



Water Ontario Regulation 453/07 Financial Plan

Town of Essex

Financial Plan #029-301A

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
MECP	Ministry of the Environment, Conservation and Parks
MMAH	Ministry of Municipal Affairs and Housing
O. Reg.	Ontario Regulation
PSAB	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

The Town of Essex (the Town) retained Watson & Associates Economists Ltd. (Watson) 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. The detailed financial planning and forecasting regarding the Town's water systems has already been completed based on the Town's Water and Wastewater Rate Study (Rate Study). The objective of the report provided herein is to convert the details of the Rate Study into the prescribed reporting requirements for a financial plan as defined by Ontario Regulation 453/07 (O.Reg. 453/07) and project the financial position over a ten-year forecast period.

1.2 Background

The Safe Drinking Water Act (S.D.W.A.), "the Act," was passed in December 2002 in order to address the recommendations made by the Walkerton Inquiry Part II report. Note that S.D.W.A. has been amended several times since 2002. 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 municipal 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

The O. Reg. 453/07 provides details with regards to the financial plans for existing water systems. The requirements for existing systems are summarized as follows:

- Financial plans must be approved by resolution of Council (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 PSAB) 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 PSAB) 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 PSAB) 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.

A copy of the financial plan will be submitted to the Ministry of Municipal Affairs and Housing (MMAH) and not the MECP; however, 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 (PSAB) 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 Town's Financial Plan

The Town is currently in the process of renewing the drinking water license 029-301A for the Essex systems and the previous version of the financial plan no longer meets the requirements as it must apply to a period of at least six years beginning in the year that the licenses would otherwise expire. As the Town's water license was renewed in 2020, this financial plan provides for a 2020 start year and forecast period to 2030. Although the Act requires at least six years to be included, this financial plan provides for a longer 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 Act requires a declaration of the financial plan's sustainability, it does not give a clear definition of what would be considered sustainable. Instead, MECP 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 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 storm water 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: 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* (W.O.A). W.O.A. was introduced into legislation on May 18, 2010 and received Royal Assent on November 29, 2010, as the *Water Opportunities Act*.

The purposes of the *Water Opportunities Act* 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 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 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 (I.J.P.A.), 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 Town will need to consider the impacts during the annual budget and forecast process.

2.5 Water Forecast

The Town has already completed their financial planning through its 2020 water budget and a forecasting exercise through the Rate Study. The budget and rate study are designed to address "full cost" principles and reflect the guiding principles toward sustainable financial planning.

As a result of employing this process, the Rate Study provides the basis for a sound financial plan for the Town's water system by assessing:

- A detailed assessment of current and future capital needs including an analysis of potential funding sources;



- An analysis of operating costs in order to determine how they will be impacted by evolving infrastructure needs and system growth;
- An analysis of required water rates that ensure revenues are equitable and sufficient to meet system needs; and
- A public process that involved consultation with the main stakeholders including the Town's 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 water financial plan.



Chapter 3

Approach



3. Approach

3.1 Overview

The Rate Study (along with additional detailed information provided by Municipal Staff) 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 water financial plan.

3.2 Conversion Process

The conversion from the existing modified cash basis found in the Rate Study 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 by the Town for the purposes of their annual PSAB 3150 compliance process. As required, for PSAB 3150 reporting purposes, the asset inventory listing included historical cost (which is the original cost to purchase, develop, or construct each asset) along with an estimated useful life for each



asset and any anticipated salvage value is recorded. 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 Rate Study. These estimates, however, only represent future assets that the Town anticipates purchasing or constructing without consideration for future assets that are contributed by developers and other parties (at no or partial cost to the Town). These contributed assets will form part of the infrastructure going forward in terms of the sustainability of the system and despite their non-monetary nature; future financial plans 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 systems, in order to convert from the cash to full accrual basis (see Figure 3-1). 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

Modified Cash Basis	Budget 2020	Adjustments		Full Accrual Budget 2020	Accrual Basis
		DR	CR		
Revenues					Revenues
Base Charge Revenue	1,576,752			1,576,752	Base Charge Revenue
Rate Based Revenue	2,413,661			2,413,661	Rate Based Revenue
Transfers from Reserves	1,336,263	1,336,263			
Other Revenue	61,736		178,582	240,318	Other Revenue
Total Revenues	5,388,412			4,230,731	Total Revenues
Expenditures					Expenses
Operating	2,295,857	53,999		2,349,856	Operating Expenses
Capital					
Transfers to Reserves	3,088,961		3,088,961		
Transfers to Capital	-		-		
Debt Repayment (Principal & Interest)	3,594		3,073	521	Interest on Debt
		729,605		729,605	Amortization
		-		-	Loss on Disposal of Tangible Capital Assets
Total Expenditures	5,388,412			3,079,982	Total Expenses
Net Expenditures	-			1,150,749	Annual Surplus/(Deficit)
Increase (decrease) in amounts to be recovered	-			54,261,986	Accumulated Surplus/(Deficit), beginning of year
Change in Fund Balances	-	1,150,749	-	55,412,735	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		3,270,616	3,270,616		

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). 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 Town 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. Ontario Regulation 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 Town 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 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, 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
Statement of Financial Position

Modified Cash Basis	Budget 2020	Adjustments		Full Accrual Budget 2020	Accrual Basis
		DR	CR		
ASSETS					ASSETS
Financial Assets					Financial Assets
Cash	17,390,667			17,390,667	Cash
Accounts Receivable	663,563			663,563	Accounts Receivable
Total Financial Assets	18,054,230			18,054,230	Total Financial Assets
Non-Financial Assets					
Inventory of Supplies	-		-		
Prepaid Expenses	-		-		
Total Non-Financial Assets	-				
LIABILITIES					Liabilities
Accounts Payable & Accrued Liabilities	17,450			17,450	Accounts Payable & Accrued Liabilities
Gross Long-term Liabilities	12,771			12,771	Debt (Principal only)
Total Liabilities	30,221			30,221	Total Liabilities
Net Assets/(Debt)	18,024,009			18,024,009	Net Financial Assets/(Debt)
		37,442,725	53,999	37,388,726	Non-Financial Assets
				37,388,726	Tangible Capital Assets
Municipal Position					Total Non-Financial Assets
Water Reserves	18,036,780	18,036,780	-		
Amounts to be Recovered	(12,771)	-	12,771		
Total Municipal Position	18,024,009		55,412,735	55,412,735	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		55,479,505	55,479,505		

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 the statements created by the previous steps are in balance. The Statement of Financial Position summarizes the resources and obligations of the Town 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 Town's ledgers. It may not be possible, however, 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 Town’s amortization policy.
- 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 capital asset listing provided.
- d) Contributed Assets – As noted earlier, contributed assets could represent a significant part of the Town’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 Town'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 Town's water systems. It is not an audited document¹ and it 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 Town'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 in 2020, the Town's water system was in a net financial asset position of \$18.02 million. The financial plan forecasts a net financial asset position for each year of the forecast period, increasing to a net financial asset position of \$18.17 million by 2030.

Another important indicator on the Statement of Financial Position is the tangible capital asset balance under section PS3150. 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:

- Tangible capital assets such as watermain and treatment facilities are imperative to water service delivery.

