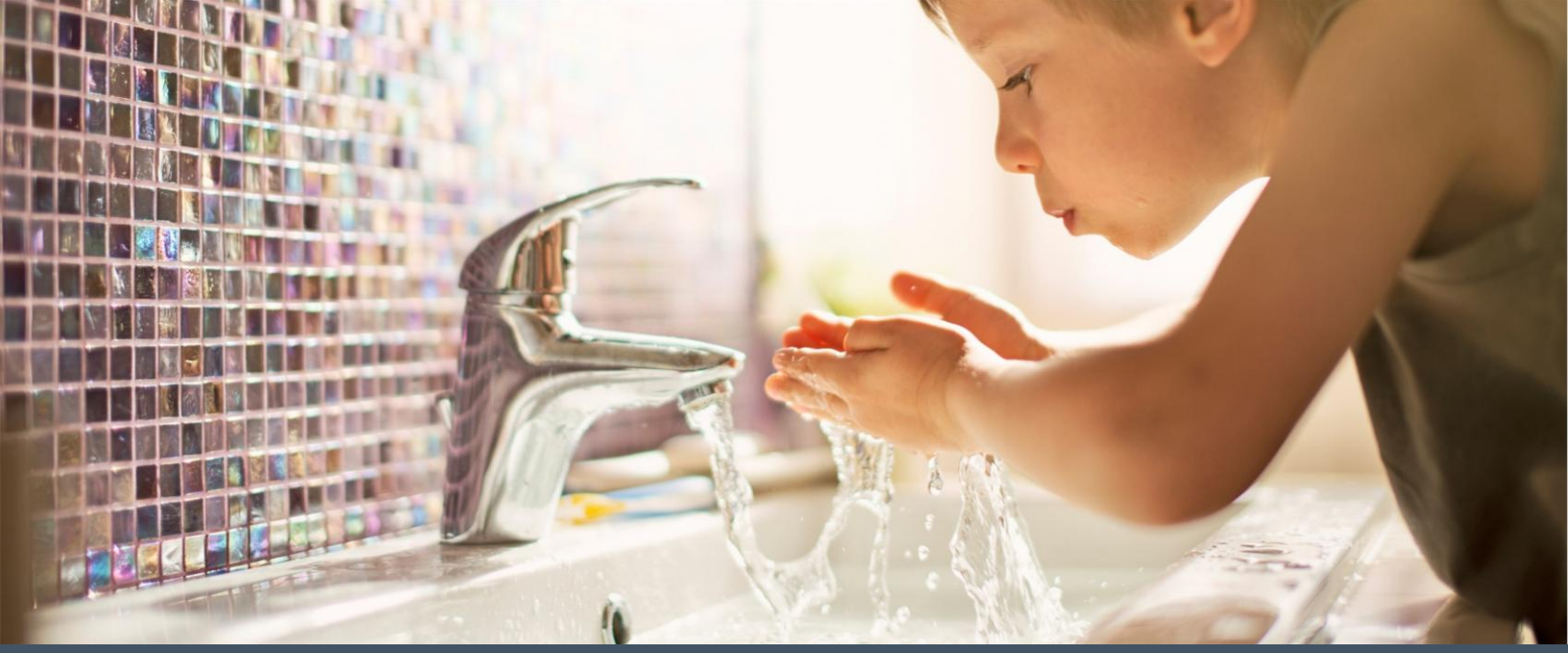

Water Rate Study

Township of Amaranth

February 13, 2026

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List of Acronyms and Abbreviations

Acronym	Full Description of Acronym
A.M.P.	Asset Management Plan
D.C.A.	*Development Charges Act, 1997*
D.C.	Development Charges
H.E.W.S.F.	Housing-Enabling Water Systems Fund
I.J.P.A.	Infrastructure for Jobs and Prosperity Act, 2015
I.O.	Infrastructure Ontario
M.O.E.C.P.	Ministry of Environment, Conservation, and Parks
O.C.I.F.	Ontario Community Infrastructure Fund
OLT	Ontario Land Tribunal
O. Reg.	Ontario Regulation
O.S.I.F.A.	Ontario Strategic Infrastructure Financing Authority
S.W.S.S.A.	*Sustainable Water and Sewage Systems Act, 2002*

Executive Summary

Executive Summary

The Township of Amaranth (Township) retained Watson & Associates Economists Ltd. (Watson) to undertake a comprehensive water rate study. This study provides an analysis of the Township's water rates based on forecast demands and costs of the services. This includes an assessment of capital and operating expenditure forecasts, costing for lifecycle replacement requirements, and current and projected customer demands for the Waldemar system.

The Township currently provides water services to 116 customers located within its boundaries through the Waldemar Heights Water Supply (Waldemar) System. The number of customers within the Waldemar system is projected to increase by 73 over the period from 2026 to 2035.

The Township currently charges a monthly flat rate for water services. In addition to the monthly flat rate, the Township collects two separate capital charges for prior system upgrades from customers who elected to amortize their payments rather than pay the required capital charges as a lump sum. The capital charges will mature in 2026.

The analysis presented herein provides the following:

- The capital spending programs were developed based on multiple sources, including the Township's 2025 approved capital budget, the 2025 to 2035 Waldemar Waterworks Capital Forecast plan, the 2025 Asset Management Plan, and discussions with Municipal staff
- The 2026 to 2035 capital plan includes capital expenditures for infrastructure replacement/lifecycle requirements. The total cost of the capital program is $422,900 in current dollars. After incorporating inflation, assumed to be 4.1% annually over the 2026 to 2035 the total cost of the capital program increases to $529,000 in inflated dollars.
- The net operating expenditure forecast for 2026 to 2035 is based on the Township's 2025 Operating Budget. Projections for 2026 to 2035 based on the following:
    - Expenditures related to hydro are assumed to increase at a rate of 4.0% annually, with additional proportionate increases applied to the hydro costs for each well based on increased water demand;

- Expenditures related to the metering program have been included based on estimates from the Township's engineering consultant; and
- All other expenditures are assumed to increase at a rate of 4.0% annually from 2026 to 2035.

Capital-related annual expenditures in the forecast include annual debt repayments and contributions to reserves to support the forecast and future needs. Annual transfers to the reserve have been built into the operating expenditure forecasts to minimize the need for debt to finance the capital program.

Total operating expenditures, including capital-related expenditures such as transfers to reserves, are projected to increase from $300,500 in 2025 to $495,600 in 2035.

Rate forecasts have been prepared for the 10-year period from 2026 to 2035. Adjustments to the water rates have been developed based on an analysis of service needs and full cost recovery requirements. The proposed increases will allow the Township to avoid external borrowing to finance capital and increase funding for the annual lifecycle contribution over the forecast period. These impacts balance the long-term needs of the system with affordability considerations.

Table ES-1 presents the water rate forecast for the Waldemar system. The monthly flat rate is projected to increase by 11% beginning in April 2026, resulting in an additional cost of approximately $9 per month compared to the current rate. The monthly flat rate is then forecast to increase by 7% in 2027 and then by 10% annually from 2028 through 2035.

For customers who are no longer paying the capital charges, these rate impacts are equivalent to the annual bill impacts as discussed above.

For customers currently paying both the 20-year and five-year capital charges, annual bills are projected to increase from approximately $1,660 in 2025 to $1,742 in 2026. The capital charges mature in 2026, and as a result, the annual bills are projected to decrease to $1,217 in 2027. The annual bills are then projected to increase by 10% annually from 2028 to 2035, as presented in Table ES-3.

Table ES-1
Township of Amaranth
Water Rate Forecast

Description	2025	2026 January to March	2026 April to December	2027	2028	2029	2030	2031	2032	2033	2034	2035
Monthly Flat Rate	$85.40	$85.40	$94.51	$101.45	$111.60	$122.76	$135.04	$148.54	$163.39	$179.73	$197.71	$217.48
% Increase		**0%**	**11%**	**7%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**
$ Increase		**$0**	**$9**	**$7**	**$10**	**$11**	**$12**	**$14**	**$15**	**$16**	**$18**	**$20**

Table ES-2
Township of Amaranth
Annual Bill Impact – No Capital Charges

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Flat Rate	$1,025	$1,107	$1,217	$1,339	$1,473	$1,620	$1,782	$1,961	$2,157	$2,372	$2,610
Total Annual Bill	**$1,025**	**$1,107**	**$1,217**	**$1,339**	**$1,473**	**$1,620**	**$1,782**	**$1,961**	**$2,157**	**$2,372**	**$2,610**
% Increase - Annual Bill		8%	10%	10%	10%	10%	10%	10%	10%	10%	10%
$ Increase - Annual Bill		$82	$111	$122	$134	$147	$162	$178	$196	$216	$237

Table ES-3
Township of Amaranth
Annual Bill Impact – Including 20-Year and 5-Year Capital Charges

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Flat Rate	$1,025	$1,107	$1,217	$1,339	$1,473	$1,620	$1,782	$1,961	$2,157	$2,372	$2,610
20-Year Capital Charge	$287	$287	$0	$0	$0	$0	$0	$0	$0	$0	$0
5-Year Capital Valve Replacement Charge	$348	$348	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill	**$1,660**	**$1,742**	**$1,217**	**$1,339**	**$1,473**	**$1,620**	**$1,782**	**$1,961**	**$2,157**	**$2,372**	**$2,610**
%Increase - Annual Bill		5%	-30%	10%	10%	10%	10%	10%	10%	10%	10%
$ Increase - Annual Bill		$82	-$524	$122	$134	$147	$162	$178	$196	$216	$237

The following recommendations have been made for Council's consideration:

- That Council provide for the recovery of all water service costs through rates and maintain a separate reserve fund for water services;
- That Council considers the capital plans as provided in Table 3-1 and the recommended capital financing plan as set out in Table 5-1;
- That Council consider the rates as presented in Chapter 8, and direct staff to review the Rate Study in five years; and
- That Council approve the Rate Study and the Water Financial Plan (under separate cover) in the format required under O. Reg. 453/07.

Report

Chapter 1
Introduction

1. Introduction

1.1 Background

The Township of Amaranth (Township) currently provides water services to 116 customers on the Waldemar Heights Water Supply (Waldemar) System.

The Township currently charges an annual flat rate of $1,024.79, which is billed monthly. In addition to this monthly flat rate, the Township collects capital charges for prior system upgrades from customers who elected to amortize their payments rather than pay the required capital charges as a lump sum. Specifically, 21 customers have been paying an annual capital charge of $287 over a 20-year term to cover the costs of system upgrades. This charge was established under By-law 50-2006 and will mature in 2026. In addition, 92 customers elected to pay the capital charge for the valve replacement program over a five-year period beginning in 2022. This resulted in an annual payment of $347.83 for the valve replacement capital program. This capital charge will also mature in 2026.

