

Town of Essex
Water
Ontario Regulation 453/07
Financial Plan

Financial Plan #029-301A

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Plaza Three
101-2000 Argentia Rd.
Mississauga, Ontario
Canada L5N 1V9

Phone: (905) 272-3600

Fax: (905) 272-3602

e-mail: info@watson-econ.ca

www.watson-econ.ca

 **Planning for growth**

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List of Acronyms

O.Reg.	Ontario Regulation
P.S.A.B.	Public Sector Accounting Board
S.D.W.A.	Safe Drinking Water Act
S.W.S.S.A.	Sustainable Water and Sewage Systems Act

1. Introduction

1.1 Study Purpose

Watson & Associates Economists Ltd. (Watson) was retained by the Town of Essex (the Town) to prepare a water financial plan as part of the five submission requirements for the purposes of obtaining a municipal drinking water license as per the Safe Drinking Water Act, 2002. In general, a financial plan requires an in-depth analysis of capital and operating needs, a review of current and future demand versus supply, and consideration of available funding sources. This detailed financial planning and forecasting in regards to the Town's water systems has already been completed and documented by Watson within the "2015 Town of Essex Water and Wastewater Rate Study" (2015 Rate Study). The objective of the report provided herein is to convert the findings of the 2015 Rate Study into the prescribed reporting requirements for a financial plan as defined by Ontario Regulation 453/07 (O.Reg. 453/07).

1.2 Background

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

"No person shall,

- a) establish a new municipal drinking water system or replace or carry out an alteration to a municipal drinking water system except under the authority of and in accordance with an approval under this Part or a drinking water works permit; or
- b) use or operate a municipal drinking water system that was established before or after this section comes into force except under the authority of and in accordance with an approval under this Part or municipal drinking water licence."

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

1. Obtain a drinking water works permit;
2. Acceptance of the operational plan for the system based on the Drinking Water Quality Management Standard;

3. Accreditation of the Operating Authority;
4. Prepare and provide a financial plan; and
5. Obtain permit to take water.

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

1.2.1 Financial Plan Defined

Section 30 (1) of the S.D.W.A. provides the following definition of financial plans:

“financial plans’ means,

- a) financial plans that satisfy the requirements of subsection (2), but only if,
 - (i) Bill 175 (Sustainable Water and Sewage Systems Act, 2002, introduced on September 23, 2002) receives Royal Assent, and
 - (ii) sections 3 and 9 of Bill 175 (Sustainable Water and Sewage Systems Act, 2002) are in force, or
- b) financial plans that satisfy the requirements prescribed by the Minister, in any other case. 2002, c. 32, s. 30 (1).”

As of time of writing, the Sustainable Water and Sewage Systems Act, 2002 cited above has been repealed (see Section 2.2 of this report); however, the standards that it directs underpin the specific requirements of s.30 (1) part b as they are outlined in O.Reg. 453/07 and which will be examined in detail below.

1.2.2 Financial Plan Requirements – New System

O.Reg. 453/07 provides the following parameters with regard to s.30 (1) part b of the S.D.W.A. for new water systems:

- Financial plans must be approved by Council resolution (or governing body) indicating that the drinking water system is financially viable;
- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period (commencing when the system first serves the public);
- 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 Public Sector Accounting Board (P.S.A.B.) for each year in which the financial plans apply;

- Financial plans applicable to two or more solely-owned drinking water systems can be prepared as if they are for one drinking water system;
- Financial plans are to be made available to the public upon request and at no charge;
- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge;
- Notice of the availability of the financial plans is to be given to the public; and
- Financial plans are to be submitted to the Ministry of Municipal Affairs and Housing.

1.2.3 Financial Plan Requirements – Existing System

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

- Financial plans must be approved by Council resolution (or governing body);
- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period (commencing in the year of licence expiry);
- Financial plans must include detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e. the components of a “Statement of Operations” as per the P.S.A.B.) for each year in which the financial plans apply;
- Financial plans must present financial position itemized by total financial assets, total liabilities, net debt, non-financial assets, and tangible capital assets (i.e. the components of a “Statement of Financial Position” as per the P.S.A.B.) for each year in which the financial plans apply;
- Gross cash receipts/payments itemized by operating transactions, capital transactions, investing transactions and financial transactions (i.e. the components of a “Statement of Cash Flow” as per the P.S.A.B.) for each year in which the financial plans apply;
- Financial plans applicable to two or more solely-owned drinking water systems can be prepared as if they are for one drinking water system;
- Financial plans are to be made available to the public upon request and at no charge;

- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge;
- Notice of the availability of the financial plans is to be given to the public; and
- Financial plans are to be submitted to the Ministry of Municipal Affairs and Housing.

1.2.4 Financial Plan Requirements - General

Given that the legislation falls under the S.D.W.A., a financial plan is mandatory for water systems and encouraged for wastewater systems. The financial plans shall be for a forecast period of at least six years but longer planning horizons are encouraged. The financial plan is to be completed, approved and submitted at the time of licence renewal (i.e. six months prior to licence expiry). Financial plans may be amended and additional information beyond what is prescribed can be included if deemed necessary.

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

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

The components of the financial plans indicated by the regulation are consistent with the requirements for financial statement presentation as set out in section PS1200 of the Chartered Professional Accountants Canada (previously 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.”

Both the Statement of Financial Position and the Statement of Operations were required for financial reporting purposes in pre-2009 reporting years; however, the format changed in 2009 to conform to the requirements of PS1200 and PS3150 (see Figures 1-1 and 1-2). Financial statements are now reported on a full accrual accounting basis, which will continue in future years. 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. Before 2009, financial results were reported on a modified cash basis of accounting, whereby revenues and expenses are recognized when cash is paid or received and only certain accrual-type items such as payables and receivables are recognized at year-end. The difference between the

methods is in the timing of when transactions are reported. This timing difference has impacted the presentation of the statements in that various accounts have been added or deleted in order to properly report the transactions.

Moreover, since the 2009 fiscal year, additional information relating to the accounting treatment of tangible capital assets is included in annual reporting, as indicated by the requirements under section PS3150. Pre-2009, the costs to acquire, develop and/or construct capital assets were expensed in the year in which they occur. Going forward, tangible capital assets are capitalized so as to create an inventory of the assets owned and to account for their ability to provide future benefits. The reporting of tangible capital assets required further changes to the format of existing financial statements. From a financial planning perspective, this change is significant for water assets as they can represent a significant portion of the Town's total assets.

The Statement of Cash Flow and the Statement of Change in Net Financial Assets/Debt (which is a new statement as of 2009) are required statements going forward. 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 (see Figure 1-3). 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 (see Figure 1-4).

It should be noted that the Statement of Reserves and Reserve Funds and the Statement of Capital, as used by the public sector pre-2009, have been eliminated by the new reporting format. The balances and transactions that make up these two statements have been transferred to either the Statement of Operations or the Statement of Financial Position depending on the nature of the account.

Figure 1-1
Statement of Financial Position

OLD FORMAT (PRE-2009)**2009 AND FUTURE**

<u>Assets</u>
Financial Assets
Cash
Accounts Receivable
Investments
Inventory for resale
Other Assets
Total Financial Assets
<u>Non-Financial Assets</u>
Inventory of Supplies
Prepaid Expenses
Total Non-Financial Assets
<u>Liabilities</u>
Accounts Payable & Accrued Liabilities
Debt (Principal only)
Other (DC Reserves-Deferred Revenue)
Total Liabilities
NET ASSETS
<u>Municipal Position</u>
Fund Balances
Current Fund
Capital Fund
Reserves and Reserve Funds
Amounts to be Recovered
From Future Revenues
From Reserves & Reserve Funds
TOTAL MUNICIPAL POSITION

<u>Financial Assets</u>
Cash
Accounts Receivable
Investments
Inventory for resale
Other Assets
Total Financial Assets
<u>Liabilities</u>
Accounts Payable & Accrued Liabilities
Debt (Principal only)
Other (DC Reserves-Deferred Revenue)
Total Liabilities
NET FINANCIAL ASSETS/(DEBT)
<u>Non-Financial Assets</u>
Tangible Capital Assets
Inventory of Supplies
Prepaid Expenses
Total Non-Financial Assets
ACCUMULATED SURPLUS/(DEFICIT)

Figure 1-2
Statement of Operations

OLD FORMAT (PRE-2009)

<u>Revenues</u>
Base Charge Revenue
Rate Based Revenue
Transfers from Reserves
Other Revenue
Total Revenues
<u>Expenditures</u>
Operating Expenses
Capital
Total Expenditures
Net Revenues for the year
Increase (decrease) in amounts to be recovered
Change in fund balances

2009 AND FUTURE

<u>Revenue</u>
Base Charge Revenue
Rate Based Revenue
Earned DC Revenue
Other Revenue
Total Revenue
<u>Expenses</u>
Operating Expenses
Interest on Debt
Amortization
Other
Total Expenses
Annual Surplus/(Deficit)
Accum. Surplus/(Deficit), beg. of year
Accum. Surplus/(Deficit), end of year

Figure 1-3
Statement of Change in Net Financial Assets/Debt

2009 AND FUTURE

Annual Surplus/(Deficit)
Less: Acquisition of tangible capital assets
Add: Amortization of tangible capital assets
(Gain)/Loss on disposal of tangible capital assets
Add: Proceeds on sale of tangible capital assets
Add: Write-downs of tangible capital assets
Sub-total
Less: Acquisition of supplies inventory
Less: Acquisition of prepaid expenses
Add: Consumption of supplies inventory
Add: Use of prepaid expenses
Sub-total
(Increase)/Decrease in net financial assets/net debt
Net financial assets/(net debt), beginning of year
Net financial assets/(net debt), end of year