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



- 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 net book value is expected to increase over the forecast period by \$19.4 million. This indicates that the Town continues to invest in tangible capital 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 73% in 2020 to 64% by 2030. As a result, annual surplus increases from a surplus of \$1.15 million to a surplus of \$2.00 million by 2030. This is due to a general increasing trend in amortization expense over the forecast to 2028, the retirement of existing debt by 2024 as well as increases to revenues anticipated over the forecast period. 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 and reserve/reserve fund transfers.

Another important indicator on this statement is accumulated surplus/deficit. An accumulated surplus indicates that the available net resources are sufficient to provide future capital 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 increase by approximately \$18.03 million from a 2020 accumulated surplus of \$54.26 million over the forecast period to \$72.29 million in 2030. The 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 by the municipality.

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 2020 through 2022 and in 2030, forecasted tangible capital asset acquisitions (net of amortization for the year) exceeds the forecasted annual surplus, resulting in decreases in the net financial asset balance. However, from 2023 to 2029, forecasted annual surplus exceeds forecasted tangible capital asset acquisitions (net of amortization for the year), resulting in increases in the net financial asset balance. Therefore, an overall increase to net financial assets is anticipated over the forecast period to 2030. This is a result of more significant capital asset acquisitions forecasted allowing for a long-term plan of funding capital through accumulated surplus (i.e. reserves and reserve funds). This is also evidenced by the ratio of cumulative annual surplus before amortization to cumulative tangible capital asset acquisitions increasing from 0.55 to 0.95 over the forecast period.¹

4.2.4 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-based 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 Town's water systems to decrease from a balance of \$19.05 million at the beginning of 2020, to just over \$17.56 million by the end of 2030. For further discussions, on projected cash balances please refer to the Notes to the Financial Plan.

¹ A desirable ratio is 1:1 or better.



Table 4-1
Statement of Financial Position: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets												
Cash	1	17,390,667	18,711,901	18,969,892	19,358,061	19,956,377	20,635,489	21,013,788	20,973,050	20,379,132	19,344,562	17,557,494
Accounts Receivable	1	663,563	660,370	534,189	548,311	559,156	569,897	582,183	594,936	607,912	621,115	632,449
Total Financial Assets		18,054,230	19,372,271	19,504,081	19,906,372	20,515,533	21,205,386	21,595,971	21,567,986	20,987,044	19,965,677	18,189,943
Liabilities												
Bank Indebtedness		-	-	-	-	-	-	-	-	-	-	-
Accounts Payable & Accrued Liabilities	1	17,450	16,597	17,186	17,561	18,067	18,599	19,149	19,718	20,307	20,915	21,518
Debt (Principal only)	2	12,771	9,595	6,314	2,922	-	-	-	-	-	-	-
Deferred Revenue	3	-	-	-	-	-	-	-	-	-	-	-
Total Liabilities		30,221	26,192	23,500	20,483	18,067	18,599	19,149	19,718	20,307	20,915	21,518
Net Financial Assets/(Debt)		18,024,009	19,346,079	19,480,581	19,885,889	20,497,466	21,186,787	21,576,822	21,548,268	20,966,737	19,944,762	18,168,425
Non-Financial Assets												
Tangible Capital Assets	4	37,388,726	37,468,051	38,677,857	39,755,513	40,827,348	41,832,598	43,200,626	44,985,062	47,305,680	50,347,810	54,123,829
Total Non-Financial Assets		37,388,726	37,468,051	38,677,857	39,755,513	40,827,348	41,832,598	43,200,626	44,985,062	47,305,680	50,347,810	54,123,829
Accumulated Surplus/(Deficit)	5	55,412,735	56,814,130	58,158,438	59,641,402	61,324,814	63,019,385	64,777,448	66,533,330	68,272,417	70,292,572	72,292,254

Financial Indicators	Total Change	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1) Increase/(Decrease) in Net Financial Assets	(1,366,695)	(1,511,111)	1,322,070	134,502	405,308	611,577	689,321	390,035	(28,554)	(581,531)	(1,021,975)	(1,776,337)
2) Increase/(Decrease) in Tangible Capital Assets	19,396,963	2,661,860	79,325	1,209,806	1,077,656	1,071,835	1,005,250	1,368,028	1,784,436	2,320,618	3,042,130	3,776,019
3) Increase/(Decrease) in Accumulated Surplus	18,030,268	1,150,749	1,401,395	1,344,308	1,482,964	1,683,412	1,694,571	1,758,063	1,755,882	1,739,087	2,020,155	1,999,682



Table 4-2
Statement of Operations: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water Revenue												
Base Charge Revenue		1,576,752	1,639,377	1,708,055	1,770,049	1,819,516	1,868,950	1,920,964	1,975,397	2,031,238	2,088,523	2,138,646
Rate Based Revenue		2,413,661	2,470,240	2,531,815	2,584,504	2,623,101	2,660,887	2,708,639	2,757,771	2,807,300	2,857,226	2,899,135
Earned Development Charges Revenue	3	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	6	240,318	289,563	290,909	294,888	499,881	513,397	521,045	520,485	509,083	489,044	454,214
Total Revenues		4,230,731	4,399,180	4,530,779	4,649,441	4,942,498	5,043,234	5,150,648	5,253,653	5,347,621	5,434,793	5,491,995
Water Expenses												
Operating Expenses	Sch. 4-1	2,349,856	2,204,091	2,375,565	2,321,130	2,387,932	2,499,113	2,530,613	2,605,707	2,683,652	2,763,768	2,843,332
Interest on Debt	2	521	419	312	203	89	-	-	-	-	-	-
Amortization	4	729,605	793,275	810,594	845,144	871,065	849,550	861,972	892,064	924,882	650,870	648,981
Loss on Disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Total Expenses		3,079,982	2,997,785	3,186,471	3,166,477	3,259,086	3,348,663	3,392,585	3,497,771	3,608,534	3,414,638	3,492,313
Annual Surplus/(Deficit)		1,150,749	1,401,395	1,344,308	1,482,964	1,683,412	1,694,571	1,758,063	1,755,882	1,739,087	2,020,155	1,999,682
Accumulated Surplus/(Deficit), beginning of year	5	54,261,986	55,412,735	56,814,130	58,158,438	59,641,402	61,324,814	63,019,385	64,777,448	66,533,330	68,272,417	70,292,572
Accumulated Surplus/(Deficit), end of year		55,412,735	56,814,130	58,158,438	59,641,402	61,324,814	63,019,385	64,777,448	66,533,330	68,272,417	70,292,572	72,292,254
Note 5:												
Accumulated Surplus/(Deficit) Reconciliation:		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Reserve Balances												
Reserves: Development Charges		-	-	-	-	-	-	-	-	-	-	-
Reserves: Gas Tax		-	-	-	-	-	-	-	-	-	-	-
Reserves: Capital/Other		18,036,780	19,355,674	19,486,895	19,888,811	20,497,466	21,186,787	21,576,822	21,548,268	20,966,737	19,944,762	18,168,425
Total Reserves Balance		18,036,780	19,355,674	19,486,895	19,888,811	20,497,466	21,186,787	21,576,822	21,548,268	20,966,737	19,944,762	18,168,425
Less: Debt Obligations and Deferred Revenue		(12,771)	(9,595)	(6,314)	(2,922)	-	-	-	-	-	-	-
Add: Tangible Capital Assets	4	37,388,726	37,468,051	38,677,857	39,755,513	40,827,348	41,832,598	43,200,626	44,985,062	47,305,680	50,347,810	54,123,829
Total Ending Balance		55,412,735	56,814,130	58,158,438	59,641,402	61,324,814	63,019,385	64,777,448	66,533,330	68,272,417	70,292,572	72,292,254
Financial Indicators	Total Change	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1) Expense to Revenue Ratio		73%	68%	70%	68%	66%	66%	66%	67%	67%	63%	64%
2) Increase/(Decrease) in Accumulated Surplus	18,030,268	1,150,749	1,401,395	1,344,308	1,482,964	1,683,412	1,694,571	1,758,063	1,755,882	1,739,087	2,020,155	1,999,682



