



2026 St. Thomas Area Secondary Water Supply System Rate Study

City of St. Thomas

Final Report

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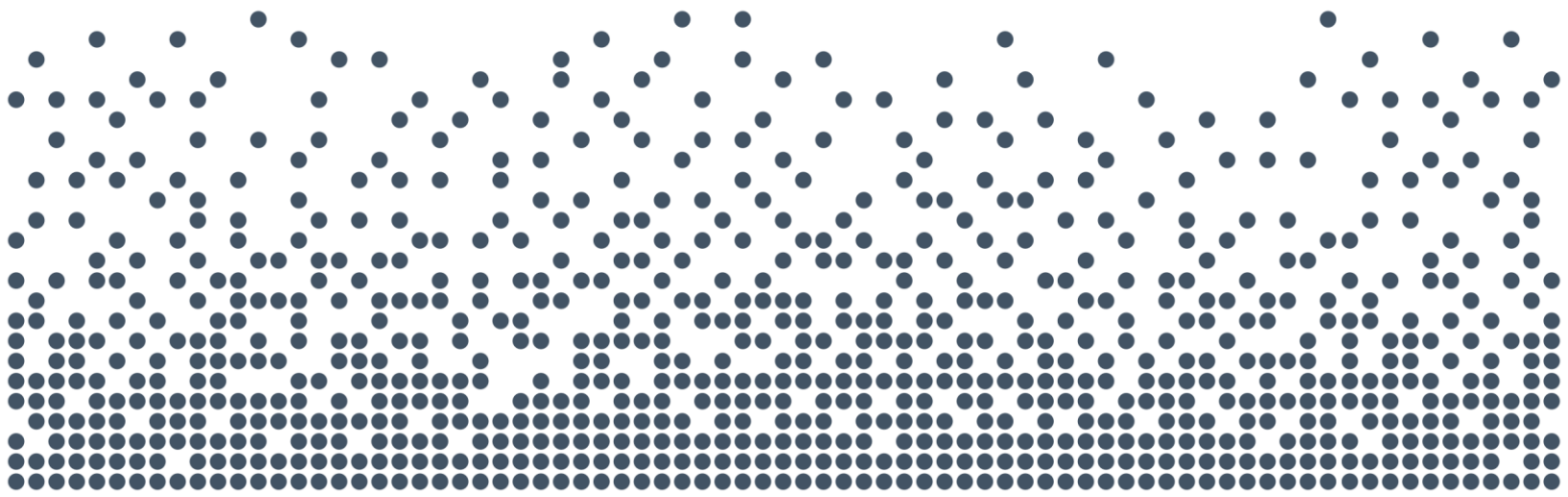
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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.P.	Asset Management Plan
A.R.L.	Annual Repayment Limit
C.I.R.C.	Canadian Infrastructure Report Card
D.C.	Development Charges
D.C.A.	<i>Development Charges Act, 1997</i>
E.A.P.W.S.S.	Elgin Area Primary Water Supply System
F.P.	Financial Plan
H.E.W.S.F.	Housing-Enabling Water Systems Fund
I.J.P.A.	<i>Infrastructure for Jobs and Prosperity Act, 2015</i>
I.O.	Infrastructure Ontario
M.O.E.C.P.	Ministry of the Environment, Conservation and Parks
O.C.I.F.	Ontario Community Infrastructure Fund
O. Reg.	Ontario Regulation
P.S.A.B.	Public Sector Accounting Board
S.T.A.S.W.S.S.	St. Thomas Area Secondary Water Supply System
S.T.D.W.S.	St. Thomas and Suburban Area Drinking Water System
S.W.S.S.A.	<i>Sustainable Water and Sewage Systems Act, 2002</i>



Executive Summary



Executive Summary

Overview

Watson & Associates Economists Ltd. (Watson) was retained to undertake the 2026 St. Thomas Area Secondary Water Supply System (S.T.A.S.W.S.S.) Rate Study. The purpose of this study is to establish wholesale water rates that support full cost recovery, regulatory compliance, and the long-term financial sustainability of the S.T.A.S.W.S.S. over a ten-year forecast period from 2026 to 2036.

The study updates the S.T.A.S.W.S.S. rate model using updated consumption forecasts for the serviced municipalities, capital infrastructure requirements identified through capital forecasting, operating cost projections, and a recommended capital financing strategy. The analysis also supports the Water Financial Plan required under Ontario Regulation 453/07 of the Safe Drinking Water Act for the S.T.A.S.W.S.S.

Existing System and Customer Base

The S.T.A.S.W.S.S. is a wholesale water supply system that purchases treated water from the Elgin Area Primary Water Supply System (E.A.P.W.S.S.) and conveys it to the City of St. Thomas, the Municipality of Central Elgin, and the Township of Southwold (with subsequent pass-through to the Municipality of Dutton-Dunwich via the serviced municipalities). In 2026, total water purchases from S.T.A.S.W.S.S. across the three directly serviced municipalities is estimated at approximately 2.4 million m³ per year.

Costs to operate, maintain, and renew the S.T.A.S.W.S.S. are recovered through a variable water rate charged per cubic metre to the serviced municipalities. For customers within the St. Thomas and Suburban Area Drinking Water System (S.T.D.W.S.), the S.T.A.S.W.S.S. rate is blended with the E.A.P.W.S.S. rate based on the proportion of water supplied from each system.

Growth and Water Demand Forecast

Forecasts of water demand for the S.T.A.S.W.S.S. are based on growth projections for the serviced municipalities and reflect historical system water losses of approximately 6%. In 2026, the S.T.A.S.W.S.S. is forecast to deliver approximately 2.4 million m³ of



water and purchase approximately 2.6 million m³ from the E.A.P.W.S.S. when losses are included.

Over the 2026 to 2036 forecast period, supplied water from the S.T.A.S.W.S.S. is projected to increase by approximately 287,000 m³. Accounting for losses, total purchases by the S.T.A.S.W.S.S. from the E.A.P.W.S.S. are projected to increase by approximately 305,000 m³ by the end of the forecast period.

Capital Infrastructure Needs

Based on the capital forecast, and input from administration, total capital investment requirements for the S.T.A.S.W.S.S. over the 2026 to 2036 period are estimated at approximately \$19.0 million in 2026 dollars (i.e., excluding inflation).

The capital program includes replacement, major maintenance, and lifecycle renewal of existing assets. The most significant capital need relates to the Ford Tower replacement and related transmission main works (approximately \$17.5 million).

Capital Financing Strategy

The recommended capital financing approach balances affordability with long-term system sustainability and intergenerational equity. Over the forecast period, capital expenditures (inclusive of 3.5% annual capital inflation) total approximately \$19.9 million and are funded through a combination of transfers from rate-supported reserves and debenture financing.

New debt represents approximately 49% of the forecast funding mix, with transfers from rate-supported reserves funding the remaining approximately \$10.1 million. Based on the estimated uncommitted year-end 2025 water reserve balance, the opening capital reserve fund balance is approximately \$6.2 million and is forecast to close at approximately \$2.8 million in 2036.

Operating Expenditures

The 2026 operating budget was used as the base year for operating cost projections for the S.T.A.S.W.S.S. Operating costs were forecast using 3% annual inflation for most items, 5% annual inflation for utilities and insurance, and water purchase cost increases consistent with the E.A.P.W.S.S. rate forecast.



Operating expenditures for the S.T.A.S.W.S.S. (excluding transfers to reserves) are forecast to increase from approximately \$3.4 million in 2026 to approximately \$5.1 million by 2036, driven primarily by increases in water purchase costs.

Water Rate Forecast and Impacts

Water rates have been developed to achieve full cost recovery for the S.T.A.S.W.S.S. while maintaining a prudent approach to affordability and long-term sustainability. The recommended forecast funds projected operating expenditures, capital reserve contributions, and debt servicing requirements associated with existing and future capital investments.

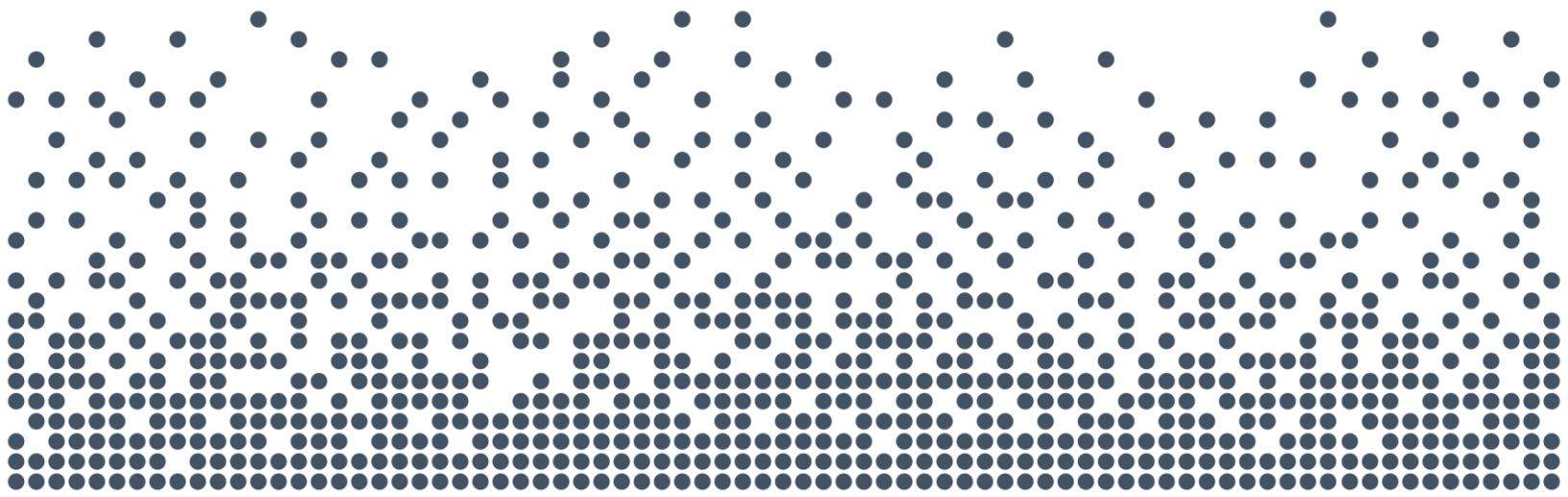
To support full cost recovery, the secondary consumptive water rate is forecast to increase by 4.2% annually over the 2026 to 2036 period.

These increases are intended to move the system from funding approximately 40% of the established long-term lifecycle funding target in 2026 to approximately 60% by the end of the forecast period, with the intent that future rate increases will continue to progress toward recovering 100% of the annual lifecycle funding target over time.

