



Ontario Regulation 453/07
Water Financial Plan
Township of Armstrong

Financial Plan # 269-301

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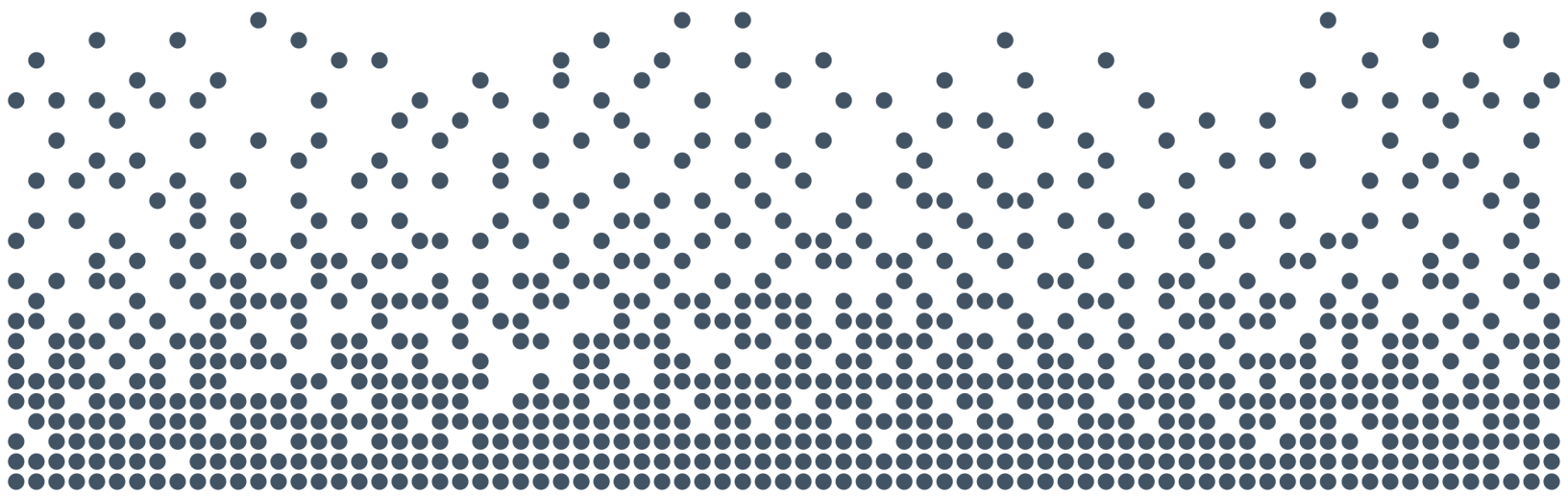
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Report



Chapter 1

Introduction



1. Introduction

1.1 Study Purpose

The Township of Armstrong (Township) retained Watson & Associates Economists Ltd. (Watson) to prepare a water financial plan as part of the five submission requirements for the purposes of obtaining a municipal drinking water license as per the *Safe Drinking Water Act, 2002*. In general, a financial plan requires an in-depth analysis of capital and operating needs, a review of current and future demand versus supply, and consideration of available funding sources. The detailed financial planning and forecasting regarding the Township's water system has been completed based on audited financial statements, historical financial information in relation to the water system, the Township's Asset Management Software (i.e. CityWide) and input from staff. The Township is anticipating they will conduct a Water Rate Study (Rate Study) in the near future. Depending on the findings of the Rate Study, this water financial plan may be subsequently amended.

The objective of the report provided herein is to provide the prescribed reporting requirements for a financial plan as defined by Ontario Regulation 453/07 (O. Reg. 453/07).

1.2 Background

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

"No person shall,

- a) establish a new municipal drinking water system or replace or carry out an alteration to a municipal drinking water system except under the authority of and in accordance with an approval under this Part or a drinking water works permit; or



- b) use or operate a municipal drinking water system that was established before or after this section comes into force except under the authority of and in accordance with an approval under this Part or municipal drinking water licence.”

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

1. Obtain a drinking water works permit.
2. Acceptance of the operational plan for the system based on the Drinking Water Quality Management Standard.
3. Accreditation of the Operating Authority.
4. Prepare and provide a financial plan.
5. Obtain permit to take water.

