



# Aurora Water System Financial Plan As Required by Ontario Regulation 453/07

The Town of Aurora Distribution System  
Financial Plan No. 115-301

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Prepared by: Town of Aurora  
Operational Services Department

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## 1. Introduction

### 1.1. Ontario Regulation 453/07

One of the requirements for licensing of drinking water systems under Ontario Regulation 453/07 of the Safe Drinking Water Act, 2002, is the development of a Financial Plan covering a period of at least 6 years. This regulation requires that the Owner of a drinking water system approves a financial plan that must be submitted to the Province within the timeline listed in the drinking water system licence.

The financial plan requirements identified in this regulation are summarized as follows:

- The plan must be approved by resolution of Council that indicates that the drinking water system is financially viable
- The plan must provide for a planning period of at least six years, starting the last year of the existing licence
- The plan must include the current financial position, projected operating costs, capital plan, and revenues to demonstrate appropriate fiscal management
- The plan must be made available to the public at no cost and the public must be notified of its availability
- A copy of the plan must be submitted to the Ministry of Municipal Affairs and Housing

## **1.2. Sustainable Financial Planning**

**In August 2007**, the Ministry of Environment issued a guideline entitled Toward Financially Sustainable Drinking Water and Wastewater Systems. The Town has followed this guideline to transform the financial aspects of its water and wastewater systems into a format that complies with Ontario Regulation 453/07. The guideline defines principles to aid in developing financial plans. These are:

1. Practice ongoing public engagement and transparency to build confidence in the financial plans and systems delivering these services
2. An integrated approach to planning among water, wastewater, and stormwater systems is desirable given the relationship among these services
3. Revenue collected for these services should be used to meet the needs of these services
4. Life cycle planning with mid-course corrections is preferable to not planning at all
5. An asset management plan is a key input to the financial plan
6. A sustainable level of revenue is key to meeting legislative requirements and future repair and replacement needs
7. By ensuring users pay for services provided (through metering), a more equitable outcome is achieved including increased conservation
8. Financial plans are living documents that require continuous updating and improvement
9. Financial plans benefit from collaboration with various groups including engineering, finance, staff and Council

The Department has taken great efforts to incorporate these principles into the development of financial plans and the annual budget process.

### **1.3. Municipal Drinking Water Licence**

The Town of Aurora received its current drinking water licence in July 2016. The licence is valid for 5 years with the requirement to submit a renewal application before December 29, 2020.

The licence requires that a financial plan be submitted with the renewal application.

## **2. Financial Management Practices**

### **2.1. PSAB Compliance and full accrual accounting**

Public Sector Accounting Board (PSAB) compliance relates to the identification and amortization of capital assets so that they are recognized as an investment rather than the previous municipal practice of expensing capital projects in the year the expenses were incurred. This approach results in recognizing the long term nature of infrastructure and accounting for its future replacement through the annual consumption of its value as determined by appropriate asset amortization rates. The principle supports the notion that investments in the system should be at least equal to the annual amortization amount which should lead to a sustainable state for infrastructure condition.

Full accrual accounting is the principle of recognizing all costs related to the operation of the system. The principle components of the full cost side of accrual accounting include operating expenses, interest expenses (if any), and amortization of the tangible capital assets. In principle, the sum of these costs represents the full cost of the water system and represents a sustainable funding model. However, in reality, the water system's amortization expense is not an accurate indication of the true cost of replacing the system's existing assets due to two factors; it does not reflect community growth and is based upon the historical cost of the original assets rather than their future replacement costs.

Supporting the growth of a community requires additional funding beyond what is generated from the existing infrastructure. As a community grows, so too does its

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demand for water resulting in a requirement to expand the community's water network in order to accommodate this demand. The funding necessary for the construction of this new infrastructure must be raised in addition to the funds that are used to maintain and operate the Town's existing network. Most commonly, new infrastructure funding is raised through other avenues such as development charges. Future new infrastructure needs are identified through master plans that are reviewed and updated on a regular basis.