The resulting S.T.A.S.W.S.S. rate forecast is summarized in Table ES-1, with detailed calculations and supporting continuity schedules provided in Appendix A.

Table ES-1
S.T.A.S.W.S.S. Rate Forecast

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Water Rates - STASWSS											
Primary Rate (per m ³)	\$1.0699	\$1.1073	\$1.1405	\$1.1747	\$1.2099	\$1.2462	\$1.2836	\$1.3221	\$1.3618	\$1.4026	\$1.4447
Secondary Rate (per m ³)	\$0.6824	\$0.7110	\$0.7408	\$0.7718	\$0.8042	\$0.8379	\$0.8730	\$0.9095	\$0.9477	\$0.9874	\$1.0287
Total	\$1.7523	\$1.8183	\$1.8813	\$1.9465	\$2.0141	\$2.0841	\$2.1566	\$2.2316	\$2.3094	\$2.3900	\$2.4734
% Change - Primary Rate		3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% Change - Secondary Rate		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%



Report



Chapter 1

Introduction



1. Introduction

1.1 Background

Watson & Associates Economists Ltd. (Watson) was retained to complete both a Water Rate Study and requisite Water Ontario Regulation 453/07 Financial Plan for the St. Thomas Area Secondary Water Supply System (S.T.A.S.W.S.S.).

The S.T.A.S.W.S.S. purchases its water from the E.A.P.W.S.S. and transfers the water to the City of St. Thomas and parts of the Municipality of Central Elgin and the Township of Southwold, which then subsequently allows pass-through to the Municipality of Dutton-Dunwich. This report reviews the rates that are imposed for water services within the S.T.A.S.W.S.S.

The S.T.A.S.W.S.S. does not directly provide water to customers but provides water to the S.T.D.W.S., the Municipality of Central Elgin and the Township of Southwold. In 2026 it is estimated that the total water purchases from all three areas is 2.4 million m³. Table 1-1 outlines the current base consumption (m³ per year) from each area that has been utilized in the review.

Costs to operate and maintain the system are recovered through a variable water rate that is charged to each municipality for the purchase of water. For water customers within the S.T.D.W.S., the water rate for the S.T.A.S.W.S.S. is blended with the water rate charged by the E.A.P.W.S.S. based on the proportion of water coming from each system.

As the S.T.A.S.W.S.S. is purchasing its water from the E.A.P.W.S.S. and the blended rate includes 100% of all water purchase costs from the E.A.P.W.S.S., it follows that the secondary rate excludes the costs to purchase this water, but includes other related operating costs and capital related expenditures.

The water rate for the S.T.A.S.W.S.S. is \$0.6824 per m³ for a total rate of \$1.7523 per m³ when the purchase of water from the E.A.P.W.S.S. is accounted for. This results in the blended rate being \$1.2746 per m³ for those customers connected to the S.T.D.W.S.



Table 1-1
Current Consumption by Municipality

Description	Base Consumption (m ³)
Central Elgin	62,391
Southwold	872,423
St. Thomas	1,494,747
Grand Total	2,429,560

1.2 Study Process

Periodically conducting water rate studies helps to ensure rates reflect the costs incurred. In addition to this, municipalities and local boards must prepare a Water Financial Plan as part of the five-year submission requirements for the purpose of obtaining a municipal drinking water license as per the *Safe Drinking Water Act, 2002*.

The objectives of the study and the steps involved in carrying out the assignment are summarized below:

- Calculate service demand assumptions based on analysis of historical consumption and recent trends;
- Estimate future consumption levels by applying demand assumptions to forecast system growth;
- Develop a capital program consisting of lifecycle needs and needs identified by the Administration;
- Forecast annual operating costs and rate-based funding requirements;
- Develop a long-term rate forecast;
- Provide an impact assessment on rate payers;
- Prepare the Financial Plan required under the Municipal Drinking Water Licensing Program, as prescribed by the *Safe Drinking Water Act* (Ontario Regulation (O. Reg.) 453/07); and
- Present findings to staff and the Joint Board of Management for their consideration.

The following analysis is provided in this report:

- Chapter 2 – Forecast Growth and Servicing Requirements
- Chapter 3 – Capital Infrastructure Needs



- Chapter 4 – Capital Cost Financing
- Chapter 5 – Operating Expenditure and Revenue
- Chapter 6 – Forecast Water Rates
- Chapter 7 – Recommendations

Unless otherwise noted, 2026 is used as the base year for existing rates and observed consumption, with the recommended rate forecast implemented beginning in 2027 and presented through 2036.

1.3 Legislative Context

Significant regulatory changes have occurred in Ontario since the Walkerton water crisis. These changes result from the Walkerton Commission and the 93 recommendations made in the Walkerton Inquiry Part II report. Areas of recommendation include:

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

The legislation that would have most impacted municipal water and wastewater rates was the Sustainable Water and Sewage Systems Act, 2002 (S.W.S.S.A.), which required municipalities to implement full-cost pricing. The legislation was enacted in 2002; however, it had not been implemented pending the approval of its regulations. The Act was repealed as of January 1, 2013. It is expected that the provisions of the *Water Opportunities Act* will implement the requirements of S.W.S.S.A. Furthermore, on December 27, 2017, O. Reg. 588/17 was released under the *Infrastructure for Jobs and Prosperity Act, 2015* (I.J.P.A.), which outlines the requirements for asset management for municipalities. The results of the asset management review under this Act will need to be considered in light of the recent investments undertaken by the City and the capital spending plan provided herein.

The following sections describe these various resulting changes.



1.3.1 Safe Drinking Water Act

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

The purposes of the *Safe Drinking Water Act* are to “recognize that the people of Ontario are entitled to expect their drinking water to be safe and to provide for the protection of human health and the prevention of drinking water health hazards through the control and regulation of drinking water systems and drinking water testing. 2002, c. 32, s. 1.”

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

- Mandatory licensing and accreditation of testing laboratories;
- New standards for treatment, distribution quality and testing;
- Mandatory operator training and certification;
- Mandatory licensing of municipal water providers;
- Stronger enforcement and compliance provisions; and
- “Standard of care” requirements for municipalities.

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

1.3.2 Financial Plans Regulation

On August 16, 2007, the Ministry of Environment, Conservation, and Parks (M.O.E.C.P.) issued O. Reg. 453/07, which requires the preparation of financial plans for water systems. The M.O.E.C.P. has also provided a Financial Plan Guidance Document to assist in preparing the plans. A summary of the key elements of the regulation is provided below:

- The financial plan will represent one of the key elements for the City to retain its Drinking Water Licence;



- The financial plans shall be for a period of at least six years, but longer planning horizons are encouraged;
- As the regulation is under the *Safe Drinking Water Act, 2002*, the preparation of the plan is mandatory for water and encouraged for wastewater;
- The plan is considered a living document (i.e., will be updated as annual budgets are prepared) but will need to be undertaken, at a minimum, every five years;
- The plans generally require the forecasting of capital, operating and reserve fund positions, providing detailed inventories, forecasting future users and volume usage, and corresponding calculation of rates. In addition, Public Sector Accounting Board (P.S.A.B.) information on the system must be provided for each year of the forecast (i.e., total non-financial assets, tangible capital asset acquisitions, tangible capital asset construction, betterments, write-downs, disposals, total liabilities, and net debt);
- The financial plans must be made available to the public (at no charge) upon request and be available on the City's website. The availability of this information must also be advertised; and
- The financial plans are to be approved by Resolution of the Council or governing body indicating that the drinking water system is financially viable.

In general, the financial principles of the draft regulations follow the intent of S.W.S.S.A. to move municipalities towards financial sustainability. Many of the prescriptive requirements, however, have been removed (e.g., preparation of two separate documents for provincial approval, auditor opinions, engineer certifications, etc.).

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

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

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

This Rate Study provides the foundation for the required financial plan. The Water Financial Plan, which meets the requirements of O. Reg. 453/07, is provided under separate cover.

1.3.3 Water Opportunities Act, 2010

Since the passage of the *Safe Drinking Water Act, 2002*, further changes and refinements to the legislation have been introduced. Some of these Bills have found their way into law, while others have not been approved. Bill 72, the *Water Opportunities Act, 2010*, was introduced into legislation on May 18, 2010, and received Royal Assent on November 29, 2010.



The Act provides for the following elements:

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

Regarding the sustainability plans:

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

The financial plan shall include:

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

Performance indicators will be established by service, with the following considerations:

- Financing, operation, or maintenance of a municipal service, or to any other matter in respect of what information may be required to be included in a plan;
- Different municipal service providers or for municipal services in different areas of the Province.



Regulations will prescribe:

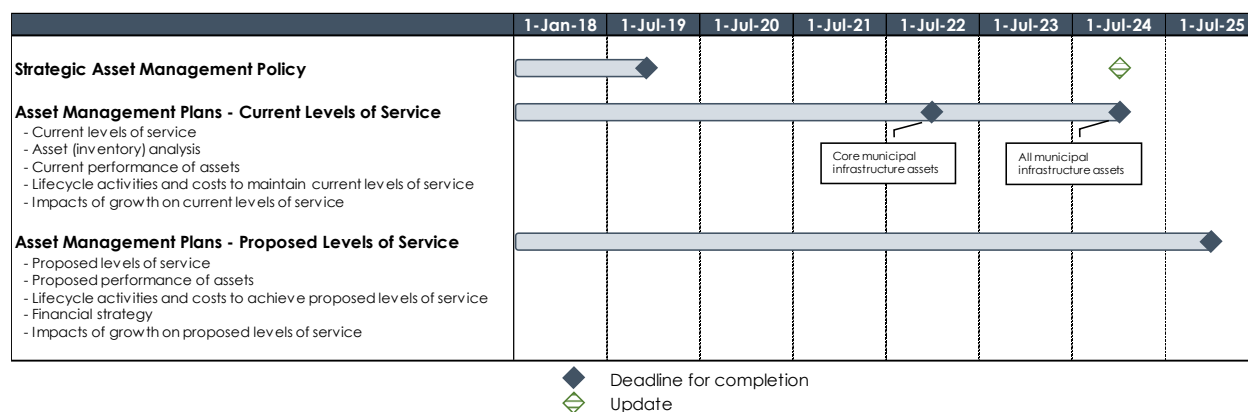
- Timing;
- Contents of the plans;
- Which identified portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

As noted earlier, it is expected that this Act will implement the principles of the S.W.S.S.A. once all regulations are put in place.