1.2 Study Process

The Township retained Watson to undertake a water rate study and prepare a water financial plan in accordance with Ontario Regulation (O. Reg.) 453/07. The objectives of the study and steps involved in carrying out the assignment are summarized below:

- Identify all current and future water system capital needs to assess both the immediate and longer-term implications;
- Identify potential methods of cost recovery from the capital needs listing. These recovery methods may include other statutory authorities (e.g., *Development Charges Act, 1997*, as amended (D.C.A.), *Municipal Act*, etc.) as offsets to recovery through the water rates;
- Forecast annual operating costs and rate-based funding requirements;
- Develop a long-term water rate forecast, and assess the potential impacts of proposed rates on customer/rate payers;
- Present findings to staff and Council for their consideration and to assist in gaining approval of the rates for 2026 and future; and

- Prepare a water financial plan that meets the requirements of Ontario Regulation 453/07. This report will be provided under separate cover.

1.3 Legislative Context

Significant regulatory changes have taken place in Ontario over the past two decades since the water crisis in Walkerton. 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 which would have most impacted municipal water and wastewater rates was the *Sustainable Water and Sewage Systems Act, 2002* (S.W.S.S.A.), as it 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 fundamental 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 Township 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.) filed O. Reg 453/07, which requires the preparation of financial plans for water (and wastewater) 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 Township to obtain 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 Township'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 does not constitute a water or wastewater financial plan in accordance with O. Reg. 453/07; however, it will provide the basis to undertake the required financial plan(s).

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:

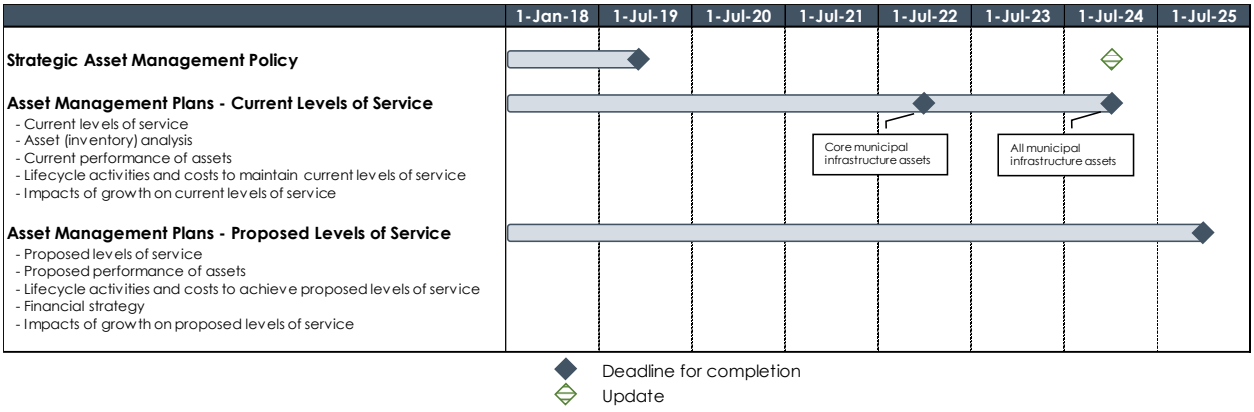
- Timing;
- Contents of the plans;
- Which identified portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

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 has three phases that municipalities must meet. The timelines associated with the three phases were later extended by O. Reg. 193/21 which was filed on March 15, 2021. The timelines are presented in Figure 1-1 below.

Figure 1-1
Legislative Timelines set out by the *Infrastructure for Jobs and Prosperity Act, 2015*
Legislation related to Asset Management Plans



Every municipality in Ontario had 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):

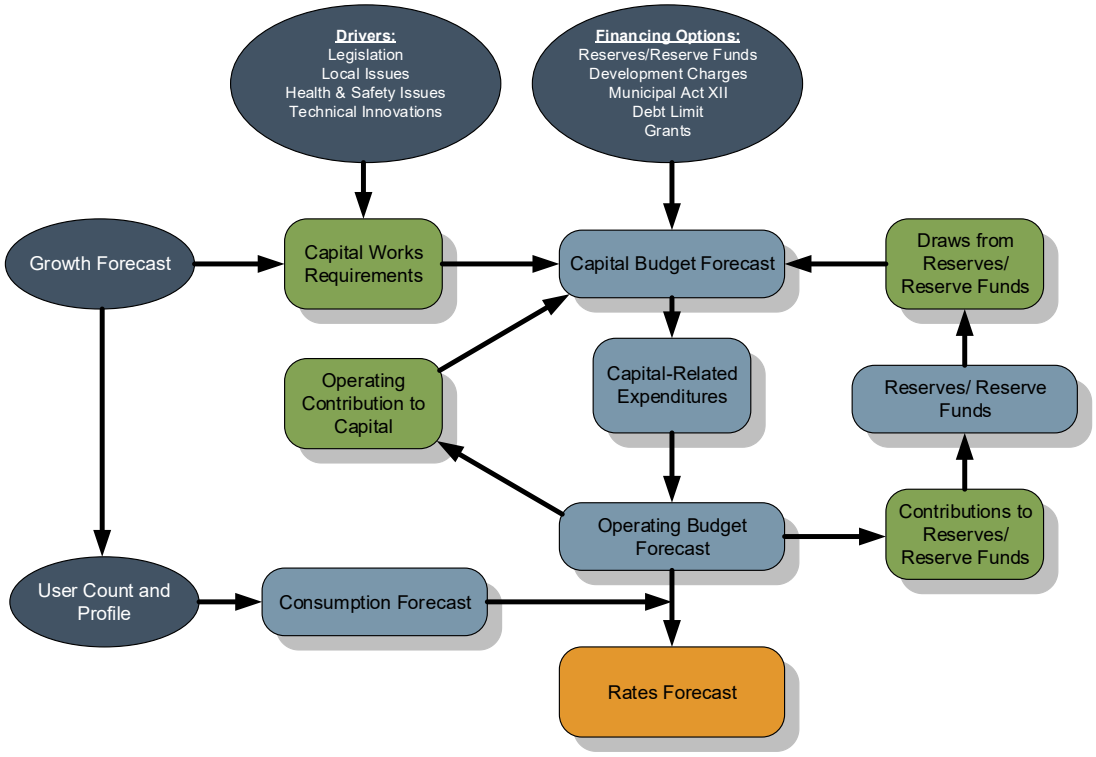
    - Same steps as Phase 1, but for all assets.
- Phase 3 – Asset Management Plan (by July 1, 2025) builds on Phases 1 and 2, adding:
    - Proposed levels of service; and
    - Financial strategy that supports achieving proposed levels of service.

The Township completed its most recent Asset Management Plan (A.M.P.) as required under the legislation in November 2025. The A.M.P. included a review of the Township's water infrastructure. The findings of the 2025 A.M.P. have been considered as part of this study. Furthermore, the Township will need to consider the impacts of funding the lifecycle requirements identified in the A.M.P. during the annual budget and forecast periods.

1.4 Water Rate Calculation Methodology

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

Figure 1-2
Water Rate Calculation Methodology



The methodology employed generally consists of 5 major elements:

1. Customer Demands and Consumption Forecast

This first step in the analysis is important as it produces the current base revenue by source and assumptions for forecasting purposes. The water customer forecast is prepared by considering potential new water users connecting to the system. Through discussions with Township staff, projected total water users over the forecast have been included within the rate study calculations.

2. Capital Needs Forecast

The capital needs forecasts are developed to measure program/service level adjustments, lifecycle requirements, and growth-related needs. The asset management plan, lifecycle analysis of tangible capital assets, and specific needs identified by municipal staff provided the base capital forecast. Capital expenditures are forecast with inflationary adjustments based on capital cost indices.

3. Capital Funding Plan

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

4. Operating Budget Forecast

The operating budget forecast considers adjustments to the municipality's base budget reflecting program/service level changes, operating fund impacts associated with infrastructure, and financing for capital needs. The operating expenditures are forecast with inflationary adjustments and growth in service demand, based on fixed and variable

cost characteristics. The operating budget forecast ties the capital funding plan and reserve/reserve fund continuity forecast to the rate-based revenue projections. This ensures sufficient funding for both the ongoing annual operation and maintenance of water services, as well as the capital cost requirements to ensure service sustainability. Operating revenues are projected to identify the rate components net of anticipated other operating revenues, such as connection charges, capital charges, and other miscellaneous revenues.

5. Rate Forecast and Structure

The rate forecast and rate structure components of the analysis consider various rate structures to recover the forecast rate-based revenue from the projected customer demands. At this stage in the analysis, the full costs of service are measured against the customer growth and consumption demands to determine full cost recovery rates. The analysis may consider alternative structures, including minimum bill and consumptive components of the rates, consistent with municipal policies/strategies, industry practice and customer affordability. The rate forecasts are then applied to a range of customer types and in relation to other municipalities to measure the annual impacts on water bills.

Chapter 2
Forecast Growth and Servicing Requirements

2. Forecast Growth and Servicing Requirements

As previously mentioned, the Township provides water services to 116 customers through the Waldemar system.

The growth identified for 2026-2035 is based on a review of the Waldemar Water Storage Municipal Class Environmental Assessment, dated August 2019 (Waldemar EA) and the 2020 Rate Study, as well as the anticipated development activity within the serviced area and discussions with Township staff. These discussions included consideration of developments where building permits have already been issued.

Table 2-1 presents the forecasted number of new water users over the 10-year period to 2035. The number of customers is projected to increase from 116 in 2025 to 189 in 2035.

Table 2-1
Township of Amaranth
Waldemar Water System Forecast

Water Customer Forecast	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing	110	110	110	110	110	110	110	110	110	110	110
New - Growth	6	35	43	53	63	74	79	79	79	79	79
Total	**116**	**145**	**153**	**163**	**173**	**184**	**189**	**189**	**189**	**189**	**189**

Chapter 3
Capital Infrastructure Needs

3. Capital Infrastructure Needs

A 10-year capital forecast has been developed for the Waldemar water system based on the following sources:

- the Township's 2025 Capital Budget;
- the 2025 to 2035 Waldemar Waterworks Capital Forecast plan;
- the Township's 2025 Asset Management Plan; and
- discussions with Municipal staff.

The 2025 capital budget and the 10-year capital forecast are presented in Table 3-1. Costs for the capital program are presented in current (uninflated) dollars.

The capital plan for 2026 to 2035 totals $422,900 in current dollars. The capital plan includes projects to repair and replace water system assets, as well as to replace water meters for existing customers and other metering-related needs.