**Figure 1-4
Statement of Cash Flow¹**

DIRECT METHOD	INDIRECT METHOD
<u>Operating Transactions</u> Cash received from: Water Operations Less: Cash paid for: Operating expenses Finance charges	<u>Operating Transactions</u> Annual Surplus/(Deficit) Add: Amortization of Tangible Capital Assets Loss/(Gain) on sale of Tangible Capital Assets Decrease/(Increase) in Accounts Receivable Increase/(Decrease) in Accounts Payable Decrease/(Increase) in Inventories for sale Other items
Cash provided by operating transactions	Cash provided by operating transactions
<u>Capital Transactions</u> Proceeds on sale of tangible capital assets Less: Cash used to acquire tangible capital assets	<u>Capital Transactions</u> Proceeds on sale of tangible capital assets Less: Cash used to acquire tangible capital assets
Cash applied to capital transactions	Cash applied to capital transactions
<u>Investing Transactions</u> Proceeds from investments Less: Cash used to acquire investments	<u>Investing Transactions</u> Proceeds from investments Less: Cash used to acquire investments
Cash provided by (applied to) investing transactions	Cash provided by (applied to) investing transactions
<u>Financing Transactions</u> Proceeds from debt issue Less: Debt repayment (Principal only)	<u>Financing Transactions</u> Proceeds from debt issue Less: Debt repayment (Principal only)
Cash applied to financing transactions	Cash applied to financing transactions
Increase in cash and cash equivalents	Increase in cash and cash equivalents
Cash and cash equivalents, beginning of year	Cash and cash equivalents, beginning of year
Cash and cash equivalents, end of year	Cash and cash equivalents, end of year

¹ The statement of cash flow can be prepared using either the direct or indirect methods. The indirect method derives cash flow by making adjustments to the net surplus/deficit reported on the statement of operations. The direct method calculates cash flow identifying the direct sources and uses of cash.

2. Sustainable Financial Planning

2.1 Introduction

In general, sustainability refers to the ability to maintain a certain position over time. While the S.D.W.A. requires a declaration of the financial plan's sustainability, it does not give a clear definition of what would be considered sustainable. Instead, the Ministry of the Environment released a guideline ("Towards Financially Sustainable Drinking-Water and Wastewater Systems") that provides possible approaches to achieving sustainability. The Province's Principles of Financially Sustainable Water 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: Lifecycle planning with mid-course corrections is preferable to planning over the short term, or not planning at all.

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

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

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

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

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

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 (Bill 72)

Since the passage of the Safe Drinking Water Act, changes and refinements to the legislation have been introduced, including Bill 72. Bill 72 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; to create opportunities for economic development and clean-technology jobs; and to conserve and sustain water resources. To achieve this, Bill 72 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 storm water.

The sustainability plan in Bill 72 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.

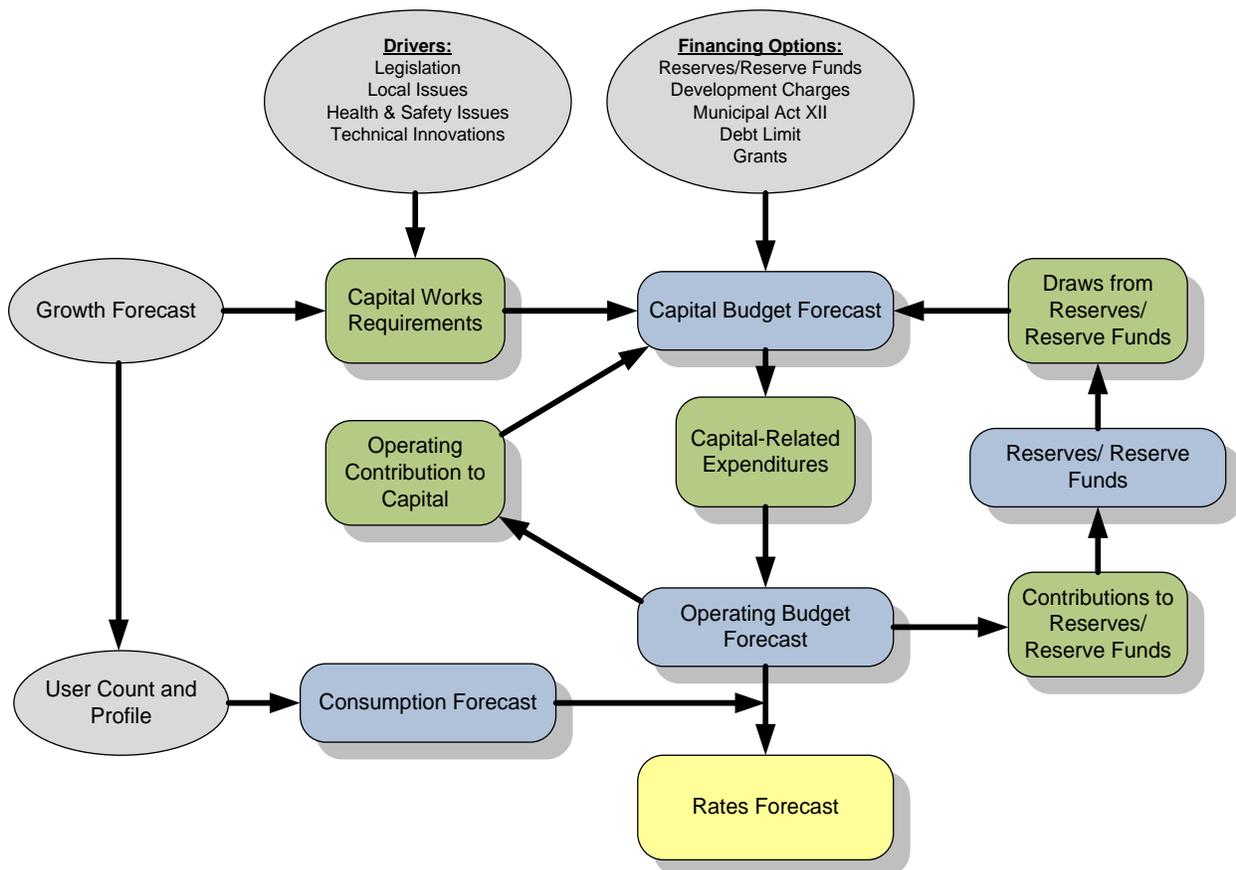
Where a Board has jurisdiction over a service, the plan (and any plan amendments) must be approved by the municipality in which the municipal service is provided, before submission to the Minister. The Minister may also direct preparation of joint or partially joint plans.

Regulations (still forthcoming) will prescribe details with 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 Water and Wastewater Rate Study

As noted above, Watson has already completed extensive financial planning as documented in the 2015 Rate Study conducted on behalf of the Town. The study process was designed to address “full cost” principles and reflect the guiding principles toward sustainable financial planning. Figure 2-1 below summarizes the process.

**Figure 2-1
Water and Wastewater Rate Calculation Process**



As a result of employing this process, the 2015 Rate Study provides a sound financial plan for the Town’s water systems by providing:

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

The details of the financial plan arising from the 2015 Rate Study are contained in Appendix A.

3. Approach

3.1 Overview

The 2015 Rate Study has been prepared on a modified cash basis; therefore, a conversion was required in order to present a full accrual financial plan for the purposes of this report. The conversion process used will help to establish the structure of the financial plan along with the opening balances that will underpin the forecast. This chapter outlines the conversion process utilized and summarizes the adjustments made to prepare the financial plan.

3.2 Conversion Process

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

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

3.2.1 Calculate Tangible Capital Asset Balances

In calculating tangible capital asset balances, existing and future purchased, developed, and/or contributed assets will need to be considered. For existing water assets, an inventory has already been compiled and summarized within the 2015 Rate Study as well as part of the Town's annual P.S.A.B. 3150 compliance processes. Given the prospective nature of the 2015 Rate Study, replacement cost is provided for each asset; however, historical cost (which is the original cost to purchase, develop or construct each asset) is required for financial reporting purposes. Once historical cost is established, the following calculations are made to determine net book value:

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

Future water capital needs have also been determined and summarized within the 2015 Rate Study. These estimates, however, only represent future assets that the Town anticipates purchasing or constructing without consideration for assets that are contributed by developers and other parties (at no cost or partial cost to the Town). These contributed assets could form a significant part of the infrastructure going forward in terms of the sustainability of the system as a whole and despite their non-monetary nature; the financial plan may need to be adjusted in order to properly account for these transactions. Once the sequence and total asset acquisition has been determined for the forecast period, annual amortization of these assets for each year is calculated in a similar manner as that used for existing assets.

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

3.2.2 Convert Statement of Operations

As per subsection 1.2.5 above, the new Statement of Operations eliminates and/or adds certain transactions that have been reported differently by municipalities since 2009 (see Figure 3-1). A wide range of adjustments will be considered and will depend on the size and complexity of the system. For example, the revenues and expenses associated with the now obsolete Statement of Capital and Statement of Reserves and Reserve Funds (see subsection 1.2.5) will need to be adjusted for and included within the Statement of Operations. This includes all non-tangible capital asset costs previously included in the capital statement (i.e. expenses related to various studies) while at the same time eliminating all expenditures incurred to acquire tangible capital assets which will now form part of the tangible capital asset balance discussed in subsection 3.2.1. Transfers to and from reserves are no longer explicitly reported on the Statement of Operations. Instead, these transactions are represented by changes in cash and accumulated surplus. Also, debt repayment costs relating to the principal payment portion only need to be removed, as they no longer qualify as an expense for reporting purposes. Principal payments will now be reported as a decrease in debt liability on the Statement of Financial Position. Finally, expenses relating to tangible capital assets, such as amortization, write-offs and (gain)/loss on disposal of assets, will be 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.