1.3.4 Infrastructure for Jobs and Prosperity Act, 2015

On June 4, 2015, the Province passed the *Infrastructure for Jobs and Prosperity Act, 2015* (I.J.P.A.), which, over time, will require municipalities to undertake and implement asset management plans for all infrastructure they own. On December 27, 2017, the Province of Ontario released O. Reg. 588/17 under I.J.P.A., which sets out three phases municipalities must meet. The timelines for the three phases were later extended by O. Reg. 193/21, filed on March 15, 2021. The timelines are presented in Figure 1-1 below.

Figure 1-1
Legislative Timelines set out by the Jobs and Prosperity Act
Legislation related to Asset Management Plans



Every municipality in Ontario will have to prepare a strategic asset management policy by July 1, 2019. Municipalities will be required to review their strategic asset



management policies at least every five years and make updates as necessary. The subsequent phases are as follows:

- Phase 1 – Asset Management Plan (by July 1, 2022) for core assets, municipalities must have the following:
 - Inventory of assets;
 - Current levels of service, including some prescribed measures; and
 - Lifecycle management strategies and associated costs to maintain current levels of service.
- Phase 2 – Asset Management Plan (by July 1, 2024):
 - Same steps as Phase 1, but for all assets.
- Phase 3 – Asset Management Plan (by July 1, 2025) builds on Phases 1 and 2, adding:
 - Proposed levels of service; and
 - Financial strategy that supports achieving proposed levels of service.

In relation to water and wastewater services (which are considered core assets), municipalities were required to have an asset management plan that addressed the related infrastructure by July 1, 2022 (Phase 1). O. Reg. 588/17 specifies that the municipality's asset management plan must include the following for each asset category:

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



1.4 Rate Calculation Methodology

Figure 1-2 illustrates the general methodology used in determining the full cost recovery of water services.

The methodology employed generally consists of 5 major elements:

1. Customer Demands and Consumption Forecast

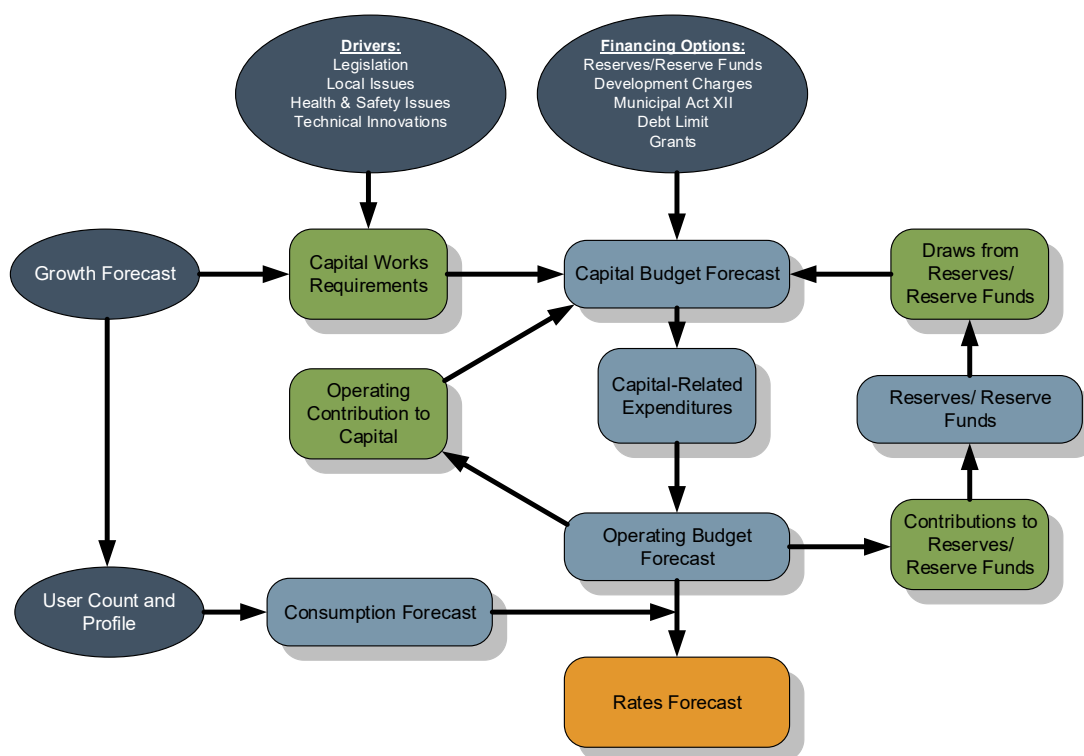
This first step in the analysis is to assess the number of water connections and volume of water consumption over the forecast period. This is an important first step because it produces the customer base and consumption estimates for revenue generation. The water volume forecasts are prepared by applying average annual consumption/flow estimates to future development. Volume estimates were determined based on a review of historical average levels across the S.T.A.S.W.S.S.

2. Capital Needs Forecast

The capital needs forecasts are developed to measure program/service-level adjustments and lifecycle requirements. Capital expenditures are forecast with inflationary adjustments based on capital cost indices.



Figure 1-2
Water Rate Calculation Methodology



3. Capital Funding Plan

The capital funding plans consider the available funding sources to address the forecast capital needs. Sources of capital funding include rate-based support, reserves/reserve funds, grants, and debt for program/service-level improvements. The use of rate-based funding is measured against the revenue projections and affordability impacts. The reserve/reserve fund sources are measured against their sustainability relative to lifecycle demands, revenue projections, and affordability impacts. Debt financing is considered for significant capital expenditures that require funding beyond long-term lifecycle needs or to facilitate rate transition policies. Debt financing is measured against debt policies and annual repayment limits to ensure a practical and sustainable funding mix.

4. Operating Budget Forecast

The operating budget forecast considers adjustments to the S.T.A.S.W.S.S.'s base budget reflecting program/service level changes, operating fund impacts associated with infrastructure, water purchase costs, and financing for capital projects. The operating expenditures are forecast with inflationary adjustments and growth in service



demand, based on fixed and variable cost characteristics as well as the operation of new infrastructure. The operating budget forecast ties the capital funding plan and reserve/reserve fund continuity forecast to the rate-based revenue projections. This ensures sufficient funding for both the ongoing annual operations and maintenance of water services, as well as the capital cost requirements to ensure service sustainability.

5. Rate Forecast and Structure

The rate forecast and rate structure components of the analysis may consider various rate structures to recover forecast rate-based revenue from projected customer demand. At this stage in the analysis, the full costs of service are measured against customer growth and volume demands to determine full-cost recovery rates. The analysis may consider alternative structures, including amalgamating individual systems within a municipality, consistent with municipal policies/strategies, industry practice, and customer affordability. The rate forecasts are applied across a range of customer types and compared with other municipalities to measure the annual impacts on total water bills. Appendix B includes an overview of the different types of rate structures imposed across the province.



Chapter 2

Forecast Growth and Servicing Requirements



2. Forecast Growth and Servicing Requirements

Several information sources were used to inform the growth forecast utilized for the Rate Study. For the S.T.A.S.W.S.S., the growth forecast is derived for each of the serviced municipalities (i.e., the City, Municipality of Central Elgin and the Township of Southwold) based on the following information :

- St. Thomas – St. Thomas 2025 Housing Needs Assessment
- Municipality of Central Elgin – Central Elgin 2024 Water & Wastewater Rate Study and Input from staff regarding additional development in the Psych Lands (Note: the Psych Lands growth currently has not been included within the analysis while the City assesses and confirms the needs of the Municipality of Central Elgin).
- Township of Southwold – Township of Southwold 2026 Development Charge Background Study (ongoing)

The forecast growth over the 2026-2036 period is presented in Table 2-1. In 2026, there is an estimated 2.4 million m³ of water that is purchased from the S.T.A.S.W.S.S. Accounting for water loss in the system, based on historical trends, there is an assumed approximately 6% water loss in the system resulting in a total water purchased by the S.T.A.S.W.S.S. of 2.6 million m³. It is forecast that there will be an additional 287,000 m³ purchased from the S.T.A.S.W.S.S. which relates to an additional 306,000 m³ purchased by the S.T.A.S.W.S.S. from the E.A.P.W.S.S. by the end of the forecast period.



Table 2-1
S.T.A.S.W.S.S. Water Forecast Summary

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Central Elgin	62,391	63,583	64,776	65,968	67,160	68,353	69,545	70,738	71,930	73,122	74,315
Southwold	872,423	877,964	883,506	889,047	894,588	900,130	905,671	911,213	916,754	922,296	927,837
St. Thomas	1,494,747	1,527,122	1,366,234	1,421,269	1,476,304	1,531,339	1,586,374	1,618,470	1,650,567	1,682,664	1,714,761
Total Purchased from S.T.A.S.W.S.S.	2,429,560	2,468,669	2,314,515	2,376,284	2,438,053	2,499,821	2,561,590	2,600,421	2,639,251	2,678,082	2,716,913
Total Purchased by S.T.A.S.W.S.S. (including water loss)	2,584,638	2,626,244	2,462,250	2,527,961	2,593,673	2,659,384	2,725,096	2,766,405	2,807,714	2,849,023	2,890,333



Chapter 3

Capital Infrastructure Needs



3. Capital Infrastructure Needs

3.1 Capital Forecast

The forecast capital needs include replacements and lifecycle requirements. A list of the capital works for this system is provided in Table 3-1. The total capital costs over the 2026 – 2036 period are estimated at \$19.0 million. The most significant expenditure relates to the Ford Tower replacement and related transmission mains projects totaling \$17.5 million.

Note that the capital costs identified in Table 3-1 exclude inflation.



Table 3-1
S.T.A.S.W.S.S. Capital Needs (uninflated)

Program/Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Total	Annual Average Expenditure
Existing Capital Needs													
Chlorination Equipment (50% shared with Aylmer) - S.T.A.S.W.S.S. share	10,000	-	50,000	-	-	-	-	-	-	-	-	60,000	5,455
Generator Replacement (50% shared with Aylmer) - S.T.A.S.W.S.S. share	-	125,000	-	-	-	-	-	-	-	-	-	125,000	11,364
Drawing Revisions	-	15,000	-	-	-	-	-	-	-	-	-	15,000	1,364
Pump dismantle and rebuild	15,000	-	-	20,000	20,000	-	-	-	-	-	-	55,000	5,000
Analyzer and pressure replace	-	-	-	30,000	-	-	-	-	-	-	-	30,000	2,727
Valves in chambers	-	-	-	-	-	-	500,000	-	-	-	-	500,000	45,455
Ford Tower Replacement & Decommissioning	8,200,000	-	-	-	-	-	-	-	-	-	-	8,200,000	745,455
Transmission Main	-	4,500,000	4,750,000	-	-	-	-	-	-	-	-	9,250,000	840,909
Annual Minor Capital Assumption	-	-	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	800,000	72,727
GRAND TOTAL	8,225,000	4,640,000	4,800,000	150,000	120,000	100,000	600,000	100,000	100,000	100,000	100,000	19,035,000	1,730,455



3.2 Overview of Lifecycle Costing

3.2.1 *Definition*

Lifecycle costing is widely used in maintenance engineering and in evaluating the benefits of alternative materials in construction and production design. Over time, the approach has gained broader acceptance in industrial decision-making and in the management of physical assets.