Schedule 4-1
Statement of Operating Expenses: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Expenses												
Wards 1 & 2:												
Treatment:												
Contracted Services												
55300 - Union Water - Water Supply		722,565	535,726	596,415	629,110	658,572	690,803	724,553	759,777	796,652	835,298	872,152
Utilities, Insurance and Property Taxes												
54300 - Insurance - Buildings		115	119	120	120	120	120	120	120	120	120	120
54310 - Insurance - Vehicles		833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General		2,302	3,530	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
Distribution/Transmission:												
Contracted Services												
55100 - ELK Energy Incorporated - Billing and Collection Charges		83,903	98,000	99,000	100,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900
Internal Allocations - Expense												
51900 - Administration Charges - Town of Essex		20,806	20,806	21,000	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300
58900 - Amounts Allocated from Other Departments		39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies												
51100 - Office Supplies		400	150	150	150	150	150	150	150	150	150	150
51105 - Computer Hardware and Software		750	400	400	400	410	420	430	440	450	460	470
51115 - Memberships		2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel		4,500	7,000	7,100	7,200	7,600	8,000	8,400	8,800	9,200	9,700	10,200
51190 - Materials and Supplies - Other		2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters		25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment		250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools		600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services												
53605 - System Access Fee - Automatic Vehicle Locator		760	910	920	930	950	970	990	1,010	1,030	1,050	1,070
Repairs and Maintenance												
52120 - Repairs and Maintenance - Computers and Equipment		1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures		1,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52300 - Repairs and Maintenance - Vehicles (Labour)		1,500	1,800	1,820	1,840	1,880	1,920	1,960	2,000	2,040	2,080	2,120
52305 - Repairs and Maintenance - Vehicles (Parts)		2,500	3,800	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
52350 - Repairs and Maintenance - Equipment (Labour)		150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)		150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains		35,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100
52620 - Repairs and Maintenance - Hydrants		7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves		2,500	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
52660 - Repairs and Maintenance - Water Meters		25,000	27,500	27,800	28,100	28,700	29,300	29,900	30,500	31,100	31,700	32,300
52690 - Repairs and Maintenance - Private Water Service		20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Salaries, Wages, Benefits and Personnel Expenses												
50100 - Salaries and Wages - Full-Time		125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime		10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50500 - Canada Pension Plan - Employer Contribution		4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution		1,700	1,702	1,720	1,740	1,770	1,810	1,850	1,890	1,930	1,970	2,010
50520 - Employer Health Insurance		2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums		1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution		7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums		12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums		3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms		1,210	2,420	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
50720 - Training and Tuition Refund		2,789	700	710	720	730	740	750	770	790	810	830
50740 - Meals		100	100	100	100	100	100	100	100	100	100	100
50750 - Mileage		100	100	100	100	100	100	100	100	100	100	100
Uncollectible Taxes and Accounts Receivable												
54700 - Uncollectible Accounts Receivable - Water		2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330



Schedule 4-1
Statement of Operating Expenses: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Utilities, Insurance and Property Taxes												
54100 - Utilities - Hydro		4,696	5,900	6,000	6,100	6,400	6,700	7,000	7,400	7,800	8,200	8,600
54120 - Utilities - Gas		1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water		606	606	620	630	660	690	720	760	800	840	880
54200 - Communications - Telephone		4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
54300 - Insurance - Buildings		197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles		3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General		9,330	14,307	14,400	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600
54400 - Payments-in-Lieu of Taxes		-	100	100	100	100	100	100	100	100	100	100
Wards 3 & 4:												
Treatment:												
Contracted Services												
55200 - Ontario Clean Water Agency - Annual Operating Costs		393,271	405,069	409,100	413,200	421,500	429,900	438,500	447,300	456,200	465,300	474,600
55250 - Ontario Clean Water Agency - Other Operating Costs		71,400	42,000	42,400	42,800	43,700	44,600	45,500	46,400	47,300	48,200	49,200
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System		2,550	2,550	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
55450 - Contractors		9,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
Miscellaneous Services												
53650 - Weed Control Services		8,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance												
52120 - Repairs and Maintenance - Computers and Equipment		7,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Utilities, Insurance and Property Taxes												
54100 - Utilities - Hydro		100,311	116,600	117,800	119,000	121,400	123,800	126,300	128,800	131,400	134,000	136,700
54120 - Utilities - Gas		5,891	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	8,500	8,700
54300 - Insurance - Buildings		13,587	13,976	14,100	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300
54310 - Insurance - Vehicles		833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General		2,302	3,531	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
54400 - Payments-in-Lieu of Taxes		-	252	250	250	260	270	280	290	300	310	320
Distribution/Transmission:												
Contracted Services												
55100 - ELK Energy Incorporated - Billing and Collection Charges		88,931	100,000	101,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900	117,200
Internal Allocations - Expense												
51900 - Administration Charges - Town of Essex		21,028	21,028	21,200	21,400	21,800	22,200	22,600	23,100	23,600	24,100	24,600
58900 - Amounts Allocated from Other Departments		39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies												
51100 - Office Supplies		400	100	100	100	100	100	100	100	100	100	100
51105 - Computer Hardware and Software		750	250	250	250	260	270	280	290	300	310	320
51115 - Memberships		2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel		4,500	6,500	6,600	6,700	7,000	7,400	7,800	8,200	8,600	9,000	9,500
51190 - Materials and Supplies - Other		2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters		25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment		250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools		600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services												
53605 - System Access Fee - Automatic Vehicle Locator		760	910	920	930	950	970	990	1,010	1,030	1,050	1,070