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

Modified Cash Basis	Budget 2015	Adjustments		Full Accrual Budget 2015	Accrual Basis
		DR	CR		
Revenues					Revenues
Base Charge Revenue	1,562,981			1,562,981	Base Charge Revenue
Rate Based Revenue	2,317,829			2,317,829	Rate Based Revenue
Transfers from Reserves	1,289,728	1,289,728			
Contributions from Ratepayers	5,285	5,285			
Other Revenue	79,207		126,183	205,390	Other Revenue
Total Revenues	5,255,030			4,086,200	Total Revenues
Expenditures					Expenses
Operating	2,150,934			2,150,934	Operating Expenses
Capital					
Transfers to Reserves	3,095,799		3,095,799		
Debt Repayment (Principal & Interest)	8,297		6,627	1,670	Interest on Debt
		790,858		790,858	Amortization
Total Expenditures	5,255,030			2,943,462	Total Expenses
Net Expenditures	-			1,142,738	Annual Surplus/(Deficit)
Increase (decrease) in amounts to be recovered	-			49,362,947	Accumulated Surplus/(Deficit), beginning of year
Change in Fund Balances	-	1,142,738		50,505,685	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		3,228,609	3,228,609		

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

3.2.3 Convert Statement of Financial Position

Once the Statement of Operations has been converted and the net book value of tangible capital assets has been recorded, balances for the remaining items on the Statement of Financial Position are determined and recorded (see Figure 3-2). As noted earlier, the applicable balances from the Statement of Capital and the Statement of Reserve and Reserve Funds will need to be transferred to this statement. The opening/actual balances for the remaining accounts, such as accounts receivable, inventory, accounts payable and 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 new statement which reconciles the difference between the surplus or deficit from current operations and the change in net financial assets/debt for the year. This is significant, as net debt provides an indication of future revenue requirements. In order to complete the Statement of Net Financial Assets/Debt, additional information regarding any gains/losses on disposals of assets, asset write-downs, acquisition/use of supplies inventory and the acquisition use of prepaid expenses, is necessary (if applicable). Although the Statement of Change in Net Financial Assets/Debt is not required under O.Reg. 453/07, it has been included in this report as a further indicator of financial viability.

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

Modified Cash Basis	Budget 2015	Adjustments		Full Accrual Budget 2015	Accrual Basis
		DR	CR		
ASSETS					ASSETS
Financial Assets					Financial Assets
Cash	10,048,910			10,048,910	Cash
Accounts Receivable	297,097			297,097	Accounts Receivable
Long-term Accounts Receivable	19,423			19,423	Long-term Accounts Receivable
<i>Total Financial Assets</i>	<i>10,365,430</i>			<i>10,365,430</i>	<i>Total Financial Assets</i>
LIABILITIES					Liabilities
Accounts Payable & Accrued Liabilities	192,406			192,406	Accounts Payable & Accrued Liabilities
Gross Long-term Liabilities	37,981			37,981	Debt (Principal only)
<i>Total Liabilities</i>	<i>230,387</i>			<i>230,387</i>	<i>Total Liabilities</i>
Net Assets/(Debt)	10,135,043			10,135,043	Net Financial Assets/(Debt)
		40,370,642		40,370,642	Non-Financial Assets
				40,370,642	Tangible Capital Assets
					Total Non-Financial Assets
Municipal Position					
Water Reserves	10,153,601	10,153,601			
Amounts to be Recovered	(18,558)		18,558		
Total Municipal Position	10,135,043		50,505,685	50,505,685	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		50,524,243	50,524,243		

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

3.2.5 Verification and Note Preparation

The final step in the conversion process is to ensure that all of the statements created by the previous steps are in balance. The Statement of Financial Position summarizes the resources and obligations of the 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:

$$\begin{array}{l}
 \text{Ending Reserve/Reserve Fund Balance} \\
 \text{Plus: Ending Accounts Payable Balance} \\
 \text{Less: Ending Accounts Receivable Balance} \\
 \text{Equals: Approximate Ending Cash Balance}
 \end{array}$$

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

- c) Accumulated Amortization – Will be based on the culmination of accumulated amortization expenses throughout the life of each asset however derived, along with information on construction/acquisition date and useful life obtained from the 2015 Rate Study.
- 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.

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 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 estimation of the system's "future revenue requirement." A net financial asset position is where financial assets are greater than liabilities and implies that the systems have the resources to finance future operations. Conversely, a net debt position implies that the future revenues generated by the systems will be needed to finance past transactions as well as future operations. Table 4-1 indicates that at the end of 2015, the Town's water systems will be in a net financial asset position of approximately \$10.1 million. From 2016 to 2025, the financial plan forecasts an improving net financial asset position each year. In 2025, a net financial asset position of approximately \$20.7 million is projected.

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

- Tangible capital assets such as water mains are imperative to water service delivery;
- These assets represent significant economic resources in terms of their historical and replacement costs; therefore, ongoing capital asset management is essential to managing significant replacements and repairs; and

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

- 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 Town or donation/contribution by a third party. A decrease in the tangible capital asset balance can indicate a disposal, write down, or use of assets. A use of assets is usually represented by an increase in accumulated amortization due to annual amortization expenses arising as a result of allocating the cost of the asset to operations over the asset's useful life. Table 4-1 shows tangible capital assets are expected to grow approximately \$4.1 million over the forecast period. This indicates that the Town has plans to invest in tangible capital assets in excess of the anticipated use of existing assets over the forecast period.

4.2.2 Statement of Operations (Table 4-2)

The Statement of Operations summarizes the revenues and expenses generated by the water systems 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 improving from 72% in 2015 to approximately 67 to 69% over the remainder of the forecast period. As a result, annual surplus increases from just over \$1.1 million in 2015 to approximately \$1.5 million by 2025. It is important to note that an annual surplus is beneficial to ensure funding is available to non-expense costs such as tangible capital asset acquisitions, reserve/reserve fund transfers and debt principal payments.

Another important indicator on this statement is accumulated surplus/deficit. An accumulated surplus indicates that the available net resources are sufficient to provide future water services. An accumulated deficit indicates that resources are insufficient to provide future services and that borrowing or rate increases are required to finance annual deficits. From Table 4-2, the financial plan proposes to add approximately \$16.0 million to a 2014 accumulated surplus of approximately \$49.4 million over the forecast period. This accumulated surplus, as indicated in Table 4-2, is predominantly made up of reserve and reserve fund balances as well as historical investments in tangible capital assets.

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

The Statement of Change in Net Financial Assets/Debt indicates whether revenue generated was sufficient to cover operating and non-financial asset costs (i.e. inventory

supplies, prepaid expenses, tangible capital assets, etc.) and in so doing, explains the difference between the annual surplus/deficit and the change in net financial assets/debt for the period. Table 4-3 indicates that in each year of the forecast period, forecasted annual surplus exceeds forecasted tangible capital asset acquisitions (net of amortization for the year) resulting in annual increases in net financial assets. This allows for a long-term plan of funding capital through accumulated surplus (i.e. reserves and reserve funds). This is evidenced by the ratio of cumulative annual surplus before amortization to cumulative tangible capital asset acquisitions ranging from 1.91 to 3.11 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 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 Town's water systems to have a cash balance of approximately \$10.0 million at the end of 2015. This cash balance is expected to increase to approximately \$20.6 million by 2025. 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
2015-2025

	Notes	Forecast										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Financial Assets												
Cash	1	10,048,910	11,294,683	12,580,724	13,857,393	15,199,310	16,955,874	18,701,871	20,415,082	22,232,742	24,022,511	20,572,421
Accounts Receivable	1	297,097	300,826	305,300	309,858	314,483	319,185	323,788	328,431	333,133	337,858	342,651
Long-term Accounts Receivable	2	19,423	14,813	10,043	5,108	-	-	-	-	-	-	-
Total Financial Assets		10,365,430	11,610,322	12,896,067	14,172,359	15,513,793	17,275,059	19,025,659	20,743,513	22,565,875	24,360,369	20,915,072
Liabilities												
Accounts Payable & Accrued Liabilities	1	192,406	176,868	180,978	185,152	189,426	193,885	198,491	203,201	208,077	213,068	218,200
Debt (Principal only)	2	37,981	31,574	24,946	18,089	10,995	8,940	6,816	4,619	2,348	-	-
Total Liabilities		230,387	208,442	205,924	203,241	200,421	202,825	205,307	207,820	210,425	213,068	218,200
Net Financial Assets/(Debt)		10,135,043	11,401,880	12,690,143	13,969,118	15,313,372	17,072,234	18,820,352	20,535,693	22,355,450	24,147,301	20,696,872
Non-Financial Assets												
Tangible Capital Assets	4	40,370,642	40,478,313	40,606,075	40,761,350	40,870,353	40,594,918	40,353,685	40,167,560	39,900,506	39,682,883	44,640,163
Total Non-Financial Assets		40,370,642	40,478,313	40,606,075	40,761,350	40,870,353	40,594,918	40,353,685	40,167,560	39,900,506	39,682,883	44,640,163
Accumulated Surplus/(Deficit)	5	50,505,685	51,880,193	53,296,218	54,730,468	56,183,725	57,667,152	59,174,037	60,703,253	62,255,956	63,830,184	65,337,035
Financial Indicators												
	Total Change	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1) Increase/(Decrease) in Net Financial Assets	11,873,625	1,311,796	1,266,837	1,288,263	1,278,975	1,344,254	1,758,862	1,748,118	1,715,341	1,819,757	1,791,851	(3,450,429)
2) Increase/(Decrease) in Tangible Capital Assets	4,100,463	(169,058)	107,671	127,762	155,275	109,003	(275,435)	(241,233)	(186,125)	(267,054)	(217,623)	4,957,280
3) Increase/(Decrease) in Accumulated Surplus	15,974,088	1,142,738	1,374,508	1,416,025	1,434,250	1,453,257	1,483,427	1,506,885	1,529,216	1,552,703	1,574,228	1,506,851

