	-	-	-	-	-	-	-	-
Lindsay WTP THM and HAA Reduction System	-	-	2,878,000	-	-	-	-	-	-	-
Lindsay WTP Secondary Reactivator	-	-	-	-	-	-	-	-	1,409,000	-
Fenelon Falls WTP Dehumidifier	-	39,000	-	-	-	-	-	-	-	-
Bobcaygeon WTP Low-Lift Valves and Piping	-	134,000	-	-	-	-	-	-	-	-
Thornhill Reservoir SCADA System	-	139,000	-	-	-	-	-	-	-	-
Verulam Elevated Tank SCADA System	-	99,000	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Melbourne St.	-	-	464,000	-	-	-	-	-	-	-
St. Paul St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Peter St. Mains - Queen St. to South End	-	-	258,000	-	-	-	-	-	-	-

Table A-1 (continued)
City of Kawartha Lakes
Water Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Colborne St. Mains - Bond St. to Water St.	605,280	-	-	-	-	-	-	-	-	-
Thornhill Reservoir HVAC System	112,000	-	-	-	-	-	-	-	-	-
Fenelon Falls WTP High-Lift Pumps	-	-	123,000	-	-	-	-	-	-	-
Lindsay St. Mains - Queen St. to Colborne St.	-	-	-	1,018,000	-	-	-	-	-	-
St. David St. Watermain - Queen St. to Riverview Rd.	-	-	-	449,000	-	-	-	-	-	-
King St. Mains - St. David St. to Hwy. 36	-	-	-	1,109,000	-	-	-	-	-	-
St. Patrick St. Mains - Colborne St. to North End	-	-	-	761,000	-	-	-	-	-	-
Oakwood Reservoir SCADA System	-	-	-	124,000	-	-	-	-	-	-
Fenelon Falls WTP SCADA System	-	-	-	295,000	-	-	-	-	-	-
Pottinger St. Mains - Victoria Ave. to West End	-	-	-	-	1,498,000	-	-	-	-	-
Riverview Rd. Mains - Logie St. to Hwy. 36	-	-	-	-	968,000	-	-	-	-	-
William St. Mains - Colborne St. to Olympia Ct.	-	-	-	-	1,521,000	-	-	-	-	-
Lindsay St. Mains - Glenelg St. to Mary St.	-	-	-	-	1,700,000	-	-	-	-	-
Southview Estates WTP SCADA System	-	-	-	-	227,000	-	-	-	-	-
Bobcaygeon WTP SCADA System	-	-	-	-	205,000	-	-	-	-	-
Birch Point / Highview Acres WTP SCADA System	-	-	-	-	166,000	-	-	-	-	-
Victoria Place WTP SCADA System	-	-	-	-	155,000	-	-	-	-	-
Russell St. Watermain - Lindsay St. to Water St.	-	-	-	-	-	1,498,000	-	-	-	-
Mill St. Mains - Durham St. to Kent St.	-	-	-	-	-	1,161,000	-	-	-	-
Wolfe St. Mains - Mary St to Durham St.	-	-	-	-	-	792,000	-	-	-	-
Duke St. Mains - Division St. to Durham St.	-	-	-	-	-	562,000	-	-	-	-
Durham St. Mains - Lindsay St. to Simcoe St.	-	-	-	-	-	-	992,000	-	-	-
Adelaide St. Mains - Kent St. to Colborne St.	-	-	-	-	-	-	1,312,000	-	-	-
Fairview Ct. Mains - Adelaide St. to East End	-	-	-	-	-	-	243,000	-	-	-
St. Paul St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	779,000	-	-	-
John St. Mains - St. Paul St. to St. Patrick St.	-	-	-	-	-	-	390,000	-	-	-
St. Peter St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	818,000	-	-	-
Bertie St. Mains - St. Peter St. to St. Patrick St.	-	-	-	-	-	-	380,000	-	-	-
Canadiana Shores WTP SCADA System	-	-	-	-	-	-	193,000	-	-	-
King's Bay WTP SCADS System	-	-	-	-	-	-	175,000	-	-	-
Sonya WTP SCADA System	-	-	-	-	-	-	177,000	-	-	-
Pleasant Point WTP SCADA System	-	-	-	-	-	-	155,000	-	-	-
Simcoe St. Mains - Durham St. to Ridout St.	-	-	-	-	-	-	-	1,179,000	-	-
Albert St. (Fleming College) Watermain - Mary St. to Angeline St.	-	-	-	-	-	-	-	2,154,000	-	-
Melbourne St. Mains - Lindsay St. to Albert St.	-	-	-	-	-	-	-	1,835,000	-	-
Glenelg St. Mains - Cambridge St. to Adelaide St.	-	-	-	-	-	-	-	1,538,000	-	-
Woodville WTP SCADA System	-	-	-	-	-	-	-	182,000	-	-
Mariposa Estates WTP SCADA System	-	-	-	-	-	-	-	159,000	-	-
Janetville WTP SCADA System	-	-	-	-	-	-	-	178,000	-	-
Pinewood WTP SCADA System	-	-	-	-	-	-	-	182,000	-	-
Woodfield WTP SCADA System	-	-	-	-	-	-	-	321,000	-	-
Manorview WTP SCADA System	-	-	-	-	-	-	-	186,000	-	-
St. David St. Watermain - Queen St. to Colborne St.	-	-	-	-	-	-	-	-	1,234,000	-
Armour Ct. Mains - St. David St. to West End	-	-	-	-	-	-	-	-	173,000	-
Short Ave. Mains - St. Peter St. to St. George St.	-	-	-	-	-	-	-	-	833,000	-
St. George St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	-	-	855,000	-

Table A-1 (continued)
City of Kawartha Lakes
Water Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Kent St. Mains - Victoria Ave. to Adelaide St.	-	-	-	-	-	-	-	-	1,622,000	-
Durham St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	629,000	-
Eglington St. Mains - Lindsay St. to William St.	-	-	-	-	-	-	-	-	401,000	-
Omemee WTP SCADA System	-	-	-	-	-	-	-	-	202,000	-
Western Trent/Palmina WTP SCADA System	-	-	-	-	-	-	-	-	243,000	-
Kinmount WTP SCADA System	-	-	-	-	-	-	-	-	389,000	-
Norland WTP SCADA System	-	-	-	-	-	-	-	-	210,000	-
Albert St. Mains - Regent St. to Lindway Pl. (South Intersection)	-	-	-	-	-	-	-	-	-	880,000
Angeline St. Mains - Colborne St. to Northlin Park Rd.	-	-	-	-	-	-	-	-	-	2,215,000
Water St. Mains - Glenelg St. to North End	-	-	-	-	-	-	-	-	-	481,000
Ardmore Ave. Mains - Albert St. to Adelaide St.	-	-	-	-	-	-	-	-	-	639,000
Cambridge St. Mains - Wellington St. to Colborne St.	-	-	-	-	-	-	-	-	-	868,000
Roosevelt St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	-	650,000
Sunset Ct. Mains - Angeline St. to East End	-	-	-	-	-	-	-	-	-	458,000
James St. Watermain - Mary St. to South End	-	-	-	-	-	-	-	-	-	458,000
Kent St. Mains - William St. to Victoria Ave.	977,898	-	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Kent St.	535,458	-	-	-	-	-	-	-	-	-
Bond St. Mains - Victoria Ave. to William St.	-	-	-	-	-	-	-	-	-	-
Sussex St. Mains - Melbourne St. to Glenelg St.	-	-	-	-	-	-	-	-	328,000	-
Sussex St. Mains - Glenelg St. to Russell St.	-	-	-	-	-	-	-	-	413,000	-
Sussex St. Mains - Russell St. to Kent St.	-	-	-	-	-	-	-	-	421,000	-
Studies:	-									
Rate Study and Financial Plan	-	-	-	-	27,000	-	-	-	-	32,000
Fenelon Falls Elevated Storage Tank Structural Assessment	-	-	-	-	-	-	-	-	-	-
Manilla Wells Assessment and Capital Plan	-	-	-	-	-	-	-	-	-	-
Lindsay WTP THM and HAA Reduction Pilot	-	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Filter Optimization Assessment	30,000	-	-	-	-	-	-	-	-	-
Facility Condition Assessments and Capital Plans	100,000	-	-	-	-	-	-	-	-	-
Growth Related:	-									
Lindsay St. Watermain - Elliot St. to Veteran's Way (Fenelon Falls)	-	-	-	-	-	-	-	-	-	-
Canal St./Boyd St. Watermain - Sherwood St. to East St.	-	-	-	-	-	1,293,000	-	-	-	-
Capacity Studies	-	321,000	-	-	-	-	-	-	-	-
Fenelon Falls WTP LLPS and SCADA Upgrades	-	-	-	-	-	-	-	-	-	701,000
King St. Mains - Lindsay St. to St. David St.	-	-	1,394,000	-	-	-	-	-	-	-
Lindsay St. Watermain - Elliot St. to Veteran's Way	-	-	-	-	-	-	-	-	-	-
Elliot St. Watermain - Lindsay St. to Juniper St.	-	-	-	481,000	-	-	-	-	-	-
Murray St. Watermain - Elliot St. to West St.	-	1,114,000	-	-	-	-	-	-	-	-
Ellice St. Watermain - Juniper St. to Wychwood Cres.	-	-	-	879,000	-	-	-	-	-	-
Francis St. Mains - Colborne St. to Clifton St.	-	-	-	-	-	559,000	-	-	-	-
Francis St. Mains - Clifton St. to Janlisda Dr.	-	-	-	-	-	582,000	-	-	-	-
Capacity Studies	-	-	-	-	-	-	380,000	-	-	-
Auk Tr. Watermain Looping - Adelaide St. to Mary St.	-	-	-	-	-	-	-	-	-	-
Pottinger St. Mains - Dyana Dr. to Lindsay St.	-	-	-	-	-	-	-	-	179,000	-

Table A-1 (continued)
City of Kawartha Lakes
Water Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Capital Expenditures	**4,994,636**	**6,457,000**	**6,107,000**	**5,116,000**	**6,467,000**	**6,447,000**	**5,994,000**	**7,914,000**	**9,541,000**	**7,382,000**
Capital Financing										
Provincial/Federal Grants	1,008,633									
Development Charges Reserve Fund	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Non-Growth Related Debenture Requirements	3,772,003	-	-	-	2,271,311	1,278,431	1,019,461	2,783,781	3,719,634	545,012
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Water Reserve	214,000	5,456,460	5,803,651	4,249,751	4,195,689	4,183,541	4,594,539	5,130,219	5,688,906	6,276,188
Total Capital Financing	**4,994,636**	**6,457,000**	**6,107,000**	**5,116,000**	**6,467,000**	**6,447,000**	**5,994,000**	**7,914,000**	**9,541,000**	**7,382,000**

Table A-2
City of Kawartha Lakes
Water Service
Schedule of Non-Growth Related Debenture Repayments
Inflated $

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020		33,718	33,718	33,718	33,718	33,718	33,718	33,718	33,718	33,718
2021			229,572	229,572	229,572	229,572	229,572	229,572	229,572	229,572
2022				-	-	-	-	-	-	-
2023					-	-	-	-	-	-
2024						-	-	-	-	-
2025							138,237	138,237	138,237	138,237
2026								77,808	77,808	77,808
2027									62,046	62,046
2028										169,427
2029										
2030										
Total Annual Debt Charges	**-**	**33,718**	**263,290**	**263,290**	**263,290**	**263,290**	**401,526**	**479,334**	**541,381**	**710,807**

Table A-3
City of Kawartha Lakes
Water Service
Schedule of Growth Related Debenture Repayments
Inflated $

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020		-	-	-	-	-	-	-	-	-
2021			-	-	-	-	-	-	-	-
2022				-	-	-	-	-	-	-
2023					-	-	-	-	-	-
2024						-	-	-	-	-
2025							-	-	-	-
2026								-	-	-
2027									-	-
2028										-
2029										
2030										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-

Table A-4
City of Kawartha Lakes
Water Service
Water Reserves/ Reserve Funds Continuity
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	6,090,641	8,136,174	5,060,807	2,038,316	920,107	510,000	510,000	510,000	510,000	510,000
Transfer from Operating	2,100,000	2,281,861	2,741,194	3,113,501	3,775,582	4,173,541	4,584,539	5,120,219	5,678,906	6,266,188
Transfer to Capital	214,000	5,456,460	5,803,651	4,249,751	4,195,689	4,183,541	4,594,539	5,130,219	5,688,906	6,276,188
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**7,976,641**	**4,961,575**	**1,998,349**	**902,066**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**
Interest	159,533	99,232	39,967	18,041	10,000	10,000	10,000	10,000	10,000	10,000

Table A-5
City of Kawartha Lakes
Water Service
Water Development Charges Reserve Fund Continuity
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	2,296,068	3,005,603	2,708,753	3,141,118	3,032,358	3,829,907	3,663,954	4,137,561	5,034,387	5,840,809
Development Charge Proceeds	1,020,702	1,041,076	1,061,913	1,083,213	1,104,821	1,126,893	1,149,428	1,172,426	1,195,887	1,219,811
Transfer to Capital	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Transfer to Operating	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Closing Balance	**2,946,669**	**2,655,640**	**3,079,528**	**2,972,900**	**3,754,810**	**3,592,112**	**4,056,432**	**4,935,673**	**5,726,284**	**6,131,000**
Interest	58,933	53,113	61,591	59,458	75,096	71,842	81,129	98,713	114,526	122,620
Required from Development Charges	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800

Table A-6
City of Kawartha Lakes
Water Services
Operating Budget Forecast
Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures										
Operating Costs										
WATER - EMILY - BIRCH POINT	146,451	149,400	152,400	155,400	158,500	161,700	164,900	168,200	171,600	175,000
WATER - LINDSAY	1,684,028	1,717,700	1,752,100	1,787,100	1,822,800	1,859,300	1,896,500	1,934,400	1,973,100	2,012,600
WATER - LINDSAY - THORNHILL	191,208	195,000	198,900	202,900	207,000	211,100	215,300	219,600	224,000	228,500
WATER - LINDSAY - VERULAM TANK	24,763	25,300	25,800	26,300	26,800	27,300	27,800	28,400	29,000	29,600
WATER-LINDSAY-OAKWOOD WATER	73,945	75,400	76,900	78,400	80,000	81,600	83,200	84,900	86,600	88,300
WATER - FEN TWP-STHVIEW ESTATES	246,853	251,800	256,800	261,900	267,100	272,400	277,800	283,400	289,100	294,900
WATER - MARIPOSA - SONYA	95,591	97,500	99,500	101,500	103,500	105,600	107,700	109,900	112,100	114,300
WATER-MARIPOSA-CANADIANA SHR	236,455	241,200	246,000	250,900	255,900	261,000	266,200	271,500	276,900	282,400
WATER-MARIPOSA-WOODS/MANILLA	95,991	97,900	99,900	101,900	103,900	106,000	108,100	110,300	112,500	114,800
WATER - MARIPOSA - MARIPOSA EST	156,256	159,400	162,600	165,900	169,200	172,600	176,100	179,600	183,200	186,900
WATER - MARIPOSA-PLEASANT POINT	142,918	145,800	148,700	151,700	154,700	157,800	161,000	164,200	167,500	170,900
WATER - MARIPOSA - KINGS BAY	155,781	158,900	162,100	165,300	168,600	172,000	175,400	178,900	182,500	186,200
WATER - ELDON-WESTERN TRENT	175,779	179,300	182,900	186,600	190,300	194,100	198,000	202,000	206,000	210,100
WATER - FENELON FALLS	584,029	595,700	607,600	619,800	632,200	644,800	657,700	670,900	684,300	698,000
WATER - NORLAND	239,905	244,700	249,600	254,600	259,700	264,900	270,200	275,600	281,100	286,700
WATER - KINMOUNT - DOWNTOWN	217,159	221,500	225,900	230,400	235,000	239,700	244,500	249,400	254,400	259,500
WATER - OMEMEE - VICTORIA GLEN	89,423	91,200	93,000	94,900	96,800	98,700	100,700	102,700	104,800	106,900
WATER - WOODVILLE	213,631	217,900	222,300	226,700	231,200	235,800	240,500	245,300	250,200	255,200
WATER - BOBCAYGEON	719,459	733,800	748,500	763,500	778,800	794,400	810,300	826,500	843,000	859,900
WATER - BOBCAYGN-VICTORIA PL	132,740	135,400	138,100	140,900	143,700	146,600	149,500	152,500	155,600	158,700
WATER - MANVERS - JANETVILLE	140,795	143,600	146,500	149,400	152,400	155,400	158,500	161,700	164,900	168,200
WATER - MANVERS-MANORVIEW	126,643	129,200	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
WATER - MANVERS - WOODFIELD	109,480	111,700	113,900	116,200	118,500	120,900	123,300	125,800	128,300	130,900
WATER - MANVERS - PINEWOOD P/P	129,138	131,700	134,300	137,000	139,700	142,500	145,400	148,300	151,300	154,300
WATER-SEWER - ADMINISTRATION	1,672,532	1,706,000	1,740,100	1,774,900	1,810,400	1,846,600	1,883,500	1,921,200	1,959,600	1,998,800
Sub Total Operating	**7,800,953**	**7,957,000**	**8,116,200**	**8,278,500**	**8,443,800**	**8,612,600**	**8,784,700**	**8,960,700**	**9,140,000**	**9,323,000**