Township staff noted that all existing customers had meters installed; however, the majority of these meters are now past their useful life and cannot produce reliable data. As a result, a meter replacement program has been included in the capital needs for the 2026 to 2035 forecast period. Updating the existing water meters and related assets will enable the Township to better understand individual customers' water consumption. This information would also help inform and support the Township's consideration of metered water rates to better align a customer's usage with their water bill. Additional information on water pricing structures in provided in Chapter 7.

Table 3-1
Township of Amaranth
2026 to 2035 Waldemar Water System Capital Forecast (Uninflated $)

Description	Budget 2025	Total	Forecast									
			2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Well One - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well One - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well One - Transmission main repairs	-	2,500	2,500	-	-	-	-	-	-	-	-	-
Well Two - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Two - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well Two - Transmission main repairs	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well Three - Transmission main repairs	-	2,500	2,500	-	-	-	-	-	-	-	-	-
Communications - Replace Com System	100,000	-	-	-	-	-	-	-	-	-	-	-
Pumphouse Raw - Replace pressure gauges	-	1,500	-	-	-	-	-	-	1,500	-	-	-
Water Piping - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Service pressure relief valve	-	5,000	-	-	-	-	-	-	-	5,000	-	-
Water Piping - Process piping repairs	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Replace raw water meters	-	20,000	-	-	-	10,000	-	-	-	-	10,000	-
Pumphouse - Chemical metering pumps	-	15,000	-	-	-	-	-	-	-	-	15,000	-
Treatment - Discharge piping/valves	-	-	-	-	-	-	-	-	-	-	-	-
Equipment - Centreline Injectors	1,500	15,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Reservoir - Camera inspection/clean	-	5,000	-	-	-	-	-	-	-	-	5,000	-
Treated Water - Replace pressure gauges	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service pressure relief valve	-	-	-	-	-	-	-	-	-	-	-	-
Process - Rebuild high lift pumps	-	15,000	-	-	-	-	-	-	-	-	-	15,000
Process - Service emergency pump	-	10,000	-	-	-	-	-	-	-	-	-	10,000
Process - Replace treated water meters	-	4,000	-	-	-	4,000	-	-	-	-	-	-
Instrumentation - Replace free chlorine analyzer	-	20,000	-	-	-	-	-	-	-	-	-	20,000
SCADA - Replace laptop	-	-	-	-	-	-	-	-	-	-	-	-
SCADA - Replace datalogger	2,500	-	-	-	-	-	-	-	-	-	-	-
Building Services - Electrical	-	12,500	2,500	-	2,500	-	2,500	-	2,500	-	-	2,500
Building Services - Heating	500	4,500	500	500	500	500	500	500	500	500	-	500
Building Services - Lighting	500	2,500	-	500	-	500	-	500	-	500	-	500
Building Services - Gnerator Service	-	15,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Treated Water - Distribution mains leak repairs	-	15,500	-	500	-	-	5,000	-	-	5,000	-	5,000
Distribution - Valve repair	-	4,500	-	1,500	-	-	1,500	-	-	-	-	1,500
Distribution - Hydrant repair	-	12,500	-	-	2,500	-	2,500	-	-	2,500	-	5,000

Table 3-1 (continued)
Township of Amaranth
2026 to 2035 Waldemar Water System Capital Forecast (Uninflated $)

Description	Budget	Total	Forecast									
	2025		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Distribution - Service repairs	1,500	7,500	-	-	1,500	-	1,500	-	-	1,500	-	3,000
Metering Program Equiment - Belt Clip		11,383	11,383									
Water Meters		104,500	52,250	52,250								
Studies:												
Water Rate Study	30,000	60,000					30,000					30,000
Total Capital Expenditures	**$136,500**	**$422,883**	**$119,633**	**$58,250**	**$22,000**	**$18,000**	**$46,500**	**$4,000**	**$7,500**	**$18,000**	**$33,000**	**$96,000**

Chapter 4
Lifecycle Costing

4. Lifecycle Costing

4.1 Overview of Lifecycle Costing

4.1.1 Definition

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

By definition, lifecycle costs include all of the costs which are incurred during the service life of a physical asset. This service life spans the period from the time its acquisition is first considered to the time it is taken out of service for disposal or redeployment. The asset goes through several stages in its lifecycle. These include specification, design, manufacture (or build), install, commission, operate, maintain, and disposal. Figure 4-1 depicts these stages in schematic form.

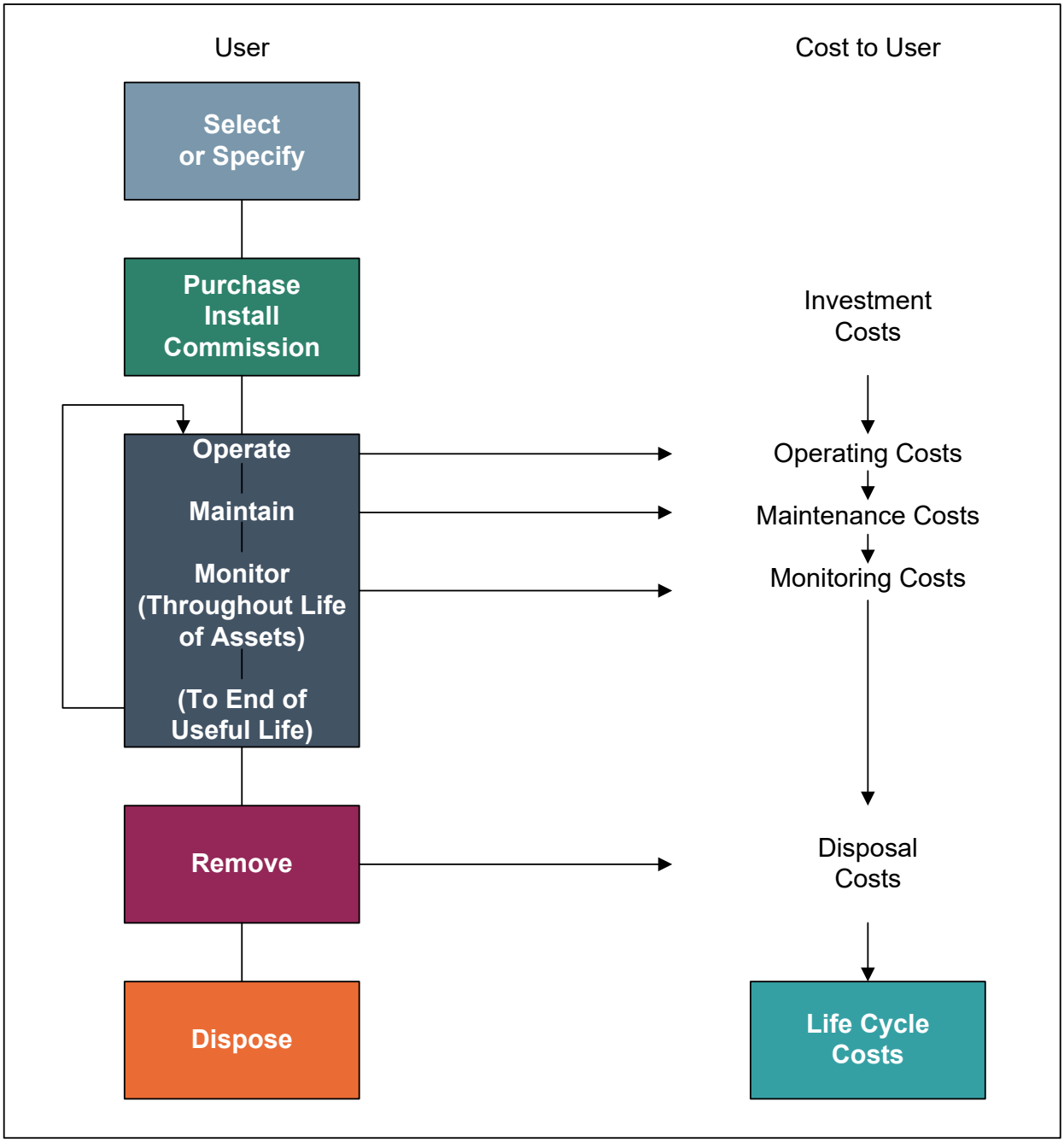
4.1.2 Financing Costs

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

In a municipal context, services are provided to benefit rate payers. Acquisition of assets is normally timed to meet direct needs within the community. At times, economies of scale or technical efficiencies will lead to oversizing an asset to accommodate future growth within the Township. Over the past few decades, new financing techniques such as D.C.s have been employed based on the underlying principle of having those that require and directly benefit from expansionary needs, to pay for those needs, vs. having the costs spread amongst existing rate payers (i.e., growth paying for growth needs). Operating costs, which reflect the cost of the service for that year, are charged directly to all existing ratepayers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

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

Figure 4-1
Lifecycle Costing



Construction related to growth could produce D.C.s and developer contributions (e.g., works internal to a subdivision which are the responsibility of the developer to construct) to fund a significant portion of projects, where new assets are being acquired to allow growth within the municipality to continue. As well, debentures could be used to fund

such works, with the debt charge carrying costs recouped from growth and/or ratepayers in the future.

Capital construction to replace existing infrastructure, however, is largely not growth-related and will therefore not yield D.C.s or developer contributions to assist in financing these works. Hence, a municipality is typically dependent upon debentures, reserves, and contributions from the operating budget to fund these works.

Figure 4-2 depicts the costs of an asset from its initial conception through to replacement. It then follows the costs through to the next replacement.