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Statement of Operating Expenses: Water Services
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2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Repairs and Maintenance												
52120 - Repairs and Maintenance - Computers and Equipment		1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures		1,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
52300 - Repairs and Maintenance - Vehicles (Labour)		1,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52305 - Repairs and Maintenance - Vehicles (Parts)		2,500	3,500	3,500	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200
52350 - Repairs and Maintenance - Equipment (Labour)		150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)		150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains		20,000	23,000	23,200	23,400	23,900	24,400	24,900	25,400	25,900	26,400	26,900
52620 - Repairs and Maintenance - Hydrants		7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves		2,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
52660 - Repairs and Maintenance - Water Meters		20,000	25,500	25,800	26,100	26,600	27,100	27,600	28,200	28,800	29,400	30,000
52690 - Repairs and Maintenance - Private Water Service		27,000	35,000	35,400	35,800	36,500	37,200	37,900	38,700	39,500	40,300	41,100
Salaries, Wages, Benefits and Personnel Expenses												
50100 - Salaries and Wages - Full-Time		125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime		10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50400 - Benefits and Overhead Distributed		15,355	15,355	15,500	15,700	16,000	16,300	16,600	16,900	17,200	17,500	17,900
50500 - Canada Pension Plan - Employer Contribution		4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution		1,700	1,702	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
50520 - Employer Health Insurance		2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums		1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution		7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums		12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums		3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms		1,140	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
50720 - Training and Tuition Refund		2,789	500	510	520	530	540	550	560	570	580	590
50740 - Meals		100	100	100	100	100	100	100	100	100	100	100
Utilities, Insurance and Property Taxes												
54100 - Utilities - Hydro		3,378	4,000	4,100	4,200	4,400	4,600	4,800	5,000	5,300	5,600	5,900
54120 - Utilities - Gas		1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water		400	500	510	520	550	580	610	640	670	700	740
54200 - Communications - Telephone		4,500	3,000	3,000	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700
54300 - Insurance - Buildings		197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles		3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General		8,639	13,247	13,400	13,500	13,800	14,100	14,400	14,700	15,000	15,300	15,600
54400 - Payments-in-Lieu of Taxes		-	64	60	60	60	60	60	60	60	60	60
Non TCA - Expenses from Capital Budget	7	53,999	20,400	62,400	10,600	10,800	52,000	11,200	11,400	11,800	12,000	12,200
TOTAL OPERATING EXPENSES		2,349,856	2,204,091	2,323,565	2,321,130	2,387,932	2,499,113	2,530,613	2,605,707	2,683,652	2,763,768	2,843,332



Table 4-3
Statement of Changes in Net Financial Assets/Debt: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Surplus/(Deficit)		1,150,749	1,401,395	1,344,308	1,482,964	1,683,412	1,694,571	1,758,063	1,755,882	1,739,087	2,020,155	1,999,682
Less: Acquisition of Tangible Capital Assets	4	(3,391,465)	(872,600)	(2,020,400)	(1,922,800)	(1,942,900)	(1,854,800)	(2,230,000)	(2,676,500)	(3,245,500)	(3,693,000)	(4,425,000)
Add: Amortization of Tangible Capital Assets	4	729,605	793,275	810,594	845,144	871,065	849,550	861,972	892,064	924,882	650,870	648,981
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Add: Proceeds on Sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Add: Write-downs of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
		(2,661,860)	(79,325)	(1,209,806)	(1,077,656)	(1,071,835)	(1,005,250)	(1,368,028)	(1,784,436)	(2,320,618)	(3,042,130)	(3,776,019)
Less: Acquisition of Supplies Inventory		-	-	-	-	-	-	-	-	-	-	-
Less: Acquisition of Prepaid Expenses		-	-	-	-	-	-	-	-	-	-	-
Add: Consumption of Supplies Inventory		-	-	-	-	-	-	-	-	-	-	-
Add: Use of Prepaid Expenses		-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
Increase/(Decrease) in Net Financial Assets/(Net Debt)		(1,511,111)	1,322,070	134,502	405,308	611,577	689,321	390,035	(28,554)	(581,531)	(1,021,975)	(1,776,337)
Net Financial Assets/(Net Debt), beginning of year		19,535,120	18,024,009	19,346,079	19,480,581	19,885,889	20,497,466	21,186,787	21,576,822	21,548,268	20,966,737	19,944,762
Net Financial Assets/(Net Debt), end of year		18,024,009	19,346,079	19,480,581	19,885,889	20,497,466	21,186,787	21,576,822	21,548,268	20,966,737	19,944,762	18,168,425

Financial Indicators	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1) Acquisition of Tangible Capital Assets (Cumulative)	3,391,465	4,264,065	6,284,465	8,207,265	10,150,165	12,004,965	14,234,965	16,911,465	20,156,965	23,849,965	28,274,965
2) Annual Surplus/Deficit before Amortization (Cumulative)	1,880,354	4,075,024	6,229,926	8,558,034	11,112,511	13,656,632	16,276,667	18,924,613	21,588,582	24,259,607	26,908,270
3) Ratio of Annual Surplus before Amortization to Acquisition of TCA's (Cumulative)	0.55	0.96	0.99	1.04	1.09	1.14	1.14	1.12	1.07	1.02	0.95



Table 4-4
Statement of Cash Flow – Indirect Method: Water Services
UNAUDITED: For Financial Planning Purposes Only
2020-2030

	Notes	Forecast										
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Transactions												
Annual Surplus/Deficit		1,150,749	1,401,395	1,344,308	1,482,964	1,683,412	1,694,571	1,758,063	1,755,882	1,739,087	2,020,155	1,999,682
Add: Amortization of TCA's	4	729,605	793,275	810,594	845,144	871,065	849,550	861,972	892,064	924,882	650,870	648,981
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Less: Earned Deferred Revenue	3	-	-	-	-	-	-	-	-	-	-	-
Less: Developer Contributions		-	-	-	-	-	-	-	-	-	-	-
Add: Deferred Revenue Proceeds		-	-	-	-	-	-	-	-	-	-	-
Change in A/R (Increase)/Decrease		(141,946)	3,193	126,182	(14,122)	(10,845)	(10,741)	(12,286)	(12,753)	(12,976)	(13,203)	(11,334)
Change in A/P Increase/(Decrease)		1,362	(853)	589	375	506	532	550	569	589	608	603
Less: Interest Proceeds		(178,582)	(191,640)	(192,940)	(196,919)	(401,911)	(415,427)	(423,075)	(422,515)	(411,113)	(391,074)	(356,244)
Cash Provided by Operating Transactions		1,561,188	2,005,370	2,088,733	2,117,442	2,142,227	2,118,485	2,185,224	2,213,247	2,240,469	2,267,356	2,281,688
Capital Transactions												
Proceeds on sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Less: Cash Used to acquire Tangible Capital Assets	4	(3,391,465)	(872,600)	(2,020,400)	(1,922,800)	(1,942,900)	(1,854,800)	(2,230,000)	(2,676,500)	(3,245,500)	(3,693,000)	(4,425,000)
Cash Applied to Capital Transactions		(3,391,465)	(872,600)	(2,020,400)	(1,922,800)	(1,942,900)	(1,854,800)	(2,230,000)	(2,676,500)	(3,245,500)	(3,693,000)	(4,425,000)
Investing Transactions												
Proceeds from Investments		178,582	191,640	192,940	196,919	401,911	415,427	423,075	422,515	411,113	391,074	356,244
Less: Cash Used to Acquire Investments		-	-	-	-	-	-	-	-	-	-	-
Cash Provided by (applied to) Investing Transactions		178,582	191,640	192,940	196,919	401,911	415,427	423,075	422,515	411,113	391,074	356,244
Financing Transactions												
Proceeds from Debt Issue	2	-	-	-	-	-	-	-	-	-	-	-
Less: Debt Repayment (Principal only)	2	(3,073)	(3,176)	(3,282)	(3,392)	(2,922)	-	-	-	-	-	-
Cash Applied to Financing Transactions		(3,073)	(3,176)	(3,282)	(3,392)	(2,922)	-	-	-	-	-	-
Increase in Cash and Cash Equivalents		(1,654,768)	1,321,234	257,991	388,169	598,316	679,112	378,299	(40,738)	(593,918)	(1,034,570)	(1,787,068)
Cash and Cash Equivalents, beginning of year	1	19,045,435	17,390,667	18,711,901	18,969,892	19,358,061	19,956,377	20,635,489	21,013,788	20,973,050	20,379,132	19,344,562
Cash and Cash Equivalents, end of year	1	17,390,667	18,711,901	18,969,892	19,358,061	19,956,377	20,635,489	21,013,788	20,973,050	20,379,132	19,344,562	17,557,494



Notes to Financial Plan

The financial plan format as outlined in Chapter 4 closely approximates the full accrual format used by municipalities 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 Town, some of the items listed above have been estimated given that the Town 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 Town, receivable and payable balances were estimated for each year of the forecast based on the following factors:

- a) Receivables: Based on the historical levels of water receivables as a percentage of annual water revenue earned (source: provided by Town staff); and
- b) Payables: Based on historical levels of water payables as a percentage of annual water expenses (source: provided by Town staff).