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

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

1.2.1 Financial Plan Defined

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

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

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

1.2.2 Financial Plan Requirements – Existing System

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



- Financial plans must be approved by resolution of Council (or governing body);
- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period (commencing in the year of licence expiry);
- Financial plans must include detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e. the components of a “Statement of Operations” as per the PSAB) for each year in which the financial plans apply;
- Financial plans must present financial position itemized by total financial assets, total liabilities, net debt, non-financial assets, and tangible capital assets (i.e. the components of a “Statement of Financial Position” as per PSAB) for each year in which the financial plans apply;
- Gross cash receipts/payments itemized by operating transactions, capital transactions, investing transactions and financial transactions (i.e. the components of a “Statement of Cash Flow” as per PSAB) for each year in which the financial plans apply;
- Financial plans applicable to two or more solely-owned drinking water systems can be prepared as if they are for one drinking water system;
- Financial plans are to be made available to the public upon request and at no charge;
- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge;
- Notice of the availability of the financial plans is to be given to the public;
- Financial plan is to be submitted to the Ministry of Municipal Affairs and Housing; and
- The resolution of Council approving the Financial Plan be submitted to the Ministry of the Environment, Conservation and Parks (MECP).

1.2.3 Financial Plan Requirements – General

Given that the requirements for a financial plan is legislated under the Act, a financial plan is mandatory for water systems. The financial plans shall be for a forecast period of at least six years but longer planning horizons are encouraged. The financial plan is to be completed and approved by resolution of Council or the governing body in accordance with subsection 3(1)1 of O. Reg. 453/07. Confirmation of approval of the



financial plan must be submitted at the time of municipal drinking water license renewal (i.e. six months prior to license expiry).

A copy of the financial plan will be submitted to the Ministry of Municipal Affairs and Housing (MMAH) and not the MECP; however, MECP may request it in the course of review of the licence renewal. Financial plans may be amended and additional information beyond what is prescribed can be included if deemed necessary. The financial plan must contain on the front page, the appropriate financial plan number as set out in Schedule A of the Municipal Drinking Water Licence.

1.2.4 Public Sector Accounting Board (PSAB) Requirements

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

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

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

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

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



1.2.5 The Township's Financial Plan

The Township is currently in the process of renewing the drinking water license (license number 269-301) and the previous version of the financial plan no longer meets the requirements as it must apply to a period of a least six years beginning in the year that the licenses would otherwise expire. As such, this financial plan has been prepared for the forecast period of 2021 to 2026. The Township's application renewal deadline has since passed; however, the Township has received permission from MECP to submit the remaining portions of their application by January 29, 2021.



Chapter 2

Sustainable Financial Planning



2. Sustainable Financial Planning

2.1 Introduction

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

- Principle #1: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.
- Principle #2: An integrated approach to planning among water, wastewater, and storm water systems is desirable given the inherent relationship among these services.
- Principle #3: Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.
- Principle #4: Life-cycle planning with mid-course corrections is preferable to planning over the short-term, or not planning at all.
- Principle #5: An asset management plan is a key input to the development of a financial plan.
- Principle #6: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.
- Principle #7: Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.
- Principle #8: Financial plans are "living" documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.



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

2.2 Sustainable Water and Sewage Systems Act

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

2.3 Water Opportunities Act, 2010

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

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

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

- an asset management plan for the physical infrastructure;
- financial plan;
- water conservation plan (for water service only);
- a risk assessment;
- a strategy for maintaining and improving the services; and



- additional information considered advisable.

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

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

2.4 Infrastructure for Jobs and Prosperity Act (I.J.P.A.), 2015

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

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

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



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

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

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

2.5 Water System Analysis

As noted earlier, this financial plan has been prepared using audited financial statements, historical financial information in relation to the water system, the Township's asset management information, and input from staff. In doing so, a preliminary analysis of current and future capital needs, operating costs and water revenue forecasts have been undertaken that will be subsequently updated during the process of the anticipated Rate Study.

As a result of this analysis, projections have been constructed to 2026. This meets the minimum 6-year projection period required under the S.D.W.A. and provides the basis



for not only this financial plan for the Township's water system but also for the future Rate Study. These projections include:

- An assessment of current and future capital needs that has been based on the Township's historical capital expenditures from 2018-2020, anticipated future projects and an analysis of the asset replacement profile extracted from the Township's Asset Management system;
- An analysis of operating costs in order to determine how they will be impacted by evolving infrastructure needs;
- An extrapolation of water revenues to 2026.