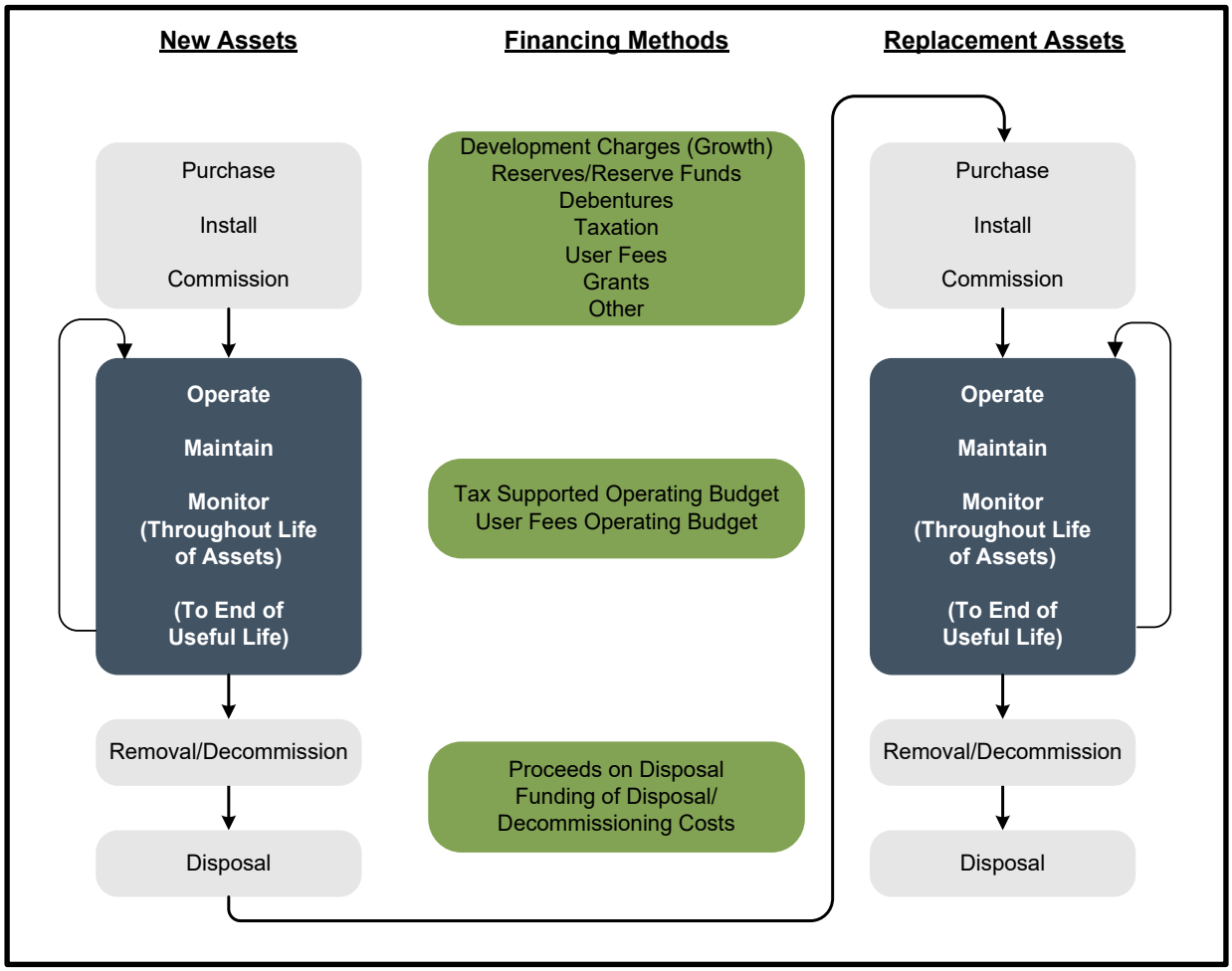
As referred to earlier, growth-related financing methods such as D.C.s and developer contributions could be used to finance the growth-related component of the new asset. These revenues are collected (indirectly) from the new homeowner who benefits directly from the installation of this asset. Other financing methods may be used to address the non-growth-related component of this project. These methods include reserves which have been collected from past rate payers, operating budget contributions collected from existing rate payers, and debentures which future rate payers will carry. Ongoing costs for monitoring, operating, and maintaining the asset will be charged annually to the existing rate payer.

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

Charging for the cost of using up an asset is the basic concept behind depreciation methods utilized by the private sector. This concept allows for expending the asset as it is used up in the production process. The tracking of these costs forms part of the product's selling price and, hence, end-users are charged for the asset's depreciation. The same concept can be applied in a municipal setting to charge existing users for the

asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

Figure 4-2
Financing Lifecycle Costs



4.1.3 Costing Methods

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

The straight-line method is calculated by taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is

disposed of) and dividing this by the estimated number of years of useful life. The reducing balance method is calculated by utilizing a fixed percentage rate, and this rate is applied annually to the undepreciated balance of the asset value.

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

4.2 Impacts on Budgets

The Township completed its 2025 Asset Management Plan (2025 A.M.P.). Based on the Township's asset management database, the total replacement value of existing Waldemar water system infrastructure is approximately $15.65 million.

The 2025 A.M.P. also identified the annual capital requirement to meet the lifecycle and replacement needs of the systems, also referred to as the annual replacement investment or annual contribution. The annual contribution amounts identified for water assets from the 2025 A.M.P. have been updated to include the value of water meters calculated using the straight-line method. These calculations indicate the level of investment the Township may wish to consider as part of its budgeting practices and are summarized in Table 4-1 below (in current dollars). The amounts represent the average annual funding required for the Township to rehabilitate and replace its infrastructure in order to achieve and maintain the approved levels of service.

As shown in Table 4-1, the annual contribution totals approximately $234,900 in current (uninflated) dollars. Assuming annual capital inflation of 4.1% based on the long-term average annual increase in the Non-Residential Building Construction Price Index (NRBCPI), this amount would increase to approximately $350,370 by 2035.

The annual requirement has been considered in developing the rate forecast and is discussed further in Chapter 6 of this report.

Table 4-1
Township of Amaranth
Summary of Water Infrastructure – Waldemar

Description	Total Replacement Value	Annual Lifecycle Contribution
Facilities and Components	6,745,000	146,600
Wells	780,000	16,800
Watermains	6,687,829	49,900
Water Fittings	383,000	3,800
Hydrants	270,000	5,400
Water - Lateral Line	36,000	400
Water System Valve	690,000	9,200
Water Meters	55,000	2,800
Total	**$15,646,829**	**$234,900**

Chapter 5
Capital Cost Financing Options

5. Capital Cost Financing Options

5.1 Summary of Capital Cost Financing Alternatives

Historically, the powers that municipalities 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
• *Development Charges Act, 1997*, as amended	5.2
• *Municipal Act*	5.3
○ Fees and Charges	
○ Connection Fees	
○ Local Improvements	
• Grant Funding Availability	5.4
• Existing Reserves/Reserve Funds	5.5
• Debenture Financing	5.6
• Recommended Capital Financing Approach	5.7

5.2 Development Charges Act, 1997

D.C.s are a revenue tool that municipalities use 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., municipalities may pass by-laws to impose charges to recover the capital costs associated with development and redevelopment. The Township does not currently impose D.C.s for water services.

5.3 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).

Section 221 of the previous *Municipal Act* permitted municipalities to impose charges, by by-law, on owners or occupants of land who would or might derive benefit from the construction of sewage (storm and sanitary) or water works being authorized (in a specific benefit area). For a by-law imposed under this section of the previous Act:

- A variety of different means could be used to establish the rate and recovery of the costs;
- The charges could be imposed by a number of methods at the discretion of Council (i.e., lot size, frontage, number of benefiting properties, etc.);
- Rates could be imposed with respect to the costs of major capital works, even though an immediate benefit was not enjoyed;
- Non-abutting owners could be charged;

- Recovery was authorized against existing works, where a new water or sewer main was added to such works, "notwithstanding that the capital costs of existing works have in whole or in part been paid;"
- Charges on individual parcels could be deferred;
- Exemptions could be established;
- Repayment was secured; and
- OLT approval was not required.

While under the new *Municipal Act* no provisions are provided specific to the previous s.221, the intent to allow capital cost recovery through fees and charges is embraced within s.391. The new *Municipal Act* also maintains 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."

Section 222 of the previous *Municipal Act* permitted municipalities to pass a by-law requiring buildings to connect to the municipality's sewer and water systems, charging the owner for the cost of constructing services from the mains to the property line. Under the new *Municipal Act*, this power still exists 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*.

Under the previous *Local Improvement Act*:

- A variety of different types of works could be undertaken, such as watermain, storm and sanitary sewer projects, supply of electrical light or power, bridge construction, sidewalks, road widening, and paving;
- Council could pass a by-law for undertaking such work on petition of a majority of benefiting taxpayers, on a 2/3 vote of Council, and on sanitary grounds, based on the recommendation of the Minister of Health. The by-law was required to go to the OLT, which might hold hearings and alter the by-law, particularly if there were objections;

- The entire cost of a work was assessed only upon the lots abutting directly on the work, according to the extent of their respective frontages, using an equal special rate per metre of frontage; and
- As noted, this Act was repealed as of April 1, 2003; however, O. Reg. 119/03 was enacted on April 19, 2003, which restores many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

The Township imposes a connection charge on new users connecting to the water system. Although the connection charge has not been reviewed as part of this rate study, revenues associated with the anticipated new connections have been included in the operating revenue forecast.

5.4 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.

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 over $1.0 billion.

The rate calculations provided in subsequent chapters do not assume that any grant funding from the federal and provincial governments will be allocated to water projects. The Township is encouraged to continue to pursue funding opportunities as they are announced or made available to assist with funding its water infrastructure.

5.5 Existing Reserves/Reserve Funds

The Township has established a reserve fund for water services; however, the balance was $0 on December 31, 2024. Transfers or contributions to the reserve fund have been forecasted as part of this rate study and are discussed further in Section 6.2 of this report.

5.6 Debenture Financing

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

The Ministry of Municipal Affairs and Housing regulates the level of debt incurred by Ontario municipalities through its powers established under the *Municipal Act*. O. Reg. 403/02 provides the current rules respecting municipal debt and financial obligations. Under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own-source revenues may be allotted to servicing the debt (i.e., debt charges). The Township's most recent Annual Repayment Limit, issued by the Ministry of Municipal Affairs and Housing for 2024, indicated a limit of $1.33 million. Based on 20-year financing at an assumed interest rate of 5.0%, the estimated available debt for the Township was approximately $16.58 million. No external debt financing has been identified as part of this rate study.

5.6.1 Infrastructure Ontario

Infrastructure Ontario (I.O.) is an arms-length crown corporation established to provide low-cost, long-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 requested.

To be eligible to receive these loans, municipalities must submit a formal application along with pertinent financial information. Allotments are prioritized and distributed based upon the Province's assessment of need. The analysis provided herein assumes that the Township will not provide debt financing for the capital projects identified.

5.6.2 Ontario Infrastructure Bank

The Province, through the *Building Ontario Fund Act, 2024* established funding through a new Ontario Infrastructure Bank. This arms-length, board-governed agency will assist investors and institutions in participating in large-scale infrastructure projects. The bank is newly established and currently in the process of being operationalized.

5.7 Recommended Capital Financing Approach

Table 5-1 presents the detailed annual capital expenditures (inflated $). The capital expenditures, as outlined in the table, include 4.1% in annual capital inflation. The table also includes various funding sources recommended for the Township's consideration.

Capital expenditures over the 10-year period from 2026 to 2035 are estimated at $529,000 (inflated $). These expenditures are projected to be funded from the water reserve fund. The expenditures are also interim financed with a $20,000 loan from the

Township's other reserves, forecasted for 2026, and repaid in 2030. The interim loan is presented in the table as an operating contribution.