Lifecycle costs represent all costs incurred over the service life of an asset. This service life begins when the asset is first considered for acquisition and ends when it is removed from service for disposal or redeployment. Throughout its lifecycle, an asset progresses through several stages, including specification, design, manufacture or construction, installation, commissioning, operation, maintenance, and disposal. These stages are illustrated in Figure 3-1.

3.2.2 *Financing Costs*

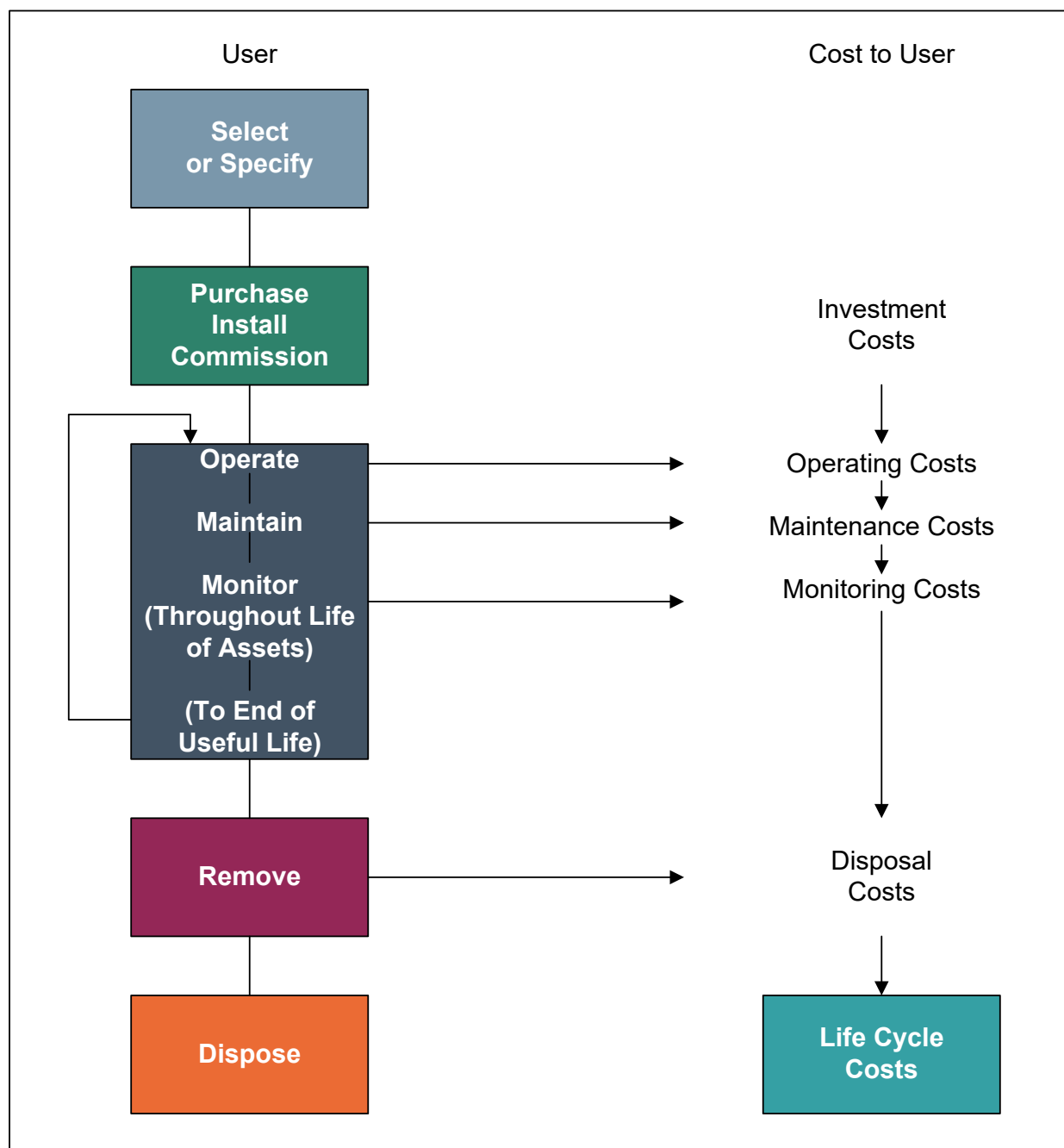
This section focuses on the financing mechanisms used to fund the costs incurred throughout an asset's service life. In a municipal context, services are provided to benefit rate payers, and the acquisition of assets is typically timed to address direct needs within the community. Operating costs, which represent the cost of delivering the service in a given year, are funded directly by existing rate payers through taxes or user rates. Capital expenditures may be financed through a variety of methods, including contributions from the operating budget, development charges, connection fees, reserves, developer contributions, grants, and debentures.

Capital construction to replace existing infrastructure is generally not related to growth and therefore does not produce D.C.s, connection fees, or developer contributions. As a result, municipalities rely on debentures, reserves, and contributions from the operating budget to fund these works.

Figure 3-2 illustrates the costs associated with an asset from its initial conception through to its eventual replacement and then through to the next replacement cycle.



Figure 3-1
Lifecycle Costing



Growth-related financing methods, such as D.C.s, connection fees, and developer contributions, can be used to fund the growth-related share of new assets. These revenues are collected indirectly from new homeowners who benefit from the asset's installation. Other financing tools are used to fund the non-growth-related share of these



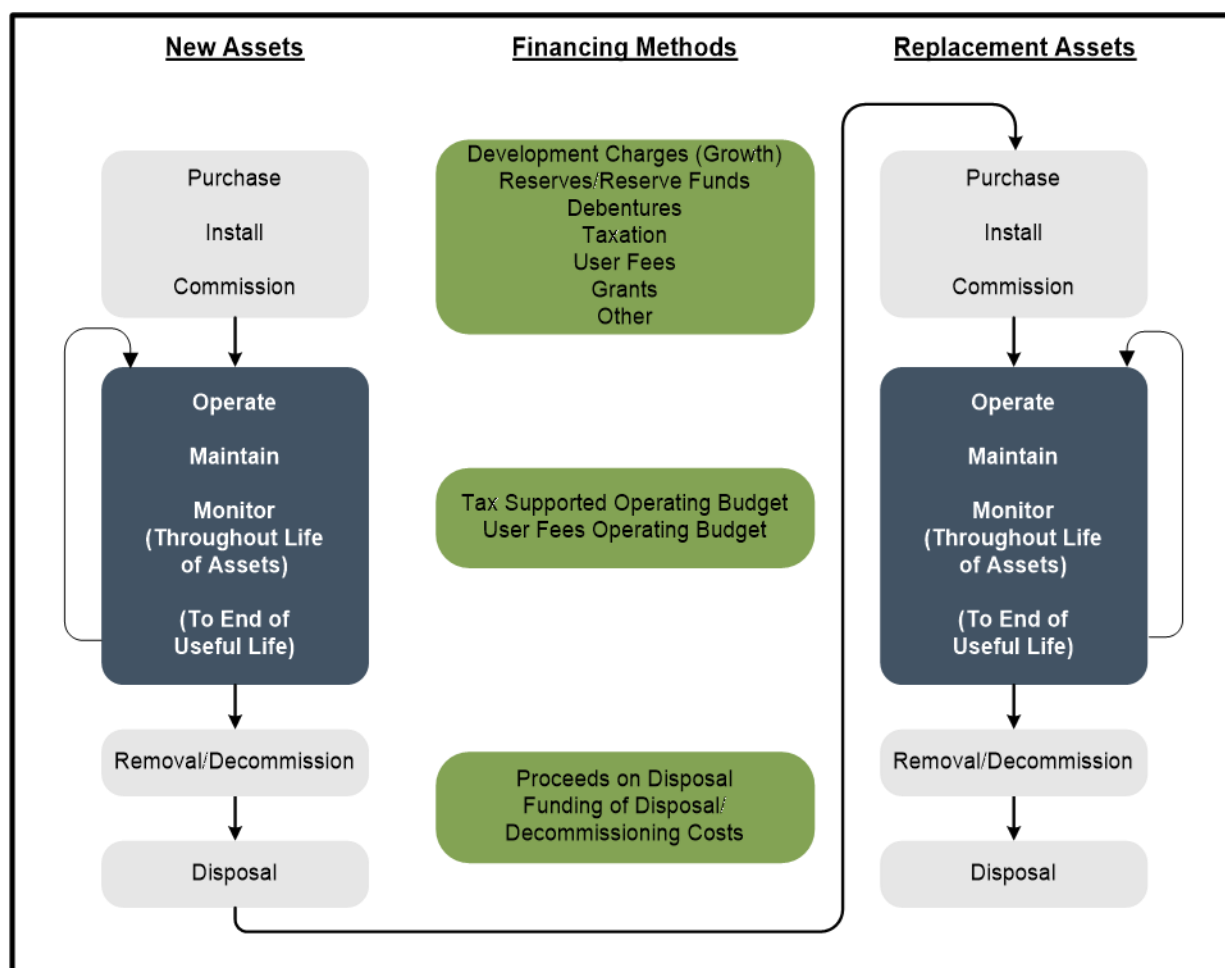
projects, including reserves funded by past rate payers, operating budget contributions funded by existing rate payers, and debentures repaid by future rate payers. Ongoing monitoring, operating, and maintenance costs are recovered annually from existing rate payers.

When an asset requires replacement, the available financing tools are typically limited to reserves, debentures, and contributions from the operating budget. This raises the question of whether past or future rate payers should bear the cost of replacing an asset. If past rate payers are expected to fund the replacement, contributions should be collected annually throughout the asset's life to ensure sufficient funds are available when needed. If future rate payers are expected to fund the replacement, debentures, and operating budget contributions can be used.

The concept of charging users for the consumption of an asset is consistent with depreciation methods used in the private sector. Depreciation recognizes the use of an asset over time and incorporates these costs into the price of goods or services. A similar approach can be applied in the municipal sector by allocating the cost of asset use to current users and setting aside these funds in reserves to finance future replacement needs.