Table A-6 (continued)
City of Kawartha Lakes
Water Services
Operating Budget Forecast
Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital-Related										
Existing Debt (Principal) - Growth Related		348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119
Existing Debt (Interest) - Growth Related		42,380	39,670	37,063	34,250	31,541	28,831	26,194	23,411	20,701
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related		2,357,661	2,088,449	2,140,730	1,915,943	1,958,822	1,865,313	1,720,026	1,574,206	1,280,911
Existing Debt (Interest) - Non-Growth Related		805,751	713,912	629,306	544,759	469,291	392,323	315,948	247,218	204,255
New Non-Growth Related Debt (Principal)		22,915	179,380	182,877	186,444	190,079	287,732	346,221	395,139	517,987
New Non-Growth Related Debt (Interest)		10,803	83,910	80,413	76,846	73,211	113,795	133,113	146,242	192,820
Existing Debt (Principal)	2,505,407									
Existing Debt (Interest)	1,013,191									
Transfer to Capital Reserve	2,100,000	2,281,861	2,741,194	3,113,501	3,775,582	4,173,541	4,584,539	5,120,219	5,678,906	6,266,188
Sub Total Capital Related	**5,618,599**	**5,869,490**	**6,194,634**	**6,532,008**	**6,881,943**	**7,244,604**	**7,620,652**	**8,009,840**	**8,413,241**	**8,830,981**
Total Expenditures	**13,419,551**	**13,826,490**	**14,310,834**	**14,810,508**	**15,325,743**	**15,857,204**	**16,405,352**	**16,970,540**	**17,553,241**	**18,153,981**
Revenues										
Base Charge	5,268,537	5,384,882	5,541,012	5,700,614	5,863,758	6,030,513	6,200,952	6,375,148	6,553,175	6,735,108
BUILDING/PROPERTY RENTAL	31,000	31,600	32,200	32,800	33,500	34,200	34,900	35,600	36,300	37,000
WATER CONNECTION FEE	9,500	9,700	9,900	10,100	10,300	10,500	10,700	10,900	11,100	11,300
WATER METER FEE	18,070	18,400	18,800	19,200	19,600	20,000	20,400	20,800	21,200	21,600
BULK WATER SALES	121,500	123,900	126,400	128,900	131,500	134,100	136,800	139,500	142,300	145,100
OTHER WATER USER CHARGES	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WASTEWATER USER CHARGES	10,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800
RECOVERIES - OTHER	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100	9,300
MISCELLANEOUS REVENUE	142,650	145,500	148,400	151,400	154,400	157,500	160,700	163,900	167,200	170,500
Contributions from Development Charges Reserve Fund	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Total Operating Revenue	**5,980,857**	**6,124,381**	**6,284,801**	**6,448,896**	**6,616,527**	**6,787,973**	**6,963,302**	**7,142,461**	**7,325,505**	**7,512,528**
Water Billing Recovery - Total	**7,438,694**	**7,702,109**	**8,026,034**	**8,361,612**	**8,709,217**	**9,069,231**	**9,442,050**	**9,828,079**	**10,227,736**	**10,641,453**

Table A-7
City of Kawartha Lakes
Water Services
Water Rate Forecast
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Charge by Meter Size										
5/8" - 3/4"	$ 31.58	$ 32.05	$ 32.53	$ 33.02	$ 33.52	$ 34.02	$ 34.53	$ 35.05	$ 35.57	$ 36.11
1"	$ 41.09	$ 41.71	$ 42.33	$ 42.97	$ 43.61	$ 44.27	$ 44.93	$ 45.60	$ 46.29	$ 46.98
1 ½"	$ 52.83	$ 53.62	$ 54.43	$ 55.24	$ 56.07	$ 56.91	$ 57.77	$ 58.63	$ 59.51	$ 60.41
2"	$ 85.10	$ 86.38	$ 87.67	$ 88.99	$ 90.32	$ 91.68	$ 93.05	$ 94.45	$ 95.87	$ 97.30
3"	$ 322.81	$ 327.65	$ 332.57	$ 337.56	$ 342.62	$ 347.76	$ 352.98	$ 358.27	$ 363.65	$ 369.10
4"	$ 410.84	$ 417.00	$ 423.26	$ 429.61	$ 436.05	$ 442.59	$ 449.23	$ 455.97	$ 462.81	$ 469.76
6"	$ 616.23	$ 625.47	$ 634.86	$ 644.38	$ 654.05	$ 663.86	$ 673.82	$ 683.93	$ 694.19	$ 704.60
8"	$ 850.98	$ 863.75	$ 876.70	$ 889.85	$ 903.20	$ 916.75	$ 930.50	$ 944.46	$ 958.63	$ 973.01
Annual Percentage Change		**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**
Consumptive Rate (per m^3)										
Constant Rate per m^3	$ 2.80	$ 2.88	$ 2.96	$ 3.05	$ 3.14	$ 3.23	$ 3.32	$ 3.42	$ 3.52	$ 3.62
Annual Percentage Change		**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**

Appendix B
Detailed Wastewater Rate Calculations

Table B-1
City of Kawartha Lakes
Wastewater Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Colbrone St. Mains - Adelaide St. to Angeline St.	-	-	556,000	-	-	-	-	-	-	-
Huron St. Mains - Russell St. to Durham St.	-	802,000	-	-	-	-	-	-	-	-
Hillside Dr. Mains - Logie St. to Hwy. 36	-	700,000	-	-	-	-	-	-	-	-
Lindsay WPCP Tertiary Chemical Pump	55,000	-	-	-	-	-	-	-	-	-
Logie St. SPS Fencing	15,000	-	-	-	-	-	-	-	-	-
Wellington St. SPS Fencing	5,000	-	-	-	-	-	-	-	-	-
Riverview SPS Fencing	15,000	-	-	-	-	-	-	-	-	-
Northwest Trunk Sewer Forcemain Valve Chamber Fencing	15,000	-	-	-	-	-	-	-	-	-
Fenelon Falls WPCP Clarifiers and Small Rotor	170,000	-	-	-	-	-	-	-	-	-
Francis St. SPS Generator	60,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WPCP Electrical Panel and Fixtures	55,000	-	-	-	-	-	-	-	-	-
King's Bay WPCP Maintenance Hydrant	30,000	-	-	-	-	-	-	-	-	-
SCADA System Standards	116,000	-	-	-	-	-	-	-	-	-
Jennings Creek SPS SCADA System	-	122,000	-	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to Colborne St.	-	684,000	-	-	-	-	-	-	-	-
William St. Mains - Russell St. to Peel St.	-	811,000	-	-	-	-	-	-	-	-
York St./Peel St. Mains - Russell St. to William St.	-	741,000	-	-	-	-	-	-	-	-
Lindsay St. Mains - Russell St. to Glenelg St.	-	278,000	-	-	-	-	-	-	-	-
Glenelg St. Mains - Lindsay St. to Cambridge St.	-	691,000	-	-	-	-	-	-	-	-
Coboconk Lagoon Cleaning	-	834,000	-	-	-	-	-	-	-	-
Bobcaygeon WPCP Envelope	-	56,000	-	-	-	-	-	-	-	-
Bobcaygeon WPCP Comminuter	-	122,000	-	-	-	-	-	-	-	-
Bobcaygeon SPS 7 Pumps and Controls	-	114,000	-	-	-	-	-	-	-	-
Bobcaygeon SPS 5 Secondary Generator	-	66,000	-	-	-	-	-	-	-	-
Lindsay WPCP Grit Removal System	-	66,000	-	-	-	-	-	-	-	-
Lindsay St. N. SPS SCADA System (OCWA)	-	56,000	-	-	-	-	-	-	-	-
Lindsay WPCP SCADA System	-	239,000	-	-	-	-	-	-	-	-
Lindsay St. N. SPS SCADA System	-	107,000	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Melbourne St.	-	-	464,000	-	-	-	-	-	-	-
St. Paul St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Peter St. Mains - Queen St. to South End	-	-	258,000	-	-	-	-	-	-	-
Colborne St. Mains - Bond St. to Water St.	655,720	-	-	-	-	-	-	-	-	-
Main St. Bridges Sewer Heat Tracer System	-	-	529,000	-	-	-	-	-	-	-
Lindsay WPCP Boiler System	-	-	35,000	-	-	-	-	-	-	-
Lindsay WPCP South Clarifier Gearbox	-	-	82,000	-	-	-	-	-	-	-
Lindsay St. N. Leachate SPS SCADA System	-	-	100,000	-	-	-	-	-	-	-
Ridout St. SPS SCADA System	-	-	159,000	-	-	-	-	-	-	-

Table B-1 (continued)
City of Kawartha Lakes
Wastewater Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Wellington St. SPS SCADA System	-	-	106,000	-	-	-	-	-	-	-
Fairgrounds SPS SCADA System	-	-	108,000	-	-	-	-	-	-	-
Riverview SPS SCADA System	-	-	149,000	-	-	-	-	-	-	-
Lindsay St. Mains - Queen St. to Colborne St.	-	-	-	1,018,000	-	-	-	-	-	-
King St. Mains - St. David St. to Hwy. 36	-	-	-	1,109,000	-	-	-	-	-	-
St. Patrick St. Mains - Colborne St. to North End	-	-	-	761,000	-	-	-	-	-	-
William St. Sewermain - Olympia Ct. to Orchard Park Rd.	-	-	-	989,000	-	-	-	-	-	-
Fenelon Falls WPCP Grinders	-	-	-	62,000	-	-	-	-	-	-
Bobcaygeon WPCP Mechanical Barscreen	-	-	-	434,000	-	-	-	-	-	-
Lindsay WPCP Actiflow Air Scour System	-	-	-	272,000	-	-	-	-	-	-
Logie St. SPS (formerly George St. SPS) SCADA System	-	-	-	168,000	-	-	-	-	-	-
Mary St. E. SPS SCADA System	-	-	-	163,000	-	-	-	-	-	-
Rivera SPS SCADA System	-	-	-	135,000	-	-	-	-	-	-
Pottinger St. Mains - Victoria Ave. to West End	-	-	-	-	1,498,000	-	-	-	-	-
Riverview Rd. Mains - Logie St. to Hwy. 36	-	-	-	-	968,000	-	-	-	-	-
William St. Mains - Colborne St. to Olympia Ct.	-	-	-	-	1,521,000	-	-	-	-	-
Lindsay St. Mains - Glenelg St. to Mary St.	-	-	-	-	1,700,000	-	-	-	-	-
Lindsay WPCP Lagoon 4 Cleaning	-	-	-	-	1,307,000	-	-	-	-	-
Fenelon WPCP SCADA System	-	-	-	-	170,000	-	-	-	-	-
Ellice St. SPS SCADA System	-	-	-	-	112,000	-	-	-	-	-
Colborne St. SPS SCADA System	-	-	-	-	167,000	-	-	-	-	-
Francis St. SPS SCADA System	-	-	-	-	166,000	-	-	-	-	-
Bobcaygeon WPCP SCADA System	-	-	-	-	181,000	-	-	-	-	-
Mill St. Mains - Durham St. to Kent St.	-	-	-	-	-	1,161,000	-	-	-	-
Division St. Sewermain - Lindsay St. to East End	-	-	-	-	-	993,000	-	-	-	-
Wolfe St. Mains - Mary St to Durham St.	-	-	-	-	-	792,000	-	-	-	-
Duke St. Mains - Division St. to Durham St.	-	-	-	-	-	562,000	-	-	-	-
Fenelon Falls WPCP Large Rotor	-	-	-	-	-	138,000	-	-	-	-
Need St. SPS SCADA System	-	-	-	-	-	184,000	-	-	-	-
Lance St. SPS SCADA System	-	-	-	-	-	179,000	-	-	-	-
Bolton St. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Main St. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Navigator Trail East SPS SCADA System	-	-	-	-	-	189,000	-	-	-	-
Front St. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Marina Dr. SPS SCADA System	-	-	-	-	-	181,000	-	-	-	-
Anne St. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Little Bob Dr. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Navigator Trail West SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Riverside Dr. SPS SCADA System	-	-	-	-	-	175,000	-	-	-	-
Durham St. Mains - Lindsay St. to Simcoe St.	-	-	-	-	-	-	992,000	-	-	-

Table B-1 (continued)
City of Kawartha Lakes
Wastewater Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Durham St./Georgian St. New Sewermain - Simcoe St. to Melbourne St.	-	-	-	-	-	-	669,000	-	-	-
Georgian St. Sewermain - Melbourne St. to Ridout St.	-	-	-	-	-	-	1,047,000	-	-	-
Adelaide St. Mains - Kent St. to Colborne St.	-	-	-	-	-	-	1,312,000	-	-	-
Fairview Ct. Mains - Adelaide St. to East End	-	-	-	-	-	-	243,000	-	-	-
St. Paul St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	779,000	-	-	-
John St. Mains - St. Paul St. to St. Patrick St.	-	-	-	-	-	-	390,000	-	-	-
St. Peter St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	818,000	-	-	-
Bertie St. Mains - St. Peter St. to St. Patrick St.	-	-	-	-	-	-	380,000	-	-	-
King's Bay WPCP SCADA System	-	-	-	-	-	-	198,000	-	-	-
Simcoe St. Mains - Durham St. to Ridout St.	-	-	-	-	-	-	-	1,179,000	-	-
Melbourne St. Mains - Lindsay St. to Albert St.	-	-	-	-	-	-	-	1,835,000	-	-
Glenelg St. Mains - Cambridge St. to Adelaide St.	-	-	-	-	-	-	-	1,538,000	-	-
Armour Ct. Mains - St. David St. to West End	-	-	-	-	-	-	-	-	173,000	-
Short Ave. Mains - St. Peter St. to St. George St.	-	-	-	-	-	-	-	-	833,000	-
St. George St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	-	-	855,000	-
Kent St. Mains - Victoria Ave. to Adelaide St.	-	-	-	-	-	-	-	-	1,622,000	-
Durham St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	629,000	-
Eglington St. Mains - Lindsay St. to William St.	-	-	-	-	-	-	-	-	401,000	-
Omemee WPCP SCADA System	-	-	-	-	-	-	-	-	188,000	-
Sturgeon St. SPS SCADA System	-	-	-	-	-	-	-	-	182,000	-
Albert St. Mains - Regent St. to Lindway Pl. (South Intersection)	-	-	-	-	-	-	-	-	-	880,000
Angeline St. Mains - Colborne St. to Northlin Park Rd.	-	-	-	-	-	-	-	-	-	2,215,000
Water St. Mains - Glenelg St. to North End	-	-	-	-	-	-	-	-	-	481,000
Ardmore Ave. Mains - Albert St. to Adelaide St.	-	-	-	-	-	-	-	-	-	639,000
Cambridge St. Mains - Wellington St. to Colborne St.	-	-	-	-	-	-	-	-	-	868,000
Roosevelt St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	-	650,000
Sunset Ct. Mains - Angeline St. to East End	-	-	-	-	-	-	-	-	-	458,000
Adelaide St. Sewermain - Mary St. to Auk Tr.	-	-	-	-	-	-	-	-	-	664,000
Lindsay WPCP Lagoon 2 Cleaning	-	-	-	-	-	-	-	-	-	1,709,000
Church St. SPS SCADA System	-	-	-	-	-	-	-	-	-	167,000
Coboconk SPS #1 SCADA System	-	-	-	-	-	-	-	-	-	157,000
Coboconk SPS #2 SCADA System	-	-	-	-	-	-	-	-	-	157,000
Coboconk SPS #3 SCADA System	-	-	-	-	-	-	-	-	-	154,000
Coboconk SPS #4 and WPCP SCADA Systems	-	-	-	-	-	-	-	-	-	156,000
King St. Mains - Lindsay St. to St. David St.	-	-	1,394,000	-	-	-	-	-	-	-
Francis St. Mains - Colborne St. to Clifton St.	-	-	-	-	-	559,000	-	-	-	-
Francis St. Mains - Clifton St. to Janlisda Dr.	-	-	-	-	-	582,000	-	-	-	-
Pottinger St. Mains - Dyana Dr. to Lindsay St.	-	-	-	-	-	-	-	-	179,000	-
Studies:	-	-	-	-	-	-	-	-	-	-
Rate Study and Financial Plan	-	-	-	-	27,000	-	-	-	-	32,000
Facility Condition Assessments and Capital Plans	50,000	-	-	-	-	-	-	-	-	-