Table 5-1
Township of Amaranth
Waldemar Water System Capital Forecast and Financing Plan (Inflated $)

Description	Budget	Total	Forecast									
	2025		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Well One - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well One - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well One - Transmission main repairs	-	3,000	3,000	-	-	-	-	-	-	-	-	-
Well Two - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Two - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well Two - Transmission main repairs	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well Three - Transmission main repairs	-	3,000	3,000	-	-	-	-	-	-	-	-	-
Communications - Replace Com System	100,000	-	-	-	-	-	-	-	-	-	-	-
Pumphouse Raw - Replace pressure gauges	-	2,000	-	-	-	-	-	-	2,000	-	-	-
Water Piping - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Service pressure relief valve	-	7,000	-	-	-	-	-	-	-	7,000	-	-
Water Piping - Process piping repairs	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Replace raw water meters	-	26,000	-	-	-	12,000	-	-	-	-	14,000	-
Pumphouse - Chemical metering pumps	-	21,000	-	-	-	-	-	-	-	-	21,000	-
Treatment - Discharge piping/valves	-	-	-	-	-	-	-	-	-	-	-	-
Equipment - Centreline Injectors	1,500	20,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Reservoir - Camera inspection/clean	-	7,000	-	-	-	-	-	-	-	-	7,000	-
Treated Water - Replace pressure gauges	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service pressure relief valve	-	-	-	-	-	-	-	-	-	-	-	-
Process - Rebuild high lift pumps	-	22,000	-	-	-	-	-	-	-	-	-	22,000
Process - Service emergency pump	-	15,000	-	-	-	-	-	-	-	-	-	15,000
Process - Replace treated water meters	-	5,000	-	-	-	5,000	-	-	-	-	-	-
Instrumentation - Replace free chlorine analyzer	-	30,000	-	-	-	-	-	-	-	-	-	30,000
SCADA - Replace laptop	-	-	-	-	-	-	-	-	-	-	-	-
SCADA - Replace datalogger	2,500	-	-	-	-	-	-	-	-	-	-	-
Building Services - Electrical	-	16,000	3,000	-	3,000	-	3,000	-	3,000	-	-	4,000
Building Services - Heating	500	9,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	-	1,000
Building Services - Lighting	500	5,000	-	1,000	-	1,000	-	1,000	-	1,000	-	1,000
Building Services - Gnerator Service	-	20,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Treated Water - Distribution mains leak repairs	-	21,000	-	1,000	-	-	6,000	-	-	7,000	-	7,000
Distribution - Valve repair	-	6,000	-	2,000	-	-	2,000	-	-	-	-	2,000
Distribution - Hydrant repair	-	16,000	-	-	3,000	-	3,000	-	-	3,000	-	7,000

Table 5-1 (continued)
Township of Amaranth
Waldemar Water System Capital Forecast and Financing Plan (Inflated $)

Description	Budget 2025	Total	Forecast									
			2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Distribution - Service repairs	1,500	10,000	-	-	2,000	-	2,000	-	-	2,000	-	4,000
Metering Program Equiment - Belt Clip	-	12,000	12,000	-	-	-	-	-	-	-	-	-
Water Meters	-	111,000	54,000	57,000	-	-	-	-	-	-	-	-
Studies:		-	-	-	-	-	-	-	-	-	-	-
Water Rate Study	30,000	82,000	-	-	-	-	37,000	-	-	-	-	45,000
Total Capital Expenditures	**$136,500**	**$529,000**	**$128,000**	**$66,000**	**$25,000**	**$23,000**	**$58,000**	**$6,000**	**$10,000**	**$25,000**	**$46,000**	**$142,000**
Capital Financing												
Operating Contributions	136,500	20,000	20,000	-	-	-	-	-	-	-	-	-
Water Reserve	-	509,000	108,000	66,000	25,000	23,000	58,000	6,000	10,000	25,000	46,000	142,000
Total Capital Financing	**$136,500**	**$529,000**	**$128,000**	**$66,000**	**$25,000**	**$23,000**	**$58,000**	**$6,000**	**$10,000**	**$25,000**	**$46,000**	**$142,000**

Chapter 6
Operating Expenditure and Revenues

6. Operating Expenditure and Revenues

6.1 Operating Expenditures

Township staff provided the approved 2025 Operating Budget, which provided the basis for developing the operating forecast to 2035 in this report. The operating budget forecast generally includes two components: the operating expenditures and capital-related expenditures. The former is based on the Township's projected annual spending for ongoing operations and maintenance. The latter is based on the capital funding plan decisions (i.e., transfers to reserve funds, debt repayment, and capital fund transfers) presented earlier.

The operating forecast for 2026 through 2035 is based on the 2025 approved operating budget with adjustments for inflation and growth impacts. The costs for each component of the operating budget have been reviewed with staff to establish forecast inflationary adjustments. The cost adjustments are summarized below:

- Expenditures related to hydro are assumed to increase at a rate of 4.0% annually, with additional proportionate increases applied to the hydro costs for each well based on growth;
- Expenditures related to the metering program have been included based on estimates from the Township's engineering consultant; and
- All other expenditures are assumed to increase at a rate of 4.0% annually from 2026 to 2035.

Capital-related annual expenditures in the forecast include annual debt repayments and contributions to reserves to support the forecast and future needs. Annual transfers to the reserve have been built into the operating expenditure forecasts to minimize the need for debt to finance the capital program.

Compared to the annual lifecycle requirement discussed in Section 4.2 of this report, the annual capital-related expenditures will total $315,510 in 2035. This represents approximately 90% of the calculated annual lifecycle requirement of $350,370 in 2035 as identified in Section 4.2. Increasing the capital-related expenditures to fully fund the annual lifecycle requirement by 2035 would require higher rate increases than those currently proposed and discussed in Chapter 8. Based on discussions with staff regarding projected capital needs and priorities and the need to balance these

requirements with affordability for the ratepayers, the time horizon for achieving the target funding level was extended beyond 2035. This will be reassessed in five years as part of the next rate study and preparation of the water financial plan.

Table 6-1 provides the operating expenditure forecast. Gross operating expenditures are projected to increase from approximately $300,500 in 2025 to approximately $495,600 in 2035.

6.2 Operating Revenues

The Township has revenues from flat rates, connection charges, capital charges, and penalties and interest to help contribute towards operating expenditures.

The Township has two *Municipal Act* capital charge recoveries to recover the capital costs associated with specific capital works. The first capital charge recovery was implemented through By-law 50-2006. It provided customers the option to pay their capital charge over 20 years beginning in 2007. A second capital charge was implemented in 2021 with a five-year term that started in 2022. Both these recoveries mature in 2026. The total capital charge revenue is projected to be approximately $36,300 for 2026, the final year of the recoveries.

For 2026, a $20,000 interim loan from tax-supported reserves has been assumed to fund the projected capital expenditures. Other miscellaneous revenues, including connection charges, as well as penalties and interest, are assumed to increase over the forecast period. Connection charge revenue is based on the anticipated growth as discussed in Chapter 2. Revenue from penalties and interest has been assumed to increase by 4% annually.

Water billing revenues are forecast to increase from approximately $118,880 in 2025 to $493,240 in 2035 based on the anticipated development summarized in Chapter 2 and the proposed increases to the water rates, which are discussed further in Chapter 8.

Table 6-1 presents the operating budget forecast in inflated dollars. A detailed discussion on the adjustments to rate revenue is provided in Chapter 8.

Table 6-1
Township of Amaranth
Operating Budget Forecast (inflated $) – Waldemar Water System

Description	Budget 2025	Forecast 2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Expenditures											
Operating Costs											
Hydro	21,420	23,443	24,715	26,138	27,636	29,258	30,673	31,900	33,176	34,503	35,883
Phone	1,938	2,016	2,097	2,181	2,268	2,359	2,453	2,551	2,653	2,759	2,869
Contract/Supplies	91,659	95,325	99,138	103,104	107,228	111,517	115,978	120,617	125,442	130,460	135,678
Metering Program Subscription		4,000	4,160	4,326	4,499	4,679	4,866	5,061	5,263	5,474	5,693
Sub Total Operating	**115,017**	**124,784**	**130,110**	**135,749**	**141,631**	**147,813**	**153,970**	**160,129**	**166,534**	**173,196**	**180,123**
Capital-Related											
Repayment of Interim Loan from Township's General Reserves		-	-	-	-	20,000	-	-	-	-	-
Transfer to Capital	136,500	20,000	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	48,995	74,023	58,510	84,991	115,769	153,071	184,917	212,547	243,299	277,501	315,514
Sub Total Capital Related	**185,495**	**94,023**	**58,510**	**84,991**	**115,769**	**173,071**	**184,917**	**212,547**	**243,299**	**277,501**	**315,514**
Total Expenditures	**$300,512**	**$218,806**	**$188,620**	**$220,740**	**$257,400**	**$320,884**	**$338,887**	**$372,676**	**$409,833**	**$450,697**	**$495,637**
Revenues											
Connection Charges	10,000	450	750	750	750	825	-	-	-	-	-
Other Revenue	1,500	1,560	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400
Capital Charge Recovery	36,315	36,315	-	-	-	-	-	-	-	-	-
Interim Loan from General Reserves		20,000									
Capital Loan Repayment	133,821										
Contributions from Reserves	-	-	-	-	-	20,000	-	-	-	-	-
Total Operating Revenue	**$181,636**	**$58,325**	**$2,350**	**$2,450**	**$2,550**	**$22,725**	**$2,000**	**$2,100**	**$2,200**	**$2,300**	**$2,400**
Water Billing Recovery - Operating	**$118,876**	**$160,482**	**$186,270**	**$218,290**	**$254,850**	**$298,159**	**$336,887**	**$370,576**	**$407,633**	**$448,397**	**$493,237**

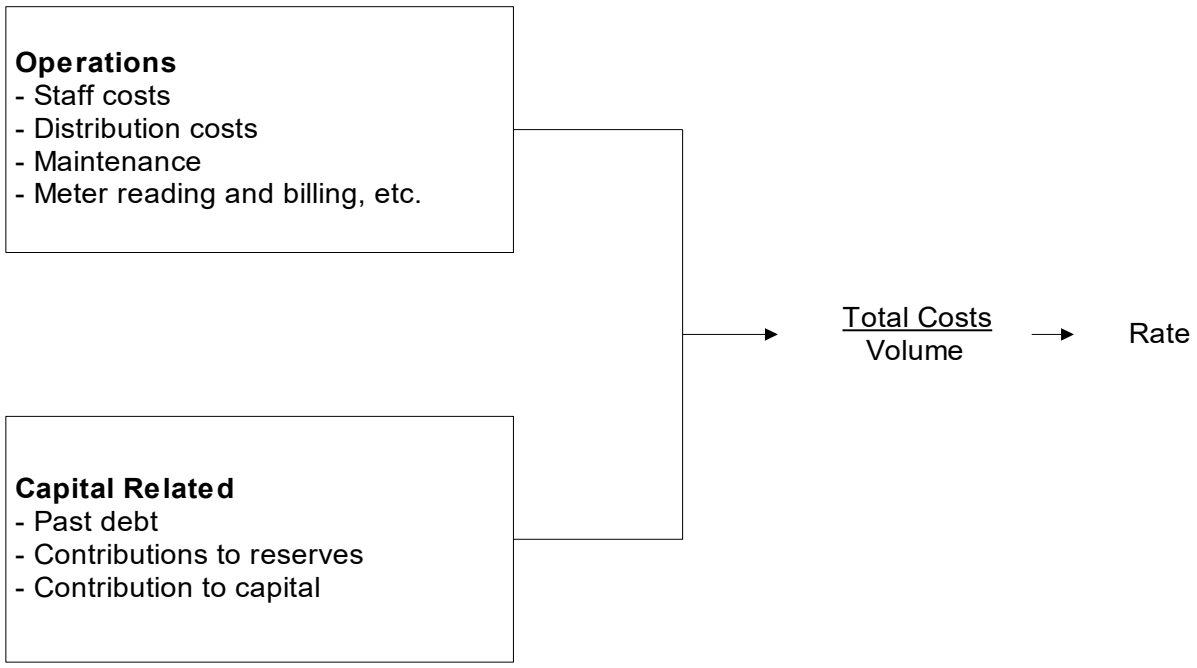
Chapter 7
Pricing Structures

7. Pricing Structures

7.1 Introduction

Rates, in their simplest form, are defined as the total costs to maintain the utility function divided by the total expected volume to be generated over 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 system ages; and
- Financing of capital costs are a function of policy regarding reserves and direct financing from rates (pay as you go), debt, and user pay methods (development charges, *Municipal Act*).