Table 4-2
Statement of Operations: Water Services
UNAUDITED: For Financial Planning Purposes Only
2015-2025

	Notes	Forecast										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water Revenue												
Base Charge Revenue		1,562,981	1,587,464	1,612,281	1,637,435	1,662,931	1,688,773	1,714,965	1,741,513	1,768,420	1,795,691	1,823,331
Rate Based Revenue		2,317,829	2,342,052	2,375,672	2,410,062	2,444,982	2,480,552	2,514,488	2,548,592	2,583,106	2,617,548	2,652,520
Other Revenue	6	205,390	220,855	236,574	252,175	268,574	295,372	316,925	338,076	360,513	382,607	340,008
Total Revenues		4,086,200	4,150,371	4,224,527	4,299,672	4,376,487	4,464,697	4,546,378	4,628,181	4,712,039	4,795,846	4,815,859
Water Expenses												
Operating Expenses	Sch. 4-1	2,150,934	1,977,227	2,023,179	2,069,841	2,117,614	2,167,461	2,218,956	2,271,608	2,326,125	2,381,915	2,439,288
Interest on Debt	2	1,670	1,307	1,085	856	619	374	304	232	157	80	-
Amortization	4	790,858	797,329	784,238	794,725	804,997	813,435	820,233	827,125	833,054	839,623	869,720
Total Expenses		2,943,462	2,775,863	2,808,502	2,865,422	2,923,230	2,981,270	3,039,493	3,098,965	3,159,336	3,221,618	3,309,008
Annual Surplus/(Deficit)		1,142,738	1,374,508	1,416,025	1,434,250	1,453,257	1,483,427	1,506,885	1,529,216	1,552,703	1,574,228	1,506,851
Accumulated Surplus/(Deficit), beginning of year	5	49,362,947	50,505,685	51,880,193	53,296,218	54,730,468	56,183,725	57,667,152	59,174,037	60,703,253	62,255,956	63,830,184
Accumulated Surplus/(Deficit), end of year		50,505,685	51,880,193	53,296,218	54,730,468	56,183,725	57,667,152	59,174,037	60,703,253	62,255,956	63,830,184	65,337,035
Note 5:												
Accumulated Surplus/(Deficit) Reconciliation:		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Reserve Balances												
Reserves: Capital/Other		10,153,601	11,418,641	12,705,046	13,982,099	15,324,367	17,081,174	18,827,168	20,540,312	22,357,798	24,147,301	20,696,872
Total Reserves Balance		10,153,601	11,418,641	12,705,046	13,982,099	15,324,367	17,081,174	18,827,168	20,540,312	22,357,798	24,147,301	20,696,872
Less: Debt Obligations and Deferred Revenue		(37,981)	(31,574)	(24,946)	(18,089)	(10,995)	(8,940)	(6,816)	(4,619)	(2,348)	-	-
Add: Long-term Accounts Receivable		19,423	14,813	10,043	5,108	-	-	-	-	-	-	-
Add: Tangible Capital Assets	4	40,370,642	40,478,313	40,606,075	40,761,350	40,870,353	40,594,918	40,353,685	40,167,560	39,900,506	39,682,883	44,640,163
Total Ending Balance		50,505,685	51,880,193	53,296,218	54,730,468	56,183,725	57,667,152	59,174,037	60,703,253	62,255,956	63,830,184	65,337,035
Financial Indicators	Total Change	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1) Expense to Revenue Ratio		72%	67%	66%	67%	67%	67%	67%	67%	67%	67%	69%
2) Increase/(Decrease) in Accumulated Surplus	15,974,088	1,142,738	1,374,508	1,416,025	1,434,250	1,453,257	1,483,427	1,506,885	1,529,216	1,552,703	1,574,228	1,506,851

Schedule 4-1
Statement of Operating Expenses: Water Services
UNAUDITED: For Financial Planning Purposes Only
2015-2025

	Notes	Forecast										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Operating Expenses												
55100 - ELK Energy Incorporated - Billing and Collection Charges		170,496	173,900	177,400	180,900	184,500	188,200	192,000	195,900	199,800	203,800	207,900
51900 - Administration Charges - Town of Essex		41,287	42,100	42,900	43,700	44,500	45,400	46,300	47,300	48,300	49,300	50,300
58900 - Amounts Allocated from Other Departments		50,966	52,000	53,000	54,000	55,000	56,200	57,400	58,600	59,800	61,000	62,200
51100 - Office Supplies		800	800	800	800	800	800	800	800	800	800	800
51105 - Computer Hardware and Software		1,500	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
51110 - Postage and Courier		40	-	-	-	-	-	-	-	-	-	-
51115 - Memberships		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
51140 - Janitorial Supplies and Services		1,094	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
51150 - Vehicles - Fuel		9,000	9,300	9,600	9,900	10,300	10,700	11,100	11,500	11,900	12,300	12,700
51190 - Materials and Supplies - Other		2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800	2,900	3,000
51600 - Materials & Supplies - Water Meters		40,000	41,400	42,900	44,400	46,000	47,600	49,300	51,000	52,900	54,900	57,000
51800 - Office Equipment		380	400	400	400	400	400	400	400	400	400	400
51840 - Small Tools		1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
53510 - Advertising		400	400	400	400	400	400	400	400	400	400	400
53605 - System Access Fee - Automatic Vehicle Locator		1,520	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
56700 - Leases - Office Equipment and Computers		400	400	400	400	400	400	400	400	400	400	400
52120 - Repairs and Maintenance - Computers and Equipment		3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800	3,800
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
52300 - Repairs and Maintenance - Vehicles (Labour)		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
52305 - Repairs and Maintenance - Vehicles (Parts)		5,000	5,200	5,400	5,600	5,800	6,000	6,200	6,400	6,600	6,800	7,000
52350 - Repairs and Maintenance - Equipment (Labour)		300	400	400	400	400	400	400	400	400	400	400
52355 - Repairs and Maintenance - Equipment (Parts)		300	400	400	400	400	400	400	400	400	400	400
52600 - Repairs and Maintenance - Watermains		40,000	40,800	41,600	42,400	43,200	44,000	44,800	45,600	46,600	47,600	48,600
52620 - Repairs and Maintenance - Hydrants		30,000	30,600	31,200	31,800	32,400	33,000	33,600	34,200	34,800	35,400	36,200
52640 - Repairs and Maintenance - Valves		15,000	15,400	15,800	16,200	16,600	17,000	17,400	17,800	18,200	18,600	19,000
52660 - Repairs and Maintenance - Water Meters		25,000	25,500	26,000	26,500	27,000	27,500	28,000	28,500	29,000	29,500	30,100
52690 - Repairs and Maintenance - Private Water Service		40,000	40,800	41,600	42,400	43,200	44,000	44,800	45,600	46,600	47,600	48,600
50100 - Salaries and Wages - Full-Time		215,250	219,600	224,000	228,400	233,000	237,600	242,400	247,200	252,200	257,200	262,400
50120 - Salaries and Wages - Part-Time		7,364	7,600	7,800	8,000	8,200	8,400	8,600	8,800	9,000	9,200	9,400
50150 - Salaries and Wages - Overtime		20,000	20,400	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	24,800
50400 - Benefits and Overhead Distributed		292	200	200	200	200	200	200	200	200	200	200
50900 - Canada Pension Plan - Employer Contribution		7,769	8,000	8,200	8,400	8,600	8,800	9,000	9,200	9,400	9,600	9,800
50910 - Employment Insurance - Employer Contribution		3,864	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
50520 - Employer Health Insurance		4,339	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
50530 - Workplace Safety and Insurance Board Premiums		6,070	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,000
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution		13,728	14,000	14,200	14,400	14,600	14,800	15,000	15,400	15,800	16,200	16,600
50550 - Health Insurance Premiums		18,988	19,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,000
50560 - Life Insurance Premiums		4,349	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400	4,400
50700 - Clothing and Uniforms		2,280	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
50720 - Training and Tuition Refund		5,380	5,400	5,600	5,800	6,000	6,200	6,400	6,600	6,800	7,000	7,200
50740 - Meals		-	-	-	-	-	-	-	-	-	-	-
50750 - Mileage		-	-	-	-	-	-	-	-	-	-	-
54700 - Uncollectible Accounts Receivable - Water		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
54100 - Utilities - Hydro		24,180	25,400	26,600	28,000	29,400	30,800	32,400	34,000	35,700	37,500	39,300
54120 - Utilities - Gas		3,183	3,400	3,600	3,800	4,000	4,200	4,400	4,600	4,800	5,000	5,200
54140 - Utilities - Water		1,015	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
54200 - Communications - Telephone		9,000	9,200	9,400	9,600	9,800	10,000	10,200	10,400	10,600	10,800	11,000
54300 - Insurance - Buildings		540	600	600	600	600	600	600	600	600	600	600
54310 - Insurance - Vehicles		2,403	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
54320 - Insurance - General		17,032	17,400	17,800	18,200	18,600	19,000	19,400	19,800	20,200	20,600	21,000
Water Treatment												
55200 - Ontario Clean Water Agency - Annual Operating Costs		351,218	358,200	365,400	372,700	380,200	387,800	395,600	403,500	411,600	419,800	428,200
55250 - Ontario Clean Water Agency - Other Operating Costs		71,400	72,800	74,300	75,800	77,300	78,800	80,400	82,000	83,600	85,300	87,000
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System		2,550	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500
55450 - Contractors		17,000	17,300	17,600	18,000	18,400	18,800	19,200	19,600	20,000	20,400	20,800
51870 - Equipment		5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900	6,000
52120 - Repairs and Maintenance - Computers and Equipment		7,000	7,100	7,200	7,300	7,400	7,500	7,600	7,700	7,800	7,900	8,000
54100 - Utilities - Hydro		80,928	85,000	89,300	93,800	98,500	103,400	108,600	114,000	119,700	125,700	132,000
54120 - Utilities - Gas		11,754	12,300	12,900	13,500	14,200	14,800	15,600	16,400	17,200	18,100	19,000
54300 - Insurance - Buildings		18,300	19,200	19,600	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800
54310 - Insurance - Vehicles		640	600	600	600	600	600	600	600	600	600	600
54320 - Insurance - General		4,541	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600
55300 - Union Water - Water Supply		722,565	515,727	528,379	541,141	554,014	568,261	582,856	597,808	613,125	628,915	644,888
Non TCA - Expenses from Capital Budget	7	-	-	-	-	-	-	-	-	-	-	-
TOTAL OPERATING EXPENSES		2,150,934	1,977,227	2,023,179	2,069,841	2,117,614	2,167,461	2,218,956	2,271,608	2,326,125	2,381,915	2,439,288