As the amortization expense is based upon the historical cost of the water system's existing assets, these costs do not consider Inflation and therefore undervalues the replacement cost of an asset. To compensate for this it is necessary to develop an asset replacement plan that considers the future replacement cost of each asset.

PSAB accounting ensures that financial reporting complies with the legislation on a historic reporting basis, however does not ensure that sufficient funding will be available even with the full accrual accounting methodology. To compensate for this, the development of a detailed asset growth and replacement plan which considers the system's future demand and future asset replacement costs is a necessity to ensure that its has a in sustainable funding strategy for the Town's water system. Under this methodology the system's future investment needs will exceed its amortization costs to ensure a truly sustainable system. For the purposes of this financial plan, asset amortization has been factored into the contribution to reserves line item under the system's operating expenses. Also, the included contributions to reserves have been validated against the water system's asset management plan to demonstrate and its amortization expense.

## **2.2. Life Cycle Analysis and 10 Year Capital Plan**

The life cycle approach is an appropriate method of determining long term system capital needs and funding for those needs in a systematic and sustainable manner. The Town uses a 10 year planning horizon for capital planning.

The Aurora water system's 10 year capital plan is built upon its asset management Plan foundation. This 10 year plan identifies all the necessary works including all required asset repair, replacement, enhancement and risk mitigation. This plan is intended to be fully funded from its reserve account which is replenished on an annual basis through water rates which are set in an effort to meet long term target reserve balances.

### **2.3. Impact of Community Growth**

The Town completed a review of its water system development charge requirements as part of the Town's recent 2019 background study. As of this development chart study, the Town's projected a total population growth of 13,163 over its planning horizon of 2019-2031, with a total projected population of 70,900 at the end of this period.

The majority of Town's green field development is nearing completion. Once these developments have been serviced, minimal further infrastructure growth is anticipated for the next ten years.

### **2.4. Operating Expenditures**

Operating expenses are derived from the following areas:

- Staff salaries
- Materials and supplies
- Fleet charges
- Contracted services
- Bulk purchase of water from York Region
- Interdepartmental charges for meter reading and billing services
- Contribution to reserves

The total of operating expenses is intended to provide for a full cost accounting picture that meets both the annual operating needs and the long term capital requirements of maintaining the system.

The Clean Water Act, 2006 is an act focused on protection of drinking water supplies through source water protection plans. Within York Region, the regional upper tier government has the responsibility for water production and treatment and has been taking the lead role in fulfilling the requirements of the Clean Water Act. The Town has played an active role through participation, data collection and evaluation of the plans and is a partner in the process. However, under the current structure, the Town's impact on the operations of the overall water system is limited.

Lead service connections have been a priority for the Province with mandatory testing and development of lead service replacement programs. The Town is conducting regular lead testing and has not uncovered any issues with lead presence in its water to date. The Town was offered relief in its sampling and testing of residential properties until December 2021 based upon its past test results showing no lead in the drinking water. The Town continues with its sampling and testing for lead in the distribution system. The financial implications of this program have been incorporated into its annual operating budget.

## **2.5. Reserves and Use of Debt**

The contribution to reserves operating expense item represents the forecasted amount that is needed to sustain the longer term capital rehabilitation and replacement program for the Aurora water system. This contribution is established based on the 10 year capital plan and is adjusted periodically as required to meet the long term reserve balance target of two times the typical annual capital program forecast costs. This reserve balance target is based on providing sufficient funds to account for larger expenditure years over the long term capital plan. This target is currently \$1.5M. Should the reserve balance be in a deficit position in any given year, the resultant funding shortfall is addressed

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through internal borrowing as arranged through the Finance Department and is assumed to be charged an annual interest rate of 4.64 percent. The Town has not required external debt to maintain the system and does not anticipate a requirement for external debt based on the current capital forecast.