7.2 Alternative Pricing Structures

Throughout Ontario, and as well, Canada, the use of pricing mechanisms varies between municipalities. The use of a particular form of pricing depends upon numerous factors, including Council preference, administrative structure, surplus/deficit system capacities, and economic/demographic conditions, to name a few.

Municipalities within Ontario have two basic forms of collecting revenues for water purposes, those being through incorporation of the costs within the tax rate charged on property assessment and/or through the establishment of 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 general requisition or the assessment base of the municipality. This form of collection is a "wealth tax," as payment increases directly with the value of property owned and bears 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, 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) into 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 set revenue for the collection period but is not sensitive to consumption, hence may cause a shortfall or surplus of revenues collected.

Constant Rate: This rate is a volume-based rate, in which the consumer pays the same price per unit consumed, regardless of the 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 loosely aligns the 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 to say that within set volume ranges, or blocks, the charge per unit is set at one rate. Within the next volume range, the charge per unit decreases to a lower rate, and so on. Typically, the first, or first and second blocks cover residential and light commercial uses. Subsequent blocks normally are used for heavier commercial and industrial uses. This rate structure requires water meters to record the volume consumed by each type of user. This method requires the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over 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 with higher volumes used. This rate structure also requires water meters to record the volume consumed by each user. This method requires, as with the declining block structure, the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over or under-collect from rate payers.

The Hump Back Rate: The hump back rate is a combination of an increasing block rate and the declining block rate. Under this method, the consumer's bill rises with higher volumes used up to a certain level and then begins to fall for volumes exceeding levels set for the increasing block rate.

7.3 Assessment of Alternative Pricing Structures

The adoption by a municipality or utility of any one particular pricing structure is normally a function of a variety of administrative, social, demographic, and financial factors. The number of factors, and the weighting each particular factor receives, can vary between municipalities. The following is a review of some of the more prevalent factors.

Cost Recovery

Cost recovery is a prime factor in establishing a particular pricing structure. Costs can be divided into different categories: operations, maintenance, capital, financing, and administration. These costs often vary between municipalities and even within a municipality, based on consumption patterns, infrastructure age, economic growth, etc.

The pricing alternatives defined earlier can all achieve the cost recovery goal, but some do so more precisely than others. Fixed pricing structures, such as Property Assessment and Flat Rate, are established on the value of property or on the number of units present in the municipality, but do not reflect consumption of the service. Thus, if actual consumption for the year is greater than projected, the municipality incurs a higher cost of production, but the revenue base remains static (since it was determined at the beginning of the year), thus potentially providing a funding shortfall. Conversely, if consumption declines below projections, fixed pricing structures will produce more revenue than actual costs incurred.

The other pricing methods (declining block, constant rate, increasing block) are consumption-based and generally generate revenues in proportion to actual consumption.

Administration

Administration is defined herein as the staffing, equipment, and supplies required to support the undertaking of a particular pricing strategy. This factor not only addresses

the tangible requirements to support the collection of revenues, but also the intangible requirements, such as policy development.

The easiest pricing structure to support is the Property Assessment structure. As municipalities undertake the process of calculating property tax bills and the collection process for their general services, the incorporation of the water costs into this calculation would have virtually no impact on the administrative process and structure.

The Flat Rate pricing structure is relatively easy to administer as well. It is usually calculated to collect a certain amount, either monthly, quarterly, semi-annually, or annually. It is billed directly to the customer. The impact on administration centres is mostly on the accounts receivable or billing area of the municipality but normally requires minor additional staff or operating costs to undertake.

The three remaining methods, Increasing Block Rate, Constant Rate, and Declining Block Rate, have a bigger impact on administration. These methods are dependent upon actual consumption and hence involve a major structure in place to administer. First, meters must be installed in all existing buildings in the municipality. New buildings that are built after this must include water meters. Second, meter readings must be undertaken periodically. Hence, staff must be available for this purpose, or a service contract must be negotiated. Third, the billings process must be expanded to accommodate this process. Billing must be done over a defined period, requiring staff to produce the bills. Lastly, either through increased staffing or by service contract, an annual maintenance program must be set up to ensure meters are working effectively in recording consumed volumes.

The benefit derived from the installation of meters is that information on consumption patterns becomes available. This information provides benefit to administration in calculating rates, which will ensure revenue recovery. When planning what services are to be constructed in future years, the municipality or utility has documented consumption patterns distinctive to its own situation, which can be used to project sizing of growth-related works.

Equity

Equity is always a consideration in the establishment of pricing structures, but its definition can vary depending on a municipality's circumstances and based on the subjective interpretation of those involved. For example: is the price charged to a

particular class of rate payer consistent with those of a similar class in surrounding municipalities; through the pricing structure, does one class of rate payer pay more than another class; should one pay based on ability to pay, or on the basis that a unit of water costs the same to supply no matter who consumes it; etc.? There are many interpretations. Equity therefore must be viewed broadly in light of many factors as part of achieving what is best for the municipality.

Revenue Stability

The objective of revenue stability is to limit the variability of annual variation in revenues due to fluctuation in consumption patterns. Variability is most often caused by weather conditions where in "wet" years, water usage is low and in "dry" years, water usage is high. To remove this variability entirely, a municipality would need to recover costs by either property taxes or by using the flat rates. Alternatively, a base charge provides for a fixed amount to be collected per period, which would at least guarantee a portion of the revenue stream.

Fixed vs. Variable Rates/Revenue

Often it is suggested that the rate structure be developed to reflect the fixed vs. variable expenditures so that revenues more closely match the expenditures being made. While this is a positive objective to advance, the reality is that most annual expenditures are generally fixed over periods of time and do not vary with consumption. The most variable costs would include hydro and chemicals, which generally increase or decrease with water production. Other costs, such as wages, benefits, insurance, vehicles/equipment, telecommunications, contracts, capital-related (i.e., debt, reserve transfers, current to capital transfers) are generally fixed. Variable costs for chemicals and hydro generally represent about 10% of the total water budget.

Conservation

Conservation of natural resources is increasingly being more highly valued. Conservation is also a concept which applies to a municipality facing physical limitations in the amount of water which can be supplied to an area. As well, financial constraints can encourage conservation in a municipality where the cost of providing each additional unit is increasing.

Pricing structures such as property assessment and flat rate do not, in themselves, encourage conservation. In fact, depending on the price, which is charged, they may even encourage resource "squandering," either because consumers, without the price discipline, consume water at will, or the customer wants to get their money's worth and hence adopts more liberal consumption patterns. The reason for this is that the price paid for the service bears no direct relationship to the volume consumed and hence is viewed as a "tax," instead of being viewed as the price of a purchased commodity.

The Declining Block Rate provides a decreasing incentive towards conservation. By creating awareness of volumes consumed, the consumer can reduce their total costs by restricting consumption; however, the incentive lessens as more water is consumed, because the marginal cost per unit declines as the consumer enters the next block pricing range. Similarly, those whose consumption level is at the top end of a block have less incentive to reduce consumption.

The Constant Rate structure presents the customer with a linear relationship between consumption and the cost thereof. As the consumer pays a fixed cost per unit, their bill will vary directly with the amount consumed. This method presents tangible incentive for consumers to conserve water. As metering provides direct feedback as to usage patterns and the consumer has direct control over the total amount paid for the commodity, the consumer is encouraged to use only those volumes that are reasonably required.

The Inverted Block method presents the most effective pricing method for encouraging conservation. Through this method, the price per unit consumed increases as total volumes consumed grow. The consumer becomes aware of consumption through metering with the charges increasing dramatically with usage. Hence, there normally is awareness that exercising control over usage can produce significant savings. This method not only encourages conservation but may also penalize legitimate high-volume users if not properly structured.

Figure 7-1 shows the different rate structures. Property tax is not shown for comparison because the proportion of taxes paid for the service varies directly with the property's value. The graphs on the left-hand side of the figure present the cost per unit for each additional amount of water consumed. The right-hand side of the figure presents the impact on the customer's bill as the volume of water increases. Following the schematic

is Figure 7-2, which summarizes each rate structure and the impacts on a customer's bill as volumes increase.