Table 4-3
Statement of Changes in Net Financial Assets/Debt: Water Services
UNAUDITED: For Financial Planning Purposes Only
2015-2025

	Notes	Forecast										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual Surplus/(Deficit)		1,142,738	1,374,508	1,416,025	1,434,250	1,453,257	1,483,427	1,506,885	1,529,216	1,552,703	1,574,228	1,506,851
Less: Acquisition of Tangible Capital Assets	4	(621,800)	(905,000)	(912,000)	(950,000)	(914,000)	(538,000)	(579,000)	(641,000)	(566,000)	(622,000)	(5,827,000)
Add: Amortization of Tangible Capital Assets	4	790,858	797,329	784,238	794,725	804,997	813,435	820,233	827,125	833,054	839,623	869,720
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Add: Proceeds on Sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Add: Write-downs of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
		169,058	(107,671)	(127,762)	(155,275)	(109,003)	275,435	241,233	186,125	267,054	217,623	(4,957,280)
Increase/(Decrease) in Net Financial Assets/(Net Debt)		1,311,796	1,266,837	1,288,263	1,278,975	1,344,254	1,758,862	1,748,118	1,715,341	1,819,757	1,791,851	(3,450,429)
Net Financial Assets/(Net Debt), beginning of year		8,823,247	10,135,043	11,401,880	12,690,143	13,969,118	15,313,372	17,072,234	18,820,352	20,535,693	22,355,450	24,147,301
Net Financial Assets/(Net Debt), end of year		10,135,043	11,401,880	12,690,143	13,969,118	15,313,372	17,072,234	18,820,352	20,535,693	22,355,450	24,147,301	20,696,872
Financial Indicators		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1) Acquisition of Tangible Capital Assets (Cumulative)		621,800	1,526,800	2,438,800	3,388,800	4,302,800	4,840,800	5,419,800	6,060,800	6,626,800	7,248,800	13,075,800
2) Annual Surplus/Deficit before Amortization (Cumulative)		1,933,596	4,105,433	6,305,696	8,534,671	10,792,925	13,089,787	15,416,905	17,773,246	20,159,003	22,572,854	24,949,425
3) Ratio of Annual Surplus before Amortization to Acquisition of TCA's (Cumulative)		3.11	2.69	2.59	2.52	2.51	2.70	2.84	2.93	3.04	3.11	1.91

Table 4-4
Statement of Cash Flow – Indirect Method: Water Services
UNAUDITED: For Financial Planning Purposes Only
2015-2025

	Notes	Forecast										
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Operating Transactions												
Annual Surplus/Deficit		1,142,738	1,374,508	1,416,025	1,434,250	1,453,257	1,483,427	1,506,885	1,529,216	1,552,703	1,574,228	1,506,851
Add: Amortization of TCA's	4	790,858	797,329	784,238	794,725	804,997	813,435	820,233	827,125	833,054	839,623	869,720
Change in A/R (Increase)/Decrease		(297,097)	(3,728)	(4,474)	(4,559)	(4,625)	(4,703)	(4,603)	(4,644)	(4,702)	(4,725)	(4,793)
Change in A/P Increase/(Decrease)		192,406	(15,538)	4,110	4,174	4,274	4,459	4,606	4,710	4,876	4,991	5,132
Less: Interest Proceeds		(125,353)	(140,971)	(156,852)	(172,618)	(189,190)	(210,879)	(232,434)	(253,584)	(276,022)	(298,115)	(255,517)
Cash Provided by Operating Transactions		1,703,552	2,011,600	2,043,047	2,055,972	2,068,713	2,085,739	2,094,687	2,102,823	2,109,909	2,116,002	2,121,393
Capital Transactions												
Proceeds on sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Less: Cash Used to acquire Tangible Capital Assets	4	(621,800)	(905,000)	(912,000)	(950,000)	(914,000)	(538,000)	(579,000)	(641,000)	(566,000)	(622,000)	(5,827,000)
Cash Applied to Capital Transactions		(621,800)	(905,000)	(912,000)	(950,000)	(914,000)	(538,000)	(579,000)	(641,000)	(566,000)	(622,000)	(5,827,000)
Investing Transactions												
Proceeds from Investments		125,353	140,971	156,852	172,618	189,190	210,879	232,434	253,584	276,022	298,115	255,517
Less: Cash Used to Acquire Investments		-	-	-	-	-	-	-	-	-	-	-
Cash Provided by (applied to) Investing Transactions		125,353	140,971	156,852	172,618	189,190	210,879	232,434	253,584	276,022	298,115	255,517
Financing Transactions												
Proceeds from Debt Issue	2	-	-	-	-	-	-	-	-	-	-	-
Add: Long-term Accounts Receivable Proceeds (recovery of debt)	2	4,454	4,609	4,770	4,936	5,108	-	-	-	-	-	-
Less: Debt Repayment (Principal only)	2	(6,626)	(6,407)	(6,628)	(6,857)	(7,094)	(2,054)	(2,124)	(2,196)	(2,271)	(2,348)	-
Cash Applied to Financing Transactions		(2,172)	(1,798)	(1,858)	(1,921)	(1,986)	(2,054)	(2,124)	(2,196)	(2,271)	(2,348)	-
Increase in Cash and Cash Equivalents		1,204,933	1,245,773	1,286,041	1,276,669	1,341,917	1,756,564	1,745,997	1,713,211	1,817,660	1,789,769	(3,450,090)
Cash and Cash Equivalents, beginning of year	1	8,843,977	10,048,910	11,294,683	12,580,724	13,857,393	15,199,310	16,955,874	18,701,871	20,415,082	22,232,742	24,022,511
Cash and Cash Equivalents, end of year	1	10,048,910	11,294,683	12,580,724	13,857,393	15,199,310	16,955,874	18,701,871	20,415,082	22,232,742	24,022,511	20,572,421

Water Notes to Financial Plan

The financial plan format, as outlined in Chapter 4, closely approximates the full accrual format used by municipalities (2009 onward) on their audited financial statements. The financial plan, however, 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); and
- 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; and
- 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 of Essex, 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

Receivable and payable balances were estimated for each year of the forecast based on the following factors:

- a) Receivables: Based on historical levels of Water and Wastewater receivables as a percentage of annual revenues, applied to projected water revenues (source: provided by Town staff);
- b) Payables: Based on historical levels of Town wide payables as a percentage of annual expenses incurred, applied to projected water expenses (source: provided by Town staff).

2. Debt

Outstanding water related debt at the end of 2014 was \$44,607. It is anticipated that no debt proceeds will be required over the forecast period. Principal repayments over the forecast period are estimated as follows:

Year	Principal Payments
2015	6,626
2016	6,407
2017	6,628
2018	6,857
2019	7,094
2020	2,054
2021	2,124
2022	2,196
2023	2,271
2024	2,348
2025	-
Total	\$ 44,605

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 typically is made up of water development charge reserve fund balances which are considered to be a liability for financial reporting purposes until the funds are used to emplace the works for which they have been collected. Given that the Town does not impose water development charges, it is assumed that 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. Water Treatment;
 - ii. Water Distribution
 - iii. Vehicles; and
 - iv. Machinery & Equipment.
- Amortization is calculated based on the straight-line approach.
- Given the planned asset replacement forecast in the 2015 Rate Study, useful life on acquisitions is assumed to be equal to typical values assigned by the Town for each asset category.
- Write-offs are assumed to equal \$0 for each year in the forecast period.
- Tangible capital assets are shown on a net basis. It is assumed that disposals occur when the asset is being replaced, unless the asset is documented as a new asset. The value of each asset disposal is calculated by estimating the original purchase/construction date and deflating current replacement cost values to those estimated dates in order to calculate original historical cost.
- Gains/losses on disposals 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 subsection 3.2.1, are shown as Developer Contributions, a revenue, on the Statement of Operations in the year of contribution (if applicable).