Table B-1 (continued)
City of Kawartha Lakes
Wastewater Service
Capital Budget Forecast
Inflated $

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Growth Related:	-	-	-	-	-	-	-	-	-	-
Lindsay WPCP	-	-	-	-	-	-	-	-	-	-
Kent St. Mains - William St. to Victoria Ave.	1,116,102	-	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Kent St.	745,542	-	-	-	-	-	-	-	-	-
Anne St. SPS	120,000	-	-	-	-	-	-	-	-	-
Capacity Studies	-	321,000	-	-	-	-	-	-	-	-
Logie St. SPS Study	80,000	-	-	-	-	-	-	-	-	-
Hwy. 7 SPS Study	80,000	-	-	-	-	-	-	-	-	-
Ridout St. SPS Study	80,000	-	-	-	-	-	-	-	-	-
Omemee WPCP LSSDS Remediation	-	-	-	-	-	-	-	-	-	3,904,000
Need St. SPS Upgrades	-	-	-	-	-	-	-	-	-	523,000
Little Bob Dr. SPS Upgrades	-	-	-	-	-	-	-	-	-	427,000
Capacity Studies	-	-	-	-	-	-	380,000	-	-	-
Logie St. SPS (formerly George St. SPS) Expansion	-	-	-	-	-	-	-	1,832,000	-	-
Durham St./Sussex St. Sewermain - Albert St. to Melbourne St.	-	-	-	-	-	-	-	-	715,000	-
Sussex St. Mains - Melbourne St. to Glenelg St.	-	-	-	-	-	-	-	-	328,000	-
Sussex St. Mains - Glenelg St. to Russell St.	-	-	-	-	-	-	-	-	413,000	-
Sussex St. Mains - Russell St. to Kent St.	-	-	-	-	-	-	-	-	421,000	-
Kent St. Sewermain - Sussex St. to Victoria Ave.	-	-	-	-	-	-	-	-	390,000	-
Albert St. Sewermain - Mary St. to Durham St.	-	-	-	-	-	-	-	-	-	1,123,000
Total Capital Expenditures	**3,463,364**	**6,810,000**	**4,182,000**	**5,111,000**	**7,817,000**	**6,745,000**	**7,208,000**	**6,384,000**	**7,329,000**	**15,364,000**
Capital Financing										
Provincial/Federal Grants										
Development Charges Reserve Fund	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580
Non-Growth Related Debenture Requirements	2,070,901	-	1,343,344	4,215,927	6,453,037	5,200,858	5,127,428	2,594,836	3,638,562	8,788,518
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Wastewater Reserve	226,000	6,489,000	2,838,656	895,073	1,363,963	1,544,142	1,700,572	1,957,164	2,148,678	2,514,902
Total Capital Financing	**3,463,364**	**6,810,000**	**4,182,000**	**5,111,000**	**7,817,000**	**6,745,000**	**7,208,000**	**6,384,000**	**7,329,000**	**15,364,000**

Table B-2
City of Kawartha Lakes
Wastewater Service
Schedule of Non-Growth Related Debenture Repayments
Inflated $

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020		240,229	240,229	240,229	240,229	240,229	240,229	240,229	240,229	240,229
2021			126,039	126,039	126,039	126,039	126,039	126,039	126,039	126,039
2022				-	-	-	-	-	-	-
2023					81,759	81,759	81,759	81,759	81,759	81,759
2024						256,590	256,590	256,590	256,590	256,590
2025							392,745	392,745	392,745	392,745
2026								316,535	316,535	316,535
2027									312,066	312,066
2028										157,927
2029										
2030										
Total Annual Debt Charges	-	240,229	366,268	366,268	448,026	704,616	1,097,361	1,413,896	1,725,962	1,883,889
Lindsay WPCP (2020 Budget)										
2020			613,489	613,489	613,489	613,489	613,489	613,489	613,489	613,489

Table B-3
City of Kawartha Lakes
Wastewater Service
Schedule of Growth Related Debenture Repayments
Inflated $

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2021			-	-	-	-	-	-	-	-
2022				-	-	-	-	-	-	-
2023					-	-	-	-	-	-
2024						-	-	-	-	-
2025							-	-	-	-
2026								-	-	-
2027									-	-
2028										-
2029										
2030										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-
Lindsay WPCP (2020 Budget)										
2020			749,820	749,820	749,820	749,820	749,820	749,820	749,820	749,820

Table B-4
City of Kawartha Lakes
Wastewater Service
Wastewater Reserves/ Reserve Funds Continuity
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	6,026,217	7,701,222	2,844,400	510,000	510,000	510,000	510,000	510,000	510,000	510,000
Transfer from Operating	1,750,000	1,576,405	494,256	885,073	1,353,963	1,534,142	1,690,572	1,947,164	2,138,678	2,504,902
Transfer to Capital	226,000	6,489,000	2,838,656	895,073	1,363,963	1,544,142	1,700,572	1,957,164	2,148,678	2,514,902
Transfer to Operating										
Closing Balance	**7,550,217**	**2,788,627**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**
Interest	151,004	55,773	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Table B-5
City of Kawartha Lakes
Wastewater Service
Wastewater Development Charges Reserve Fund Continuity
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	(19,440,202)	(20,541,513)	(20,381,577)	(19,851,250)	(19,270,546)	(18,636,725)	(17,948,722)	(17,592,623)	(18,668,278)	(19,425,881)
Development Charge Proceeds	1,263,228	1,288,513	1,314,222	1,340,472	1,367,339	1,394,747	1,422,580	1,451,030	1,480,020	1,509,628
Transfer to Capital	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580
Transfer to Operating	795,302	407,938	394,656	381,914	368,092	354,809	341,527	328,640	314,964	301,682
Closing Balance	**(20,138,738)**	**(19,981,938)**	**(19,462,010)**	**(18,892,692)**	**(18,271,299)**	**(17,596,786)**	**(17,247,669)**	**(18,302,233)**	**(19,044,982)**	**(22,278,515)**
Interest	(402,775)	(399,639)	(389,240)	(377,854)	(365,426)	(351,936)	(344,953)	(366,045)	(380,900)	(445,570)
Required from Development Charges	1,166,463	321,000	-	-	-	-	380,000	1,832,000	1,541,760	4,060,580

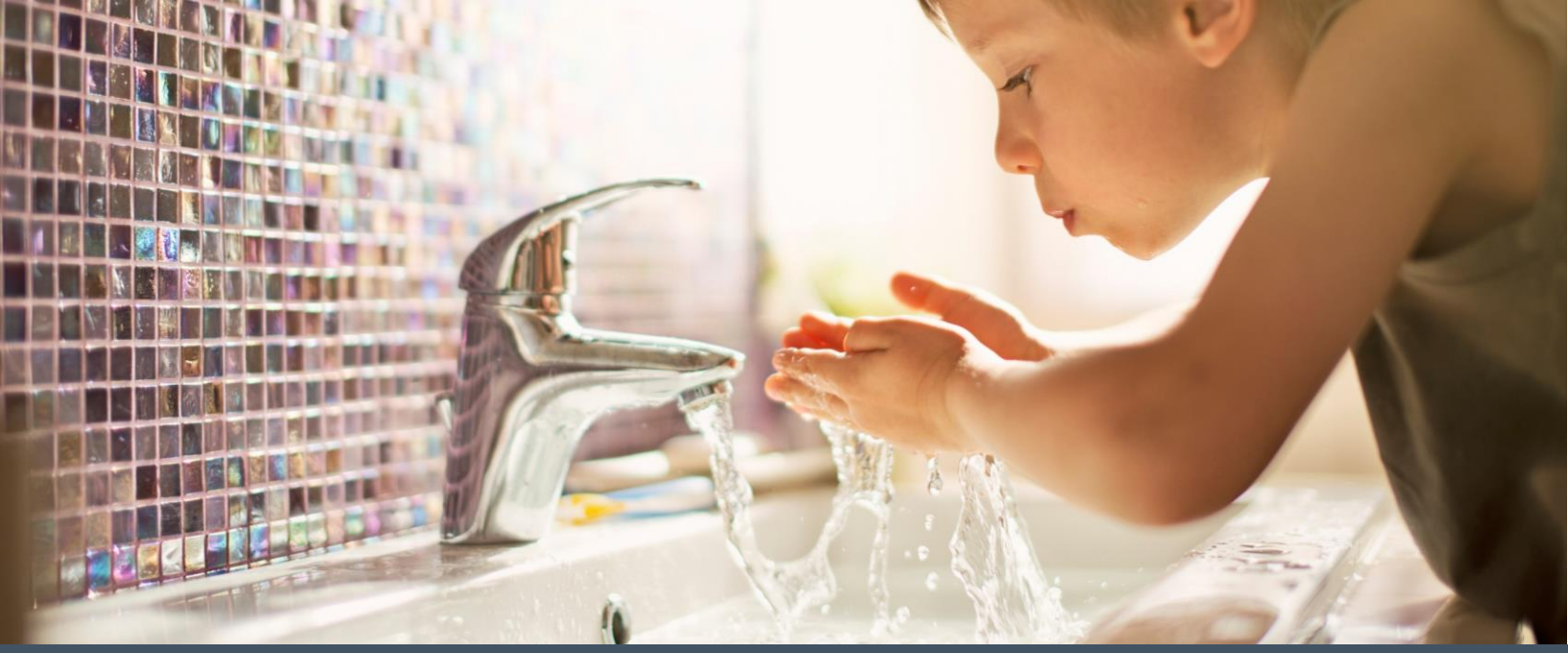
Table B-6
City of Kawartha Lakes
Wastewater Services
Operating Budget Forecast
Inflated $

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures										
Operating Costs										
SEWER - LINDSAY	2,379,169	2,426,800	2,475,300	2,524,800	2,575,300	2,626,800	2,679,300	2,732,900	2,787,600	2,843,400
SEWER - BOBCAYGEON	962,312	981,600	1,001,200	1,021,200	1,041,600	1,062,400	1,083,600	1,105,300	1,127,400	1,149,900
SEWER - OMEMEE	295,514	301,400	307,400	313,500	319,800	326,200	332,700	339,400	346,200	353,100
SEWER - FENELON FALLS	764,252	779,500	795,100	811,000	827,200	843,700	860,600	877,800	895,400	913,300
SEWER - MARIPOSA - KINGS BAY	191,013	194,800	198,700	202,700	206,800	210,900	215,100	219,400	223,800	228,300
SEWER - COBOCONK	178,975	182,600	186,300	190,000	193,800	197,700	201,700	205,700	209,800	214,000
WATER-SEWER - ADMINISTRATION	557,511	568,700	580,100	591,700	603,500	615,600	627,900	640,500	653,300	666,400
Sub Total Operating	**5,328,746**	**5,435,400**	**5,544,100**	**5,654,900**	**5,768,000**	**5,883,300**	**6,000,900**	**6,121,000**	**6,243,500**	**6,368,400**
Capital-Related										
Existing Debt (Principal) - Growth Related		187,649	187,649	187,649	187,649	187,649	187,649	187,649	187,649	187,649
Existing Debt (Interest) - Growth Related		220,289	207,007	194,265	180,443	167,160	153,878	140,991	127,315	114,033
New Growth Related Debt (Principal)		-	509,580	519,517	529,648	539,976	550,505	561,240	572,184	583,342
New Growth Related Debt (Interest)		-	240,240	230,303	220,173	209,844	199,315	188,580	177,636	166,478
Existing Debt (Principal) - Non-Growth Related		1,449,848	1,438,808	1,464,060	1,350,046	1,365,132	1,287,979	1,207,143	1,214,972	1,222,282
Existing Debt (Interest) - Non-Growth Related		557,679	508,462	458,114	406,688	360,577	315,729	272,967	234,522	200,577
Existing Debt (Principal)	1,812,034									
Existing Debt (Interest)	789,513									
New Non-Growth Related Debt (Principal)	-	163,260	669,030	682,076	750,939	939,962	1,225,202	1,464,211	1,704,844	1,845,417
New Non-Growth Related Debt (Interest)	-	76,968	310,727	297,681	310,576	378,143	485,648	563,174	634,606	651,961
Transfer to Capital Reserve	1,750,000	1,576,405	494,256	885,073	1,353,963	1,534,142	1,690,572	1,947,164	2,138,678	2,504,902
Sub Total Capital Related	**4,351,547**	**4,232,098**	**4,565,759**	**4,918,737**	**5,290,124**	**5,682,587**	**6,096,477**	**6,533,119**	**6,992,406**	**7,476,640**
Total Expenditures	**9,680,292**	**9,667,498**	**10,109,859**	**10,573,637**	**11,058,124**	**11,565,887**	**12,097,377**	**12,654,119**	**13,235,906**	**13,845,040**
Revenues										
Base Charge	4,584,462	4,781,858	5,025,721	5,280,783	5,547,528	5,826,461	6,118,107	6,423,015	6,741,755	7,074,920
SEWER & WATER CONNECTION CHRGS	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
WASTE MANAGEMENT COLLECTION CHARGES	187,075	190,800	194,600	198,500	202,500	206,600	210,700	214,900	219,200	223,600
SEWER CONNECTION	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
OTHER WASTEWATER USER CHARGES	260,000	265,200	270,500	275,900	281,400	287,000	292,700	298,600	304,600	310,700
RECOVERIES - OTHER	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
MISCELLANEOUS REVENUE	47,550	48,500	49,500	50,500	51,500	52,500	53,600	54,700	55,800	56,900
Contributions from Development Charges Reserve Fund	795,302	407,938	394,656	381,914	368,092	354,809	341,527	328,640	314,964	301,682
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**5,880,889**	**5,700,996**	**5,941,877**	**6,194,697**	**6,458,320**	**6,734,870**	**7,024,334**	**7,327,755**	**7,644,419**	**7,976,102**
Wastewater Billing Recovery - Total	**3,799,403**	**3,966,502**	**4,167,981**	**4,378,940**	**4,599,804**	**4,831,017**	**5,073,042**	**5,326,364**	**5,591,487**	**5,868,938**

Table B-7
City of Kawartha Lakes
Wastewater Services
Wastewater Rate Forecast
Inflated $

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Charge by Meter Size										
5/8" - 3/4"	$ 31.02	$ 32.10	$ 33.22	$ 34.38	$ 35.58	$ 36.83	$ 38.11	$ 39.44	$ 40.82	$ 42.24
1"	$ 41.14	$ 42.58	$ 44.06	$ 45.60	$ 47.19	$ 48.84	$ 50.54	$ 52.31	$ 54.13	$ 56.02
1 ½"	$ 54.46	$ 56.36	$ 58.33	$ 60.36	$ 62.47	$ 64.65	$ 66.91	$ 69.24	$ 71.66	$ 74.16
2"	$ 87.72	$ 90.78	$ 93.95	$ 97.23	$ 100.62	$ 104.14	$ 107.77	$ 111.53	$ 115.43	$ 119.46
3"	$ 332.73	$ 344.34	$ 356.36	$ 368.80	$ 381.68	$ 395.00	$ 408.79	$ 423.06	$ 437.83	$ 453.11
4"	$ 423.48	$ 438.26	$ 453.56	$ 469.39	$ 485.78	$ 502.73	$ 520.28	$ 538.44	$ 557.24	$ 576.69
6"	$ 635.73	$ 657.92	$ 680.89	$ 704.65	$ 729.25	$ 754.71	$ 781.05	$ 808.32	$ 836.53	$ 865.73
8"	$ 877.13	$ 907.75	$ 939.43	$ 972.23	$ 1,006.16	$ 1,041.29	$ 1,077.63	$ 1,115.25	$ 1,154.18	$ 1,194.47
Annual Percentage Change		**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**	**3.5%**
Consumptive Rate (per m^3)										
Constant Rate per m^3	$ 1.52	$ 1.58	$ 1.63	$ 1.70	$ 1.76	$ 1.82	$ 1.89	$ 1.96	$ 2.03	$ 2.11
Annual Percentage Change		**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**	**3.7%**

Appendix C
Water Ontario Regulation 453/07 Financial Plan



Water Ontario Regulation 453/07 Financial Plan

City of Kawartha Lakes

Financial Plan #141-301A

Watson & Associates Economists Ltd.
905-272-3600
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February 25, 2021

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
D.C.	Development Charges
MECP	Ministry of the Environment, Conservation and Parks
MMAH	Ministry of Municipal Affairs and Housing
OCIF	Ontario Community Infrastructure Fund
O. Reg.	Ontario Regulation
P.S.A.B.	Public Sector Accounting Board
S.D.W.A.	Safe Drinking Water Act
T.C.A.	Tangible Capital Assets
W.O.A.	Water Opportunities Act

Report

Chapter 1
Introduction

1. Introduction

1.1 Study Purpose

Watson & Associates Economists Ltd. (Watson) was retained by the City of Kawartha Lakes (the City) to prepare a water financial plan as part of the five submission requirements for the purposes of obtaining a municipal drinking water license as per the *Safe Drinking Water Act, 2002*. In general, a financial plan requires an in-depth analysis of capital and operating needs, a review of current and future demand versus supply, and consideration of available funding sources. This detailed financial planning and forecasting in regard to the City's water systems has already been completed and documented by Watson within the "City of Kawartha Lakes Water and Wastewater Rate Study" (2021 Rate Study). The objective of the report provided herein is to convert the findings of the 2021 Rate Study into the prescribed reporting requirements for a financial plan as defined by Ontario Regulation 453/07 (O.Reg. 453/07).