Chapter 3

Approach



3. Approach

3.1 Overview

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

3.2 Conversion Process

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

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

3.2.1 Calculate Tangible Capital Asset Balances

In calculating tangible capital asset balances, existing and future purchased, developed, and/or contributed assets will need to be considered. For existing water assets, an inventory has already been compiled and summarized by the Township for the purposes of their annual PSAB 3150 compliance process. As required, for PSAB 3150 reporting purposes, the asset inventory listing included historical cost (which is the original cost to purchase, develop, or construct each asset) along with an estimated useful life for each asset and any anticipated salvage value is recorded. The following calculations are made to determine net book value:



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

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

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

3.2.2 Convert Statement of Operations

A wide range of adjustments will be considered, dependent on the size and complexity of the systems, in order to convert from the cash to full accrual basis (see Figure 3-1). For example, debt repayment costs relating to the principal payment portion only needs to be removed under the accrual basis, as they no longer qualify as an expense for reporting purposes. Principal payments are reported as a decrease in debt liability on the Statement of Financial Position. Transfers to and from reserves are removed as these transactions are represented by changes in cash and accumulated surplus. Finally, expenses relating to tangible capital assets, such as amortization, write-offs, and (gain)/loss on disposal of assets are reported on the Statement of Operations in order to capture the allocation of the cost of these assets to operating activities over their useful lives and therefore are added in under the accrual basis.



Table 3-1
Conversion Adjustments
Statement of Operations

Modified Cash Basis	Budget 2021	Adjustments		Full Accrual Budget 2021	Accrual Basis
		DR	CR		
Revenues					Revenues
Base Charge Revenue	315,648			315,648	Base Charge Revenue
Rate Based Revenue	-			-	Rate Based Revenue
Transfers from Reserves	-	-			
			-	-	Earned Development Charges and Gas Tax Revenue
			-	-	Developer Contributions
Other Revenue	4,080		3,738	7,818	Other Revenue
Total Revenues	319,728			323,466	Total Revenues
Expenditures					Expenses
Operating	247,200	6,500		253,700	Operating Expenses
Capital					
Transfers to Reserves	63,226		63,226		
Transfers to Capital	-		-		
Debt Repayment (Principal & Interest)	9,302		8,390	912	Interest on Debt
		27,468		27,468	Amortization
		-		-	Loss on Disposal of Tangible Capital Assets
Total Expenditures	319,728			282,080	Total Expenses
Net Expenditures	0			41,386	Annual Surplus/(Deficit)
Increase (decrease) in amounts to be recovered	-			620,237	Accumulated Surplus/(Deficit), beginning of year
Change in Fund Balances	-	41,386	-	661,623	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		75,354	75,354		



3.2.3 Convert Statement of Financial Position

Once the Statement of Operations has been converted and the net book value of tangible capital assets has been recorded, balances for the remaining items on the Statement of Financial Position are determined and recorded (see Figure 3-2). The opening/actual balances for the remaining accounts such as accounts receivable, inventory, accounts payable, outstanding debt (principal only), are recorded and classified according to the structure of the Statement of Financial Position as outlined in PS1200.

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

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

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

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



**Table 3-2
Conversion Adjustments
Statement of Financial Position**

Modified Cash Basis	Budget 2021	Adjustments		Full Accrual Budget 2021	Accrual Basis
		DR	CR		
ASSETS					ASSETS
Financial Assets					Financial Assets
Cash	203,787			203,787	Cash
Accounts Receivable	6,270			6,270	Accounts Receivable
				-	Investments
				-	Inventory for resale
Total Financial Assets	210,057			210,057	Total Financial Assets
Non-Financial Assets					
Inventory of Supplies	-		-		
Prepaid Expenses	-		-		
Total Non-Financial Assets	-				
LIABILITIES					Liabilities
Accounts Payable & Accrued Liabilities	19,394			19,394	Accounts Payable & Accrued Liabilities
Gross Long-term Liabilities	17,671			17,671	Debt (Principal only)
Deferred Revenue	-			-	Deferred Revenue
Bank Indebtedness	-			-	Bank Indebtedness
Other	-			-	Other
Total Liabilities	37,065			37,065	Total Liabilities
Net Assets/(Debt)	172,992			172,992	Net Financial Assets/(Debt)
		495,131	6,500	488,631	Non-Financial Assets
		-		-	Tangible Capital Assets
		-		-	Inventory of Supplies
				-	Prepaid Expenses
				488,631	Total Non-Financial Assets
Municipal Position					
Water Reserves	190,663	190,663	-		
Gas Tax Reserve Fund	-	-	-		
Development Charge Reserve Fund	-	-	-		
Amounts to be Recovered	(17,671)	-	17,671		
Total Municipal Position	172,992		661,623	661,623	Accumulated Surplus/(Deficit), end of year
TOTAL ADJUSTMENTS		685,794	685,794		