2. Debt

Outstanding water related debt at the end of 2019 was \$15,845 with additional debt proceeds anticipated throughout the forecast period. Principal repayments over the forecast period are scheduled as follows:

Year	Principal Payments
2020	3,073
2021	3,176
2022	3,282
2023	3,392
2024	2,922
2025	-
2026	-
2027	-
2028	-
2029	-
2030	-
Total	15,845



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 typically made up of water development charge reserve 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. Currently the Town does not impose development charges for water therefore, deferred revenue balances are zero throughout the forecast period.

4. Tangible Capital Assets

- Opening net book value of tangible capital assets includes water related assets in the following categories:
 - i. Land;
 - ii. Land Improvements;
 - iii. Facilities;
 - iv. Watermains;
 - v. Water Meters, Machinery, and Equipment;
 - vi. Hydrants; and
 - vii. Vehicles.
- Amortization is calculated based on using the straight-line approach.
- Given the planned asset replacement forecast in the Rate Study, useful life on acquisitions is assumed to be equal to the weighted average useful life for all assets on hand in each respective 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. To calculate the value of each asset disposal, the replacement value (of each new asset that has been identified as a “replacement”) has been deflated (by weighted average useful life for all assets on hand in the respective asset category) to an estimated historical cost. This was used to calculate disposals only. Future assets are assumed to be disposed of when fully amortized.



- 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 Town is unaware of any specific lead service piping in the municipal water system.



- The balance of tangible capital assets is summarized as follows:

Asset Historical Cost	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Tangible Capital Asset Balance	50,636,002	53,924,509	54,753,752	56,688,809	58,560,747	60,442,347	62,226,679	64,368,616	66,942,943	70,047,790	73,574,164
Acquisitions	3,391,465	872,600	2,020,400	1,922,800	1,942,900	1,854,800	2,230,000	2,676,500	3,245,500	3,693,000	4,425,000
Disposals	102,958	43,357	85,343	50,862	61,300	70,468	88,063	102,173	140,653	166,626	209,148
Closing Tangible Capital Asset Balance	53,924,509	54,753,752	56,688,809	58,560,747	60,442,347	62,226,679	64,368,616	66,942,943	70,047,790	73,574,164	77,790,016
Opening Accumulated Amortization	15,909,136	16,535,783	17,285,701	18,010,952	18,805,234	19,614,999	20,394,081	21,167,990	21,957,881	22,742,110	23,226,354
Amortization Expense	729,605	793,275	810,594	845,144	871,065	849,550	861,972	892,064	924,882	650,870	648,981
Amortization on Disposal	102,958	43,357	85,343	50,862	61,300	70,468	88,063	102,173	140,653	166,626	209,148
Ending Accumulated Amortization	16,535,783	17,285,701	18,010,952	18,805,234	19,614,999	20,394,081	21,167,990	21,957,881	22,742,110	23,226,354	23,666,187
Net Book Value	37,388,726	37,468,051	38,677,857	39,755,513	40,827,348	41,832,598	43,200,626	44,985,062	47,305,680	50,347,810	54,123,829



5. Accumulated Surplus

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

Water	2020 Opening Accumulated Surplus
Reserve Balances	
Reserves: Capital/Other	19,550,964
Total Reserves Balance	19,550,964
Less: Debt Obligations and Deferred Revenue	(15,844)
Add: Tangible Capital Assets	34,726,866
Total Opening Balance	54,261,986

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

6. Other Revenue

Other revenues include minor revenues from water meter sales & inspections, investment and other income, water hook-up charges, watermain by-ins, building leases and rentals, and other miscellaneous revenues. These revenues have been held constant over the forecast period.

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, preparation of and approval of a financial plan for water assets that meets the requirements of the Act is mandatory for municipal water providers. Proof of the plan preparation and approval is a key submission requirement for municipal drinking water licensing and, upon completion, must be submitted to the MECP. The process established for plan approval, public circulation and filing is set out in O. Reg. 453/07 and can be summarized as follows:

1. The financial plan must be approved by resolution of Council 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 Director 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 Town 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 Water and Wastewater Rate Study, dated February 5, 2021. Nevertheless, Council is required to pass certain resolutions with regard to this plan and regulations and it is recommended that:

1. The Town of Essex 's Water Financial Plan prepared by Watson & Associates Economists Ltd. dated February 5, 2021 be approved.
2. Notice of availability of the Financial Plan be advertised.
3. The Financial Plan dated February 5, 2021 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 – Wards 1 and 2: 2020 & 2021 Water Budget and 2022-2029 Water Forecast (as per the Water and Wastewater Rate Study)



Table A-1
Town of Essex
Water Service – Wards 1 & 2
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	-										
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	5,000	55,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Equipment Contingency Wards 1 and 2		97,000	8,500	8,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle:		-										
Backflow Prevention and Monitoring Program Wards 1/2	6,999	-										
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	-										
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	-										
Pickup Truck Unit #607 Replacement	22,500	-										
Victor Watermain (ward 1)	140,000	25,000	25,000									
Irwin Watermain (Ward 1)	335,000	-										
Viscount Watermain (Ward 1 and 2)		160,000	160,000									
Replace Truck		23,750		23,750								
Meter Reading Software		17,000	17,000									
Lifecycle Asset Replacement		10,090,000		500,000	600,000	700,000	800,000	1,000,000	1,250,000	1,540,000	1,700,000	2,000,000
Studies:		-										
Water Rate Study	15,000	15,000					15,000					
Water Model Development and Master Plan		50,000		50,000								
Water Rate Financial Plan	3,500	3,500					3,500					
Growth Related:		-										
Hwy 3 Crossing		250,000		250,000								
Total Capital Expenditures	1,577,035	10,786,250	220,500	837,250	615,000	715,000	833,500	1,015,000	1,265,000	1,555,000	1,715,000	2,015,000