1.2 Background

The Safe Drinking Water Act (S.D.W.A.) was passed in December, 2002 in order to address some of the recommendations made by the Walkerton Inquiry Part II report. One of the main requirements of the Act is the mandatory licensing of municipal water providers. Section 31 (1) specifically states,

> "No person shall,
>
> a) establish a new municipal drinking water system or replace or carry out an alteration to a municipal drinking water system except under the authority of and in accordance with an approval under this Part or a drinking water works permit; or
>
> b) use or operate a municipal drinking water system that was established before or after this section comes into force except under the authority of and in accordance with an approval under this Part or municipal drinking water licence."

In order to become licensed, a municipality must satisfy five key requirements as per section 44 (1):

1. Obtain a drinking water works permit.

2. Acceptance of the operational plan for the system based on the Drinking Water Quality Management Standard.

3. Accreditation of the Operating Authority.

4. Prepare and provide a financial plan.

5. Obtain permit to take water.

For licence renewals, the application must be accompanied by proof that the financial plan meets the prescribed requirements as per the Act s. 32 (5) 2. ii.

The preparation of a financial plan is a key requirement for licensing and as such, must be undertaken by all water providers.

1.2.1 Financial Plan Defined

Subsection 30 of the Act provides the following definition of financial plans:

> "financial plans" means financial plans that satisfy the requirements prescribed by the Minister. 2017, c. 2, Sched. 11, s. 6 (3)

As of time of writing, the *Sustainable Water and Sewage Systems Act*, 2002 has been repealed (see Section 2.2 of this report) however, the standards that it directs underpin the specific requirements of s.30 as they are outlined in O. Reg. 453/07 and which will be examined in detail below.

1.2.2 Financial Plan Requirements – Existing System

O.Reg. 453/07 also provides details with regards to s.30 (1) part b of the S.D.W.A. for *existing* water systems. The requirements for existing systems are summarized as follows:

- Financial plans must be approved by Council resolution (or governing body);
- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period (commencing in the year of licence expiry);

- Financial plans must include detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e. the components of a "Statement of Operations" as per the P.S.A.B.) for each year in which the financial plans apply;
- Financial plans must present financial position itemized by total financial assets, total liabilities, net debt, non-financial assets, and tangible capital assets (i.e. the components of a "Statement of Financial Position" as per P.S.A.B.) for each year in which the financial plans apply;
- Gross cash receipts/payments itemized by operating transactions, capital transactions, investing transactions and financial transactions (i.e. the components of a "Statement of Cash Flow" as per P.S.A.B.) for each year in which the financial plans apply;
- Financial plans applicable to two or more solely-owned drinking water systems can be prepared as if they are for one drinking water system;
- Financial plans are to be made available to the public upon request and at no charge;
- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge;
- Notice of the availability of the financial plans is to be given to the public; and
- Financial plan is to be submitted to the Ministry of Municipal Affairs and Housing.

1.2.3 Financial Plan Requirements – General

Given that the requirements for a financial plan is legislated under the Act, a financial plan is mandatory for water systems. The financial plans shall be for a forecast period of at least six years but longer planning horizons are encouraged. The ten-year forecast goes above and beyond the minimum requirement. The financial plan is to be completed and approved by resolution of Council or the governing body in accordance with subsection 3 (1) 1 of O. Reg. 453/07. Confirmation of approval of the financial plan must be submitted at the time of municipal drinking water license renewal (i.e. six months prior to license expiry).

A copy of the financial plan will be submitted to the Ministry of Municipal Affairs and Housing (MMAH) and not the MECP; however, the MECP may request it in the course of review of the licence renewal. Financial plans may be amended and additional information beyond what is prescribed can be included if deemed necessary. The

financial plan must contain on the front page, the appropriate financial plan number as set out in Schedule A of the Municipal Drinking Water Licence.

1.2.4 Public Sector Accounting Board (P.S.A.B.) Requirements

The components of the financial plans indicated by the regulation are consistent with the requirements for financial statement presentation as set out in section PS1200 of the Canadian Institute of Chartered Accountants Public Sector Accounting Handbook:

> "Financial statements should include a Statement of Financial Position, a Statement of Operations, a Statement of Change in Net Debt, and a Statement of Cash Flow."

The format required is to conform to the requirements of PS1200 and PS3150. The financial statements are to be reported on a full accrual accounting basis. The accrual accounting method recognizes revenues and expenses in the same period as the activities that give rise to them regardless of when they are actually paid for. Since an exchange of cash is not necessary to report a financial transaction, the accrual method is meant to provide a more accurate picture of financial position.

The accounting treatment of tangible capital assets is prescribed under section PS3150. Tangible capital assets are to be capitalized to ensure an inventory of the assets owned are recorded and to account for their ability to provide future benefits.

The Statement of Cash Flow and the Statement of Change in Net Financial Assets/Debt are required statements. The Statement of Change in Net Financial Assets/Debt reports on whether enough revenue was generated in a period to cover the expenses in the period and whether sufficient resources have been generated to support current and future activities. The Statement of Cash Flow reports on how activities were financed for a given period providing a measure of the changes in cash for that period.

1.2.5 The City's Financial Plan

The City is currently in the process of renewing the drinking water license and the previous version of the financial plan no longer meets the requirements as it must apply to a period of a least six years beginning in the year that the licenses would otherwise expire. As the City's water license expires in 2021, this financial plan provides for a 2021 start year and forecast period to 2030.

Chapter 2
Sustainable Financial Planning

2. Sustainable Financial Planning

2.1 Introduction

In general, sustainability refers to the ability to maintain a certain position over time. While the S.D.W.A. requires a declaration of the financial plan's sustainability, it does not give a clear definition of what would be considered sustainable. Instead, the Ministry of the Environment released a guideline ("Towards Financially Sustainable Drinking-Water and Wastewater Systems") that provides possible approaches to achieving sustainability. The Province's Principles of Financially Sustainable Water Services are provided below:

Principle #1: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.

Principle #2: An integrated approach to planning among water, wastewater, and storm water systems is desirable given the inherent relationship among these services.

Principle #3: Revenues collected for the provision of water services should ultimately be used to meet the needs of those services.

Principle #4: Life-cycle planning with mid-course corrections is preferable to planning over the short-term, or not planning at all.

Principle #5: An asset management plan is a key input to the development of a financial plan.

Principle #6: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.

Principle #7: Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.

Principle #8: Financial plans are "living" documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.

Principle #9: Financial plans benefit from the close collaboration of various groups, including engineers, accountants, auditors, utility staff, and municipal council.

2.2 Sustainable Water and Sewage Systems Act

The *Sustainable Water and Sewage Systems Act* (S.W.S.S.A.) was passed on December 13, 2002. The intent of the Act was to introduce the requirement for municipalities to undertake an assessment of the "full cost" of providing their water and the wastewater services. In total, there were 40 areas within the Act to which the Minister could have made Regulations. It is noted that, the regulations, which accompany the Act, were not issued and the Act was repealed on December 31, 2012.

2.3 Water Opportunities Act, 2010

Since the passage of the *Safe Drinking Water Act*, changes and refinements to the legislation have been introduced, including the *Water Opportunities Act*, 2010 (W.O.A.). The W.O.A. was introduced into legislation on May 18, 2010 and received Royal Assent on November 29, 2010.

The purposes of the W.O.A. are to: foster innovative water, wastewater and storm water technologies, services and practices; create opportunities for economic development and clean-technology jobs; and conserve and sustain water resources. To achieve this, the W.O.A. provides for the creation of performance targets (financial, operational and maintenance related), which will vary by service type and location and the required submission of conservation and sustainability plans for water, wastewater and stormwater.

The sustainability plan in the W.O.A. expands on interim legislation for financial plans included in O.Reg 453/07, to include the following:

- an asset management plan for the physical infrastructure;
- financial plan;

- water conservation plan (for water service only);
- a risk assessment;
- a strategy for maintaining and improving the services; and
- additional information considered advisable.

Where a Board has jurisdiction over a service, the plan (and any plan amendments) must be approved by the municipality in which the municipal service is provided, before submission to the Minister. The Minister may also direct preparation of joint or partially joint plans.

Regulations (still forthcoming) will prescribe details in regard to any time periods or time limits, contents of the plans, identifying which portions of the plan will require certification, the public consultation process (if required), limitations updates and refinements.

2.4 Infrastructure for Jobs and Prosperity Act, 2015

On June 4, 2015, the Province passed the *Infrastructure for Jobs and Prosperity Act* (I.J.P.A.) which, over time, will require municipalities to undertake and implement asset management plans for all infrastructure they own. On December 27, 2017, the Province of Ontario released Ontario Regulation 588/17 under I.J.P.A. which has 3 phases that municipalities must meet.

Every municipality in Ontario will have to prepare a strategic asset management policy by July 1, 2019. Municipalities will be required to review their strategic asset management policies at least every five years and make updates, as necessary. The subsequent phases are as follows:

- Phase 1 – Asset Management Plan (by July 1, 2021):
    - For core assets – Municipalities must have the following:
        - Inventory of assets;
        - Current levels of service measured by standard metrics; and
        - Costs to maintain levels of service.
- Phase 2 – Asset Management Plan (by July 1, 2023):
    - Same steps as Phase 1 but for all assets.
    - Phase 3 – Asset Management Plan (by July 1, 2024):
        - Builds on Phase 1 and 2 by adding:

- Proposed levels of service; and
- Lifecycle management and Financial strategy.

In relation to water (which is considered a core asset), municipalities will need to have an asset management plan that addresses the related infrastructure by July 1, 2021 (Phase 1). O.Reg. 588/17 specifies that the municipality's asset management plan must include the following for each asset category:

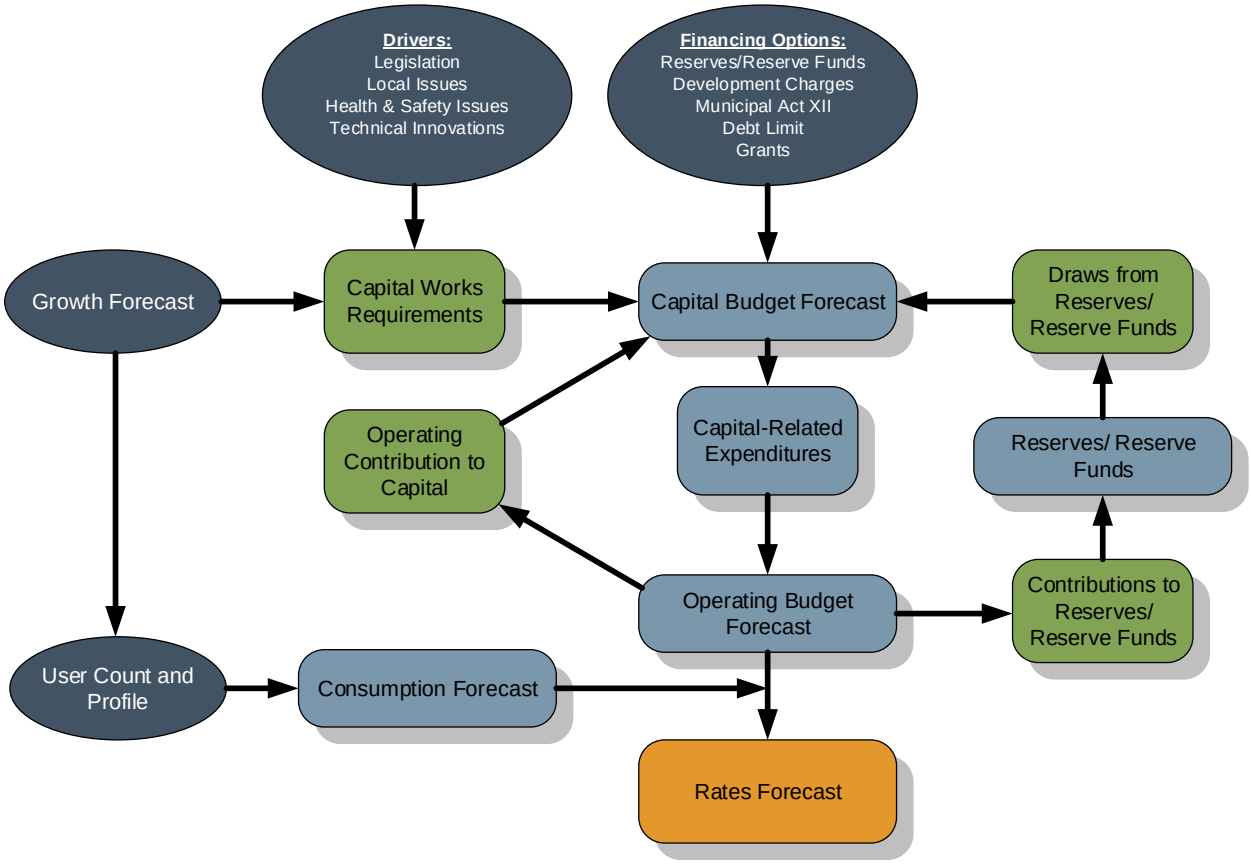
- the current levels of service being provided;
    - determined in accordance with the following qualitative descriptions and technical metrics and based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan.
- the current performance of each asset category;
- a summary of the assets in the category;
- the replacement cost of the assets in the category;
- the average age of the assets in the category, determined by assessing the average age of the components of the assets;
- the information available on the condition of the assets in the category;
- a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate; and
- the lifecycle activities that would need to be undertaken to maintain the current levels of service.

Upon completion of the asset management plan for water, the municipality will need to consider the impacts during the annual budget and forecast process.

2.5 Water Rate Study

As noted above, Watson has already completed extensive financial planning as documented in the 2021 Rate Study conducted on behalf of the City. The study process was designed to address "full cost" principles and reflect the guiding principles toward sustainable financial planning. Figure 2-1 below summarizes the process.

Figure 2-1
Water Rate Calculation Process



As a result of employing this process, the 2021 Rate Study provides a sound financial plan for the City's water systems by providing:

- A detailed assessment of current and future capital needs including an analysis of potential funding sources;
- An analysis of fixed and variable operating costs in order to determine how they will be impacted by evolving infrastructure needs and system growth;
- A review and recommendation on rate structures that ensure revenues are equitable and sufficient to meet system needs; and
- A public process that involves ongoing consultation with the main stakeholders including the City staff, Council, the general public (specifically the users of the system) and others with the aim of gaining input and collaboration on the sustainability of the financial plan.

The details of the financial plan arising from the 2021 Rate Study are contained in Appendix A.

Chapter 3
Approach

3. Approach

3.1 Overview

The 2021 Rate Study has been used as a starting point to prepare the water financial plan. The Water forecast is prepared on a modified cash basis; therefore, a conversion is required in order to present a full accrual financial plan for the purposes of this report. The conversion process used will help to establish the structure of the financial plan along with the opening balances that will underpin the forecast. This chapter outlines the conversion process utilized and summarizes the adjustments made to prepare the financial plan.

3.2 Conversion Process

The conversion from the existing modified cash basis financial plan to the full accrual reporting format required under O.Reg. 453/07 can be summarized in the following steps:

1. Calculate Tangible Capital Asset Balances
2. Convert Statement of Operations
3. Convert Statement of Financial Position
4. Convert Statement of Cash Flow and Net Assets/Debt
5. Verification and Note Preparation

3.2.1 Calculate Tangible Capital Asset Balances

In calculating tangible capital asset balances, existing and future purchased, developed, and/or contributed assets will need to be considered. For existing water assets, an inventory has already been compiled and summarized within the 2021 Rate Study as well as part of the City's annual P.S.A.B. 3150 compliance processes. Given the prospective nature of the 2021 Rate Study, replacement cost is provided for each asset. However, historical cost (which is the original cost to purchase, develop, or construct

each asset) is required for financial reporting purposes. Once historical cost is established, the following calculations are made to determine net book value:

- Accumulated amortization up to the year prior to the first forecast year.
- Amortization expense on existing assets for each year of the forecast period.
- Acquisition of new assets for each year of the forecast period.
- Disposals and related gains or losses for each year of forecast period.