3.2.5 Verification and Note Preparation

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

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

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

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

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

- b) Amortization Expense – The method and timing of amortization should be based on the Township’s amortization policy.



- c) Accumulated Amortization – Will be based on the culmination of accumulated amortization expenses throughout the life of each asset however derived, along with information on construction/acquisition date and useful life obtained from the Township.
- d) Contributed Assets – As noted earlier, contributed assets could represent a significant part of the Township’s infrastructure acquisitions. As such, a reasonable estimate of value and timing of acquisition/donation may be required in order to adequately capture these assets. In the case where contributed assets are deemed to be insignificant or unknown, an assumption of “no contributed assets within the forecast period” will be made.
- e) Accumulated Surplus – The magnitude of the surplus in this area may precipitate the need for additional explanation especially in the first year of reporting. This Accumulated Surplus captures the historical infrastructure investment which has not been reported in the past but has accumulated to significant levels. It also includes all water reserve and reserve fund balances.
- f) Other Revenues – Will represent the recognition of revenues previously deferred (e.g. development charge revenues) and/or accrued revenues (developer contributions), and/or other minor miscellaneous revenues.



Chapter 4

Financial Plan



4. Financial Plan

4.1 Introduction

The following tables provide the complete financial plan for the Township's water system. A brief description and analysis of each table is provided below. It is important to note that the financial plan that follows is a forward look at the financial position of the Township's water system. It is not an audited document¹ and it contains various estimates as detailed in the "Notes to the Financial Plan" section below.

4.2 Water Financial Plan

4.2.1 Statement of Financial Position (Table 4-1)

The Statement of Financial Position provides information that describes the assets, liabilities, and accumulated surplus of the Township's water system. The first important indicator is net financial assets/(debt), which is defined as the difference between financial assets and liabilities. This indicator provides an indication of the system's "future revenue requirement." A net financial asset position is where financial assets are greater than liabilities and implies that the system has the resources to finance future operations. Conversely, a net debt position implies that the future revenues generated by the system will be needed to finance past transactions, as well as future operations. Table 4-1 indicates that in 2021, the Township's water system was in a net asset position of \$173,000. The financial plan forecasts a net asset position for the first half of the forecast, decreasing to a net debt position of \$170,000 by 2026.

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

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

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



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

In general terms, an increase in the tangible capital asset balance indicates that assets may have been acquired either through purchase by the municipality or donation/contribution by a third party. A decrease in the tangible capital asset balance can indicate a disposal, write down, or use of assets. A use of assets is usually represented by an increase in accumulated amortization due to annual amortization expenses arising as a result of allocating the cost of the asset to operations over the asset's useful life. Table 4-1 shows tangible capital assets net book value is expected to increase from \$488,600 to approximately \$1.0 million over the 6-year forecast period. This indicates that the Township is anticipating acquiring more assets than the anticipated use of existing assets over the forecast period, as the majority of the Township's existing assets have been fully amortized prior to 2021.

4.2.2 Statement of Operations (Table 4-2)

The Statement of Operations summarizes the revenues and expenses generated by the water system for a given period. The annual surplus/deficit measures whether the revenues generated were sufficient to cover the expenses incurred and in turn, whether net financial assets have been maintained or depleted. Table 4-2 illustrates the ratio of expenses to revenues increasing from 87% to 93% over the forecast period. As a result, annual surplus/(deficit) decreases from a surplus of \$41,400 to a surplus of \$25,500 over the forecast period. It is important to note that an annual surplus is beneficial to ensure funding is available to non-expense costs such as tangible capital asset acquisitions and reserve/reserve fund transfers.