- The Town is unaware of any specific lead service piping in the Town water systems.

The balance of tangible capital assets is summarized as follows:

Asset Historical Cost	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Opening Tangible Capital Asset Balance	53,319,101	53,909,027	54,772,492	55,641,047	56,520,403	57,404,058	57,920,792	58,443,982	58,979,050	59,522,647	60,079,211
Acquisitions	621,800	905,000	912,000	950,000	914,000	538,000	579,000	641,000	566,000	622,000	5,827,000
Disposals	31,874	41,535	43,445	70,644	30,345	21,266	55,810	105,932	22,403	65,436	264,957
Closing Tangible Capital Asset Balance	53,909,027	54,772,492	55,641,047	56,520,403	57,404,058	57,920,792	58,443,982	58,979,050	59,522,647	60,079,211	65,641,254
Opening Accumulated Amortization	12,779,401	13,538,385	14,294,179	15,034,972	15,759,053	16,533,705	17,325,874	18,090,297	18,811,490	19,622,141	20,396,328
Amortization Expense	790,858	797,329	784,238	794,725	804,997	813,435	820,233	827,125	833,054	839,623	869,720
Amortization on Disposal	31,874	41,535	43,445	70,644	30,345	21,266	55,810	105,932	22,403	65,436	264,957
Ending Accumulated Amortization	13,538,385	14,294,179	15,034,972	15,759,053	16,533,705	17,325,874	18,090,297	18,811,490	19,622,141	20,396,328	21,001,091
Net Book Value	40,370,642	40,478,313	40,606,075	40,761,350	40,870,353	40,594,918	40,353,685	40,167,560	39,900,506	39,682,883	44,640,163

5. Accumulated Surplus

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

Water	2015 Opening Accumulated Surplus
Reserve Balances	
Reserves: Capital/Other	8,843,977
Total Reserves Balance	8,843,977
Less: Debt Obligations and Deferred Revenue	(44,607)
Add: Long-term Accounts Receivable	23,877
Add: Tangible Capital Assets	40,539,700
Total Opening Balance	49,362,947

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

6. Other Revenue

Other revenue includes water hook-ups, buy-ins, water meter sales, connection charges as well as other non-operating general revenues.

7. Operating Expenses

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

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

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

1. The financial plan must be approved by resolution of the municipality who owns the drinking water system or the governing body of the owner. (O.Reg. 453/07, Section 3 (1) 1)
2. The owner of the drinking water system must provide notice advertising the availability of the financial plan. The plans will be made available to the public upon request and without charge. The plans must also be made available to the public on the municipality's website. (O.Reg. 453/07, Section 3 (1) 5)
3. The owner of the drinking water system must provide a copy of the financial plan to the Director of Policy Branch, Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6)
4. The owner of the drinking water system must provide proof satisfactory to the Ministry of the Environment that the financial plans for the system satisfy the requirements under the Safe Drinking Water Act. (S.D.W.A. Section 32 (5) 2 ii)

6. Recommendations

This report presents the water financial plan for the Town of Essex 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 2015 Rate Study. 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 Water Financial Plan prepared by Watson & Associates Economists Ltd. dated November 2, 2015 be approved.
2. Notice of availability of the Financial Plan be advertised.
3. The Financial Plan, the Council Resolution approving the Financial Plan, and the Water and Wastewater Rate Study underpinning the Financial Plan be submitted to the Ministry of Municipal Affairs and Housing. (O.Reg. 453/07, Section 3 (1) 6).
4. The Financial Plan, the Council Resolution approving the Financial Plan, and the Water and Wastewater Rate Study underpinning the Financial Plan be submitted to the Ministry of the Environment, satisfying the requirements under the Safe Drinking Water Act. (S.D.W.A. Section 32 (5) 2 ii).

Appendix A – 2015 Water and Wastewater Rate Study – Summary Table

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

Description	Budget 2015	Total	Forecast									
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capital Expenditures												
Fairview Avenue Reconstruction	425,000	-	-	-	-	-	-	-	-	-	-	-
Equipment Contingency for Wards 1 and 2 Distribution and Transmission (50%)	6,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck (Water Wards 1 and 2 Distribution and Transmission)	9,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck (Water Wards 1 and 2 Treatment)	2,400	-	-	-	-	-	-	-	-	-	-	-
Barrier Wall Culvert 100,000 (Entrance to Essex Sewage Lagoon, Water and Public Works Facility)	789	-	-	-	-	-	-	-	-	-	-	-
Barrier Wall Culvert 100,000 (Entrance to Essex Sewage Lagoon, Water and Public Works Facility)	211	-	-	-	-	-	-	-	-	-	-	-
Barrier Wall Culvert 100,000 (Entrance to Essex Sewage Lagoon, Water and Public Works Facility)	789	-	-	-	-	-	-	-	-	-	-	-
Barrier Wall Culvert 100,000 (Entrance to Essex Sewage Lagoon, Water and Public Works Facility)	211	-	-	-	-	-	-	-	-	-	-	-
Lifecycle:												
Water Meters, Valves, Tower, etc. - Ward 1 & 2	-	8,000	-	-	-	-	-	-	-	-	-	8,000
Water Admin Inventory - Ward 1 & 2	-	123,000	17,000	17,000	17,000	2,000	-	9,000	26,000	-	35,000	-
Watermains - Ward 1 & 2	-	6,665,000	364,000	367,000	371,000	375,000	-	-	-	-	-	5,188,000
Water Hydrants - Ward 1 & 2	-	52,000	-	-	-	-	-	-	-	-	-	52,000
Total Capital Expenditures	444,400	6,848,000	381,000	384,000	388,000	377,000	-	9,000	26,000	-	43,000	5,240,000
Capital Financing												
Lifecycle Reserve Fund	-	5,240,000	-	-	-	-	-	-	-	-	-	5,240,000
Water Reserve	444,400	1,608,000	381,000	384,000	388,000	377,000	-	9,000	26,000	-	43,000	-
Total Capital Financing	444,400	6,848,000	381,000	384,000	388,000	377,000	-	9,000	26,000	-	43,000	5,240,000

Table A-2
Town of Essex
Water Service - Wards 1 & 2
Schedule of Non-Growth Related Debenture Repayments
 Inflated \$

Debenture Year	2015	Principal (Inflated)	Forecast										
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
2016		-		-	-	-	-	-	-	-	-	-	-
2017		-			-	-	-	-	-	-	-	-	-
2018		-				-	-	-	-	-	-	-	-
2019		-					-	-	-	-	-	-	-
2020		-						-	-	-	-	-	-
2021		-							-	-	-	-	-
2022		-								-	-	-	-
2023		-									-	-	-
2024		-										-	-
2025		-											-
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A-3
Town of Essex
Water Service - Wards 1 & 2
Schedule of Growth Related Debenture Repayments
 Inflated \$

Debenture Year	2015	Principal (Inflated)	Forecast										
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
2016		-		-	-	-	-	-	-	-	-	-	-
2017		-			-	-	-	-	-	-	-	-	-
2018		-				-	-	-	-	-	-	-	-
2019		-					-	-	-	-	-	-	-
2020		-						-	-	-	-	-	-
2021		-							-	-	-	-	-
2022		-								-	-	-	-
2023		-									-	-	-
2024		-										-	-
2025		-											-
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A-4
Town of Essex
Water Service - Wards 1 & 2
Water Reserve Funds Continuity
 Inflated \$

Description	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Opening Balance	2,657,439	2,063,196	1,703,224	1,411,652	1,112,385	820,515	906,708	984,867	1,046,791	1,135,813	1,182,411
Transfer from Operating	550,000	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Transfer to Capital	444,400	381,000	384,000	388,000	377,000	-	9,000	26,000	-	43,000	-
Transfer to Operating	725,314	-	-	-	-	-	-	-	-	-	-
Closing Balance	2,037,725	1,682,196	1,394,224	1,098,652	810,385	895,515	972,708	1,033,867	1,121,791	1,167,813	1,257,411
Interest	25,472	21,027	17,428	13,733	10,130	11,194	12,159	12,923	14,022	14,598	15,718

Table A-5
Town of Essex
Water Service - Wards 1 & 2
Water Lifecycle Reserve Fund Continuity
 Inflated \$

Description	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Opening Balance	1,119,696	2,249,591	3,220,314	4,133,126	5,063,928	6,013,187	6,980,423	7,963,577	8,962,583	9,977,211	11,007,138
Transfer from Operating	1,102,123	930,966	861,786	868,284	875,022	881,059	884,838	888,357	891,452	894,036	896,503
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	5,240,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	2,221,818	3,180,557	4,082,100	5,001,410	5,938,950	6,894,245	7,865,261	8,851,934	9,854,036	10,871,247	6,663,641
Interest	27,773	39,757	51,026	62,518	74,237	86,178	98,316	110,649	123,175	135,891	83,296

Table A-6
Town of Essex
Water Service - Wards 1 & 2
Operating Budget Forecast
 Inflated \$