Figure 7-1
Water Rate Pricing Concepts

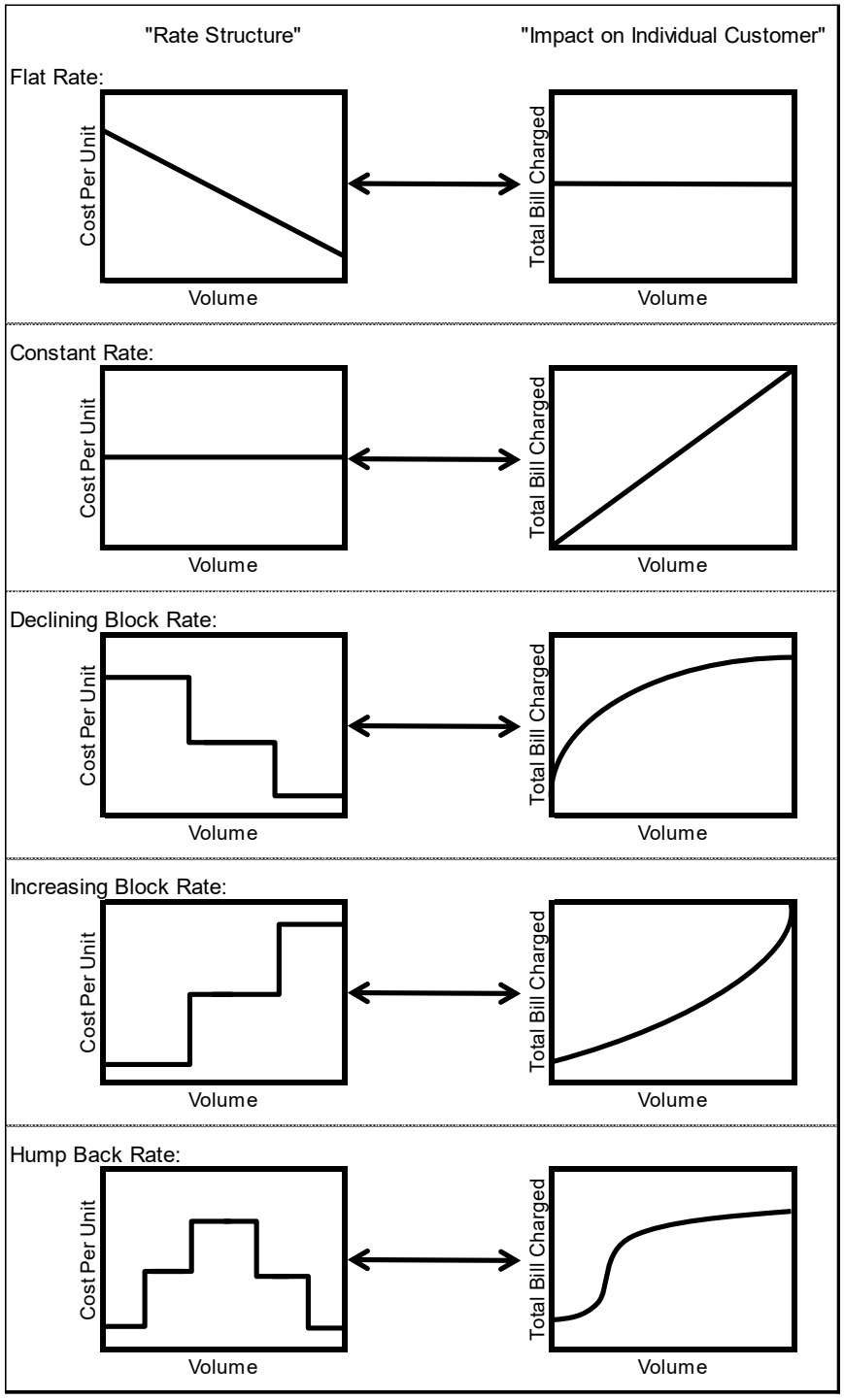


Figure 7-2
Summary of Various Rate Structures and their Impact on Customer Bills as Volume Usage Increases

Rate Structure	Cost Per Unit as Volume Increases	Impact On Customer Bill as Volume Increases
Flat Rate	Cost per unit decreases as more volume is consumed	Bill remains the same, no matter how much volume is consumed
Constant Rate	Cost per unit remains the same	Bill increases in direct proportion to consumption
Declining Block	Cost per unit decreases as threshold targets are achieved	Bill increases at a slower rate as volumes increase
Increasing Block	Cost per unit increases as threshold targets are achieved	Bill increases at a faster rate as volumes increase
Hump Back Rate	A combination of an increasing block at the lower consumption volumes and then converts to a declining block for the high consumption volumes	Bill increases at a faster rate at the lower consumption amounts and then slows as volumes increase

7.4 Rate Structures in Ontario

In a past survey of over 170 municipalities (approximately half of the municipalities who provide water and/or wastewater), all forms of rate structures are in use by Ontario municipalities. The most common rate structure is the constant rate (for metered municipalities). Most municipalities (approximately 92%) who have volume rate structures also impose a base charge.

Historically, the development of a base charge often reflected either the recovery of meter reading/billing/collection costs, plus administration or those costs plus certain fixed costs (such as capital contributions or reserve contributions). More recently, many municipalities have started to establish base charges based on ensuring a secure

portion of the revenue stream, which does not vary with volumes/flows. Selection of the quantum of the base charge is a matter of policy selected by individual municipalities.

Chapter 8
Forecast Water Rates

8. Forecast Water Rates

8.1 Introduction

To summarize the analysis undertaken thus far, Chapter 3 reviewed capital-related issues and responded to the provincial directives to maintain and upgrade infrastructure to the required levels. Chapter 5 provided a review of capital financing options, with reserve fund contributions serving as the predominant basis for financing future capital replacement. Chapter 6 established the 10-year operating forecast of expenditures, including an annual capital reserve contribution.

This chapter will provide for the calculation of the water rates over the forecast period. Based on the analysis, the Waldemar water system requires investments over the forecast period. Additional operating expenditures and the requirement for lifecycle capital expenditure will put pressure on the financial sustainability of the system. Additional details, including reserve continuity schedules and debt repayment schedules, are provided in Appendix A.

8.2 Water Rate Forecasts

The following sections outline the proposed rate adjustments required to support the capital and operating needs identified in Chapters 3 through 6.

Based on the analysis presented in this report, the Waldemar water system will require increased investment over the forecast period. Rising operating expenditures and the need to increase funding for lifecycle or asset management will put pressure on the financial sustainability of the system.

To sustainably fund these needs, it is recommended that the Township maintain its current practice of charging a monthly flat rate for all users. As mentioned earlier, while the majority of customers have meters, the meters are past their useful lives and are planned for replacement in the early part of the forecast (2026 and 2027). Maintaining the existing rate structure would allow the Township to complete the meter replacement program and gather consumption data over several years. This information will then support future consideration of transitioning to a metered rate structure that better aligns customers' bills with their actual water use.

The calculated water rates are presented in Table 8-1, with detailed calculations provided in Appendix A. As shown in Table 8-1, the monthly flat rate is projected to increase by 11% in 2026, resulting in an additional cost of approximately $9 per month beginning in April 2026. The monthly flat rate is then forecast to increase by 7% in 2027 and then by 10% annually from 2028 through 2035.

Annual bill impacts have been modelled for two customer groups: those who are not currently paying capital charges through their water bills, and those currently paying the two capital charges through their water bills.

Table 8-2 presents the annual billing impact for a customer who satisfied all capital charge obligations. As shown in the table, the annual water bill would increase by 8% from $1,025 in 2025 to $1,107 in 2026. The water bills are projected to increase by 7% in 2027 and by 10% annually from 2028 to 2035.

Similarly, Table 8-3 presents the annual billing impact for a customer who is currently paying both the 20-year and the five-year capital charges. As shown in the table, the annual water bill is projected to increase by 5% from $1,660 in 2025 to $1,742 in 2026. As previously noted, both capital charges mature in 2026; therefore, the annual bill is projected to decrease to $1,217 in 2027. The water bills are then projected to increase by 10% annually from 2028 to 2035.

Table 8-1
Township of Amaranth
Water Rate Forecast

Description	2025	2026 January to March	2026 April to December	2027	2028	2029	2030	2031	2032	2033	2034	2035
Monthly Flat Rate	$85.40	$85.40	$94.51	$101.45	$111.60	$122.76	$135.04	$148.54	$163.39	$179.73	$197.71	$217.48
% Increase		**0%**	**11%**	**7%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**
$ Increase		**$0**	**$9**	**$7**	**$10**	**$11**	**$12**	**$14**	**$15**	**$16**	**$18**	**$20**

Table 8-2
Township of Amaranth
Annual Bill Impact – No Capital Charges

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Flat Rate	$1,025	$1,107	$1,217	$1,339	$1,473	$1,620	$1,782	$1,961	$2,157	$2,372	$2,610
Total Annual Bill	**$1,025**	**$1,107**	**$1,217**	**$1,339**	**$1,473**	**$1,620**	**$1,782**	**$1,961**	**$2,157**	**$2,372**	**$2,610**
% Increase - Annual Bill		8%	10%	10%	10%	10%	10%	10%	10%	10%	10%
$ Increase - Annual Bill		$82	$111	$122	$134	$147	$162	$178	$196	$216	$237

Table 8-3
Township of Amaranth
Annual Bill Impact – Including 20-Year and 5-Year Capital Charges

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Annual Flat Rate	$1,025	$1,107	$1,217	$1,339	$1,473	$1,620	$1,782	$1,961	$2,157	$2,372	$2,610
20-Year Capital Charge	$287	$287	$0	$0	$0	$0	$0	$0	$0	$0	$0
5-Year Capital Valve Replacement Charge	$348	$348	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill	**$1,660**	**$1,742**	**$1,217**	**$1,339**	**$1,473**	**$1,620**	**$1,782**	**$1,961**	**$2,157**	**$2,372**	**$2,610**
% Increase - Annual Bill		5%	-30%	10%	10%	10%	10%	10%	10%	10%	10%
$ Increase - Annual Bill		$82	-$524	$122	$134	$147	$162	$178	$196	$216	$237

Chapter 9
Recommendations

9. Recommendations

As presented within this report, capital and operating expenditures have been identified and projected over a 10-year forecast period for the Waldemar water system. 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 Council's consideration:

1. That Council provide for the recovery of all water service costs for the Waldemar system through recovery rates and maintain a reserve fund for water services;

2. That Council considers the capital plans for water services as provided in Table 3-1 and the recommended capital financing plan as set out in Table 5-1.

3. That Council consider the water rates as shown in Chapter 8, and direct staff to review the Rate Study in five years; and

4. That Council approve the Rate Study and the Water Financial Plan (under separate cover) in the format required under O. Reg. 453/07.