Another important indicator on this statement is accumulated surplus/deficit. An accumulated surplus indicates that the available net resources are sufficient to provide future capital water services. An accumulated deficit indicates that resources are insufficient to provide future services and that borrowing or rate increases are required to finance annual deficits. From Table 4-2, the financial plan proposes to add approximately \$216,600 over the forecast period to a 2021 accumulated surplus of



\$620,237. The accumulated surplus, as indicated in Table 4-2, is predominantly related to of investments in tangible capital assets made by the Township.

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

The Statement of Change in Net Financial Assets/Debt indicates whether revenue generated was sufficient to cover operating and non-financial asset costs (i.e. inventory supplies, prepaid expenses, tangible capital assets, etc.) and in so doing, explains the difference between the annual surplus/deficit and the change in net financial assets/debt for the period. Table 4-3 indicates that forecasted tangible capital asset acquisitions (net of amortization for the year) exceed the forecasted annual surplus for all years of the forecast period, resulting in a decrease in net financial assets.

Therefore, an overall decrease to net financial assets is anticipated over the forecast period. This is due to the large amount of infrastructure backlog identified in the Townships Asset Management Software and the use of debt to construct tangible capital assets in the latter years of the forecast. Based on the foregoing, the ratio of cumulative annual surplus before amortization to cumulative tangible capital asset acquisitions stays constant at a value of 0.53 over the forecast period.¹

4.2.4 Statement of Cash Flow (Table 4-4)

The Statement of Cash Flow summarizes how water systems are expected to generate and use cash resources during the forecast period. The transactions that provide/use cash are classified as operating, capital, investing, and financing activities as shown in Table 4-4. This statement focuses on the cash aspect of these transactions and thus is the link between cash-based and accrual-based reporting. Table 4-4 indicates that cash from operations will be used to fund capital transactions (i.e. tangible capital asset acquisitions) over the forecast period. The financial plan projects the cash position of the Township's water systems to worsen from a balance of approximately \$2059,100 at the beginning of 2021, to a surplus of \$5,900 by the end of 2026. For further discussions, on projected cash balances please refer to the Notes to the Financial Plan.

¹ A desirable ratio is 1:1 or better.



Table 4-1
Statement of Financial Position: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2026

	Notes	Forecast					
		2021	2022	2023	2024	2025	2026
Financial Assets							
Cash	1	198,817	126,253	52,521	5,716	5,827	5,940
Accounts Receivable	1	11,240	14,279	14,565	14,856	15,153	15,456
Total Financial Assets		210,057	140,532	67,086	20,572	20,980	21,396
Liabilities							
Bank Indebtedness		-	-	-	-	-	-
Accounts Payable & Accrued Liabilities	1	19,394	19,780	20,172	20,572	20,980	21,396
Debt (Principal only)	2	17,671	8,988	-	20,988	91,933	168,386
Deferred Revenue	3	-	-	-	-	-	-
Total Liabilities		37,065	28,768	20,172	41,560	112,913	189,782
Net Financial Assets/(Debt)		172,992	111,764	46,914	(20,988)	(91,933)	(168,386)
Non-Financial Assets							
Tangible Capital Assets	4	488,631	593,641	697,844	801,100	903,269	1,005,210
Total Non-Financial Assets		488,631	593,641	697,844	801,100	903,269	1,005,210
Accumulated Surplus/(Deficit)	5	661,623	705,405	744,758	780,112	811,336	836,824

Financial Indicators	Total Change	2021	2022	2023	2024	2025	2026
1) Increase/(Decrease) in Net Financial Assets	(762,891)	(60,047)	(61,228)	(64,850)	(67,902)	(70,945)	(76,453)
2) Increase/(Decrease) in Tangible Capital Assets	1,029,386	101,433	105,010	104,203	103,256	102,169	101,941
3) Increase/(Decrease) in Accumulated Surplus	266,495	41,386	43,782	39,353	35,354	31,224	25,488



Table 4-2
Statement of Operations: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2026