Future water capital needs have also been determined and summarized within the 2021 Rate Study. The estimates, however, only represent future assets that the City anticipates purchasing or constructing without consideration for assets that are contributed by developers and other parties (at no or partial cost to the City). These contributed assets could form a significant part of the infrastructure going forward in terms of the sustainability of the system as a whole and despite their non-monetary nature; the financial plan may need to be adjusted in order to properly account for these transactions. Once the sequence and total asset acquisition has been determined for the forecast period, annual amortization of these assets for each year is calculated in a similar manner as that used for existing assets.

Once the historical cost, accumulated amortization, and amortization expenses are calculated as described above, the total net book value of the tangible capital assets can be determined and recorded on the Statement of Financial Position.

3.2.2 Convert Statement of Operations

A wide range of adjustments will be considered, dependent on the size and complexity of the system, in order to convert from the cash to full accrual basis. For example, debt repayment costs relating to the principal payment portion only needs to be removed under the accrual basis, as they no longer qualify as an expense for reporting purposes. Principal payments are reported as a decrease in debt liability on the Statement of Financial Position. Transfers to and from reserves are removed as these transactions are represented by changes in cash and accumulated surplus. Finally, expenses relating to tangible capital assets, such as amortization, write-offs, and (gain)/loss on disposal of assets are reported on the Statement of Operations in order to capture the

allocation of the cost of these assets to operating activities over their useful lives and therefore are added in under the accrual basis.

Table 3-1
Conversion Adjustments
Statement of Operations (Water)

Modified Cash Basis	Budget 2021	Adjustments DR	Adjustments CR	Full Accrual Budget 2021	Accrual Basis
Revenues					**Revenues**
Base Charge Revenue	5,268,537			5,268,537	Base Charge Revenue
Rate Based Revenue	7,438,694			7,438,694	Rate Based Revenue
Transfers from Reserves	370,100	370,100			
			370,100	370,100	Earned Development Charges and Gas Tax Revenue
Other Revenue	342,220		1,168,167	1,510,387	Other Revenue
Total Revenues	**13,419,551**			**14,587,718**	**Total Revenues**
Expenditures					**Expenses**
Operating	7,800,953	130,000		7,930,953	Operating Expenses
Capital					
Transfers to Reserves	2,100,000		2,100,000		
Transfers to Capital	-		-		
Debt Repayment (Principal & Interest)	3,518,598		2,505,407	1,013,191	Interest on Debt
		2,001,151		2,001,150	Amortization
		-		-	Loss on Disposal of Tangible Capital Assets
Total Expenditures	**13,419,551**			**10,945,294**	**Total Expenses**
Net Expenditures	**-**			**3,642,424**	**Annual Surplus/(Deficit)**
Increase (decrease) in amounts to be recovered	**-**			71,348,226	Accumulated Surplus/(Deficit), beginning of year
Change in Fund Balances	**-**	**3,642,424**	**-**	**74,990,650**	**Accumulated Surplus/(Deficit), end of year**

TOTAL ADJUSTMENTS	**6,143,674**	**6,143,674**

Note: The combined adjustments above should be balanced and net to $0 (i.e. Total DR = Total CR)

3.2.3 Convert Statement of Financial Position

Once the Statement of Operations has been converted and the net book value of tangible capital assets has been recorded, balances for the remaining items on the Statement of Financial Position are determined and recorded (see Figure 3-2). As noted earlier, the applicable balances from the Statement of Capital and the Statement of Reserve and Reserve Funds will need to be transferred to this statement. The opening/actual balances for the remaining accounts such as accounts receivable, inventory, accounts payable, outstanding debt (principal only), are recorded and classified according to the structure of the Statement of Financial Position as outlined in PS1200.

It is acknowledged that some of the balances required on the Statement of Financial Position will be consolidated across the City and as such, will be difficult to isolate the information that is relevant to water. An example of this is accounts receivable, which may be administered centrally by the Finance Department. O.Reg. 453/07 allows for the exclusion of these numbers if they are not known at the time of preparing the financial plan. Please refer to the Financial Plan Notes in Chapter 4 for more details.

3.2.4 Convert Statement of Cash Flow and Net Financial Assets/Debt

The Statement of Cash Flow summarizes how the City financed its activities or in other words, how the costs of providing services were recovered. The statement is derived using comparative Statement of Financial Position, the current Statement of Operations and other available transaction data.

The Statement of Change in Net Financial Assets/Debt is a new statement which reconciles the difference between the surplus or deficit from current operations and the change in net financial assets/debt for the year. This is significant, as net debt provides an indication of future revenue requirements. In order to complete the Statement of Net Financial Assets/Debt, additional information regarding any gains/losses on disposals of assets, asset write-downs, acquisition/use of supplies inventory, and the acquisition use of prepaid expenses is necessary, (if applicable). Although the Statement of Change in Net Financial Assets/Debt is not required under O.Reg. 453/07, it has been included in this report as a further indicator of financial viability.

Table 3-2
Conversion Adjustments
Statements of Financial Position (Water)

Modified Cash Basis	Budget 2021	Adjustments DR	Adjustments CR	Full Accrual Budget 2021	Accrual Basis
ASSETS					**ASSETS**
Financial Assets					**Financial Assets**
Cash	10,724,187			10,724,187	Cash
Accounts Receivable	1,301,637			1,301,637	Accounts Receivable
Total Financial Assets	**12,025,824**			**12,025,824**	**Total Financial Assets**
Non-Financial Assets					
Inventory of Supplies	-		-		
Prepaid Expenses	-		-		
Total Non-Financial Assets	-				
LIABILITIES					**Liabilities**
Accounts Payable & Accrued Liabilities	884,048			884,048	Accounts Payable & Accrued Liabilities
Gross Long-term Liabilities	32,610,356			32,610,356	Debt (Principal only)
Deferred Revenue	3,005,602			3,005,602	Deferred Revenue
Other	-			-	Other
Total Liabilities	**36,500,006**			**36,500,006**	**Total Liabilities**
Net Assets/(Debt)	**(24,474,182)**			**(24,474,182)**	**Net Financial Assets/(Debt)**
		99,594,832	130,000	99,464,832	**Non-Financial Assets** Tangible Capital Assets
				99,464,832	**Total Non-Financial Assets**
Municipal Position					
Water Reserves	8,136,174	8,136,174	-		
Development Charge Reserve Fund	3,005,602	3,005,602	-		
Amounts to be Recovered	(35,615,958)	-	35,615,958		
Total Municipal Position	**(24,474,182)**		**74,990,650**	**74,990,650**	**Accumulated Surplus/(Deficit), end of year**
TOTAL ADJUSTMENTS		**110,736,608**	**110,736,608**		

Note: The combined adjustments above should be balanced and net to $0 (i.e. Total DR = Total CR)

3.2.5 Verification and Note Preparation

The final step in the conversion process is to ensure that all of the statements created by the previous steps are in balance. The Statement of Financial Position summarizes the resources and obligations of the City at a set point in time. The Statement of Operations summarizes how these resources and obligations changed over the reporting period. To this end, the accumulated surplus/deficit reported on the Statement of Financial Position should equal the accumulated surplus/deficit reported on the Statement of Operations.

The Statement of Change in Net Financial Assets/Debt and the Statement of Financial Position are also linked in terms of reporting on net financial assets/debt. On the Statement of Financial Position, net financial assets/debt is equal to the difference between financial assets and liabilities and should equal net financial assets/debt as calculated on the Statement of Net Financial Assets/Debt.

While not part of the financial plan, the accompanying notes are important to summarize the assumptions and estimates made in preparing the financial plan. Some of the significant assumptions that need to be addressed within the financial plan are as follows:

a) Opening cash balances – Opening cash balances are necessary to complete the Statement of Cash Flows and balance the Statement of Financial Position. Preferably, opening cash balances should be derived from actual information contained within the City's ledgers. However, it may not be possible to extract this information from the ledgers for water alone; therefore, a reasonable proxy will be needed. One approach is to assume that opening cash balances equal ending reserve and reserve fund balances from the previous year adjusted for accrual-based transactions reflected by accounts receivable/payable balances. The following equation outlines this approach:

    Ending Reserve/Reserve Fund Balance
    Plus: Ending Accounts Payable Balance
    Less: Ending Accounts Receivable Balance
    Equals: Approximate Ending Cash Balance

b) Amortization Expense – The method and timing of amortization should be based on the City's amortization policy. Otherwise, an assumption will need to be made and applied consistently throughout the financial plan.

c) Accumulated Amortization – Will be based on the culmination of accumulated amortization expenses throughout the life of each asset however derived, along with information on construction/acquisition date and useful life obtained from the 2021 Rate Study.

d) Contributed Assets – As noted earlier, contributed assets could represent a significant part of the City's infrastructure acquisitions. As such, a reasonable estimate of value and timing of acquisition/donation may be required in order to adequately capture these assets. In the case where contributed assets are deemed to be insignificant or unknown, an assumption of "no contributed assets within the forecast period" will be made.

e) Accumulated Surplus – The magnitude of the surplus in this area may precipitate the need for additional explanation especially in the first year of reporting. This Accumulated Surplus captures the historical infrastructure investment which has not been reported in the past but has accumulated to significant levels. It also includes all water reserve and reserve fund balances.

f) Other Revenues – Will represent the recognition of revenues previously deferred (i.e. development charge revenues) and/or accrued revenues (developer contributions), and/or other minor miscellaneous revenues.

Chapter 4
Financial Plan

4. Financial Plan

4.1 Introduction

The following tables provide the complete financial plan for the City's water systems. A brief description and analysis of each table is provided below. It is important to note that the financial plan that follows is a forward look at the financial position of the City's water system. It is not an audited document[1] and contains various estimates as detailed in the "Notes to the Financial Plan" section below.

4.2 Water Financial Plan

4.2.1 Statement of Financial Position (Table 4-1)

The Statement of Financial Position provides information that describes the assets, liabilities, and accumulated surplus of the City's water systems. The first important indicator is net financial assets/(debt), which is defined as the difference between financial assets and liabilities. This indicator provides an indication of the system's "future revenue requirement." A net financial asset position is where financial assets are greater than liabilities and implies that the system has the resources to finance future operations. Conversely, a net debt position implies that the future revenues generated by the system will be needed to finance past transactions, as well as future operations. Table 4-1 indicates that at the end of 2021, due to the anticipated issuance of new debt, the City's water system will be in a net debt position of $24.5 million. Net debt, although fluctuating, improves by approximately $1.9 million over the forecast period, to $21.4 million at the end of 2030.

Another important indicator on the Statement of Financial Position is the tangible capital asset balance. As noted earlier, providing this information is a requirement for municipalities as part of PS3150 compliance and is significant from a financial planning perspective for the following reasons:

[1] O.Reg. 453/07 does not require an audited financial plan.

- Tangible capital assets such as water mains and treatment plants are imperative to water service delivery.
- These assets represent significant economic resources in terms of their historical and replacement costs. Therefore, ongoing capital asset management is essential to managing significant replacements and repairs.
- The annual maintenance required by these assets has an enduring impact on water operational budgets.

In general terms, an increase in the tangible capital asset balance indicates that assets may have been acquired either through purchase by the municipality or donation/contribution by a third party. A decrease in the tangible capital asset balance can indicate a disposal, write down, or use of assets. A use of assets is usually represented by an increase in accumulated amortization due to annual amortization expenses arising as a result of allocating the cost of the asset to operations over the asset's useful life. Table 4-1 shows tangible capital assets are expected to increase by approximately $40.2 million over the 10-year forecast period. This indicates that the City has plans to invest in tangible capital assets in excess of the anticipated use of existing assets over the forecast period.

4.2.2 Statement of Operations (Table 4-2)

The Statement of Operations summarizes the revenues and expenses generated by the water system for a given period. The annual surplus/deficit measures whether the revenues generated were sufficient to cover the expenses incurred and in turn, whether net financial assets have been maintained or depleted. Table 4-2 illustrates the ratio of expenses to revenues decreasing from 75% to 66% over the forecast period. As a result, annual surpluses are anticipated in every year of the forecast. It is important to note that an annual surplus is beneficial to ensure funding is available to non-expense costs such as tangible capital asset acquisitions, reserve/reserve fund transfers and debt principal payments.

Another important indicator on this statement is accumulated surplus/deficit. An accumulated surplus indicates that the available net resources are sufficient to provide future water services. An accumulated deficit indicates that resources are insufficient to provide future services and that borrowing or rate increases are required to finance annual deficits. From Table 4-2, the financial plan proposes to add approximately $46.9

million to a 2021 accumulated surplus of $71.3 million over the forecast period. This accumulated surplus, as indicated in Table 4-2, is predominantly made up of reserve and reserve fund balances as well as historical investments in tangible capital assets.

4.2.3 Statement of Change in Net Financial Assets/Debt (Table 4-3)

The Statement of Change in Net Financial Assets/Debt indicates whether revenue generated was sufficient to cover operating and non-financial asset costs (i.e. inventory supplies, prepaid expenses, tangible capital assets, etc.) and in so doing, explains the difference between the annual surplus/deficit and the change in net financial assets/debt for the period. Table 4-3 indicates that in the years 2022, 2023, 2025, 2028, and 2029, forecasted tangible capital asset acquisitions (net of amortization for the year) exceed forecasted annual surplus, resulting in decreases in net financial assets during these years. This is due to the significant capital assets anticipated to be constructed during these years. In each of the other years (i.e. 2021, 2024, 2026, 2027, and 2030) the forecasted annual surplus exceeds the forecasted tangible capital asset acquisitions (net of amortization for the year), resulting in an increase to net financial assets each year. This allows for a long-term plan of funding capital through accumulated surplus (i.e. reserves and reserve funds). This is evidenced by the ratio of cumulative annual surplus before amortization to cumulative tangible capital asset acquisitions fluctuating over the forecast period i.e. deteriorating to 0.99, then improving over the forecast period (note: a desirable ratio is 1:1 or better).

4.3 Statement of Cash Flow (Table 4-4)

The Statement of Cash Flow summarizes how water systems are expected to generate and use cash resources during the forecast period. The transactions that provide/use cash are classified as operating, capital, investing, and financing activities as shown in Table 4-4. This statement focuses on the cash aspect of these transactions and thus is the link between cash- and accrual-based reporting. Table 4-4 indicates that cash from operations will be used to fund capital transactions (i.e. tangible capital asset acquisitions) and build internal reserves and reserve funds over the forecast period. The financial plan projects the cash position of the City's water system to deteriorate from a balance of approximately $8.0 million at the beginning of 2021, to just over $6.1

million by the end of 2030. For further discussions, on projected cash balances please refer to the Notes to the Financial Plan.