Figure 3-2
Financing Lifecycle Costs



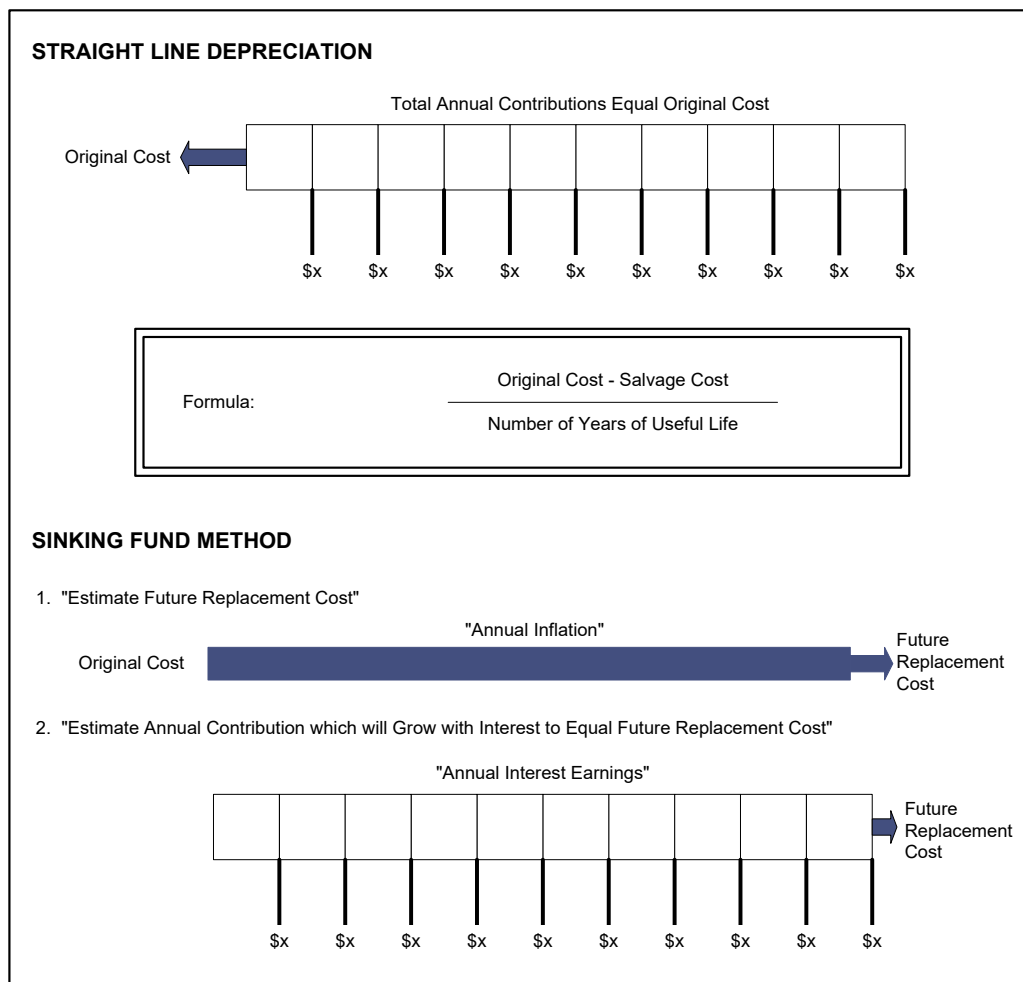
3.2.3 Costing Methods

There are two primary methods used to calculate the cost of utilizing an asset and to determine the level of revenue required for its eventual retirement and replacement. The first is the depreciation method, which recognizes the reduction in the value of an asset over time due to wear, deterioration, and aging. Two forms of depreciation are commonly applied: the straight-line method and the reducing balance method, as illustrated in Figure 3-3. Under the straight-line method, the annual depreciation expense is calculated by subtracting the estimated salvage value of the asset from its original cost and dividing the result by the estimated number of years of useful life. Under the reducing balance method, a fixed percentage rate is applied annually to the remaining, undepreciated value of the asset.



The second method is the sinking fund method. This approach first estimates the future replacement cost of the asset by applying an assumed annual inflation rate to the original cost. The next step is to calculate the annual contributions required so that, when invested, they will accumulate with interest to equal the future replacement cost at the time the asset must be replaced. Contributions may be equal or varied depending on the financial strategy adopted by the municipality.

Figure 3-3



3.3 Summary

The annual lifecycle contribution amounts have been calculated to determine the level of capital investment that should be included in the full cost assessment and rate forecast. Table 3-2 summarizes the current asset replacement value and the long-term annual lifecycle replacement needs in 2026 dollars. These replacement values were



derived from Administration's detailed capital asset inventories. Two methods were used to calculate the average annual lifecycle costs: the amortization method, which applies straight-line depreciation based on historical costs and useful life assumptions and the Canadian Infrastructure Report Card approach, which involves applying established reinvestment rates to the total replacement values. The annual lifecycle costs of all linear infrastructure was calculated using the amortization method, while the annual lifecycle costs for non-infrastructure was calculated by applying the suggested reinvestment rates identified in the Canadian Infrastructure Report Card.

The average annual lifecycle costs for the S.T.A.S.W.S.S. are estimated at approximately \$2.0 million. While these lifecycle costs establish the funding level to ensure sufficient reserves are available for the replacement of capital infrastructure, it should be noted that prior to the S.T.A.S.W.S.S.'s last rate study, provisions were not included within rates to ensure there were funds for future replacement of capital infrastructure. Since then, these contributions have been accounted for and, in 2026, rates will be funding approximately 40% of the established funding target. To ensure the S.T.A.S.W.S.S. is working towards fully funding their future funding requirements and through discussions with the Administration, it is being recommended that this funding be phased in over-time to reduce impacts on rates. By the end of the forecast period it is anticipated that rates will be funding 60% of the overall lifecycle funding target.

Table 3-2
Summary of S.T.A.S.W.S.S. Infrastructure (2026\$)

Description	Replacement Cost	Annual Lifecycle Costs
<i>Water:</i>		
STASWSS	\$141,443,845	\$1,959,284



Chapter 4

Capital Costs Financing



4. Capital Costs Financing

4.1 Summary of Capital Cost Financing Alternatives

Historically, the powers that municipalities have had to raise alternative revenues to taxation to fund capital costs have been restrictive. Over the past number of years, several legislative reforms have been introduced. Some of these have expanded municipal powers (e.g., Bill 26, introduced in 1996 to provide for expanded powers for imposing fees and charges), while others appear to limit them (e.g., Bill 98 in 1997 and Bill 23 in 2022 providing amendments to the D.C.A.).

The current Municipal Act came into force on January 1, 2003, with significant amendments in 2006 through the Municipal Statute Law Amendment Act. Part XII of the Act and O. Reg. 584/06 govern a municipality's ability to impose fees and charges. This legislation provides municipalities with broadly defined powers and the ability to impose fees for both operating and capital purposes. Under s.484 of Municipal Act, 2001, the Local Improvement Act was repealed with the in-force date of the Municipal Act (January 1, 2003). The municipal powers granted under the Local Improvement Act now fall under the jurisdiction of the Municipal Act.

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

Recovery Methods	Section Reference
• <i>Development Charges Act, 1997</i> , as amended	4.2
• <i>Municipal Act</i>	4.3
○ Fees and Charges	
○ Stormwater Area Charges	
○ Connection Fees	
○ Local Improvements	
• Grant Funding Availability	4.4
• Existing Reserves/Reserve Funds	4.5
• Debenture Financing	4.6
• Recommended Capital Financing Approach	4.7



4.2 Development Charges Act, 1997

D.C.s are a revenue tool used by municipalities to recover the capital costs associated with new development and redevelopment. These costs are in addition to what a developer/builder normally constructs as part of their subdivision (i.e., Local Services). Empowered by the D.C.A., as amended, municipalities may pass by-laws to impose charges to recover the capital costs associated with development and redevelopment.

4.3 Municipal Act

Part XII of the Municipal Act provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in s.391(1), include imposing fees or charges:

“for services or activities provided or done by or on behalf of it;
for costs payable by it for services or activities provided or done by or on
behalf of any other municipality or local board; and
for the use of its property including property under its control.”

Restrictions are provided to ensure that the form of the charge is not akin to a poll tax. Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Ontario Land Tribunal (OLT).

The *Municipal Act* provides the ability of municipalities to impose capital charges for water and sewer services on landowners not receiving an immediate benefit from the works. Under s.391(2) of the Act, “a fee or charge imposed under subsection (1) for capital costs related to sewage or water services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time.” Also, capital charges imposed under s.391 are not appealable to the OLT because the charges are “unfair or unjust.”

Under the new *Municipal Act*, municipalities are permitted to pass a by-law requiring buildings to connect to the municipality's sewer and water systems and charging the owner for the cost of constructing services from the mains to the property line under Part II, General Municipal Powers (s.9 (3) b of the *Municipal Act*). Enforcement and penalties for this use of power are contained in s.427 (1) of the *Municipal Act*.



4.4 Grant Funding Availability

Federal Infrastructure Funding

The Government of Canada has provided funding to assist municipalities with their water and wastewater systems, including repair and rehabilitation projects. Some funding programs are time-limited, for example, the Clean Water and Wastewater Fund and the Investing in Canada Infrastructure Program.

Other programs are ongoing and provide a permanent source of funding. For example, the Canada Community-Building Fund (formerly known as the Federal Gas Tax Fund). The Canada Community-Building Fund provides over \$2 billion each year to communities across Canada. Each municipality then chooses how to use the money. They can make strategic investments in 18 different projects, including water and wastewater services.

Ontario Government

The Province has taken steps to increase municipal infrastructure funding. The Ontario Community Infrastructure Fund (O.C.I.F.) was launched in 2014 and currently provides \$400 million in formula-based funding to help eligible communities renew and rehabilitate their infrastructure. The Ontario government also provides funding through the Connecting Links program (\$30 million in 2023-2024) to help pay for the construction and repair costs of municipal roads that connect communities to provincial highways. This is on top of the Building Ontario Up investment of \$130 billion in public infrastructure over 10 years starting in 2015.

Additionally, in the 2023 budget, the Province announced it was providing \$825 million over three years through the Housing-Enabling Water Systems Fund (H.E.W.S.F.). Funding through the H.E.W.S.F. would help municipalities repair, rehabilitate, and expand drinking water, wastewater, and stormwater infrastructure needed to build more homes. Since the original announcement, the Province has increased the total available funding through the H.E.W.S.F. to nearly \$1.7 billion.

4.5 Existing Reserves and Reserve Funds

The S.T.A.S.W.S.S. has established reserves and reserve funds for water capital costs. These reserves have been used in the capital funding forecast for rate-based needs.