	Notes	Forecast					
		2021	2022	2023	2024	2025	2026
Water Revenue							
Base Charge Revenue		315,648	321,961	328,400	334,968	341,668	348,501
Rate Based Revenue		-	-	-	-	-	-
Other Revenue	6	7,818	6,530	5,165	4,330	4,417	4,504
Total Revenues		323,466	328,491	333,565	339,298	346,085	353,005
Water Expenses							
Operating Expenses	Sch. 4-1	253,700	252,100	257,100	262,200	267,400	272,700
Interest on Debt	2	912	619	315	-	630	2,758
Amortization	4	27,468	31,990	36,797	41,744	46,831	52,059
Loss on Disposal of Tangible Capital Assets		-	-	-	-	-	-
Total Expenses		282,080	284,709	294,212	303,944	314,861	327,517
Annual Surplus/(Deficit)		41,386	43,782	39,353	35,354	31,224	25,488
Accumulated Surplus/(Deficit), beginning of year	5	620,237	661,623	705,405	744,758	780,112	811,336
Accumulated Surplus/(Deficit), end of year		661,623	705,405	744,758	780,112	811,336	836,824
Note 5:							
Accumulated Surplus/(Deficit) Reconciliation:		2021	2022	2023	2024	2025	2026
Reserve Balances							
Reserves: Development Charges		-	-	-	-	-	-
Reserves: Gas Tax		-	-	-	-	-	-
Reserves: Capital/Other		190,663	120,752	46,914	-	-	-
Total Reserves Balance		190,663	120,752	46,914	-	-	-
Less: Debt Obligations and Deferred Revenue		(17,671)	(8,988)	-	(20,988)	(91,933)	(168,386)
Add: Tangible Capital Assets	4	488,631	593,641	697,844	801,100	903,269	1,005,210
Total Ending Balance		661,623	705,405	744,758	780,112	811,336	836,824
Financial Indicators							
	Total Change	2021	2022	2023	2024	2025	2026
1) Expense to Revenue Ratio		87%	87%	88%	90%	91%	93%
2) Increase/(Decrease) in Accumulated Surplus	266,495	41,386	43,782	39,353	35,354	31,224	25,488



Schedule 4-1
Statement of Operating Expenses: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2026

	Notes	Forecast					
		2021	2022	2023	2024	2025	2026
Operating Expenses							
WATER DISTRIBUTION OPER Expenditures		25,400	25,900	26,400	26,900	27,400	27,900
WATER DISTRIBUTION MTNCE Expenditures		16,500	16,800	17,100	17,400	17,700	18,100
WATER TREATMENT OPER Expenditures		173,100	176,600	180,100	183,700	187,400	191,100
WATER TREATMENT MTNCE Expenditures		32,200	32,800	33,500	34,200	34,900	35,600
Non TCA - Expenses from Capital Budget	7	6,500	-	-	-	-	-
TOTAL OPERATING EXPENSES		253,700	252,100	257,100	262,200	267,400	272,700



Table 4-3
Statement of Changes in Net Financial Assets/Debt: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2026

	Notes	Forecast					
		2021	2022	2023	2024	2025	2026
Annual Surplus/(Deficit)		41,386	43,782	39,353	35,354	31,224	25,488
Less: Acquisition of Tangible Capital Assets	4	(128,901)	(137,000)	(141,000)	(145,000)	(149,000)	(154,000)
Add: Amortization of Tangible Capital Assets	4	27,468	31,990	36,797	41,744	46,831	52,059
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-
Add: Proceeds on Sale of Tangible Capital Assets		-	-	-	-	-	-
Add: Write-downs of Tangible Capital Assets		-	-	-	-	-	-
		(101,433)	(105,010)	(104,203)	(103,256)	(102,169)	(101,941)
Less: Acquisition of Supplies Inventory		-	-	-	-	-	-
Less: Acquisition of Prepaid Expenses		-	-	-	-	-	-
Add: Consumption of Supplies Inventory		-	-	-	-	-	-
Add: Use of Prepaid Expenses		-	-	-	-	-	-
		-	-	-	-	-	-
Increase/(Decrease) in Net Financial Assets/(Net Debt)		(60,047)	(61,228)	(64,850)	(67,902)	(70,945)	(76,453)
Net Financial Assets/(Net Debt), beginning of year		233,039	172,992	111,764	46,914	(20,988)	(91,933)
Net Financial Assets/(Net Debt), end of year		172,992	111,764	46,914	(20,988)	(91,933)	(168,386)

Financial Indicators	2021	2022	2023	2024	2025	2026
1) Acquisition of Tangible Capital Assets (Cumulative)	128,901	265,901	406,901	551,901	700,901	854,901
2) Annual Surplus/Deficit before Amortization (Cumulative)	68,854	144,626	220,776	297,874	375,929	453,476
3) Ratio of Annual Surplus before Amortization to Acquisition of TCA's (Cumulative)	0.53	0.54	0.54	0.54	0.54	0.53