Table A-2
Town of Essex
Water Service – Wards 1 & 2
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 1/2 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Equipment Contingency Wards 1 and 2	-	108,600	8,700	8,800	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Backflow Prevention and Monitoring Program Wards 1/2	6,999	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Fox, Station Street Main Replacement (cfwd WW-18-0009)	190,536	-	-	-	-	-	-	-	-	-	-	-
Gordon, Wilson, Station Street Phase 1 (Construction)	850,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Victor Watermain (ward 1)	140,000	25,500	25,500	-	-	-	-	-	-	-	-	-
Irwin Watermain (Ward 1)	335,000	-	-	-	-	-	-	-	-	-	-	-
Viscount Watermain (Ward 1 and 2)	-	163,200	163,200	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Lifecycle Asset Replacement	-	11,634,100	-	520,200	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Growth Related:												
Hwy3 Crossing	-	260,100	-	260,100	-	-	-	-	-	-	-	-
Total Capital Expenditures	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	11,792,500	160,000	518,600	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Water Reserve	1,577,035	574,400	64,900	352,400	15,900	16,200	37,000	16,900	17,200	17,600	18,000	18,300
Total Capital Financing	1,577,035	12,366,900	224,900	871,000	652,600	773,900	920,300	1,143,100	1,453,100	1,822,000	2,049,700	2,456,300



Table A-3
Town of Essex
Water Service – Wards 1 & 2
Water General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	5,482,742	4,658,019	5,570,841	5,270,626	5,307,273	5,396,894	5,467,092	5,559,196	5,652,836	5,747,941	5,844,539
Transfer from Operating	1,432,008	1,462,797	-	-	-	-	-	-	-	-	-
Transfer to Capital	1,577,035	64,900	352,400	15,900	16,200	37,000	16,900	17,200	17,600	18,000	18,300
Transfer to Operating	725,815	540,231	-	-	-	-	-	-	-	-	-
Closing Balance	4,611,900	5,515,684	5,218,441	5,254,726	5,291,073	5,359,894	5,450,192	5,541,996	5,635,236	5,729,941	5,826,239
Interest	46,119	55,157	52,184	52,547	105,821	107,198	109,004	110,840	112,705	114,599	116,525

Table A-4
Town of Essex
Water Service – Wards 1 & 2
Water Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	4,006,558	4,046,624	3,961,914	4,459,292	4,863,354	5,200,282	5,419,144	5,405,382	5,084,922	4,390,566	3,457,978
Transfer from Operating	-	36,063	971,827	992,611	992,662	995,904	1,006,450	1,015,736	1,023,955	1,031,309	1,029,640
Transfer to Capital	-	160,000	518,600	636,700	757,700	883,300	1,126,200	1,435,900	1,804,400	2,031,700	2,438,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	4,006,558	3,922,687	4,415,140	4,815,202	5,098,316	5,312,886	5,299,394	4,985,218	4,304,477	3,390,175	2,049,618
Interest	40,066	39,227	44,151	48,152	101,966	106,258	105,988	99,704	86,090	67,803	40,992



Table A-5
Town of Essex
Water Service – Wards 1 & 2
Operating Budget Forecast (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55300 - Union Water - Water Supply	722,565	535,726	596,415	629,110	658,572	690,803	724,553	759,777	796,652	835,298	872,152
Utilities, Insurance and Property Taxes											
54300 - Insurance - Buildings	115	119	120	120	120	120	120	120	120	120	120
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,530	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	83,903	98,000	99,000	100,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	20,806	20,806	21,000	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	150	150	150	150	150	150	150	150	150	150
51105 - Computer Hardware and Software	750	400	400	400	410	420	430	440	450	460	470
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	7,000	7,100	7,200	7,600	8,000	8,400	8,800	9,200	9,700	10,200
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	1,800	1,820	1,840	1,880	1,920	1,960	2,000	2,040	2,080	2,120
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,800	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	35,000	30,000	30,300	30,600	31,200	31,800	32,400	33,000	33,700	34,400	35,100



Table A-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	4,000	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700
52660 - Repairs and Maintenance - Water Meters	25,000	27,500	27,800	28,100	28,700	29,300	29,900	30,500	31,100	31,700	32,300
52690 - Repairs and Maintenance - Private Water Service	20,000	20,000	20,200	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,720	1,740	1,770	1,810	1,850	1,890	1,930	1,970	2,010
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,210	2,420	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
50720 - Training and Tuition Refund	2,789	700	710	720	730	740	750	770	790	810	830
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
50750 - Mileage	100	100	100	100	100	100	100	100	100	100	100
Uncollectible Taxes and Accounts Receivable											
54700 - Uncollectible Accounts Receivable - Water	2,000	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	4,696	5,900	6,000	6,100	6,400	6,700	7,000	7,400	7,800	8,200	8,600
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	606	606	620	630	660	690	720	760	800	840	880
54200 - Communications - Telephone	4,500	4,500	4,500	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	9,330	14,307	14,400	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600
54400 - Payments-in-Lieu of Taxes	-	100	100	100	100	100	100	100	100	100	100
Sub Total Operating	1,202,153	1,045,216	1,111,005	1,148,740	1,190,382	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802
<u>Capital-Related</u>											
Existing Debt (Principal) - Non-Growth Related	509	526	543	560	287	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	74	57	40	23	5	-	-	-	-	-	-
Transfer to Capital Reserve	1,432,008	1,462,797	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	1,432,591	1,463,379	583	583	291	-	-	-	-	-	-
Total Expenditures	2,634,744	2,508,596	1,111,588	1,149,323	1,190,674	1,234,903	1,281,243	1,329,377	1,379,662	1,431,918	1,482,802



Table A-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	756,332	793,872	836,299	869,323	894,382	922,705	951,803	981,424	1,011,849	1,043,099	1,069,433
Other Revenue											
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	-	-	-	-	-	-	-	-	-	-	-
46420 - Water Meter Sales and Inspection	5,600	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000
46430 - Water Hook-Up Charges	8,400	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600
46450 - Watermain Buy-Ins	5,000	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100	9,100
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	725,815	540,231	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,501,272	1,378,929	881,124	914,148	939,207	967,530	996,628	1,026,249	1,056,674	1,087,924	1,114,258
Water Billing Recovery - Operating	1,133,472	1,129,667	230,464	235,175	251,466	267,373	284,615	303,128	322,988	343,995	368,544
Lifecycle Reserve Contribution (\$)		36,063	971,827	992,611	992,662	995,904	1,006,450	1,015,736	1,023,955	1,031,309	1,029,640
Water Billing Recovery - Total	1,133,472	1,165,730	1,202,291	1,227,786	1,244,128	1,263,278	1,291,065	1,318,864	1,346,943	1,375,303	1,398,184

Table A-6
Town of Essex
Water Service – Wards 1 & 2
Water Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Water Billing Recovery	1,133,472	1,165,730	1,202,291	1,227,786	1,244,128	1,263,278	1,291,065	1,318,864	1,346,943	1,375,303	1,398,184
Total Volume (m ³)	781,705	798,445	817,885	829,585	834,985	842,185	849,385	856,405	863,425	870,445	873,865
Constant Rate	1.45	1.46	1.47	1.48	1.49	1.50	1.52	1.54	1.56	1.58	1.60
Annual Percentage Change		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%



Appendix B – Wards 3 and 4: 2020 & 2021 Water Budget and 2022-2029 Water Forecast (as per the Water and Wastewater Rate Study)