## **2.6. Flow Projections and Rate Setting**

The responsibility for water production resides with York Region as the upper tier municipality. All of the Town's water requirements are provided by York Region through water that is purchased from Peel Region and the City of Toronto, as well as, water sourced from groundwater wells. An arrangement of regional meters are in place to determine how much water is purchased by the Town.

The Town's consumer rates are determined based on its need to generate sufficient funds to recover the Aurora water system's estimated total annual operating costs which include its required contribution to reserve. In the calculation of these rates, unbillable water loss is considered. The Town water system's current water loss rate is estimated to be 11 percent; this estimate is reviewed and assessed on an annual basis.

## **3. Financial Plan**

### **3.1. Introduction**

This plan is based on the Town's most current information available as derived from the Town's capital and operating budget process as well as from its historic asset valuations based on PSAB requirements. This plan provides a 10 year forecast of expected cash flows and asset valuations and is subject to change from time to time. The format and information presented in these tables is in conformance with guidelines set out by the Ministry of Environment, Conservation and Parks.

The Financial Plan requires a forecast for the following financial areas:

- Total financial assets
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- Total liabilities
- Net Debt
- Total non-financial assets

In addition, it requires projections of cash flows over time including system projected gross cash receipts and gross cash payments arising from:

- Operating activities
- Capital activities
- Financing activities
- Investing activities

The key objectives of the funding plan are as follows:

1. To avoid large fluctuations in rates from year to year
2. Manage the level of debt (Internal)
3. Establish an appropriate level of cash reserves that reflects current and future needs of the system

The following sections provide a description of each report and the reports are located in Appendix A.

### **3.2. Opening Position**

The information in Table 1 provides a start point for the financial plan and is based on the 2020 operating year.

**Table 1**  
**Opening Position 2020**

Description	Amount
Revenue	\$11,951,166
Operating Expenses	\$2,641,648
Reserve Contribution	\$1,700,000
Cash Reserve	\$7,772,838
Fixed Assets	\$57,639,739

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### **3.3. Capital Investment Plan**

The capital investment plan establishes the water system's future investments that are required to maintain its existing infrastructure as well as accommodate for future growth and changes in water demand. The plan is derived from several sources including:

- Asset renewal forecasts identified through the PSAB process
- Condition assessments performed through various programs
- Coordination of reconstruction with other key projects such as roads and sewers
- Coordination with York Region projects where infrastructure shares common locations
- Forecast of future needs based on planned development and growth in the community through the Development Charges Background Study

Table 2 summarizes the annual expected investment to 2030 and demonstrates a reasonably balanced annual investment rate with a higher than normal expenditure in 2020. This anomaly is primarily driven by a necessity to coordinate water system with road network rehabilitation and replacement capital planning in order to minimize overall project costs. The presented rehabilitation and replacement capital investment plan is financially feasible as per the presented plan. There are no significant anomalies in the project portfolio in the long range forecast beyond 2030.

### **3.4. Statement of Operations**

The statement of operations provides a profile of the direct costs related to the operation of the water system. A key element of this financial plan is the incorporation of the system's tangible capital asset amortization expense into the statement of operations to reflect the minimum level of capital rehabilitation and

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replacement expenditure that is required annually to maintain the system. Table 3 presents the statement of operations.

The plan generates an annual surplus of funds on an annual basis primarily relating to the difference between the planned contributions to the reserve which are based on replacement value and amortization which is lower. A significant cost driver in the operations is the wholesale purchase of water from York Region which is primarily influenced by 2.9% rate increase projections from 2021 and beyond. Over the 10 year planning horizon the total operating costs increased by 35% percent with 87% of this increase being driven by the system's wholesale water cost. This cost is projected to increase by 47 percent over the next ten year period. This change is also impacted by the consideration of future growth in water demand.