Table 4-4
Statement of Cash Flow – Indirect Method: Water Services
UNAUDITED: For Financial Planning Purposes Only
2021-2026

	Notes	Forecast					
		2021	2022	2023	2024	2025	2026
Operating Transactions							
Annual Surplus/Deficit		41,386	43,782	39,353	35,354	31,224	25,488
Add: Amortization of TCA's	4	27,468	31,990	36,797	41,744	46,831	52,059
(Gain)/Loss on disposal of Tangible Capital Assets		-	-	-	-	-	-
Less: Earned Deferred Revenue	3	-	-	-	-	-	-
Less: Developer Contributions		-	-	-	-	-	-
Add: Deferred Revenue Proceeds		-	-	-	-	-	-
Change in A/R (Increase)/Decrease		(11,240)	(3,038)	(286)	(291)	(298)	(302)
Change in A/P Increase/(Decrease)		19,394	386	392	400	408	416
Less: Interest Proceeds		(3,738)	(2,368)	(920)	-	-	-
Cash Provided by Operating Transactions		73,270	70,752	75,336	77,207	78,165	77,661
Capital Transactions							
Proceeds on sale of Tangible Capital Assets		-	-	-	-	-	-
Less: Cash Used to acquire Tangible Capital Assets	4	(128,901)	(137,000)	(141,000)	(145,000)	(149,000)	(154,000)
Cash Applied to Capital Transactions		(128,901)	(137,000)	(141,000)	(145,000)	(149,000)	(154,000)
Investing Transactions							
Proceeds from Investments		3,738	2,368	920	-	-	-
Less: Cash Used to Acquire Investments		-	-	-	-	-	-
Cash Provided by (applied to) Investing Transactions		3,738	2,368	920	-	-	-
Financing Transactions							
Proceeds from Debt Issue	2	-	-	-	20,988	71,727	79,926
Less: Debt Repayment (Principal only)	2	(8,390)	(8,684)	(8,988)	-	(781)	(3,474)
Cash Applied to Financing Transactions		(8,390)	(8,684)	(8,988)	20,988	70,946	76,452
Increase in Cash and Cash Equivalents		(60,283)	(72,564)	(73,732)	(46,805)	111	113
Cash and Cash Equivalents, beginning of year	1	259,100	198,817	126,253	52,521	5,716	5,827
Cash and Cash Equivalents, end of year	1	198,817	126,253	52,521	5,716	5,827	5,940



Notes to Financial Plan

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

“Each of the following sub-subparagraphs applies only if the information referred to in the sub-subparagraph is known to the owner at the time the financial plans are prepared:

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

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

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

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

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

In order to show a balanced financial plan in a full accrual format for the Township, some of the items listed above have been estimated given that the Township does not maintain all financial asset and liability data separately for water. Usually, this type of data is combined with the financial assets and liabilities of other departments and



services given that there is not a current obligation to disclose this data separately (as there is with revenue and expenses).

The assumptions used have been documented below:

1. Cash, Receivables and Payables

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

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

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

- a) Receivables: Based on historical levels of water receivables as a percentage of annual water revenue earned (source: 2018-2019 Township provided water accounts receivable balances); and
- b) Payables: Based on historical levels of Township-wide payables as a percentage of annual Township-wide expenses incurred (source: 2017-2019 Financial Information Returns).

2. Debt

Currently, the only debt relating to the Township's water system is for an internal debenture for a pickup truck (as detailed in By-law 2018-38). Based on the Water System Analysis, the need to issue debt in 2024 as well all subsequent years of the forecast period (i.e. 2025-2026) to fund non-growth-related expenditures is anticipated. Principal repayments for the new debt over the forecast period are scheduled as follows:



Year	Principal Payments
2021	8,390
2022	8,684
2023	8,988
2024	-
2025	781
2026	3,474
Total	30,317

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

3. Deferred Revenue

Deferred revenue is typically made up of water development charge reserve fund and gas tax balances which are considered to be a liability for financial reporting purposes until the funds are used to emplace the works for which they have been collected. The Township does not collect water development charges currently, therefore the deferred revenue is assumed to be zero over the forecast period.