Table B-1
Town of Essex
Water Service – Wards 3 & 4
Capital Budget Forecast (Uninflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WW-18-0010)	260,000	-										
CWWF Upgrades to Harrow-Colchester South WTP	326,833	-										
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	-										
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	165,000	782,500	177,500	195,000	205,000	205,000						
OCWA Capital Recommendations	540,000	1,440,000	442,000	431,000	387,000	120,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle:		-										
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	-										
Backflow Prevention and Monitoring Program Wards 3/4	6,999	-										
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	5,000	55,000	10,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Pickup Truck Unit #607 Replacement	22,500	-										
Queen Watermain (Ward 4)	340,000	-										
Replace Truck		23,750		23,750								
Meter Reading Software		17,000	17,000									
Equipment Contingency Wards 3 and 4		98,500	8,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Lifecycle Asset Replacement		8,860,000		500,000	600,000	750,000	850,000	950,000	1,050,000	1,200,000	1,360,000	1,600,000
Studies:												
Water Rate Study	15,000	15,000					15,000					
Water Model Development and Master Plan		50,000		50,000								
Water Rate Financial Plan	3,500	3,500					3,500					
Total Capital Expenditures	1,868,429	11,345,250	655,000	1,214,750	1,207,000	1,090,000	893,500	975,000	1,075,000	1,225,000	1,385,000	1,625,000



Table B-2
Town of Essex
Water Service – Wards 3 & 4
Capital Budget Forecast (Inflated \$)

Description	Budget 2020	Total	Budget 2021	Forecast								
				2022	2023	2024	2025	2026	2027	2028	2029	2030
Capital Expenditures												
New/Upgrade:												
Upgrades to Harrow-Colchester South Water Treatment Plant (cfwd WW-18-0010)	260,000	-	-	-	-	-	-	-	-	-	-	-
CWWF Upgrades to Harrow-Colchester South WTP	326,833	-	-	-	-	-	-	-	-	-	-	-
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	8,500	-	-	-	-	-	-	-	-	-	-	-
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	165,000	823,400	181,100	202,900	217,500	221,900	-	-	-	-	-	-
OCWA Capital Recommendations	540,000	1,509,500	450,800	448,400	410,700	129,900	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle:												
Queen Street (Phillip Ferris to Concession 3) Main Replacement	175,097	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4	6,999	-	-	-	-	-	-	-	-	-	-	-
Backflow Prevention and Monitoring Program Wards 3/4 Maintenance	5,000	60,900	10,200	5,200	5,300	5,400	5,500	5,600	5,700	5,900	6,000	6,100
Pickup Truck Unit #607 Replacement	22,500	-	-	-	-	-	-	-	-	-	-	-
Queen Watermain (Ward 4)	340,000	-	-	-	-	-	-	-	-	-	-	-
Replace Truck	-	24,700	-	24,700	-	-	-	-	-	-	-	-
Meter Reading Software	-	17,300	17,300	-	-	-	-	-	-	-	-	-
Equipment Contingency Wards 3 and 4	-	110,200	8,700	10,400	10,600	10,800	11,000	11,300	11,500	11,700	12,000	12,200
Lifecycle Asset Replacement	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Studies:												
Water Rate Study	15,000	16,600	-	-	-	-	16,600	-	-	-	-	-
Water Model Development and Master Plan	-	52,000	-	52,000	-	-	-	-	-	-	-	-
Water Rate Financial Plan	3,500	3,900	-	-	-	-	3,900	-	-	-	-	-
Total Capital Expenditures	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	10,164,900	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Water Reserve	1,868,429	2,618,500	668,100	743,600	644,100	368,000	48,000	28,200	28,700	29,300	30,000	30,500
Total Capital Financing	1,868,429	12,783,400	668,100	1,263,800	1,280,800	1,179,800	986,500	1,098,100	1,234,800	1,435,300	1,655,300	1,980,900



Table B-3
Town of Essex
Water Service – Wards 3 & 4
Water General Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	3,498,276	2,703,116	3,070,185	2,501,351	2,027,323	1,845,510	1,986,460	2,150,425	2,317,159	2,486,617	2,658,749
Transfer from Operating	1,656,953	1,619,489	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Transfer to Capital	1,868,429	668,100	743,600	644,100	368,000	48,000	28,200	28,700	29,300	30,000	30,500
Transfer to Operating	610,448	614,718	-	-	-	-	-	-	-	-	-
Closing Balance	2,676,352	3,039,787	2,476,585	2,007,251	1,809,323	1,947,510	2,108,260	2,271,725	2,437,859	2,606,617	2,778,249
Interest	26,764	30,398	24,766	20,073	36,186	38,950	42,165	45,434	48,757	52,132	55,565

Table B-4
Town of Essex
Water Service – Wards 3 & 4
Water Lifecycle Reserve Fund Continuity (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Balance	6,563,387	6,629,021	6,752,735	7,255,627	7,690,862	8,054,781	8,314,092	8,461,820	8,493,352	8,341,615	7,983,496
Transfer from Operating	-	56,855	951,254	995,788	1,017,782	1,034,790	1,051,710	1,071,095	1,090,701	1,110,643	1,124,980
Transfer to Capital	-	-	520,200	636,700	811,800	938,500	1,069,900	1,206,100	1,406,000	1,625,300	1,950,400
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	6,563,387	6,685,876	7,183,789	7,614,714	7,896,844	8,151,071	8,295,902	8,326,816	8,178,054	7,826,957	7,158,076
Interest	65,634	66,859	71,838	76,147	157,937	163,021	165,918	166,536	163,561	156,539	143,162



Table B-5
Town of Essex
Water Service – Wards 3 & 4
Operating Budget Forecast (Inflated \$)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Expenditures											
Operating Costs											
Treatment:											
Contracted Services											
55200 - Ontario Clean Water Agency - Annual Operating Costs	393,271	405,069	409,100	413,200	421,500	429,900	438,500	447,300	456,200	465,300	474,600
55250 - Ontario Clean Water Agency - Other Operating Costs	71,400	42,000	42,400	42,800	43,700	44,600	45,500	46,400	47,300	48,200	49,200
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System	2,550	2,550	2,600	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
55450 - Contractors	9,000	15,000	15,200	15,400	15,700	16,000	16,300	16,600	16,900	17,200	17,500
Miscellaneous Services											
53650 - Weed Control Services	8,000	10,000	10,100	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	7,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	100,311	116,600	117,800	119,000	121,400	123,800	126,300	128,800	131,400	134,000	136,700
54120 - Utilities - Gas	5,891	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	8,500	8,700
54300 - Insurance - Buildings	13,587	13,976	14,100	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300
54310 - Insurance - Vehicles	833	856	860	870	890	910	930	950	970	990	1,010
54320 - Insurance - General	2,302	3,531	3,600	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
54400 - Payments-in-Lieu of Taxes	-	252	250	250	260	270	280	290	300	310	320
Distribution/Transmission:											
Contracted Services											
55100 - ELK Energy Incorporated - Billing and Collection Charges	88,931	100,000	101,000	102,000	104,000	106,100	108,200	110,400	112,600	114,900	117,200
Internal Allocations - Expense											
51900 - Administration Charges - Town of Essex	21,028	21,028	21,200	21,400	21,800	22,200	22,600	23,100	23,600	24,100	24,600
58900 - Amounts Allocated from Other Departments	39,066	40,641	41,000	41,400	42,200	43,000	43,900	44,800	45,700	46,600	47,500
Materials and Supplies											
51100 - Office Supplies	400	100	100	100	100	100	100	100	100	100	100
51105 - Computer Hardware and Software	750	250	250	250	260	270	280	290	300	310	320
51115 - Memberships	2,000	1,300	1,310	1,320	1,350	1,380	1,410	1,440	1,470	1,500	1,530
51150 - Vehicles - Fuel	4,500	6,500	6,600	6,700	7,000	7,400	7,800	8,200	8,600	9,000	9,500
51190 - Materials and Supplies - Other	2,000	2,000	2,000	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
51600 - Materials & Supplies - Water Meters	25,000	30,000	30,600	31,200	32,800	34,400	36,100	37,900	39,800	41,800	43,900
51800 - Office Equipment	250	-	-	-	-	-	-	-	-	-	-
51840 - Small Tools	600	600	610	620	630	640	650	660	670	680	690
Miscellaneous Services											
53605 - System Access Fee - Automatic Vehicle Locator	760	910	920	930	950	970	990	1,010	1,030	1,050	1,070