Description	Budget 2015	Forecast										
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Expenditures												
Operating Costs												
55100 - ELK Energy Incorporated - Billing and Collection Charges	83,903	85,600	87,300	89,000	90,800	92,600	94,500	96,400	98,300	100,300	102,300	
51900 - Administration Charges - Town of Essex	20,259	20,700	21,100	21,500	21,900	22,300	22,700	23,200	23,700	24,200	24,700	
58900 - Amounts Allocated from Other Departments	25,483	26,000	26,500	27,000	27,500	28,100	28,700	29,300	29,900	30,500	31,100	
51100 - Office Supplies	400	400	400	400	400	400	400	400	400	400	400	
51105 - Computer Hardware and Software	750	800	800	800	800	800	800	800	800	800	800	
51110 - Postage and Courier	20	-	-	-	-	-	-	-	-	-	-	
51115 - Memberships	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
51140 - Janitorial Supplies and Services	547	600	600	600	600	600	600	600	600	600	600	
51150 - Vehicles - Fuel	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,500	
51190 - Materials and Supplies - Other	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	
51600 - Materials & Supplies - Water Meters	20,000	21,000	22,100	23,200	24,400	25,600	26,900	28,200	29,600	31,100	32,700	
51800 - Office Equipment	190	200	200	200	200	200	200	200	200	200	200	
51840 - Small Tools	600	600	600	600	600	600	600	600	600	600	600	
53510 - Advertising	200	200	200	200	200	200	200	200	200	200	200	
53605 - System Access Fee - Automatic Vehicle Locator	760	800	800	800	800	800	800	800	800	800	800	
56700 - Leases - Office Equipment and Computers	200	200	200	200	200	200	200	200	200	200	200	
52120 - Repairs and Maintenance - Computers and Equipment	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	
52350 - Repairs and Maintenance - Equipment (Labour)	150	200	200	200	200	200	200	200	200	200	200	
52355 - Repairs and Maintenance - Equipment (Parts)	150	200	200	200	200	200	200	200	200	200	200	
52600 - Repairs and Maintenance - Watermains	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
52620 - Repairs and Maintenance - Hydrants	15,000	15,300	15,600	15,900	16,200	16,500	16,800	17,100	17,400	17,700	18,100	
52640 - Repairs and Maintenance - Valves	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100	9,300	9,500	
52660 - Repairs and Maintenance - Water Meters	15,000	15,300	15,600	15,900	16,200	16,500	16,800	17,100	17,400	17,700	18,100	
52690 - Repairs and Maintenance - Private Water Service	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
50100 - Salaries and Wages - Full-Time	107,625	109,800	112,000	114,200	116,500	118,800	121,200	123,600	126,100	128,600	131,200	
50120 - Salaries and Wages - Part-Time	3,682	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	
50150 - Salaries and Wages - Overtime	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
50400 - Benefits and Overhead Distributed	146	100	100	100	100	100	100	100	100	100	100	
50500 - Canada Pension Plan - Employer Contribution	3,884	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900	
50510 - Employment Insurance - Employer Contribution	1,932	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
50520 - Employer Health Insurance	2,170	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	
50530 - Workplace Safety and Insurance Board Premiums	3,035	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000	
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	6,864	7,000	7,100	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	
50550 - Health Insurance Premiums	9,494	9,700	9,900	10,100	10,300	10,500	10,700	10,900	11,100	11,300	11,500	
50560 - Life Insurance Premiums	2,174	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	
50700 - Clothing and Uniforms	1,140	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	
50720 - Training and Tuition Refund	2,690	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600	
54700 - Uncollectible Accounts Receivable - Water	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
54100 - Utilities - Hydro	12,180	12,800	13,400	14,100	14,800	15,500	16,300	17,100	18,000	18,900	19,800	
54120 - Utilities - Gas	1,783	1,900	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800	
54140 - Utilities - Water	515	500	500	500	500	500	500	500	500	500	500	

54200 - Communications - Telephone	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,500
54300 - Insurance - Buildings	270	300	300	300	300	300	300	300	300	300	300
54310 - Insurance - Vehicles	1,202	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
54320 - Insurance - General	8,516	8,700	8,900	9,100	9,300	9,500	9,700	9,900	10,100	10,300	10,500
Treatment											
55300 - Union Water - Water Supply	503,184	515,727	528,379	541,141	554,014	568,261	582,856	597,808	613,125	628,815	644,888
54300 - Insurance - Buildings	158	200	200	200	200	200	200	200	200	200	200
54310 - Insurance - Vehicles	320	300	300	300	300	300	300	300	300	300	300
54320 - Insurance - General	2,271	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Sub Total Operating	946,746	969,527	992,079	1,014,841	1,038,014	1,062,661	1,088,056	1,114,008	1,140,925	1,168,415	1,196,688
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	434	-	-	-	-	-	-	-	-	-	-
Existing Debt (Interest) - Non-Growth Related	149	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	550,000	-	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Sub Total Capital Related	550,583	-	75,000								
Total Expenditures	1,497,329	969,527	1,067,079	1,089,841	1,113,014	1,137,661	1,163,056	1,189,008	1,215,925	1,243,415	1,271,688
Revenues											
Base Charge	751,822	765,243	778,856	792,666	806,673	820,882	835,294	849,912	864,739	879,778	895,031
43120 - Water Frontage and Connection Charges	562	562	562	562	562	562	562	562	562	562	562
47800 - Miscellaneous Revenue	200	200	200	200	200	200	200	200	200	200	200
46420 - Water Meter Sales and Inspection	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600
46430 - Water Hook-Up Charges	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400
46450 - Watermain Buy-Ins	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900
Contributions from Reserves / Reserve Funds	725,314	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,494,798	782,905	796,518	810,328	824,335	838,544	852,956	867,574	882,401	897,440	912,693
Water Billing Recovery - Operating	2,531	186,622	270,561	279,514	288,679	299,117	310,100	321,434	333,524	345,975	358,995
Lifecycle Reserve Contribution (\$)	1,102,123	930,966	861,786	868,284	875,022	881,059	884,838	888,357	891,452	894,036	896,503
Water Billing Recovery - Total	1,104,654	1,117,588	1,132,347	1,147,798	1,163,701	1,180,176	1,194,938	1,209,791	1,224,976	1,240,011	1,255,498

Table A-7
Town of Essex
Water Service - Wards 3 & 4
Capital Budget Forecast
 Inflated \$

Description	Budget 2015	Total	Forecast									
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Capital Expenditures												
Equipment Contingency for Wards 3 and 4 Distribution and Transmission (50%)	6,000	-	-	-	-	-	-	-	-	-	-	-
Harrow Colchester South Water Treatment Plant Contingency for Wards 3 and 4	160,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck (Water Wards 3 and 4 Distribution and Transmission)	9,000	-	-	-	-	-	-	-	-	-	-	-
Pickup Truck (Water Wards 3 and 4 Treatment)	2,400	-	-	-	-	-	-	-	-	-	-	-
Lifecycle:												
Water Meters, Valves, Tower, etc. - Ward 3 & 4	-	2,000	-	-	-	-	-	-	-	2,000	-	-
Water Treatment - Ward 3 & 4	-	116,000	12,000	11,000	9,000	10,000	-	-	5,000	17,000	25,000	27,000
Water Admin Inventory - Ward 3 & 4	-	133,000	-	-	31,000	-	5,000	32,000	65,000	-	-	-
Watermains - Ward 3 & 4	-	5,355,000	512,000	517,000	522,000	527,000	533,000	538,000	543,000	549,000	554,000	560,000
Total Capital Expenditures	177,400	5,606,000	524,000	528,000	562,000	537,000	538,000	570,000	615,000	566,000	579,000	587,000
Capital Financing												
Lifecycle Reserve Fund	-	5,606,000	524,000	528,000	562,000	537,000	538,000	570,000	615,000	566,000	579,000	587,000
Water Reserve	177,400	-	-	-	-	-	-	-	-	-	-	-
Total Capital Financing	177,400	5,606,000	524,000	528,000	562,000	537,000	538,000	570,000	615,000	566,000	579,000	587,000

Table A-8
Town of Essex
Water Service - Wards 3 & 4
Schedule of Non-Growth Related Debenture Repayments
 Inflated \$

Debenture Year	2015	Principal (Inflated)	Forecast										
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
2016		-		-	-	-	-	-	-	-	-	-	-
2017		-			-	-	-	-	-	-	-	-	-
2018		-				-	-	-	-	-	-	-	-
2019		-					-	-	-	-	-	-	-
2020		-						-	-	-	-	-	-
2021		-							-	-	-	-	-
2022		-								-	-	-	-
2023		-									-	-	-
2024		-										-	-
2025		-											-
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A-9
Town of Essex
Water Service - Wards 3 & 4
Schedule of Growth Related Debenture Repayments
 Inflated \$

Debenture Year	2015	Principal (Inflated)	Forecast										
			2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
2016		-		-	-	-	-	-	-	-	-	-	-
2017		-			-	-	-	-	-	-	-	-	-
2018		-				-	-	-	-	-	-	-	-
2019		-					-	-	-	-	-	-	-
2020		-						-	-	-	-	-	-
2021		-							-	-	-	-	-
2022		-								-	-	-	-
2023		-									-	-	-
2024		-										-	-
2025		-											-
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-	-

Table A-10
Town of Essex
Water Service - Wards 3 & 4
Water Reserve Funds Continuity
 Inflated \$