The following table shows the water reserves used in this analysis and their estimated balances as of December 31, 2025. These balances are net of outstanding capital commitments for 2025 and earlier.

Table 4-1
Uncommitted Reserve/Reserve Fund Balances as of December 31, 2025

Reserve	Dec. 31 2025
Secondary Water	
Capital Reserve	6,283,352

4.6 Debenture Financing

Although it is not a direct way to reduce overall costs to rate payers, municipalities use debentures to finance large capital expenditures. In addition, debenture financing can promote inter-generational equity whereby future tax and rate payers who will benefit from the infrastructure pay for the cost of the infrastructure.

The Ministry of Municipal Affairs and Housing controls the amount of debt Ontario municipalities can incur. This is done through its powers under the Municipal Act. O. Reg. 403/02 provides the current rules respecting municipal debt and financial obligations. Under these rules, a municipality's debt capacity is capped at 25% of the municipality's own purpose revenue. That is, only 25% of these revenues may be allotted for servicing debt (i.e., principal and interest payments).

4.6.1 *Infrastructure Ontario*

Infrastructure Ontario (I.O.) is an arms-length crown corporation, which has been set up as a tool to offer low-cost and longer-term financing to assist municipalities in renewing their infrastructure (this corporation merged the former Ontario Strategic Infrastructure Financing Authority (O.S.I.F.A.) into its operations). I.O. combines the infrastructure renewal needs of municipalities into an infrastructure investment "pool". I.O. will raise investment capital to finance loans to the public sector by selling Infrastructure Renewal Bonds to individual and institutional investors.

I.O. provides access to infrastructure capital that would not otherwise be available to smaller borrowers. Larger borrowers receive longer loan terms than they could get in the financial markets. They can also save on costs such as legal fees and underwriting commissions. Under the I.O. approach, all borrowers receive the same low interest rate.



I.O. will enter into a financial agreement with each municipality, subject to technical and credit reviews, for a loan up to the maximum amount of the loan request.

To be eligible to receive these loans, municipalities must submit a formal application along with pertinent financial information. Allotments are prioritized and distributed based on the Province's assessment of need.

4.6.2 Building Ontario Fund

The Province, through the *Building Ontario Fund Act, 2024*, has continued the Ontario Infrastructure Bank under the name Building Ontario Fund. The Building Ontario Fund is an arms-length, board-governed Crown agency intended to help enable large-scale infrastructure projects by working with institutional investors and other partners. As this organization and its programs continue to evolve, municipalities are encouraged to monitor eligibility criteria and potential opportunities as they become available.

4.7 Recommended Capital Financing Approach

Figure 4-1 summarizes the total capital costs and the funding sources for the 2026 to 2036 capital forecast. All costs are presented inclusive of 3.5% annual capital inflation. For clarity, the capital needs summarized in Chapter 3 are presented in 2026 dollars (uninflated), while the financing plan and continuity schedules in this chapter reflect the same program inclusive of 3.5% annual capital inflation. In addition, Table 4-2 provides the detailed capital expenditure and funding program by year for the S.T.A.S.W.S.S.

In total, \$19.9 million in capital expenditures are anticipated over the forecast period. These capital needs are expected to be fully funded through a combination of transfers from reserves, and debentures. New debt represents 49% of the funding mix. Transfers from rate-supported reserves total \$10.1 million.

Based on the detailed capital funding plan and the 2025 year-end water reserve balances discussed in Section 4.5, the water reserve continuity schedule are presented in Table 4-3. The S.T.A.S.W.S.S.'s opening capital reserve fund balance is \$6.3 million. The significant non-growth capital requirements between 2026 and 2027 result in the capital reserve being fully utilized by 2029, after which annual expenditure decreases and the reserve fund begins to accumulate funds again, resulting in a forecast closing balance of \$2.8 million in 2036.



The S.T.A.S.W.S.S.'s debt is to be recognized proportionately in the financial statements of the municipalities serviced by the system. Each municipality's share of the debt will be measured against its respective provincially legislated Annual Repayment Limit (i.e., 25% of net revenues).

Figure 4-1
2026-2036 Water Capital Funding Sources (Inflated \$)

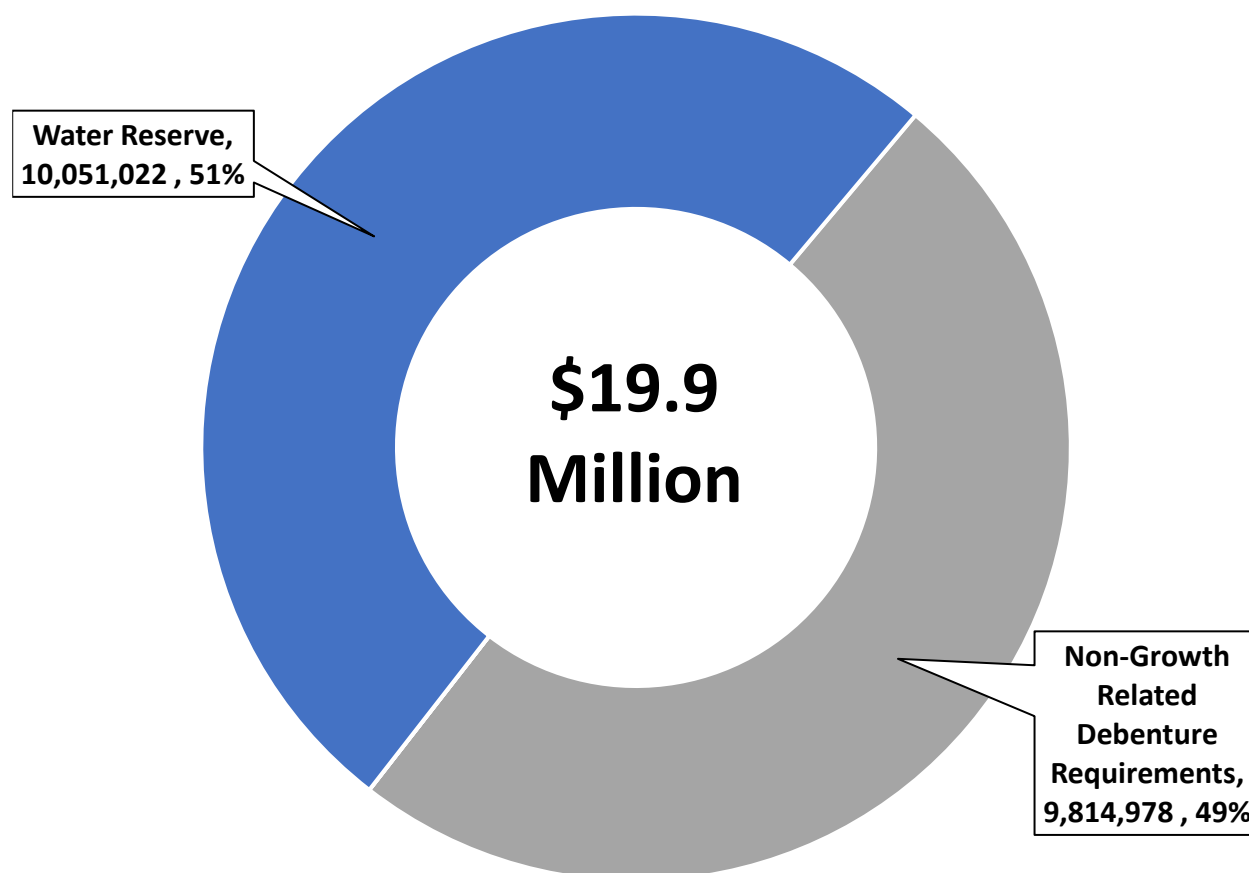




Table 4-2
Capital Budget Forecast and Recommended Capital Financing (Inflated \$)

Description	Budget 2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
S.T.A.S.W.S.S. Needs	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Total Capital Expenditures	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Capital Financing											
Non-Growth Related Debenture Requirements	2,200,000	2,954,101	4,660,877	-	-	-	-	-	-	-	-
Water Reserve	6,025,000	1,847,899	481,123	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Total Capital Financing	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000

Table 4-3
Water Reserve Continuity – Inflated \$

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	6,233,637	1,084,185	-	-	46,394	214,567	502,636	273,899	752,950	1,330,564	2,014,432
Transfer from Operating	864,813	763,714	481,123	211,935	304,049	402,092	506,551	598,595	696,441	799,923	909,594
Transfer to Capital	6,025,000	1,847,899	481,123	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	1,073,450	-	-	45,935	212,443	497,660	271,188	745,495	1,317,390	1,994,487	2,783,026
Interest	10,735	-	-	459	2,124	4,977	2,712	7,455	13,174	19,945	27,830



Chapter 5

Operating Expenditures and Revenues



5. Operating Expenditures and Revenues

5.1 Operating Expenditures

The S.T.A.S.W.S.S.'s 2026 operating budget was provided to inform the Rate Study. All operating costs have been inflated by 3% per year over the forecast period, except for the cost of utilities, insurance (both of which were inflated by 5% annually) and water purchases which reflects the increases in the primary water system's rate forecast. The primary water system rates are based on the forecast prepared by the E.A.P.W.S.S.

The S.T.A.S.W.S.S.'s 2026 operating budget anticipates a total of \$3.4 million in operating expenditures related to the S.T.A.S.W.S.S, excluding transfers to reserves and including adjustments to anticipated water purchase costs based on the rate study . These expenditures are anticipated to increase to \$5.1 million by 2036, reflecting a \$1.7 million increase over the forecast period. The increases are primarily driven by the increases in the costs related to water purchases from the E.A.P.W.S.S.

These forecasts are presented in Table 5-1.

5.2 Operating Revenues

The revenue generated for the S.T.A.S.W.S.S. through variable rates per cubic meter consumed. As outlined in Section 1.1, the S.T.A.S.W.S.S.'s water consumptive rate is constructed from two components: the E.A.P.W.S.S.'s water rates for the purchases of water and the rate charged by the S.T.A.S.W.S.S. for the remainder of the system's associated costs. The S.T.A.S.W.S.S water rates have been designed to recover the following:

- Water purchase costs from the Primary System;
- Other operating expenses; and
- S.T.A.S.W.S.S. related capital expenditures.

Total annual operating revenues for water services within the S.T.A.S.W.S.S. are forecast to increase from \$4.3 million in 2026 to \$6.7 million in 2036.