Table 4-1
Statement of Financial Position: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2030

	Notes	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets											
Cash	1	10,724,187	7,330,184	4,711,121	3,454,077	3,810,276	3,611,904	4,051,846	4,913,796	5,684,020	6,059,299
Accounts Receivable	1	1,301,637	1,341,108	1,388,087	1,436,554	1,486,529	1,538,078	1,591,246	1,646,067	1,702,586	1,760,856
Total Financial Assets		**12,025,824**	**8,671,292**	**6,099,208**	**4,890,631**	**5,296,805**	**5,149,982**	**5,643,092**	**6,559,863**	**7,386,606**	**7,820,155**
Liabilities											
Bank Indebtedness		-	-	-	-	-	-	-	-	-	-
Accounts Payable & Accrued Liabilities	1	884,048	901,732	919,773	938,166	956,899	976,028	995,531	1,015,477	1,035,796	1,056,535
Debt (Principal only)	2	32,610,356	29,881,662	27,265,714	24,593,988	24,414,793	23,196,203	21,714,500	22,083,916	23,486,086	21,884,081
Deferred Revenue	3	3,005,602	2,708,753	3,141,119	3,032,358	3,829,906	3,663,954	4,137,561	5,034,386	5,840,810	6,253,620
Total Liabilities		**36,500,006**	**33,492,147**	**31,326,606**	**28,564,512**	**29,201,598**	**27,836,185**	**26,847,592**	**28,133,779**	**30,362,692**	**29,194,236**
Net Financial Assets/(Debt)		**(24,474,182)**	**(24,820,855)**	**(25,227,398)**	**(23,673,881)**	**(23,904,793)**	**(22,686,203)**	**(21,204,500)**	**(21,573,916)**	**(22,976,086)**	**(21,374,081)**
Non-Financial Assets											
Tangible Capital Assets	4	99,464,832	103,537,615	107,508,184	110,424,789	114,641,467	118,838,929	122,165,453	127,732,748	134,840,244	139,685,530
Total Non-Financial Assets		**99,464,832**	**103,537,615**	**107,508,184**	**110,424,789**	**114,641,467**	**118,838,929**	**122,165,453**	**127,732,748**	**134,840,244**	**139,685,530**
Accumulated Surplus/(Deficit)	5	**74,990,650**	**78,716,760**	**82,280,786**	**86,750,908**	**90,736,674**	**96,152,726**	**100,960,953**	**106,158,832**	**111,864,158**	**118,311,449**

Financial Indicators	Total Change	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1) Increase/(Decrease) in Net Financial Assets	3,879,039	778,938	(346,673)	(406,543)	1,553,517	(230,912)	1,218,590	1,481,703	(369,416)	(1,402,170)	1,602,005
2) Increase/(Decrease) in Tangible Capital Assets	43,084,184	2,863,486	4,072,783	3,970,569	2,916,605	4,216,678	4,197,462	3,326,524	5,567,295	7,107,496	4,845,286
3) Increase/(Decrease) in Accumulated Surplus	46,963,223	3,642,424	3,726,110	3,564,026	4,470,122	3,985,766	5,416,052	4,808,227	5,197,879	5,705,326	6,447,291

Table 4-2
Statement of Operations: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2030

	Notes	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water Revenue											
Base Charge Revenue		5,268,537	5,384,882	5,541,012	5,700,614	5,863,758	6,030,513	6,200,952	6,375,148	6,553,175	6,735,108
Rate Based Revenue		7,438,694	7,702,109	8,026,034	8,361,612	8,709,217	9,069,231	9,442,050	9,828,079	10,227,736	10,641,453
Earned Development Charges Revenue	**3**	370,100	1,391,039	691,138	1,251,431	382,369	1,364,688	756,950	374,313	503,990	929,620
Other Revenue	**6**	1,510,387	448,231	395,967	381,141	380,401	387,801	395,400	403,000	410,800	418,600
Total Revenues		**14,587,718**	**14,926,261**	**14,654,150**	**15,694,798**	**15,335,744**	**16,852,233**	**16,795,352**	**16,980,539**	**17,695,700**	**18,724,781**
Water Expenses											
Operating Expenses	**Sch. 4-1**	7,930,953	8,278,000	8,116,200	8,278,500	8,470,800	8,612,600	9,164,700	8,960,700	9,140,000	9,355,000
Interest on Debt	**2**	1,013,191	858,934	837,493	746,781	655,856	574,043	534,949	475,255	416,870	417,776
Amortization	**4**	2,001,150	2,063,217	2,136,431	2,199,395	2,223,322	2,249,538	2,287,476	2,346,705	2,433,504	2,504,714
Loss on Disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-
Total Expenses		**10,945,294**	**11,200,151**	**11,090,124**	**11,224,676**	**11,349,978**	**11,436,181**	**11,987,125**	**11,782,660**	**11,990,374**	**12,277,490**
Annual Surplus/(Deficit)		**3,642,424**	**3,726,110**	**3,564,026**	**4,470,122**	**3,985,766**	**5,416,052**	**4,808,227**	**5,197,879**	**5,705,326**	**6,447,291**
Accumulated Surplus/(Deficit), beginning of year	**5**	71,348,226	74,990,650	78,716,760	82,280,786	86,750,908	90,736,674	96,152,726	100,960,953	106,158,832	111,864,158
Accumulated Surplus/(Deficit), end of year		74,990,650	78,716,760	82,280,786	86,750,908	90,736,674	96,152,726	100,960,953	106,158,832	111,864,158	118,311,449
Note 5:											
Accumulated Surplus/(Deficit) Reconciliation:		**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Reserve Balances											
Reserves: Development Charges		3,005,602	2,708,753	3,141,119	3,032,358	3,829,906	3,663,954	4,137,561	5,034,386	5,840,810	6,253,620
Reserves: Capital/Other		8,136,174	5,060,807	2,038,316	920,107	510,000	510,000	510,000	510,000	510,000	510,000
Total Reserves Balance		**11,141,776**	**7,769,560**	**5,179,435**	**3,952,465**	**4,339,906**	**4,173,954**	**4,647,561**	**5,544,386**	**6,350,810**	**6,763,620**
Less: Debt Obligations and Deferred Revenue		(35,615,958)	(32,590,415)	(30,406,833)	(27,626,346)	(28,244,699)	(26,860,157)	(25,852,061)	(27,118,302)	(29,326,896)	(28,137,701)
Add: Tangible Capital Assets	**4**	99,464,832	103,537,615	107,508,184	110,424,789	114,641,467	118,838,929	122,165,453	127,732,748	134,840,244	139,685,530
Total Ending Balance		**74,990,650**	**78,716,760**	**82,280,786**	**86,750,908**	**90,736,674**	**96,152,726**	**100,960,953**	**106,158,832**	**111,864,158**	**118,311,449**

Financial Indicators	**Total Change**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
1) Expense to Revenue Ratio		75%	75%	76%	72%	74%	68%	71%	69%	68%	66%
2) Increase/(Decrease) in Accumulated Surplus	46,963,223	3,642,424	3,726,110	3,564,026	4,470,122	3,985,766	5,416,052	4,808,227	5,197,879	5,705,326	6,447,291

Schedule 4-1
Statement of Operating Expenses: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2030

	Notes	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Expenses											
WATER - EMILY - BIRCH POINT		146,451	149,400	152,400	155,400	158,500	161,700	164,900	168,200	171,600	175,000
WATER - LINDSAY		1,684,028	1,717,700	1,752,100	1,787,100	1,822,800	1,859,300	1,896,500	1,934,400	1,973,100	2,012,600
WATER - LINDSAY - THORNHILL		191,208	195,000	198,900	202,900	207,000	211,100	215,300	219,600	224,000	228,500
WATER - LINDSAY - VERULAM TANK		24,763	25,300	25,800	26,300	26,800	27,300	27,800	28,400	29,000	29,600
WATER-LINDSAY-OAKWOOD WATER		73,945	75,400	76,900	78,400	80,000	81,600	83,200	84,900	86,600	88,300
WATER - FEN TWP-STHVIEW ESTATES		246,853	251,800	256,800	261,900	267,100	272,400	277,800	283,400	289,100	294,900
WATER - MARIPOSA - SONYA		95,591	97,500	99,500	101,500	103,500	105,600	107,700	109,900	112,100	114,300
WATER-MARIPOSA-CANADIANA SHR		236,455	241,200	246,000	250,900	255,900	261,000	266,200	271,500	276,900	282,400
WATER-MARIPOSA-WOODS/MANILLA		95,991	97,900	99,900	101,900	103,900	106,000	108,100	110,300	112,500	114,800
WATER - MARIPOSA - MARIPOSA EST		156,256	159,400	162,600	165,900	169,200	172,600	176,100	179,600	183,200	186,900
WATER - MARIPOSA-PLEASANT POINT		142,918	145,800	148,700	151,700	154,700	157,800	161,000	164,200	167,500	170,900
WATER - MARIPOSA - KINGS BAY		155,781	158,900	162,100	165,300	168,600	172,000	175,400	178,900	182,500	186,200
WATER - ELDON-WESTERN TRENT		175,779	179,300	182,900	186,600	190,300	194,100	198,000	202,000	206,000	210,100
WATER - FENELON FALLS		584,029	595,700	607,600	619,800	632,200	644,800	657,700	670,900	684,300	698,000
WATER - NORLAND		239,905	244,700	249,600	254,600	259,700	264,900	270,200	275,600	281,100	286,700
WATER - KINMOUNT - DOWNTOWN		217,159	221,500	225,900	230,400	235,000	239,700	244,500	249,400	254,400	259,500
WATER - OMEMEE - VICTORIA GLEN		89,423	91,200	93,000	94,900	96,800	98,700	100,700	102,700	104,800	106,900
WATER - WOODVILLE		213,631	217,900	222,300	226,700	231,200	235,800	240,500	245,300	250,200	255,200
WATER - BOBCAYGEON		719,459	733,800	748,500	763,500	778,800	794,400	810,300	826,500	843,000	859,900
WATER - BOBCAYGN-VICTORIA PL		132,740	135,400	138,100	140,900	143,700	146,600	149,500	152,500	155,600	158,700
WATER - MANVERS - JANETVILLE		140,795	143,600	146,500	149,400	152,400	155,400	158,500	161,700	164,900	168,200
WATER - MANVERS-MANORVIEW		126,643	129,200	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
WATER - MANVERS - WOODFIELD		109,480	111,700	113,900	116,200	118,500	120,900	123,300	125,800	128,300	130,900
WATER - MANVERS - PINEWOOD P/P		129,138	131,700	134,300	137,000	139,700	142,500	145,400	148,300	151,300	154,300
WATER-SEWER - ADMINISTRATION		1,672,532	1,706,000	1,740,100	1,774,900	1,810,400	1,846,600	1,883,500	1,921,200	1,959,600	1,998,800
Non TCA - Expenses from Capital Budget	**7**	130,000	321,000	-	-	27,000	-	380,000	-	-	32,000
TOTAL OPERATING EXPENSES		**7,930,953**	**8,278,000**	**8,116,200**	**8,278,500**	**8,470,800**	**8,612,600**	**9,164,700**	**8,960,700**	**9,140,000**	**9,355,000**

Table 4-3
Statement of Changes in Net Financial Assets/Debt: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2030

	Notes	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Surplus/(Deficit)		3,642,424	3,614,088	3,446,496	4,346,888	3,866,076	5,292,899	4,672,310	5,056,298	5,557,462	6,292,965
Less: Acquisition of Tangible Capital Assets	4	(4,864,636)	(6,136,000)	(6,107,000)	(5,116,000)	(6,440,000)	(6,447,000)	(5,614,000)	(7,914,000)	(9,541,000)	(7,350,000)
Add: Amortization of Tangible Capital Assets	4	2,001,150	2,063,217	2,136,431	2,199,395	2,223,322	2,249,538	2,287,476	2,346,705	2,433,504	2,504,714
		(2,863,486)	(4,072,783)	(3,970,569)	(2,916,605)	(4,216,678)	(4,197,462)	(3,326,524)	(5,567,295)	(7,107,496)	(4,845,286)
Increase/(Decrease) in Net Financial Assets/(Net Debt)		**778,938**	**(458,695)**	**(524,073)**	**1,430,283**	**(350,602)**	**1,095,437**	**1,345,786**	**(510,997)**	**(1,550,034)**	**1,447,679**
Net Financial Assets/(Net Debt), beginning of year		(25,253,120)	(24,474,182)	(24,932,877)	(25,456,950)	(24,026,667)	(24,377,269)	(23,281,832)	(21,936,046)	(22,447,043)	(23,997,077)
Net Financial Assets/(Net Debt), end of year		**(24,474,182)**	**(24,932,877)**	**(25,456,950)**	**(24,026,667)**	**(24,377,269)**	**(23,281,832)**	**(21,936,046)**	**(22,447,043)**	**(23,997,077)**	**(22,549,398)**

Financial Indicators		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1) Acquisition of Tangible Capital Assets (Cumulative)		4,864,636	11,000,636	17,107,636	22,223,636	28,663,636	35,110,636	40,724,636	48,638,636	58,179,636	65,529,636
2) Annual Surplus/Deficit before Amortization (Cumulative)		5,643,574	11,320,879	16,903,806	23,450,089	29,539,487	37,081,924	44,041,710	51,444,713	59,435,679	68,233,358
3) Ratio of Annual Surplus before Amortization to Acquisition of TCA's (Cumulative)		1.16	1.03	0.99	1.06	1.03	1.06	1.08	1.06	1.02	1.04

Table 4-4
Statement of Cash Flow – Indirect Method: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2030

	Notes	Forecast									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Transactions											
Annual Surplus/Deficit		3,642,424	3,614,088	3,446,496	4,346,888	3,866,076	5,292,899	4,672,310	5,056,298	5,557,462	6,292,965
Add: Amortization of TCA's	4	2,001,150	2,063,217	2,136,431	2,199,395	2,223,322	2,249,538	2,287,476	2,346,705	2,433,504	2,504,714
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-
Less: Earned Deferred Revenue	3	(370,100)	(1,391,039)	(691,138)	(1,251,431)	(382,369)	(1,364,688)	(756,950)	(374,313)	(503,990)	(929,620)
Less: Developer Contributions		-	-	-	-	-	-	-	-	-	-
Add: Deferred Revenue Proceeds		1,079,635	1,094,189	1,123,504	1,142,671	1,179,917	1,198,735	1,230,557	1,271,139	1,310,413	1,342,431
Change in A/R (Increase)/Decrease		(42,062)	(28,817)	(46,669)	(48,148)	(49,649)	(51,213)	(52,824)	(54,468)	(56,156)	(57,899)
Change in A/P Increase/(Decrease)		(35,543)	17,684	18,041	18,393	18,733	19,129	19,503	19,946	20,319	20,739
Less: Interest Proceeds		(159,533)	(97,035)	(35,466)	(11,124)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)
Cash Provided by Operating Transactions		**6,115,971**	**5,272,287**	**5,951,200**	**6,396,644**	**6,846,030**	**7,334,401**	**7,390,072**	**8,255,307**	**8,751,553**	**9,163,330**
Capital Transactions											
Proceeds on sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-
Less: Cash Used to acquire Tangible Capital Assets	4	(4,864,636)	(6,136,000)	(6,107,000)	(5,116,000)	(6,440,000)	(6,447,000)	(5,614,000)	(7,914,000)	(9,541,000)	(7,350,000)
Cash Applied to Capital Transactions		**(4,864,636)**	**(6,136,000)**	**(6,107,000)**	**(5,116,000)**	**(6,440,000)**	**(6,447,000)**	**(5,614,000)**	**(7,914,000)**	**(9,541,000)**	**(7,350,000)**
Investing Transactions											
Proceeds from Investments		159,533	97,035	35,466	11,124	10,000	10,000	10,000	10,000	10,000	10,000
Less: Cash Used to Acquire Investments		-	-	-	-	-	-	-	-	-	-
Cash Provided by (applied to) Investing Transactions		**159,533**	**97,035**	**35,466**	**11,124**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
Financing Transactions											
Proceeds from Debt Issue	2	3,772,003	-	-	-	2,743,787	1,401,583	1,174,921	2,950,380	3,899,433	738,788
Less: Debt Repayment (Principal only)	2	(2,505,407)	(2,728,695)	(2,615,948)	(2,671,726)	(2,450,506)	(2,497,020)	(2,520,707)	(2,439,383)	(2,349,400)	(2,186,466)
Cash Applied to Financing Transactions		**1,266,596**	**(2,728,695)**	**(2,615,948)**	**(2,671,726)**	**293,281**	**(1,095,437)**	**(1,345,786)**	**510,997**	**1,550,033**	**(1,447,678)**
Increase in Cash and Cash Equivalents		2,677,464	(3,495,373)	(2,736,282)	(1,379,958)	709,311	(198,036)	440,286	862,304	770,586	375,652
Cash and Cash Equivalents, beginning of year	1	8,046,723	10,724,187	7,228,814	4,492,532	3,112,574	3,821,885	3,623,849	4,064,135	4,926,439	5,697,025
Cash and Cash Equivalents, end of year	1	**10,724,187**	**7,228,814**	**4,492,532**	**3,112,574**	**3,821,885**	**3,623,849**	**4,064,135**	**4,926,439**	**5,697,025**	**6,072,677**

Water

Notes to Financial Plan

The financial plan format as outlined in Chapter 4 closely approximates the full accrual format used by municipalities (2009 onward) on their audited financial statements. However, the financial plan is not an audited document and contains various estimates. In this regard, Section 3 (2) of O.Reg. 453/07 states the following:

> "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:
>
> 1. Sub-subparagraphs 4 i A, B and C of subsection (1)
> 2. Sub-subparagraphs 4 iii A, C, E and F of subsection (1)."

The information referred to in sub-subparagraphs 4 i A, B and C of subsection (1) includes:

A. Total financial assets (i.e. cash and receivables);
B. Total liabilities (i.e. payables, debt and deferred revenue);
C. Net debt (i.e. the difference between A and B above).

The information referred to in sub-subparagraphs 4 iii A, C, E and F of subsection (1) includes:

A. Operating transactions that are cash received from revenues, cash paid for operating expenses and finance charges
B. Investing transactions that are acquisitions and disposal of investments
C. Change in cash and cash equivalents during the year
D. Cash and cash equivalents at the beginning and end of the year

In order to show a balanced financial plan in a full accrual format for the City of Kawartha Lakes, some of the items listed above have been estimated given that the City does not maintain all financial asset and liability data separately for water. Usually, this type of data is combined with the financial assets and liabilities of other departments and services given that there is not a current obligation to disclose this data separately (as there is with revenue and expenses).