### **3.5. Statement of Cash Flow (Direct Method)**

The cash flow statement identifies the flow of cash in and out of the operation and also incorporates the effects of changes related to asset activity through capital project investments, growth and development charges. The statement is broken down into operating, investing, and financing activities. The purpose of the statement is to provide information on solvency, changes in assets liabilities and equity, and indicate the amount and probable timing of future cash flows.

The direct method of reporting is used. This method reports major classes of cash receipts and payments under the categories of:

- Operating Transactions
- Capital Transactions
- Finance Transactions

This is a simpler report to interpret compared to the indirect method which uses net-income as a starting point.

From the statement in Table 4, it can be seen that cash receipts from operations, which exclude amortization as it is a non cash item, are essentially at breakeven reflecting both growth in consumption and rate increases required to sufficiently fund the program.

### **3.6. Statement of Change in Net Financial Assets**

The statement of change in net financial assets indicates whether sufficient revenue is available to offset the operating, capital asset cost, and other non-financial asset costs. Table 5 presents the statement of change in net financial assets.

### **3.7. Reserve Balance**

Table 6 represents the forecasted reserve balance for the planning period 2020 - 2030. In comparing the reserve contributions to the amortization rates shown in Table 5, it is demonstrated that reserve contributions are exceeding the system's capital asset amortization expense resulting in improving reserve health. It is estimated that the reserve should be adequate to address the water system's future replacement needs for at least the next years. Further increases to reserve contributions will be contemplated on an annual basis to achieve the preferred reserve balance of two time's annual capital requirement which is set at a current target of \$1,500,000.

### **3.8. Rate Forecast**

Table 7 presents the water rate forecast as a cost per cubic meter. The rate reflects full costs to be recovered relative to expected net volumetric sales after a deduction of un-billable water use and loss.

### **3.9. Summary of Financial Position**

The financial plan for the Town of Aurora has been prepared to incorporate all the required elements and demonstrates a commitment to move to full cost accounting and a sustainably funded water system. As the Town's water system's infrastructure ages, its capital rehabilitation and replacement requirements will continue to grow which will continue to subject the system's required contribution to upward pressure.

Over the coming ten years, the Town will reach build out resulting in a stabilization in demand on the system. All anticipated growth requirements for the water system for the past ten years has been captured in the Town's recent development charge study. Through its study, the Town strives to address the timing and funding of these noted requirements while adhering to the principle of "growth pays for growth". This plan strives to ensure that the system's growth requirements have no net impact on the annual operating budget.

## Appendix A- Financial Tables

Table 2

### Capital Investment Plan ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Repair and replacement	2,818	523	984	792	558	456	408	238	243	200	-
S&O	-	-	-	-	200	-	-	-	-	-	-
Growth and New	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2,818</b>	<b>523</b>	<b>984</b>	<b>792</b>	<b>758</b>	<b>456</b>	<b>408</b>	<b>238</b>	<b>243</b>	<b>200</b>	<b>-</b>

Table 3

### Statement of Operations ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues	11,951	12,327	12,631	12,721	13,010	13,480	13,982	14,307	14,641	15,197	15,770
Expenses	-	-	-	-	-	-	-	-	-	-	-
Operating Costs	2,682	2,713	2,774	2,820	2,856	2,894	2,941	2,980	3,019	3,070	3,111
Wholesale purchase of water	7,570	7,914	8,157	8,401	8,653	9,086	9,540	9,827	10,121	10,628	11,159
Interest	-	-	-	-	-	-	-	-	-	-	-
Amortization	1,334	1,342	1,357	1,369	1,380	1,387	1,393	1,396	1,400	1,403	1,403
Gross Expenses	11,585	11,969	12,288	12,590	12,890	13,366	13,875	14,203	14,541	15,100	15,673
Annual Surplus/(deficit)	366	358	343	131	120	113	107	104	100	097	097
Accum. Surplus beginning of period	7,773	8,139	8,497	8,840	8,972	9,092	9,205	9,312	9,415	9,515	9,612
Accum. Surplus end of period	8,139	8,497	8,840	8,972	9,092	9,205	9,312	9,415	9,515	9,612	9,709