Description	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Opening Balance	659,090	1,377,964	1,595,768	1,772,416	1,856,485	1,896,960	1,948,889	2,006,382	2,069,130	2,136,519	2,208,131
Transfer from Operating	1,443,676	198,102	154,766	61,150	17,055	27,869	32,723	37,203	41,012	44,352	49,552
Transfer to Capital	177,400	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	564,414	-	-	-	-	-	-	-	-	-	-
Closing Balance	1,360,952	1,576,067	1,750,534	1,833,566	1,873,540	1,924,829	1,981,612	2,043,585	2,110,142	2,180,870	2,257,683
Interest	17,012	19,701	21,882	22,920	23,419	24,060	24,770	25,545	26,377	27,261	28,221

Table A-11
Town of Essex
Water Service - Wards 3 & 4
Water Lifecycle Reserve Fund Continuity
 Inflated \$

Description	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Opening Balance	4,407,753	4,462,850	4,899,335	5,387,852	5,949,300	6,593,704	7,245,150	7,872,340	8,461,806	9,108,254	9,749,620
Transfer from Operating	-	900,000	950,000	1,050,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
Transfer to Capital	-	524,000	528,000	562,000	537,000	538,000	570,000	615,000	566,000	579,000	587,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	4,407,753	4,838,850	5,321,335	5,875,852	6,512,300	7,155,704	7,775,150	8,357,340	8,995,806	9,629,254	10,262,620
Interest	55,097	60,486	66,517	73,448	81,404	89,446	97,189	104,467	112,448	120,366	128,283

Table A-12
Town of Essex
Water Service - Wards 3 & 4
Operating Budget Forecast
 Inflated \$

Description	Budget 2015	Forecast										
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Expenditures												
<u>Operating Costs</u>												
55100 - ELK Energy Incorporated - Billing and Collection Charges	86,593	88,300	90,100	91,900	93,700	95,600	97,500	99,500	101,500	103,500	105,600	
51900 - Administration Charges - Town of Essex	21,028	21,400	21,800	22,200	22,600	23,100	23,600	24,100	24,600	25,100	25,600	
58900 - Amounts Allocated from Other Departments	25,484	26,000	26,500	27,000	27,500	28,100	28,700	29,300	29,900	30,500	31,100	
51100 - Office Supplies	400	400	400	400	400	400	400	400	400	400	400	
51105 - Computer Hardware and Software	750	800	800	800	800	800	800	800	800	800	800	
51110 - Postage and Courier	20	-	-	-	-	-	-	-	-	-	-	
51115 - Memberships	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
51140 - Janitorial Supplies and Services	547	600	600	600	600	600	600	600	600	600	600	
51150 - Vehicles - Fuel	4,500	4,700	4,900	5,100	5,400	5,700	6,000	6,300	6,600	6,900	7,200	
51190 - Materials and Supplies - Other	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
51600 - Materials & Supplies - Water Meters	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
51800 - Office Equipment	190	200	200	200	200	200	200	200	200	200	200	
51840 - Small Tools	600	600	600	600	600	600	600	600	600	600	600	
53510 - Advertising	200	200	200	200	200	200	200	200	200	200	200	
53605 - System Access Fee - Automatic Vehicle Locator	760	800	800	800	800	800	800	800	800	800	800	
56700 - Leases - Office Equipment and Computers	200	200	200	200	200	200	200	200	200	200	200	
52120 - Repairs and Maintenance - Computers and Equipment	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	1,900	
52200 - Repairs and Maintenance - Buildings and Miscellaneous Structures	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
52300 - Repairs and Maintenance - Vehicles (Labour)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
52305 - Repairs and Maintenance - Vehicles (Parts)	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	
52350 - Repairs and Maintenance - Equipment (Labour)	150	200	200	200	200	200	200	200	200	200	200	
52355 - Repairs and Maintenance - Equipment (Parts)	150	200	200	200	200	200	200	200	200	200	200	
52600 - Repairs and Maintenance - Watermains	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
52620 - Repairs and Maintenance - Hydrants	15,000	15,300	15,600	15,900	16,200	16,500	16,800	17,100	17,400	17,700	18,100	
52640 - Repairs and Maintenance - Valves	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100	9,300	9,500	
52660 - Repairs and Maintenance - Water Meters	10,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800	12,000	
52690 - Repairs and Maintenance - Private Water Service	20,000	20,400	20,800	21,200	21,600	22,000	22,400	22,800	23,300	23,800	24,300	
50100 - Salaries and Wages - Full-Time	107,625	109,800	112,000	114,200	116,500	118,800	121,200	123,600	126,100	128,600	131,200	
50120 - Salaries and Wages - Part-Time	3,682	3,800	3,900	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	
50400 - Benefits and Overhead Distributed	146	100	100	100	100	100	100	100	100	100	100	
50500 - Canada Pension Plan - Employer Contribution	3,884	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900	
50510 - Employment Insurance - Employer Contribution	1,932	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
50520 - Employer Health Insurance	2,170	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	
50530 - Workplace Safety and Insurance Board Premiums	3,035	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000	
50540 - Ontario Municipal Employees Retirement Savings - Employer Contribution	6,864	7,000	7,100	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	
50550 - Health Insurance Premiums	9,494	9,700	9,900	10,100	10,300	10,500	10,700	10,900	11,100	11,300	11,500	
50560 - Life Insurance Premiums	2,174	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	
50700 - Clothing and Uniforms	1,140	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	
50720 - Training and Tuition Refund	2,691	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500	3,600	

54100 - Utilities - Hydro	12,000	12,600	13,200	13,900	14,600	15,300	16,100	16,900	17,700	18,600	19,500
54120 - Utilities - Gas	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400
54140 - Utilities - Water	500	500	500	500	500	500	500	500	500	500	500
54200 - Communications - Telephone	4,500	4,600	4,700	4,800	4,900	5,000	5,100	5,200	5,300	5,400	5,500
54300 - Insurance - Buildings	270	300	300	300	300	300	300	300	300	300	300
54310 - Insurance - Vehicles	1,202	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
54320 - Insurance - General	8,516	8,700	8,900	9,100	9,300	9,500	9,700	9,900	10,100	10,300	10,500
Treatment											
55200 - Ontario Clean Water Agency - Annual Operating Costs	351,218	358,200	365,400	372,700	380,200	387,800	395,600	403,500	411,600	419,800	428,200
55250 - Ontario Clean Water Agency - Other Operating Costs	71,400	72,800	74,300	75,800	77,300	78,800	80,400	82,000	83,600	85,300	87,000
55265 - Ontario Clean Water Agency - Drinking Water Quality Management System	2,550	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400	3,500
55450 - Contractors	17,000	17,300	17,600	18,000	18,400	18,800	19,200	19,600	20,000	20,400	20,800
51870 - Equipment	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,800	5,900	6,000
52120 - Repairs and Maintenance - Computers and Equipment	7,000	7,100	7,200	7,300	7,400	7,500	7,700	7,900	8,100	8,300	8,500
54100 - Utilities - Hydro	80,928	85,000	89,300	93,800	98,500	103,400	108,600	114,000	119,700	125,700	132,000
54120 - Utilities - Gas	11,754	12,300	12,900	13,500	14,200	14,900	15,600	16,400	17,200	18,100	19,000
54300 - Insurance - Buildings	18,673	19,000	19,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600
54310 - Insurance - Vehicles	320	300	300	300	300	300	300	300	300	300	300
54320 - Insurance - General	2,270	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
55300 - Union Water - Water Supply	219,381	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	1,204,188	1,007,700	1,031,100	1,055,000	1,079,600	1,104,800	1,130,900	1,157,600	1,185,200	1,213,500	1,242,600
Capital-Related											
Existing Debt (Principal) - Non-Growth Related	6,192	6,407	6,628	6,857	7,094	2,054	2,124	2,196	2,271	2,348	-
Existing Debt (Interest) - Non-Growth Related	1,521	1,307	1,085	856	619	374	304	232	157	80	-
Transfer to Capital Reserve	1,443,676	198,102	154,766	61,150	17,055	27,869	32,723	37,203	41,012	44,352	49,552
Sub Total Capital Related	1,451,390	205,816	162,480	68,864	24,769	30,297	35,151	39,631	43,440	46,780	49,552
Total Expenditures	2,655,578	1,213,516	1,193,580	1,123,864	1,104,369	1,135,097	1,166,051	1,197,231	1,228,640	1,260,280	1,292,152
Revenues											
Base Charge	811,159	822,222	833,424	844,769	856,257	867,891	879,671	891,601	903,681	915,913	928,300
46945 - Building Leases and Rentals	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
43120 - Water Frontage and Connection Charges	24,344	24,344	24,344	24,344	24,344	24,344	24,344	24,344	24,344	24,344	24,344
47800 - Miscellaneous Revenue	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	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157	6,157
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	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800
46945 - Building Leases and Rentals	8,329	8,329	8,329	8,329	8,329	8,329	8,329	8,329	8,329	8,329	8,329
Contributions from Reserves / Reserve Funds	564,414	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	1,442,403	889,052	900,254	911,599	923,087	934,721	946,501	958,431	970,511	982,743	995,130
Water Billing Recovery - Operating	1,213,175	324,464	293,325	212,264	181,281	200,377	219,550	238,801	258,130	277,537	297,022
Lifecycle Reserve Contribution (\$)		900,000	950,000	1,050,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
Water Billing Recovery - Total	1,213,175	1,224,464	1,243,325	1,262,264	1,281,281	1,300,377	1,319,550	1,338,801	1,358,130	1,377,537	1,397,022