The assumptions used have been documented below:

1. **Cash, Receivables and Payables**

   It is assumed that the opening cash balances required to complete the financial plan are equal to:

   Ending Reserve/Reserve Fund Balance

   Plus: Ending Accounts Payable Balance

   Less: Ending Accounts Receivable Balance

   Equals: Approximate Ending Cash Balance

   For the City of Kawartha Lakes, receivable and payable balances were estimated for each year of the forecast based on the following factors:

   a) Receivables: Based on historical levels of receivables as a percentage of annual water and wastewater revenue earned (as per the 2018 and 2019 Financial Information Returns along with additional data provided by the City for 2018 and 2019); and

   b) Payables: Based on historical levels of payables as a percentage of annual water and wastewater expenses incurred (as per the 2018 and 2019 Financial Information Returns along with additional data provided by the City for 2018 and 2019).

2. **Debt**

   Outstanding water related debt at the end of 2020 was $31.3 million, with additional debt proceeds anticipated throughout the forecast period. *Principal* repayments for existing and new debt over the forecast period are scheduled as follows:

Year	Principal Payments
2021	$ 2,505,407
2022	$ 2,728,695
2023	$ 2,615,948
2024	$ 2,671,726
2025	$ 2,450,506
2026	$ 2,497,020
2027	$ 2,501,164
2028	$ 2,414,366
2029	$ 2,317,464
2030	$ 2,147,017
Total	**$ 24,849,314**

For financial reporting purposes, debt principal payments represent a decrease in debt liability and the interest payments represent a current year operating expense.

3. Deferred Revenue

Deferred revenue is made up of development charge reserve fund balances which are considered to be a liability for financial reporting purposes until the funds are used to emplace the works for which they have been collected. In years when the water development charge reserve fund balance is negative, it is shown as an asset (accounts receivable – other) for financial reporting purposes, representing future amounts to be collected from developers.

4. Tangible Capital Assets

- Opening net book value of tangible capital assets includes water related assets in the following categories:
    i. Infrastructure
    ii. Facilities
    iii. Equipment; and
    iv. Land

- Amortization is calculated based on the straight-line approach with 50% amortization in the year of acquisition or construction.

- Given the planned asset replacement forecast in the 2021 Rate Study, useful life on acquisitions is assumed to be equal to typical values assigned by the City for each asset category.
- Write-offs are assumed to equal $0 for each year in the forecast period.
- Tangible capital assets are shown on a net basis. It is assumed that disposals occur when the asset is being replaced, unless the asset is documented as a new asset. The value of each asset disposal is calculated by estimating the original purchase/construction date and deflating current replacement cost values to those estimated dates in order to calculate original historical cost.
- Gains/losses on disposal are assumed to be $0 (it is assumed that historical cost is equal to accumulated amortization for all disposals).
- Residual value is assumed to be $0 for all assets contained within the forecast period.
- Contributed Assets, as described in Section 3.2.1, are deemed to be insignificant/ unknown during the forecast period and are therefore assumed to be $0.
- The City is unaware of any specific lead service piping in the municipal water system. The lifecycle replacement program targets the replacement of existing infrastructure that may have lead services or components, such as older cast iron mains. Any lead service pipes or components will be replaced, if and when found.

The balance of tangible capital assets is summarized as follows:

Asset Historical Cost	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Tangible Capital Asset Balance	135,749,960	139,945,959	145,840,234	151,078,384	156,029,102	162,164,973	168,557,272	173,855,121	181,214,798	189,665,639
Acquisitions	4,864,636	6,136,000	6,107,000	5,116,000	6,440,000	6,447,000	5,614,000	7,914,000	9,541,000	7,350,000
Disposals	668,637	241,725	868,850	165,282	304,129	54,701	316,151	554,323	1,090,159	96,665
Closing Tangible Capital Asset Balance	**139,945,959**	**145,840,234**	**151,078,384**	**156,029,102**	**162,164,973**	**168,557,272**	**173,855,121**	**181,214,798**	**189,665,639**	**196,918,974**
Opening Accumulated Amortization	39,148,614	40,481,127	42,302,619	43,570,200	45,604,313	47,523,506	49,718,343	51,689,668	53,482,050	54,825,395
Amortization Expense	2,001,150	2,063,217	2,136,431	2,199,395	2,223,322	2,249,538	2,287,476	2,346,705	2,433,504	2,504,714
Amortization on Disposal	668,637	241,725	868,850	165,282	304,129	54,701	316,151	554,323	1,090,159	96,665
Ending Accumulated Amortization	**40,481,127**	**42,302,619**	**43,570,200**	**45,604,313**	**47,523,506**	**49,718,343**	**51,689,668**	**53,482,050**	**54,825,395**	**57,233,444**
Net Book Value	**99,464,832**	**103,537,615**	**107,508,184**	**110,424,789**	**114,641,467**	**118,838,929**	**122,165,453**	**127,732,748**	**134,840,244**	**139,685,530**

5. Accumulated Surplus

Opening accumulated surplus for the forecast period is reconciled as follows:

Water	2021 Opening Accumulated Surplus
Reserve Balances	
Reserves: Development Charges	2,296,068
Reserves: Capital/Other	6,090,641
Total Reserves Balance	**8,386,709**
Less: Debt Obligations and Deferred Revenue	(33,639,829)
Add: Tangible Capital Assets	96,601,346
Total Opening Balance	**71,348,226**

The accumulated surplus reconciliation for all years within the forecast period is contained in Table 4-2.

6. Other Revenue

Other revenue includes bulk water sales, connection fees, recoveries, penalties and interest, as well as other non-operating general revenues

7. Operating Expenses

Capital expenditures for items not meeting the definition of tangible capital assets have been reclassified as operating expenses and have been expensed in the year in which they occur.

Chapter 5
Process for Financial Plan Approval and Submission to the Province

5. Process for Financial Plan Approval and Submission to the Province

As mentioned in section 1.2, the requirement to prepare the financial plan is provided in Section 32 (5) 2 ii of the S.D.W.A. Proof of the preparation of a financial plan is one of the submission requirements for municipal drinking water licensing and upon completion, must be submitted to the Ministry of the Environment. As part of O.Reg. 453/07, the process established for plan approval, public circulation and filing is set out as follows:

1. The financial plan must be approved by resolution of the municipality who owns the drinking water system or the governing body of the owner. (O.Reg. 453/07, Section 3 (1) 1)

2. The owner of the drinking water system must provide notice advertising the availability of the financial plan. The plans will be made available to the public upon request and without charge. The plans must also be made available to the public on the municipality's website. (O.Reg. 453/07, Section 3 (1) 5)

3. The owner of the drinking water system must provide a copy of the financial plan to the Director of Policy Branch, Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6)

4. The owner of the drinking water system must provide proof satisfactory to the Ministry of the Environment that the financial plans for the system satisfy the requirements under the Safe Drinking Water Act. (S.D.W.A. Section 32 (5) 2 ii)

Chapter 6
Recommendations

6. Recommendations

This report presents the water financial plan for the City of Kawartha Lakes in accordance with the mandatory reporting formats for water systems as detailed in O.Reg. 453/07. It is important to note that while mandatory, the financial plan is provided for Council's interest and approval however, for decision making purposes, it may be more informative to rely on the information contained within the 2021 Rate Study. Nevertheless, Council is required to pass certain resolutions regarding this plan and regulations and it is recommended that:

1. The City of Kawartha Lakes Water Financial Plan prepared by Watson & Associates Economists Ltd. dated March 25, 2021 be approved.

2. Notice of availability of the Financial Plan be advertised.

3. The Financial Plan, the Council Resolution approving the Financial Plan, and the Water Rate Study underpinning the Financial Plan be submitted to the Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6)

4. The Resolution of Council approving the Financial Plan be submitted to the MECP, satisfying the requirements under the *Safe Drinking Water Act*. (S.D.W.A. Section 32 (5) 2 ii))

Appendices

Appendix A
Water Budget and Forecast Summary Tables

Appendix A-1
Water Service Capital Forecast
2021-2030

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
Colbrone St. Mains - Adelaide St. to Angeline St.	-	-	748,000	-	-	-	-	-	-	-
Huron St. Mains - Russell St. to Durham St.	-	802,000	-	-	-	-	-	-	-	-
Hillside Dr. Mains - Logie St. to Hwy. 36	-	700,000	-	-	-	-	-	-	-	-
Lindsay Water Tower Altitude Value, Pumps and Piping	196,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Filter Media	400,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Chemical Tanks	600,000	-	-	-	-	-	-	-	-	-
Lindsay WTP Recirculation Pumps	45,000	-	-	-	-	-	-	-	-	-
Manilla WTP SCADA System	350,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Envelope, Heaters, Exhaust Fans and Louvres	210,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP High-Lift Pumps	50,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Programmable Logic Controllers	30,000	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Filter Media	-	193,000	-	-	-	-	-	-	-	-
Mariposa Estates WTP Nitrate Removal System	-	32,000	-	-	-	-	-	-	-	-
Ponytpool WTP High-Lift Pump Header	-	43,000	-	-	-	-	-	-	-	-
Pontypool WTP Generator	75,000	-	-	-	-	-	-	-	-	-
Canadiana Shores WTP Filter Housing and Cartriges	60,000	-	-	-	-	-	-	-	-	-
Norland WTP Backwash Pumps and High-Lift Pumps and VFDs	90,000	-	-	-	-	-	-	-	-	-
Kinmount WTP Backwash Pumps and High-Lift Pumps and VFDs	90,000	-	-	-	-	-	-	-	-	-
Southview Estates WTP Low-Lift, High-Lift and Polymer Pumps	31,000	-	-	-	-	-	-	-	-	-
SCADA System Standards	84,000	-	-	-	-	-	-	-	-	-
Lindsay WTP SCADA System	283,000	-	-	-	-	-	-	-	-	-
Pleasant Point WTP Filter Housing and Cartridges	40,000	-	-	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to Colborne St.	-	684,000	-	-	-	-	-	-	-	-
William St. Mains - Russell St. to Peel St.	-	627,000	-	-	-	-	-	-	-	-
York St./Peel St. Mains - Russell St. to William St.	-	561,000	-	-	-	-	-	-	-	-
Lindsay St. Mains - Russell St. to Glenelg St.	-	278,000	-	-	-	-	-	-	-	-
Glenelg St. Mains - Lindsay St. to Cambridge St.	-	691,000	-	-	-	-	-	-	-	-
Lindsay WTP THM and HAA Reduction System	-	-	2,878,000	-	-	-	-	-	-	-
Lindsay WTP Secondary Reactivator	-	-	-	-	-	-	-	-	1,409,000	-
Fenelon Falls WTP Dehumidifier	-	39,000	-	-	-	-	-	-	-	-
Bobcaygeon WTP Low-Lift Valves and Piping	-	134,000	-	-	-	-	-	-	-	-
Thornhill Reservoir SCADA System	-	139,000	-	-	-	-	-	-	-	-
Verulam Elevated Tank SCADA System	-	99,000	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Melbourne St.	-	-	464,000	-	-	-	-	-	-	-
St. Paul St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Patrick St. Mains - Queen St. to King St.	-	-	121,000	-	-	-	-	-	-	-
St. Peter St. Mains - Queen St. to South End	-	-	258,000	-	-	-	-	-	-	-
Colborne St. Mains - Bond St. to Water St.	605,280	-	-	-	-	-	-	-	-	-
Thornhill Reservoir HVAC System	112,000	-	-	-	-	-	-	-	-	-
Fenelon Falls WTP High-Lift Pumps	-	-	123,000	-	-	-	-	-	-	-
Lindsay St. Mains - Queen St. to Colborne St.	-	-	-	1,018,000	-	-	-	-	-	-

Appendix A-1 (continued)
Water Service Capital Forecast
2021-2030

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
St. David St. Watermain - Queen St. to Riverview Rd.	-	-	-	449,000	-	-	-	-	-	-
King St. Mains - St. David St. to Hwy. 36	-	-	-	1,109,000	-	-	-	-	-	-
St. Patrick St. Mains - Colborne St. to North End	-	-	-	761,000	-	-	-	-	-	-
Oakwood Reservoir SCADA System	-	-	-	124,000	-	-	-	-	-	-
Fenelon Falls WTP SCADA System	-	-	-	295,000	-	-	-	-	-	-
Pottinger St. Mains - Victoria Ave. to West End	-	-	-	-	1,498,000	-	-	-	-	-
Riverview Rd. Mains - Logie St. to Hwy. 36	-	-	-	-	968,000	-	-	-	-	-
William St. Mains - Colborne St. to Olympia Ct.	-	-	-	-	1,521,000	-	-	-	-	-
Lindsay St. Mains - Glenelg St. to Mary St.	-	-	-	-	1,700,000	-	-	-	-	-
Southview Estates WTP SCADA System	-	-	-	-	227,000	-	-	-	-	-
Bobcaygeon WTP SCADA System	-	-	-	-	205,000	-	-	-	-	-
Birch Point / Highview Acres WTP SCADA System	-	-	-	-	166,000	-	-	-	-	-
Victoria Place WTP SCADA System	-	-	-	-	155,000	-	-	-	-	-
Russell St. Watermain - Lindsay St. to Water St.	-	-	-	-	-	1,498,000	-	-	-	-
Mill St. Mains - Durham St. to Kent St.	-	-	-	-	-	1,161,000	-	-	-	-
Wolfe St. Mains - Mary St to Durham St.	-	-	-	-	-	792,000	-	-	-	-
Duke St. Mains - Division St. to Durham St.	-	-	-	-	-	562,000	-	-	-	-
Durham St. Mains - Lindsay St. to Simcoe St.	-	-	-	-	-	-	992,000	-	-	-
Adelaide St. Mains - Kent St. to Colborne St.	-	-	-	-	-	-	1,312,000	-	-	-
Fairview Ct. Mains - Adelaide St. to East End	-	-	-	-	-	-	243,000	-	-	-
St. Paul St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	779,000	-	-	-
John St. Mains - St. Paul St. to St. Patrick St.	-	-	-	-	-	-	390,000	-	-	-
St. Peter St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	818,000	-	-	-
Bertie St. Mains - St. Peter St. to St. Patrick St.	-	-	-	-	-	-	380,000	-	-	-
Canadiana Shores WTP SCADA System	-	-	-	-	-	-	193,000	-	-	-
King's Bay WTP SCADS System	-	-	-	-	-	-	175,000	-	-	-
Sonya WTP SCADA System	-	-	-	-	-	-	177,000	-	-	-
Pleasant Point WTP SCADA System	-	-	-	-	-	-	155,000	-	-	-
Simcoe St. Mains - Durham St. to Ridout St.	-	-	-	-	-	-	-	1,179,000	-	-
Albert St. (Fleming College) Watermain - Mary St. to Angeline St.	-	-	-	-	-	-	-	2,154,000	-	-
Melbourne St. Mains - Lindsay St. to Albert St.	-	-	-	-	-	-	-	1,835,000	-	-
Glenelg St. Mains - Cambridge St. to Adelaide St.	-	-	-	-	-	-	-	1,538,000	-	-
Woodville WTP SCADA System	-	-	-	-	-	-	-	182,000	-	-
Mariposa Estates WTP SCADA System	-	-	-	-	-	-	-	159,000	-	-
Janetville WTP SCADA System	-	-	-	-	-	-	-	178,000	-	-
Pinewood WTP SCADA System	-	-	-	-	-	-	-	182,000	-	-
Woodfield WTP SCADA System	-	-	-	-	-	-	-	321,000	-	-
Manorview WTP SCADA System	-	-	-	-	-	-	-	186,000	-	-