Appendices

Appendix A
Detailed Water Rate Calculations – Waldemar

Table A-1
Township of Amaranth
Water Capital Budget Forecast (uninflated $)

Description	Budget 2025	Total	Forecast									
			2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Well One - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well One - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well One - Transmission main repairs	-	2,500	2,500	-	-	-	-	-	-	-	-	-
Well Two - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Two - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well Two - Transmission main repairs	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Submersible pump replacement	-	15,000	15,000	-	-	-	-	-	-	-	-	-
Well Three - Transmission main repairs	-	2,500	2,500	-	-	-	-	-	-	-	-	-
Communications - Replace Com System	100,000	-	-	-	-	-	-	-	-	-	-	-
Pumphouse Raw - Replace pressure gauges	-	1,500	-	-	-	-	-	-	1,500	-	-	-
Water Piping - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Service pressure relief valve	-	5,000	-	-	-	-	-	-	-	5,000	-	-
Water Piping - Process piping repairs	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Replace raw water meters	-	20,000	-	-	-	10,000	-	-	-	-	10,000	-
Pumphouse - Chemical metering pumps	-	15,000	-	-	-	-	-	-	-	-	15,000	-
Treatment - Discharge piping/valves	-	-	-	-	-	-	-	-	-	-	-	-
Equipment - Centreline Injectors	1,500	15,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Reservoir - Camera inspection/clean	-	5,000	-	-	-	-	-	-	-	-	5,000	-
Treated Water - Replace pressure gauges	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service pressure relief valve	-	-	-	-	-	-	-	-	-	-	-	-
Process - Rebuild high lift pumps	-	15,000	-	-	-	-	-	-	-	-	-	15,000
Process - Service emergency pump	-	10,000	-	-	-	-	-	-	-	-	-	10,000
Process - Replace treated water meters	-	4,000	-	-	-	4,000	-	-	-	-	-	-
Instrumentation - Replace free chlorine analyzer	-	20,000	-	-	-	-	-	-	-	-	-	20,000
SCADA - Replace laptop	-	-	-	-	-	-	-	-	-	-	-	-
SCADA - Replace datalogger	2,500	-	-	-	-	-	-	-	-	-	-	-
Building Services - Electrical	-	12,500	2,500	-	2,500	-	2,500	-	2,500	-	-	2,500
Building Services - Heating	500	4,500	500	500	500	500	500	500	500	500	-	500
Building Services - Lighting	500	2,500	-	500	-	500	-	500	-	500	-	500
Building Services - Gnerator Service	-	15,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Treated Water - Distribution mains leak repairs	-	15,500	-	500	-	-	5,000	-	-	5,000	-	5,000
Distribution - Valve repair	-	4,500	-	1,500	-	-	1,500	-	-	-	-	1,500
Distribution - Hydrant repair	-	12,500	-	-	2,500	-	2,500	-	-	2,500	-	5,000

Table A-1 (continued)
Township of Amaranth
Water Capital Budget Forecast (uninflated $)

Description	Budget 2025	Total	Forecast									
			2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Distribution - Service repairs	1,500	7,500	-	-	1,500	-	1,500	-	-	1,500	-	3,000
Metering Program Equiment - Belt Clip		11,383	11,383									
Water Meters		104,500	52,250	52,250								
Studies:												
Water Rate Study	30,000	60,000					30,000					30,000
Total Capital Expenditures	**$136,500**	**$422,883**	**$119,633**	**$58,250**	**$22,000**	**$18,000**	**$46,500**	**$4,000**	**$7,500**	**$18,000**	**$33,000**	**$96,000**

Table A-2
Township of Amaranth
Water Capital Budget Forecast and Recommended Capital Financing (inflated $)

Description	Budget	Total	Forecast									
	2025		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Well One - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well One - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well One - Transmission main repairs	-	3,000	3,000	-	-	-	-	-	-	-	-	-
Well Two - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Two - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well Two - Transmission main repairs	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Camera inspection of well casing	-	3,000	-	-	3,000	-	-	-	-	-	-	-
Well Three - Submersible pump replacement	-	16,000	16,000	-	-	-	-	-	-	-	-	-
Well Three - Transmission main repairs	-	3,000	3,000	-	-	-	-	-	-	-	-	-
Communications - Replace Com System	100,000	-	-	-	-	-	-	-	-	-	-	-
Pumphouse Raw - Replace pressure gauges	-	2,000	-	-	-	-	-	-	2,000	-	-	-
Water Piping - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Service pressure relief valve	-	7,000	-	-	-	-	-	-	-	7,000	-	-
Water Piping - Process piping repairs	-	-	-	-	-	-	-	-	-	-	-	-
Water Piping - Replace raw water meters	-	26,000	-	-	-	12,000	-	-	-	-	14,000	-
Pumphouse - Chemical metering pumps	-	21,000	-	-	-	-	-	-	-	-	21,000	-
Treatment - Discharge piping/valves	-	-	-	-	-	-	-	-	-	-	-	-
Equipment - Centreline Injectors	1,500	20,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Reservoir - Camera inspection/clean	-	7,000	-	-	-	-	-	-	-	-	7,000	-
Treated Water - Replace pressure gauges	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service flow control valves	-	-	-	-	-	-	-	-	-	-	-	-
Process - Service pressure relief valve	-	-	-	-	-	-	-	-	-	-	-	-
Process - Rebuild high lift pumps	-	22,000	-	-	-	-	-	-	-	-	-	22,000
Process - Service emergency pump	-	15,000	-	-	-	-	-	-	-	-	-	15,000
Process - Replace treated water meters	-	5,000	-	-	-	5,000	-	-	-	-	-	-
Instrumentation - Replace free chlorine analyzer	-	30,000	-	-	-	-	-	-	-	-	-	30,000
SCADA - Replace laptop	-	-	-	-	-	-	-	-	-	-	-	-
SCADA - Replace datalogger	2,500	-	-	-	-	-	-	-	-	-	-	-
Building Services - Electrical	-	16,000	3,000	-	3,000	-	3,000	-	3,000	-	-	4,000
Building Services - Heating	500	9,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	-	1,000
Building Services - Lighting	500	5,000	-	1,000	-	1,000	-	1,000	-	1,000	-	1,000
Building Services - Gnerator Service	-	20,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Treated Water - Distribution mains leak repairs	-	21,000	-	1,000	-	-	6,000	-	-	7,000	-	7,000
Distribution - Valve repair	-	6,000	-	2,000	-	-	2,000	-	-	-	-	2,000
Distribution - Hydrant repair	-	16,000	-	-	3,000	-	3,000	-	-	3,000	-	7,000

Table A-2 (continued)
Township of Amaranth
Water Capital Budget Forecast and Recommended Capital Financing (inflated $)

Description	Budget	Total	Forecast									
	2025		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures												
Distribution - Service repairs	1,500	10,000	-	-	2,000	-	2,000	-	-	2,000	-	4,000
Metering Program Equiment - Belt Clip	-	12,000	12,000	-	-	-	-	-	-	-	-	-
Water Meters	-	111,000	54,000	57,000	-	-	-	-	-	-	-	-
Studies:		-	-	-	-	-	-	-	-	-	-	-
Water Rate Study	30,000	82,000	-	-	-	-	37,000	-	-	-	-	45,000
Total Capital Expenditures	**$136,500**	**$529,000**	**$128,000**	**$66,000**	**$25,000**	**$23,000**	**$58,000**	**$6,000**	**$10,000**	**$25,000**	**$46,000**	**$142,000**
Capital Financing												
Operating Contributions	136,500	20,000	20,000	-	-	-	-	-	-	-	-	-
Water Reserve	-	509,000	108,000	66,000	25,000	23,000	58,000	6,000	10,000	25,000	46,000	142,000
Total Capital Financing	**$136,500**	**$529,000**	**$128,000**	**$66,000**	**$25,000**	**$23,000**	**$58,000**	**$6,000**	**$10,000**	**$25,000**	**$46,000**	**$142,000**

Table A-3
Township of Amaranth
Water Reserve Fund Continuity (inflated $)

Description	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	-	49,975	16,317	9,005	70,375	166,407	246,307	433,729	649,002	884,647	1,138,471
Transfer from Operating	48,995	74,023	58,511	84,990	115,769	153,071	184,917	212,547	243,300	277,501	315,514
Transfer to Capital		108,000	66,000	25,000	23,000	58,000	6,000	10,000	25,000	46,000	142,000
Transfer to Operating	-	-	-	-	-	20,000	-	-	-	-	-
Closing Balance	**$48,995**	**$15,997**	**$8,828**	**$68,995**	**$163,144**	**$241,478**	**$425,224**	**$636,276**	**$867,301**	**$1,116,148**	**$1,311,985**
Interest	980	320	177	1,380	3,263	4,830	8,504	12,726	17,346	22,323	26,240

Table A-4
Township of Amaranth
Operating Budget Forecast – Water (inflated $)

Description	Budget 2025	Forecast 2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Expenditures											
Operating Costs											
Hydro	21,420	23,443	24,715	26,138	27,636	29,258	30,673	31,900	33,176	34,503	35,883
Phone	1,938	2,016	2,097	2,181	2,268	2,359	2,453	2,551	2,653	2,759	2,869
Contract/Supplies	91,659	95,325	99,138	103,104	107,228	111,517	115,978	120,617	125,442	130,460	135,678
Metering Program Subscription		4,000	4,160	4,326	4,499	4,679	4,866	5,061	5,263	5,474	5,693
Sub Total Operating	**115,017**	**124,784**	**130,110**	**135,749**	**141,631**	**147,813**	**153,970**	**160,129**	**166,534**	**173,196**	**180,123**
Capital-Related											
Repayment of Interim Loan from Township's General Reserves		-	-	-	-	20,000	-	-	-	-	-
Transfer to Capital	136,500	20,000	-	-	-	-	-	-	-	-	-
Transfer to Capital Reserve	48,995	74,023	58,510	84,991	115,769	153,071	184,917	212,547	243,299	277,501	315,514
Sub Total Capital Related	**185,495**	**94,023**	**58,510**	**84,991**	**115,769**	**173,071**	**184,917**	**212,547**	**243,299**	**277,501**	**315,514**
Total Expenditures	**$300,512**	**$218,806**	**$188,620**	**$220,740**	**$257,400**	**$320,884**	**$338,887**	**$372,676**	**$409,833**	**$450,697**	**$495,637**
Revenues											
Connection Charges	10,000	450	750	750	750	825	-	-	-	-	-
Other Revenue	1,500	1,560	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400
Capital Charge Recovery	36,315	36,315	-	-	-	-	-	-	-	-	-
Interim Loan from General Reserves		20,000									
Capital Loan Repayment	133,821										
Contributions from Reserves	-	-	-	-	-	20,000	-	-	-	-	-
Total Operating Revenue	**$181,636**	**$58,325**	**$2,350**	**$2,450**	**$2,550**	**$22,725**	**$2,000**	**$2,100**	**$2,200**	**$2,300**	**$2,400**
Water Billing Recovery - Operating	**$118,876**	**$160,482**	**$186,270**	**$218,290**	**$254,850**	**$298,159**	**$336,887**	**$370,576**	**$407,633**	**$448,397**	**$493,237**

Table A-5
Township of Amaranth
Water Rate Forecast (inflated $)

Description	2025	2026 January to March	2026 April to December	2027	2028	2029	2030	2031	2032	2033	2034	2035
Monthly Flat Rate	$85.40	$85.40	$94.51	$101.45	$111.60	$122.76	$135.04	$148.54	$163.39	$179.73	$197.71	$217.48
% Increase		**0%**	**11%**	**7%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**
$ Increase		**$0**	**$9**	**$7**	**$10**	**$11**	**$12**	**$14**	**$15**	**$16**	**$18**	**$20**