Table 5-1
Operating Budget Forecast – Water (Inflated \$)

Description	Budget 2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Expenditures											
<u>Operating Costs</u>											
Salary, Wage and Benefits	152,500	157,100	161,800	166,700	171,700	176,900	182,200	187,700	193,300	199,100	205,100
Miscellaneous	68,500	70,600	72,700	74,900	77,100	79,400	81,800	84,300	86,800	89,400	92,100
Contracted Services	180,000	185,400	191,000	196,700	202,600	208,700	215,000	221,500	228,100	234,900	241,900
SCADA	52,000	53,600	55,200	56,900	58,600	60,400	62,200	64,100	66,000	68,000	70,000
Job Costing	13,000	13,400	13,800	14,200	14,600	15,000	15,500	16,000	16,500	17,000	17,500
Insurance	36,200	38,000	39,900	41,900	44,000	46,200	48,500	50,900	53,400	56,100	58,900
Water Purchases	2,765,305	2,908,040	2,808,196	2,969,596	3,138,085	3,314,117	3,497,887	3,657,438	3,823,414	3,996,056	4,175,617
Utilities	115,000	120,800	126,800	133,100	139,800	146,800	154,100	161,800	169,900	178,400	187,300
Chemical	10,000	10,300	10,600	10,900	11,200	11,500	11,800	12,200	12,600	13,000	13,400
Sub Total Operating	3,392,505	3,557,240	3,479,996	3,664,896	3,857,685	4,059,017	4,268,987	4,455,938	4,650,014	4,851,956	5,061,817
<u>Capital-Related</u>											
New Non-Growth Related Debt (Principal)		73,913	172,229	329,801	344,345	359,531	375,386	391,941	409,225	427,272	446,115
New Non-Growth Related Debt (Interest)		93,898	220,914	418,864	404,320	389,134	373,279	356,724	339,439	321,393	302,550
Transfer to Capital Reserve	864,813	763,714	481,123	211,935	304,049	402,092	506,551	598,595	696,441	799,923	909,594
Sub Total Capital Related	864,813	931,525	874,267	960,600	1,052,713	1,150,757	1,255,216	1,347,260	1,445,105	1,548,588	1,658,258
Total Expenditures	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075
Revenues											
Rate Revenues	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075
Total Revenue	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075



Chapter 6

Forecast Water Rates



6. Forecast S.T.A.S.W.S.S. Rates

6.1 Introduction

To summarize the analysis undertaken thus far, Chapter 2 provided the growth and service demands for S.T.A.S.W.S.S. Chapter 3 reviewed the capital-related infrastructure needs and funding sources, including addressing the provincial directives to maintain and upgrade infrastructure to required levels. Chapter 4 provided a review of capital financing options. Water reserve contributions and future debentures will be the predominant methods for financing future capital replacement. Chapter 5 established the 10-year operating expenditure forecast, including an annual capital reserve contribution. The following calculations will be based on the net operating expenditures provided in Chapter 5, divided by the customer and volume forecasts provided in Chapter 2. The S.T.A.S.W.S.S.'s current rate structure is proposed to be maintained.

The forecast water rates are discussed in Section 6.2.

6.2 Forecast Water Rates

The recommended water rate forecasts have been developed to fund 100% of operating costs and move towards full capital cost recovery over the forecast period. The rates are designed to fund projected operating expenditures, capital reserve contributions, and debt servicing requirements associated with both existing and future capital investments.

To move towards full cost recovery and maintain financial sustainability, the secondary consumptive water rate is forecast to increase 4.2% annually for the entire forecast period. As discussed in Section 3.3, these increases will move the system's current funding of approximately 40% of the established lifecycle funding target up to 60% by the end of the forecast period with the intent that future rate will continue to increase to move towards funding 100% of the established funding target.

The resulting water rate forecast is summarized in Table 6-1. Detailed financial forecasts and rate calculations supporting the recommended water rates are provided in Appendix A.



Table 6-1
S.T.A.S.W.S.S. Rate Forecast

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Water Rates - STASWSS											
Primary Rate (per m ³)	\$1.0699	\$1.1073	\$1.1405	\$1.1747	\$1.2099	\$1.2462	\$1.2836	\$1.3221	\$1.3618	\$1.4026	\$1.4447
Secondary Rate (per m ³)	\$0.6824	\$0.7110	\$0.7408	\$0.7718	\$0.8042	\$0.8379	\$0.8730	\$0.9095	\$0.9477	\$0.9874	\$1.0287
Total	\$1.7523	\$1.8183	\$1.8813	\$1.9465	\$2.0141	\$2.0841	\$2.1566	\$2.2316	\$2.3094	\$2.3900	\$2.4734
% Change - Primary Rate		3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% Change - Secondary Rate		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%

6.3 Water Rate Impacts

6.3.1 City of St. Thomas

Within the City, customers are charged a Common Water Rate, the St. Thomas Capital Rate and the Blended Water Rate. The Secondary Rate makes its way into the City's water rate as a component of the Blended Water Rate and is calculated as the sum of the primary rate charged by the E.A.P.W.S.S. and 30% of the Secondary Rate imposed by the S.T.A.S.W.S.S.

For the average residential customer (i.e., consuming 148 m³ of water) the increases to the secondary rates would result in an average annual increase of \$4.43 over the forecast period.

6.3.2 Municipality of Central Elgin and Township of Southwold

For the Municipality of Central Elgin and Township of Southwold, when purchasing water from the secondary system they are paying the total of the primary rate and secondary rate (as depicted in Table 6-1). For an average residential customer, the increases to the secondary rate would result in an average annual increase of \$5.13 over the forecast period.



Chapter 7

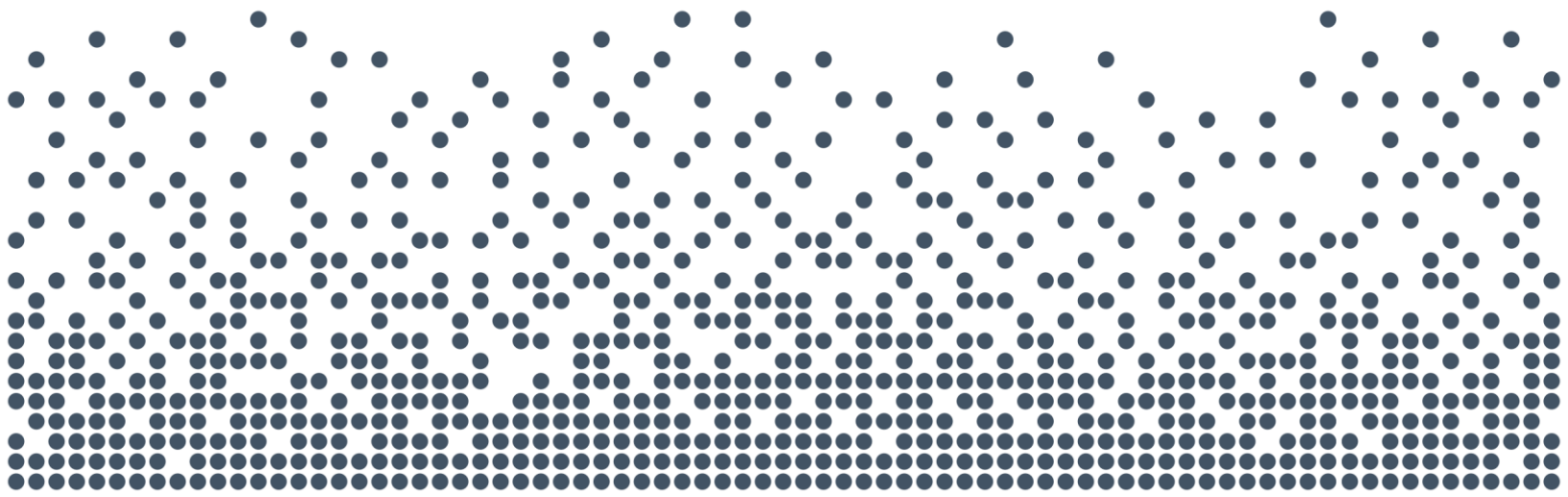
Recommendations



7. Recommendations

As presented within this report, capital and operating expenditures have been identified and projected over a 10-year forecast period for water services provided through the S.T.A.S.W.S.S. Updated rates have been calculated to fund the increased capital and operating expenditures. Based on the analysis in this report, the following recommendations are provided for the Board's consideration:

1. That the Board provide for the recovery of all water service costs through full cost recovery rates and maintain reserve funds for water services;
2. That the Board considers the capital plans for water services as provided in Tables A-1 of the Appendix, and the recommended capital financing plan as set out in Table 4-2.
3. That the Board consider the 2027 to 2036 water rates as shown in Chapter 6 of this Rate Study for implementation as part of the annual budgeting process; and
4. That the Board approve the Water Financial Plan required under O. Reg. 453/07.



Appendices



Appendix A

Detailed Water Rate Calculations



Table A-1
Capital Budget Forecast (Uninflated \$) – Water

Description	Budget 2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
S.T.A.S.W.S.S. Needs	8,225,000	4,640,000	4,800,000	150,000	120,000	100,000	600,000	100,000	100,000	100,000	100,000
Total Capital Expenditures	8,225,000	4,640,000	4,800,000	150,000	120,000	100,000	600,000	100,000	100,000	100,000	100,000

Table A-2
Capital Budget Forecast and Recommended Capital Financing (Inflated \$) – Water

Description	Budget 2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
S.T.A.S.W.S.S. Needs	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Total Capital Expenditures	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Capital Financing											
Non-Growth Related Debenture Requirements	2,200,000	2,954,101	4,660,877	-	-	-	-	-	-	-	-
Water Reserve	6,025,000	1,847,899	481,123	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Total Capital Financing	8,225,000	4,802,000	5,142,000	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000

Table A-3
Schedule of Non-Growth-Related Debenture Repayments

Debenture Year	2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
2026		167,811	167,811	167,811	167,811	167,811	167,811	167,811	167,811	167,811	167,811
2027			225,332	225,332	225,332	225,332	225,332	225,332	225,332	225,332	225,332
2028				355,521	355,521	355,521	355,521	355,521	355,521	355,521	355,521
2029					-	-	-	-	-	-	-
2030						-	-	-	-	-	-
2031							-	-	-	-	-
2032								-	-	-	-
2033									-	-	-
2034										-	-
2035											-
2036											
Total Annual Debt Charges	-	167,811	393,143	748,665	748,665	748,665	748,665	748,665	748,665	748,665	748,665



Table A-4
Water Reserve/Reserve Funds Continuity (Inflated \$)