Appendix A-1 (continued)
Water Service Capital Forecast
2021-2030

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Lifecycle:										
St. David St. Watermain - Queen St. to Colborne St.	-	-	-	-	-	-	-	-	1,234,000	-
Armour Ct. Mains - St. David St. to West End	-	-	-	-	-	-	-	-	173,000	-
Short Ave. Mains - St. Peter St. to St. George St.	-	-	-	-	-	-	-	-	833,000	-
St. George St. Mains - Queen St. to Colborne St.	-	-	-	-	-	-	-	-	855,000	-
Kent St. Mains - Victoria Ave. to Adelaide St.	-	-	-	-	-	-	-	-	1,622,000	-
Durham St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	629,000	-
Eglington St. Mains - Lindsay St. to William St.	-	-	-	-	-	-	-	-	401,000	-
Omemee WTP SCADA System	-	-	-	-	-	-	-	-	202,000	-
Western Trent/Palmina WTP SCADA System	-	-	-	-	-	-	-	-	243,000	-
Kinmount WTP SCADA System	-	-	-	-	-	-	-	-	389,000	-
Norland WTP SCADA System	-	-	-	-	-	-	-	-	210,000	-
Albert St. Mains - Regent St. to Lindway Pl. (South Intersection)	-	-	-	-	-	-	-	-	-	880,000
Angeline St. Mains - Colborne St. to Northlin Park Rd.	-	-	-	-	-	-	-	-	-	2,215,000
Water St. Mains - Glenelg St. to North End	-	-	-	-	-	-	-	-	-	481,000
Ardmore Ave. Mains - Albert St. to Adelaide St.	-	-	-	-	-	-	-	-	-	639,000
Cambridge St. Mains - Wellington St. to Colborne St.	-	-	-	-	-	-	-	-	-	868,000
Roosevelt St. Mains - Angeline St. to Adelaide St.	-	-	-	-	-	-	-	-	-	650,000
Sunset Ct. Mains - Angeline St. to East End	-	-	-	-	-	-	-	-	-	458,000
James St. Watermain - Mary St. to South End	-	-	-	-	-	-	-	-	-	458,000
Kent St. Mains - William St. to Victoria Ave.	977,898	-	-	-	-	-	-	-	-	-
Cambridge St. Mains - Russell St. to Kent St.	535,458	-	-	-	-	-	-	-	-	-
Bond St. Mains - Victoria Ave. to William St.	-	-	-	-	-	-	-	-	-	-
Sussex St. Mains - Melbourne St. to Glenelg St.	-	-	-	-	-	-	-	-	328,000	-
Sussex St. Mains - Glenelg St. to Russell St.	-	-	-	-	-	-	-	-	413,000	-
Sussex St. Mains - Russell St. to Kent St.	-	-	-	-	-	-	-	-	421,000	-
Studies:	-									
Rate Study and Financial Plan	-	-	-	-	27,000	-	-	-	-	32,000
Fenelon Falls Elevated Storage Tank Structural Assessment	-	-	-	-	-	-	-	-	-	-
Manilla Wells Assessment and Capital Plan	-	-	-	-	-	-	-	-	-	-
Lindsay WTP THM and HAA Reduction Pilot	-	-	-	-	-	-	-	-	-	-
Bobcaygeon WTP Filter Optimization Assessment	30,000	-	-	-	-	-	-	-	-	-
Facility Condition Assessments and Capital Plans	100,000	-	-	-	-	-	-	-	-	-

Appendix A-1 (continued)
Water Service Capital Forecast
2021-2030

Description	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures										
Growth Related:	-									
Lindsay St. Watermain - Elliot St. to Veteran's Way (Fenelon Falls)	-	-	-	-	-	-	-	-	-	-
Canal St./Boyd St. Watermain - Sherwood St. to East St.	-	-	-	-	-	1,293,000	-	-	-	-
Capacity Studies	-	321,000	-	-	-	-	-	-	-	-
Fenelon Falls WTP LLPS and SCADA Upgrades	-	-	-	-	-	-	-	-	-	701,000
King St. Mains - Lindsay St. to St. David St.	-	-	1,394,000	-	-	-	-	-	-	-
Lindsay St. Watermain - Elliot St. to Veteran's Way	-	-	-	-	-	-	-	-	-	-
Elliot St. Watermain - Lindsay St. to Juniper St.	-	-	-	481,000	-	-	-	-	-	-
Murray St. Watermain - Elliot St. to West St.	-	1,114,000	-	-	-	-	-	-	-	-
Ellice St. Watermain - Juniper St. to Wychwood Cres.	-	-	-	879,000	-	-	-	-	-	-
Francis St. Mains - Colborne St. to Clifton St.	-	-	-	-	-	559,000	-	-	-	-
Francis St. Mains - Clifton St. to Janlisda Dr.	-	-	-	-	-	582,000	-	-	-	-
Capacity Studies	-	-	-	-	-	-	380,000	-	-	-
Auk Tr. Watermain Looping - Adelaide St. to Mary St.	-	-	-	-	-	-	-	-	-	-
Pottinger St. Mains - Dyana Dr. to Lindsay St.	-	-	-	-	-	-	-	-	179,000	-
Total Capital Expenditures	**4,994,636**	**6,457,000**	**6,107,000**	**5,116,000**	**6,467,000**	**6,447,000**	**5,994,000**	**7,914,000**	**9,541,000**	**7,382,000**
Capital Financing										
Provincial/Federal Grants	1,008,633									
Development Charges Reserve Fund	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Non-Growth Related Debenture Requirements	3,772,003	-	-	-	2,743,787	1,401,583	1,174,921	2,950,380	3,899,433	738,788
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-
Water Reserve	214,000	5,456,460	5,803,651	4,249,751	3,723,213	4,060,389	4,439,079	4,963,620	5,509,107	6,082,412
Total Capital Financing	**4,994,636**	**6,457,000**	**6,107,000**	**5,116,000**	**6,467,000**	**6,447,000**	**5,994,000**	**7,914,000**	**9,541,000**	**7,382,000**

Appendix A-2
Schedule of Non-Growth-Related Debenture Repayments
2021-2030

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020		33,718	33,718	33,718	33,718	33,718	33,718	33,718	33,718	33,718
2021			229,572	229,572	229,572	229,572	229,572	229,572	229,572	229,572
2022				-	-	-	-	-	-	-
2023					-	-	-	-	-	-
2024						-	-	-	-	-
2025							166,992	166,992	166,992	166,992
2026								85,303	85,303	85,303
2027									71,508	71,508
2028										179,566
2029										
2030										
Total Annual Debt Charges	**-**	**33,718**	**263,290**	**263,290**	**263,290**	**263,290**	**430,282**	**515,586**	**587,094**	**766,660**

Appendix A-3
Schedule of Growth-Related Debenture Repayments
2021-2030

Debenture Year	Forecast									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020		-	-	-	-	-	-	-	-	-
2021			-	-	-	-	-	-	-	-
2022				-	-	-	-	-	-	-
2023					-	-	-	-	-	-
2024						-	-	-	-	-
2025							-	-	-	-
2026								-	-	-
2027									-	-
2028										-
2029										
2030										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-

Appendix A-4
Water Reserve Continuity
2021-2030

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	6,090,641	8,136,174	4,948,785	1,808,764	567,321	510,000	510,000	510,000	510,000	510,000
Transfer from Operating	2,100,000	2,172,036	2,628,165	2,997,184	3,655,892	4,050,389	4,429,079	4,953,620	5,499,107	6,072,412
Transfer to Capital	214,000	5,456,460	5,803,651	4,249,751	3,723,213	4,060,389	4,439,079	4,963,620	5,509,107	6,082,412
Transfer to Operating	-	-	-	-	-	-	-	-	-	-
Closing Balance	**7,976,641**	**4,851,750**	**1,773,298**	**556,197**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**	**500,000**
Interest	159,533	97,035	35,466	11,124	10,000	10,000	10,000	10,000	10,000	10,000

Appendix A-5
Water Development Charges Reserve Fund Continuity
2021-2030

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	2,296,068	3,005,603	2,708,753	3,141,118	3,032,358	3,829,907	3,663,954	4,137,561	5,034,387	5,840,809
Development Charge Proceeds	1,020,702	1,041,076	1,061,913	1,083,213	1,104,821	1,126,893	1,149,428	1,172,426	1,195,887	1,219,811
Transfer to Capital	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800
Transfer to Operating	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Closing Balance	**2,946,669**	**2,655,640**	**3,079,528**	**2,972,900**	**3,754,810**	**3,592,112**	**4,056,432**	**4,935,673**	**5,726,284**	**6,131,000**
Interest	58,933	53,113	61,591	59,458	75,096	71,842	81,129	98,713	114,526	122,620
Required from Development Charges	-	1,000,540	303,349	866,249	-	985,028	380,000	-	132,460	560,800

Appendix A-6
Water Operating Forecast
2021-2030

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures										
Operating Costs										
WATER - EMILY - BIRCH POINT	146,451	149,400	152,400	155,400	158,500	161,700	164,900	168,200	171,600	175,000
WATER - LINDSAY	1,684,028	1,717,700	1,752,100	1,787,100	1,822,800	1,859,300	1,896,500	1,934,400	1,973,100	2,012,600
WATER - LINDSAY - THORNHILL	191,208	195,000	198,900	202,900	207,000	211,100	215,300	219,600	224,000	228,500
WATER - LINDSAY - VERULAM TANK	24,763	25,300	25,800	26,300	26,800	27,300	27,800	28,400	29,000	29,600
WATER-LINDSAY-OAKWOOD WATER	73,945	75,400	76,900	78,400	80,000	81,600	83,200	84,900	86,600	88,300
WATER - FEN TWP-STHVIEW ESTATES	246,853	251,800	256,800	261,900	267,100	272,400	277,800	283,400	289,100	294,900
WATER - MARIPOSA - SONYA	95,591	97,500	99,500	101,500	103,500	105,600	107,700	109,900	112,100	114,300
WATER-MARIPOSA-CANADIANA SHR	236,455	241,200	246,000	250,900	255,900	261,000	266,200	271,500	276,900	282,400
WATER-MARIPOSA-WOODS/MANILLA	95,991	97,900	99,900	101,900	103,900	106,000	108,100	110,300	112,500	114,800
WATER - MARIPOSA - MARIPOSA EST	156,256	159,400	162,600	165,900	169,200	172,600	176,100	179,600	183,200	186,900
WATER - MARIPOSA-PLEASANT POINT	142,918	145,800	148,700	151,700	154,700	157,800	161,000	164,200	167,500	170,900
WATER - MARIPOSA - KINGS BAY	155,781	158,900	162,100	165,300	168,600	172,000	175,400	178,900	182,500	186,200
WATER - ELDON-WESTERN TRENT	175,779	179,300	182,900	186,600	190,300	194,100	198,000	202,000	206,000	210,100
WATER - FENELON FALLS	584,029	595,700	607,600	619,800	632,200	644,800	657,700	670,900	684,300	698,000
WATER - NORLAND	239,905	244,700	249,600	254,600	259,700	264,900	270,200	275,600	281,100	286,700
WATER - KINMOUNT - DOWNTOWN	217,159	221,500	225,900	230,400	235,000	239,700	244,500	249,400	254,400	259,500
WATER - OMEMEE - VICTORIA GLEN	89,423	91,200	93,000	94,900	96,800	98,700	100,700	102,700	104,800	106,900
WATER - WOODVILLE	213,631	217,900	222,300	226,700	231,200	235,800	240,500	245,300	250,200	255,200
WATER - BOBCAYGEON	719,459	733,800	748,500	763,500	778,800	794,400	810,300	826,500	843,000	859,900
WATER - BOBCAYGN-VICTORIA PL	132,740	135,400	138,100	140,900	143,700	146,600	149,500	152,500	155,600	158,700
WATER - MANVERS - JANETVILLE	140,795	143,600	146,500	149,400	152,400	155,400	158,500	161,700	164,900	168,200
WATER - MANVERS-MANORVIEW	126,643	129,200	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
WATER - MANVERS - WOODFIELD	109,480	111,700	113,900	116,200	118,500	120,900	123,300	125,800	128,300	130,900
WATER - MANVERS - PINEWOOD P/P	129,138	131,700	134,300	137,000	139,700	142,500	145,400	148,300	151,300	154,300
WATER-SEWER - ADMINISTRATION	1,672,532	1,706,000	1,740,100	1,774,900	1,810,400	1,846,600	1,883,500	1,921,200	1,959,600	1,998,800
Sub Total Operating	**7,800,953**	**7,957,000**	**8,116,200**	**8,278,500**	**8,443,800**	**8,612,600**	**8,784,700**	**8,960,700**	**9,140,000**	**9,323,000**
Capital-Related										
Existing Debt (Principal) - Growth		348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119	348,119
Existing Debt (Interest) - Growth		42,380	39,670	37,063	34,250	31,541	28,831	26,194	23,411	20,701
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth		2,357,661	2,088,449	2,140,730	1,915,943	1,958,822	1,865,313	1,720,026	1,574,206	1,280,911
Existing Debt (Interest) - Non-Growth		805,751	713,912	629,306	544,759	469,291	392,323	315,948	247,218	204,255
New Non-Growth Related Debt		22,915	179,380	182,877	186,444	190,079	307,274	371,238	427,075	557,436
New Non-Growth Related Debt		10,803	83,910	80,413	76,846	73,211	123,008	144,347	160,019	209,223
Existing Debt (Principal)	2,505,407									
Existing Debt (Interest)	1,013,191									
Transfer to Capital Reserve	2,100,000	2,172,036	2,628,165	2,997,184	3,655,892	4,050,389	4,429,079	4,953,620	5,499,107	6,072,412
Sub Total Capital Related	**5,618,599**	**5,759,665**	**6,081,605**	**6,415,691**	**6,762,253**	**7,121,453**	**7,493,948**	**7,879,492**	**8,279,154**	**8,693,058**
Total Expenditures	**13,419,551**	**13,716,665**	**14,197,805**	**14,694,191**	**15,206,053**	**15,734,053**	**16,278,648**	**16,840,192**	**17,419,154**	**18,016,058**

Appendix A-6 (continued)
Water Operating Forecast
2021-2030

Description	Budget	Forecast								
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues										
Base Charge	5,268,537	5,384,882	5,541,012	5,700,614	5,863,758	6,030,513	6,200,952	6,375,148	6,553,175	6,735,108
BUILDING/PROPERTY RENTAL	31,000	31,600	32,200	32,800	33,500	34,200	34,900	35,600	36,300	37,000
WATER CONNECTION FEE	9,500	9,700	9,900	10,100	10,300	10,500	10,700	10,900	11,100	11,300
WATER METER FEE	18,070	18,400	18,800	19,200	19,600	20,000	20,400	20,800	21,200	21,600
BULK WATER SALES	121,500	123,900	126,400	128,900	131,500	134,100	136,800	139,500	142,300	145,100
OTHER WATER USER CHARGES	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WASTEWATER USER	10,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800
RECOVERIES - OTHER	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100	9,300
MISCELLANEOUS REVENUE	142,650	145,500	148,400	151,400	154,400	157,500	160,700	163,900	167,200	170,500
Contributions from Development Charges Reserve Fund	370,100	390,499	387,789	385,182	382,369	379,660	376,950	374,313	371,530	368,820
Total Operating Revenue	**5,980,857**	**6,124,381**	**6,284,801**	**6,448,896**	**6,616,527**	**6,787,973**	**6,963,302**	**7,142,461**	**7,325,505**	**7,512,528**
Water Billing Recovery - Total	**7,438,694**	**7,592,284**	**7,913,004**	**8,245,295**	**8,589,527**	**8,946,079**	**9,315,346**	**9,697,731**	**10,093,649**	**10,503,530**

Appendix A-7
Water Rate Forecast
2021-2030

Description	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Charge by Meter Size										
5/8" - 3/4"	$ 31.58	$ 32.05	$ 32.53	$ 33.02	$ 33.52	$ 34.02	$ 34.53	$ 35.05	$ 35.57	$ 36.11
1"	$ 41.09	$ 41.71	$ 42.33	$ 42.97	$ 43.61	$ 44.27	$ 44.93	$ 45.60	$ 46.29	$ 46.98
1 ½"	$ 52.83	$ 53.62	$ 54.43	$ 55.24	$ 56.07	$ 56.91	$ 57.77	$ 58.63	$ 59.51	$ 60.41
2"	$ 85.10	$ 86.38	$ 87.67	$ 88.99	$ 90.32	$ 91.68	$ 93.05	$ 94.45	$ 95.87	$ 97.30
3"	$ 322.81	$ 327.65	$ 332.57	$ 337.56	$ 342.62	$ 347.76	$ 352.98	$ 358.27	$ 363.65	$ 369.10
4"	$ 410.84	$ 417.00	$ 423.26	$ 429.61	$ 436.05	$ 442.59	$ 449.23	$ 455.97	$ 462.81	$ 469.76
6"	$ 616.23	$ 625.47	$ 634.86	$ 644.38	$ 654.05	$ 663.86	$ 673.82	$ 683.93	$ 694.19	$ 704.60
8"	$ 850.98	$ 863.75	$ 876.70	$ 889.85	$ 903.20	$ 916.75	$ 930.50	$ 944.46	$ 958.63	$ 973.01
Annual Percentage Change		**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**
Consumptive Rate (per m^3)										
Constant Rate per m^3	$ 2.80	$ 2.88	$ 2.96	$ 3.05	$ 3.14	$ 3.23	$ 3.32	$ 3.42	$ 3.52	$ 3.62
Annual Percentage Change		**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**	**2.9%**