Table 4

### Statement of Cash Flow (Direct Method) ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Operating Transactions</b>											
Cash received from:											
Water Operations	11,951	12,327	12,631	12,721	13,010	13,480	13,982	14,307	14,641	15,197	15,770
Cash paid for:	-	-	-	-	-	-	-	-	-	-	-
Operating costs	10,251	10,627	10,931	11,221	11,510	11,980	12,482	12,807	13,141	13,697	15,770
Cash provided from operating transactions	1,700	1,700	1,700	1,500	1,500	1,500	1,500	1,500	1,500	1,500	-
<b>Capital Transactions</b>											
Acquisition of tangible capital assets	2,818	523	984	792	758	456	408	238	243	200	-
Cash applied to capital transactions	(1,118)	1,177	716	708	742	1,044	1,092	1,262	1,257	1,300	-
<b>Finance Transactions</b>											
Cash from Reserves	-	-	-	-	-	-	-	-	-	-	-
Increase/(Decrease) in cash and equivalents	(1,118)	1,177	716	708	742	1,044	1,092	1,262	1,257	1,300	-
Cash and equivalents beginning of period	7,773	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952
Cash and equivalents end of period	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952	15,952

Table 5

## Statement of Change in Net Financial Assets ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Surplus/(deficit)	366	358	343	131	120	113	107	104	100	097	097
Add: Amortization of capital assets	1,334	1,342	1,357	1,369	1,380	1,387	1,393	1,396	1,400	1,403	1,403
Less: Acquisition of capital assets	2,818	523	984	792	758	456	408	238	243	200	-
Disposal of tangible capital assets	-	-	-	-	-	-	-	-	-	-	-
Change in net financial assets (debt)	(1,118)	1,177	716	708	742	1,044	1,092	1,262	1,257	1,300	1,500
Net financial asset (debt) position beginning of period	7,773	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952
Net financial asset (debt) position end of period	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952	17,452

Table 6

## Reserve Balance ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Opening Reserve Balance	7,773	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952
Contribution to Reserve	1,700	1,700	1,700	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Capital Investments	(2,818)	(523)	(984)	(792)	(758)	(456)	(408)	(238)	(243)	(200)	-
Rate Stabilization Draw	-	-	-	-	-	-	-	-	-	-	-
Closing Reserve Balance	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952	17,452

Table 7

## Rate Forecast

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Costs to be Recovered ('000)	11,546	12,052	12,336	12,419	12,700	13,162	13,656	13,973	14,299	14,847	15,410
Volumetric Sales Forecast ('000)	5,296	5,316	5,370	5,402	5,423	5,445	5,467	5,489	5,511	5,533	5,555
Annual Blended Retail Rate (Jan 1)	2.18	2.27	2.30	2.30	2.34	2.42	2.50	2.55	2.59	2.68	2.77
Actual Rate for Billing Period (May1)	2.18	2.45	2.48	2.52	2.56	2.60	2.64	2.68	2.72	2.76	2.80

Table 8

## Statement of Financial Position ('000)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets											
Cash	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952	15,952
Liabilities	-	-	-	-	-	-	-	-	-	-	-
Debt	-	-	-	-	-	-	-	-	-	-	-
Net financial assets	6,655	7,831	8,547	9,255	9,997	11,041	12,134	13,395	14,652	15,952	15,952
Non Financial Assets	-	-	-	-	-	-	-	-	-	-	-
Tangible Capital Assets	58,084	57,266	56,893	56,317	55,694	54,764	53,779	52,620	51,463	50,260	48,857
Accumulated Surplus/ (Deficit)	64,739	65,097	65,440	65,572	65,692	65,805	65,912	66,016	66,116	66,212	64,809