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Opening Balance	6,233,637	1,084,185	-	-	46,394	214,567	502,636	273,899	752,950	1,330,564	2,014,432
Transfer from Operating	864,813	763,714	481,123	211,935	304,049	402,092	506,551	598,595	696,441	799,923	909,594
Transfer to Capital	6,025,000	1,847,899	481,123	166,000	138,000	119,000	738,000	127,000	132,000	136,000	141,000
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	1,073,450	-	-	45,935	212,443	497,660	271,188	745,495	1,317,390	1,994,487	2,783,026
Interest	10,735	-	-	459	2,124	4,977	2,712	7,455	13,174	19,945	27,830

Table A-5
Operating Budget Forecast (Inflated \$) – Water

Description	Budget 2026	Forecast									
		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Expenditures											
<u>Operating Costs</u>											
Salary, Wage and Benefits	152,500	157,100	161,800	166,700	171,700	176,900	182,200	187,700	193,300	199,100	205,100
Miscellaneous	68,500	70,600	72,700	74,900	77,100	79,400	81,800	84,300	86,800	89,400	92,100
Contracted Services	180,000	185,400	191,000	196,700	202,600	208,700	215,000	221,500	228,100	234,900	241,900
SCADA	52,000	53,600	55,200	56,900	58,600	60,400	62,200	64,100	66,000	68,000	70,000
Job Costing	13,000	13,400	13,800	14,200	14,600	15,000	15,500	16,000	16,500	17,000	17,500
Insurance	36,200	38,000	39,900	41,900	44,000	46,200	48,500	50,900	53,400	56,100	58,900
Water Purchases	2,765,305	2,908,040	2,808,196	2,969,596	3,138,085	3,314,117	3,497,887	3,657,438	3,823,414	3,996,056	4,175,617
Utilities	115,000	120,800	126,800	133,100	139,800	146,800	154,100	161,800	169,900	178,400	187,300
Chemical	10,000	10,300	10,600	10,900	11,200	11,500	11,800	12,200	12,600	13,000	13,400
Sub Total Operating	3,392,505	3,557,240	3,479,996	3,664,896	3,857,685	4,059,017	4,268,987	4,455,938	4,650,014	4,851,956	5,061,817
<u>Capital-Related</u>											
New Non-Growth Related Debt (Principal)		73,913	172,229	329,801	344,345	359,531	375,386	391,941	409,225	427,272	446,115
New Non-Growth Related Debt (Interest)		93,898	220,914	418,864	404,320	389,134	373,279	356,724	339,439	321,393	302,550
Transfer to Capital Reserve	864,813	763,714	481,123	211,935	304,049	402,092	506,551	598,595	696,441	799,923	909,594
Sub Total Capital Related	864,813	931,525	874,267	960,600	1,052,713	1,150,757	1,255,216	1,347,260	1,445,105	1,548,588	1,658,258
Total Expenditures	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075
Revenues											
Rate Revenues	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075
Total Revenue	4,257,318	4,488,765	4,354,263	4,625,496	4,910,398	5,209,774	5,524,203	5,803,198	6,095,119	6,400,544	6,720,075



Table A-6
Water Rate Forecast

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Water Rates - STASWSS											
Primary Rate (per m ³)	\$1.0699	\$1.1073	\$1.1405	\$1.1747	\$1.2099	\$1.2462	\$1.2836	\$1.3221	\$1.3618	\$1.4026	\$1.4447
Secondary Rate (per m ³)	\$0.6824	\$0.7110	\$0.7408	\$0.7718	\$0.8042	\$0.8379	\$0.8730	\$0.9095	\$0.9477	\$0.9874	\$1.0287
Total	\$1.7523	\$1.8183	\$1.8813	\$1.9465	\$2.0141	\$2.0841	\$2.1566	\$2.2316	\$2.3094	\$2.3900	\$2.4734
% Change - Primary Rate		3.5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
% Change - Secondary Rate		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%



Appendix B

Pricing Structures

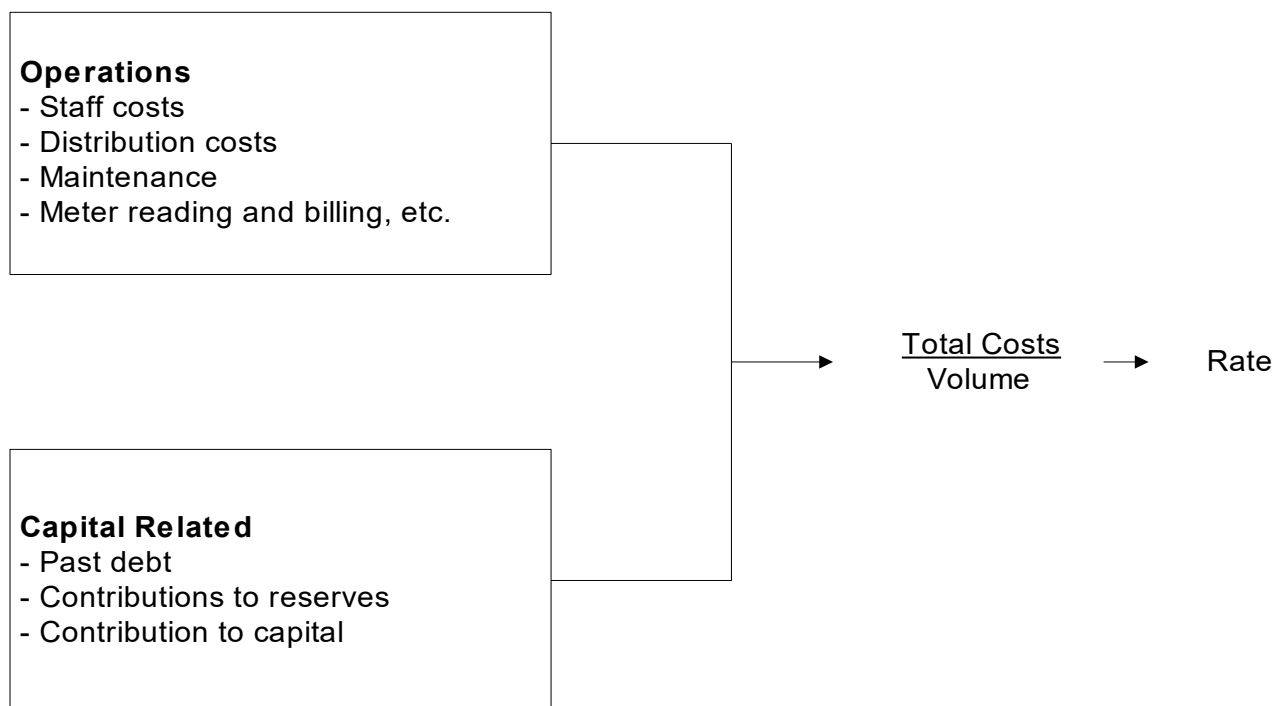


Pricing Structures

Introduction

Rates, in their simplest form, can be defined as total costs to maintain the utility function divided by the total expected volume to be generated for the period. Total costs are usually a combination of operating costs (e.g., staff costs, distribution costs, maintenance, administration, etc.) and capital-related costs (e.g., past debt to finance capital projects, transfers to reserves to finance future expenditures, etc.). The schematic below provides a simplified illustration of the rate calculation for water.

“Annual Costs”



These operating and capital expenditures will vary over time. Examples of factors affecting expenditures over time are provided below.

Operations

- Inflation;
- Increased maintenance as the system ages; and
- Changes to provincial legislation.



Capital-Related

- New capital will be built as areas expand;
- Replacement capital needed as the system ages; and
- Financing of capital costs is a function of policy regarding reserves and direct financing from rates (pay as you go), debt, and user pay methods (development charges, *Municipal Act*).

2. Alternative Pricing Structures

Across Ontario and elsewhere in Canada, pricing mechanisms vary between municipalities. The use of a particular form of pricing depends upon numerous factors, including Council preference, administrative structure, surplus/deficit system capacities, economic/demographic conditions, to name a few.

Municipalities in Ontario have two basic ways of collecting revenue for water purposes: by incorporating the costs into the tax rate charged on property assessment, and/or by establishing a specific water rate billed to the customer. Within the rate methods, there are five basic rate structures employed along with other variations:

- Flat Rate (non-metered customers);
- Constant Rate;
- Declining Block Rate;
- Increasing (or Inverted) Block Rate;
- Hump Back Block Rate; and
- Base Charges.

The definitions and general application of the various methods are as follows:

Property Assessment: This method incorporates the total costs of providing water into the municipality's general requisition or assessment base. This form of collection is a "wealth tax," as payments increase directly with the value of property owned and bear no necessary relationship to actual consumption. This form is easy to administer, as the costs to be recovered are incorporated into the calculation for all general services, which are normally collected through property taxes.

Flat Rate: This rate is a constant charge applicable to all customers served. The charge is calculated by dividing the total number of user households and other entities (e.g.,



businesses) by the costs to be recovered. This method does not recognize differences in actual consumption but provides for a uniform spreading of costs across all users. Some municipalities define users into different classes of similar consumption patterns, that is, a commercial user, residential user, and industrial user, and charge a flat rate by class. Each user is then billed on a periodic basis. No water meters are required to facilitate this method, but an accurate estimate of the number of users is required. This method ensures a set revenue for the collection period but is not sensitive to consumption, which may cause a shortfall or surplus in collected revenue.

Constant Rate: This is a volume-based rate in which the consumer pays the same price per unit, regardless of volume. The price per unit is calculated by dividing the total cost of the service by the total volume used by total consumers. The bill to the consumer climbs uniformly as consumption increases. This form of rate requires water meters to record the volume consumed by each user. This method closely aligns revenue recovery with consumption. Revenue collected varies directly with consumption volume.

Declining Block Rates: This rate structure charges a successively lower price for set volumes, as consumption increases through a series of "blocks." That is, within set volume ranges (or blocks), the charge per unit is set at a single rate. Within the next volume range, the charge per unit decreases, and so on. Typically, the first, or first and second blocks, cover residential and light commercial uses. Subsequent blocks are normally used for heavier commercial and industrial uses. This rate structure requires water meters to record the volume consumed by each user type. This method requires the collection and analysis of consumption patterns by user classification to establish rates that do not over-collect or under-collect revenue from rate payers.

Increasing or Inverted Block Rates: The increasing block rate works essentially the same way as the declining block rate, except that the price of water in successive blocks increases rather than declines. Under this method, the consumer's bill rises faster as volumes increase. This rate structure also requires water meters to record each user's consumption volume. This method, as with the declining block structure, requires the collection and analysis of consumption patterns by user classification to establish rates that do not over-collect or under-collect from rate payers.

The Hump Back Rate: The hump back rate is a combination of an increasing block rate and a declining block rate. Under this method, the consumer's bill rises with higher



volumes up to a certain level, and then begins to fall for volumes exceeding the levels set for the increasing block rate.