Table B-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Repairs and Maintenance											
52120 - Repairs and Maintenance - Computers and Equipment	1,900	-	-	-	-	-	-	-	-	-	-
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	1,500	1,520	1,540	1,570	1,600	1,630	1,660	1,690	1,720	1,750
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	2,000	2,020	2,040	2,080	2,120	2,160	2,200	2,240	2,280	2,330
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	3,500	3,500	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200
52350 - Repairs and Maintenance - Equipment (Labour)	150	150	150	150	150	150	150	150	150	150	150
52355 - Repairs and Maintenance - Equipment (Parts)	150	150	150	150	150	150	150	150	150	150	150
52600 - Repairs and Maintenance - Watermains	20,000	23,000	23,200	23,400	23,900	24,400	24,900	25,400	25,900	26,400	26,900
52620 - Repairs and Maintenance - Hydrants	7,500	7,500	7,600	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
52640 - Repairs and Maintenance - Valves	2,500	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900
52660 - Repairs and Maintenance - Water Meters	20,000	25,500	25,800	26,100	26,600	27,100	27,600	28,200	28,800	29,400	30,000
52690 - Repairs and Maintenance - Private Water Service	27,000	35,000	35,400	35,800	36,500	37,200	37,900	38,700	39,500	40,300	41,100
Salaries, Wages, Benefits and Personnel Expenses											
50100 - Salaries and Wages - Full-Time	125,286	129,159	130,500	131,800	134,400	137,100	139,800	142,600	145,500	148,400	151,400
50150 - Salaries and Wages - Overtime	10,000	4,180	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
50400 - Benefits and Overhead Distributed	15,355	15,355	15,500	15,700	16,000	16,300	16,600	16,900	17,200	17,500	17,900
50500 - Canada Pension Plan - Employer Contribution	4,055	4,689	4,700	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400
50510 - Employment Insurance - Employer Contribution	1,700	1,702	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700
50520 - Employer Health Insurance	2,443	2,519	2,500	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
50530 - Workplace Safety and Insurance Board Premiums	1,247	3,366	3,400	3,400	3,500	3,600	3,700	3,800	3,900	4,000	4,100
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	7,905	8,113	8,200	8,300	8,500	8,700	8,900	9,100	9,300	9,500	9,700
50550 - Health Insurance Premiums	12,810	12,810	12,900	13,000	13,300	13,600	13,900	14,200	14,500	14,800	15,100
50560 - Life Insurance Premiums	3,578	3,789	3,800	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500
50700 - Clothing and Uniforms	1,140	1,000	1,010	1,020	1,040	1,060	1,080	1,100	1,120	1,140	1,160
50720 - Training and Tuition Refund	2,789	500	510	520	530	540	550	560	570	580	590
50740 - Meals	100	100	100	100	100	100	100	100	100	100	100
Utilities, Insurance and Property Taxes											
54100 - Utilities - Hydro	3,378	4,000	4,100	4,200	4,400	4,600	4,800	5,000	5,300	5,600	5,900
54120 - Utilities - Gas	1,423	1,800	1,800	1,800	1,900	2,000	2,100	2,200	2,300	2,400	2,500
54140 - Utilities - Water	400	500	510	520	550	580	610	640	670	700	740
54200 - Communications - Telephone	4,500	3,000	3,000	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700
54300 - Insurance - Buildings	197	203	210	210	210	210	210	210	210	210	210
54310 - Insurance - Vehicles	3,126	3,215	3,200	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
54320 - Insurance - General	8,639	13,247	13,400	13,500	13,800	14,100	14,400	14,700	15,000	15,300	15,600
54400 - Payments-in-Lieu of Taxes	-	64	60	60	60	60	60	60	60	60	60
Sub Total Operating	1,093,704	1,138,475	1,150,160	1,161,790	1,186,750	1,212,210	1,238,170	1,264,930	1,292,190	1,319,850	1,348,330
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	2,564	2,650	2,739	2,831	2,635	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	448	361	272	180	84	-	-	-	-	-	-
Transfer to Capital Reserve	1,656,953	1,619,489	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Sub Total Capital Related	1,659,964	1,622,500	153,011	153,011	152,720	150,000	150,000	150,000	150,000	150,000	150,000
Total Expenditures	2,753,668	2,760,974	1,303,171	1,314,801	1,339,470	1,362,210	1,388,170	1,414,930	1,442,190	1,469,850	1,498,330



Table B-5 (Cont'd)

Description	Budget 2020	Budget 2021	Forecast								
			2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Base Charge	820,420	845,505	871,756	900,725	925,134	946,245	969,162	993,973	1,019,389	1,045,425	1,069,213
Other Revenue											
User Fees and Service Charges											
46945 - Building Leases and Rentals	6,000	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120	6,120
Investment and Other Income											
47800 - Miscellaneous Revenue	125	125	125	125	125	125	125	125	125	125	125
User Fees and Service Charges											
46415 - Water - Miscellaneous	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400	5,400
46420 - Water Meter Sales and Inspection	6,157	6,157	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200	6,200
46430 - Water Hook-Up Charges	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800	13,800
46450 - Watermain Buy-Ins	2,800	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
46945 - Building Leases and Rentals	8,329	8,496	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500	8,500
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	610,448	614,718	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,473,479	1,513,320	924,901	953,870	978,279	999,390	1,022,307	1,047,118	1,072,534	1,098,570	1,122,358
Water Billing Recovery - Operating	1,280,189	1,247,655	378,270	360,931	361,191	362,820	365,863	367,812	369,656	371,280	375,972
Lifecycle Reserve Contribution (\$)		56,855	951,254	995,788	1,017,782	1,034,790	1,051,710	1,071,095	1,090,701	1,110,643	1,124,980
Water Billing Recovery - Total	1,280,189	1,304,510	1,329,524	1,356,718	1,378,973	1,397,610	1,417,574	1,438,907	1,460,357	1,481,923	1,500,951

Table B-6
Town of Essex
Water Service – Wards 3 & 4
Water Rate Forecast (Inflated \$)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Water Billing Recovery	1,280,189	1,304,510	1,329,524	1,356,718	1,378,973	1,397,610	1,417,574	1,438,907	1,460,357	1,481,923	1,500,951
Total Volume (m ³)	785,392	790,612	796,122	802,792	806,417	807,867	810,042	812,942	815,842	818,742	820,192
Constant Rate	1.63	1.65	1.67	1.69	1.71	1.73	1.75	1.77	1.79	1.81	1.83
Annual Percentage Change		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%