4. Tangible Capital Assets

- Opening net book value of tangible capital assets includes water related assets in the following categories:
 - i. Infrastructure (watermains, hydrants, meters, valves and wells)
 - ii. Facilities (water treatment plants and miscellaneous equipment)
- Amortization is calculated based on using the straight-line approach with no amortization in the year of acquisition or construction.
- Given the planned asset replacement forecast in the Water System Analysis, useful life on acquisitions is assumed to be equal to the weighted average useful life for all assets on hand in each respective asset category.
- Write-offs are assumed to equal \$0 for each year in the forecast period.
- Tangible capital assets are shown on a net basis. It is assumed that disposals occur when the asset is being replaced, unless the asset is documented as a new asset. The value of each asset disposal is calculated by estimating the



original purchase/construction date and deflating current replacement cost values to those estimated dates in order to calculate original historical cost.

- Gains/losses on disposal are assumed to be \$0 (it is assumed that historical cost is equal to accumulated amortization for all disposals).
- Residual value is assumed to be \$0 for all assets contained within the forecast period.
- Contributed Assets, as described in section 3.2.1., are deemed to be insignificant/unknown during the forecast period and are therefore assumed to be \$0.
- The Township is unaware of any specific lead service piping in the municipal water system.

The balance of tangible capital assets is summarized as follows:

Asset Historical Cost	2021	2022	2023	2024	2025	2026
Opening Tangible Capital Asset Balance	1,138,991	1,217,955	1,299,701	1,382,734	1,467,036	1,551,805
Acquisitions	128,901	137,000	141,000	145,000	149,000	154,000
Disposals	49,937	55,254	57,967	60,698	64,231	70,505
Closing Tangible Capital Asset Balance	1,217,955	1,299,701	1,382,734	1,467,036	1,551,805	1,635,300
Opening Accumulated Amortization	751,793	729,324	706,060	684,890	665,936	648,536
Amortization Expense	27,468	31,990	36,797	41,744	46,831	52,059
Amortization on Disposal	49,937	55,254	57,967	60,698	64,231	70,505
Ending Accumulated Amortization	729,324	706,060	684,890	665,936	648,536	630,090
Net Book Value	488,631	593,641	697,844	801,100	903,269	1,005,210

5. Accumulated Surplus

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

Water	2021 Opening Accumulated Surplus
Reserve Balances	
Reserves: Capital/Other	259,100
Total Reserves Balance	259,100
Less: Debt Obligations and Deferred Revenue	(26,061)
Add: Tangible Capital Assets	387,198
Total Opening Balance	620,237

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

6. Other Revenue



Other revenues include water connection revenues, water works assistance, miscellaneous revenues and equipment and operator revenues.

7. Operating Expenses

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



Chapter 5

Process for Financial Plan Approval and Submission to the Province



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

As mentioned in section 1.2, preparation of and approval of a financial plan for water assets that meets the requirements of the Act is mandatory for municipal water providers. Proof of the plan preparation and approval is a key submission requirement for municipal drinking water licensing and, upon completion, must be submitted to the MECP. The process established for plan approval, public circulation and filing is set out in O. Reg. 453/07 and can be summarized as follows:

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



Chapter 6

Recommendations



6. Recommendations

This report presents the water financial plan for the Township of Armstrong in accordance with the mandatory reporting formats for water systems as detailed in O. Reg. 453/07. It is important to note that while mandatory, the financial plan is provided for Council's interest and approval, however, for decision making purposes, it may be more informative to rely on the information contained within the anticipated subsequent Water Rate Study. S.5 of O.Reg. 453/07 allows for financial plans to be amended, and as such this plan may be amended upon completion of the Water Rate Study. Nevertheless, Council is required to pass certain resolutions with regard to this plan and regulations and it is recommended that:

1. The Township of Armstrong's Water Financial Plan prepared by Watson & Associates Economists Ltd. dated January 25, 2021 be approved.
2. Notice of availability of the Financial Plan be advertised.
3. The Financial Plan dated January 25, 2021 be submitted to the Ministry of Municipal Affairs and Housing. (O. Reg. 453/07, section 3 (1) 6).
4. The resolution of Council approving the Financial Plan be submitted to the MECP, satisfying the requirements under the Safe Drinking Water Act. (S.D.W.A. section 32 (5) 2.ii.).¹

¹ Note: The Ministry of the Environment does not require the Council Resolution for the initial financial plan submission. We encourage the municipality to contact the Ministry of the Environment to verify all requirements have been met.

