
Subject: Water and Wastewater Financial Plan for O.Reg. 453/07

Report to: Public Works Committee

Report date: Tuesday, October 10, 2023

Recommendations

1. That the following statements included as part of Appendix 3 to Report PW 45-2023 resulting from the Water and Wastewater Financial Plan **BE APPROVED** in accordance with O.Reg. 453/07:
 - Pro forma Statement of Financial Position - Water
 - Pro forma Statement of Cash Flow/Cash Receipts – Water
 - Pro forma Statement of Financial Operations - Water
2. That the Water and Wastewater Financial Plan in Appendix 2 to Report PW 45-2023 **BE APPROVED** and used for the planning and preparation of water and wastewater budgets for the 2024 to 2033 period of the plan;
3. That a copy of the Water and Wastewater Financial Plan in Appendix 2 to Report PW 45-2023 **BE SUBMITTED** to the Ministry of Municipal Affairs and Housing Actions; and
4. That a copy of the Water and Wastewater Financial Plan in Appendix 2 to Report PW 45-2023 **BE POSTED** on the Niagara Region website.

Key Facts

- The purpose of this report is to seek approval of the Water and Wastewater Financial Plan as required by legislation in O.Reg. 453/07.
- The Plan proposes a financially viable multi-year plan as required by the regulation that can be integrated with the Region's budget process, as it leverages the Region's Budget Planning By-law principles and strategies, the Capital Financing Policy, Asset Management Plan and Master Servicing Plan.
- The Water and Wastewater Financial Plan proposes an annual rate increase for 10 years of 7.15% comprised of average annual increases to the water requisition of 4.30% and average annual increases to the wastewater requisition of 8.48%.

- O.Reg. 453/07 requires that the Financial Plan cover only water operations however, information for wastewater operations has also been included in the same format in order to show a more complete picture given the Region is experiencing greater fiscal challenges in wastewater operations related to both sustainability and growth. This approach is in line with the Province's principles of Financially Sustainability Water and Wastewater Services, Appendix 1 to Report PW 45-2023, and is consistent with Niagara Region's financial planning process. Similarly, although the regulations only require a 6-year plan, Niagara Region has prepared a 10-year plan to coincide with the 2024 capital budget forecast timeframe.
- The Water and Wastewater Financial Plan presents a snapshot of Niagara Region's current and forecasted position and requires approval by resolution of Regional Council prior to renewal of the Region's Drinking Water Licenses, which has an application submission deadline of February 1, 2024.
- The Water and Wastewater Financial Plan is prepared based on the proposed 2024 water and wastewater operating budget and the proposed 2024-2033 water and wastewater capital budget and forecast. The Region's 2021 Asset Management Plan (AMP) and 2021 Water and Wastewater Master Servicing Plan (MSP) are the basis of the capital and operating budgets and thus the foundation of the Financial Plan as well.

Financial Considerations

The Water and Wastewater Financial Plan was prepared based on the proposed 2024 water and wastewater operating budget and the proposed 2024-2033 water and wastewater capital budget and forecast.

The following guiding principles were used to help create the Water and Wastewater Financial Plan:

- Smooth the rate increases over the 10-year period
- Consider the water and wastewater asset renewal requirements in accordance with the approved Asset Management Plan
- Support growth related capital in accordance with the approved Water and Wastewater Master Servicing Plan
- Understand the impacts of investment on asset condition and asset level of service
- Maintain capital reserve balances to manage asset risk

- Use of debt and reserves/pay-as-you-go for assets in accordance with the Capital Financing Strategy

Based on the guiding principles above, the need to significantly increase capital funding and the need to fund the regional portion of growth, the Water and Wastewater Financial Plan has identified the need for an annual 7.15% rate increase in order to move towards sustainability while considering affordability and remaining viable over the 10-year forecast period. The 7.15% increase is comprised of average annual increases to the water requisition of 4.30%, and average annual increases to the wastewater requisition of 8.48%.

The Plan provides for an average annual increase in the requisition to support capital renewal of 5.15% and an increase of 2.0% to support operations for a total of 7.15%. Overall, this represents an increase of 2.0% over the prior 2016 Financial Plan recommendation of 5.15% due to the updated capital investment in the 2021 Asset Management Plan.

Niagara Region's Water and Wastewater Operations division currently operates and maintains assets with an estimated replacement value of \$5,458 million, which is the 2021 Asset Management Plan value of \$5,102 million adjusted for a further two years of inflation. The Region's Asset Management Plan (AMP) has identified that in order to properly sustain these assets, a total of \$164 million in capital renewal is required annually for the next 10 years to address the backlog within 10 years. This is referred to as the Average Annual Renewal Investment (AARI). This AARI would require an annual operating budget increase of 7.22% per year. Understanding that presents challenges to rate payers, staffing and supply chain issues, the Budget Strategy proposed a more modest annual increase for capital of 5.15% per year to target a 50-year AARI of \$122 million.

In addition to requirements to sustain existing infrastructure, the Region's Water and Wastewater Master Serving Plan has also identified a significant amount of new infrastructure that is required to support growth. A total of \$493 million in growth related capital is included in the water and wastewater capital budget and forecast. While the majority of growth related capital is funded externally from the collection of development charges in the amount of \$348 million, there is a total of \$145 million of the new infrastructure that is considered a "benefit to existing" and therefore must be funded from regional funds.

Other municipalities are being faced with the same fiscal challenges as the Region in funding their water and wastewater systems as indicated on page 3 of the Water and Wastewater Financial Plan, Appendix 2 to Report PW 45-2023, which highlights annual rate increases in other jurisdictions of between 1.5% to as high as 9.6% per year.

Approval of the Water and Wastewater Financial Plan is an approval in principle only of the Plan. Separate approval of the Water and Wastewater Operating Budgets as well as the 10-year Capital Budget and Forecast are required annually.

Analysis

Niagara Region has five existing licenses, all of which require renewal in 2024. The Municipal Drinking Water Licensing Program was implemented under the Safe Drinking Water Act (2002) (SDWA) and requires system owners to meet the following five key requirements for licensing:

1. Drinking Water Works Permit
2. Permit to Take Water
3. Approved Operational Plan
4. Accredited Operating Authority
5. Financial Plan

Through the approvals recommended in this report related to the Financial Plan, Niagara Region can finalize and submit the applications for license renewals.

Niagara's Financial Plan has been prepared to meet the requirements of O.Reg. 453/07 and will serve as a valuable tool to guide the Region towards long-term financial sustainability of the Region's drinking water systems.

Provided as Appendix 1 to Report PW-2023 is a summary of the Financial Plan requirements as per O.Reg. 453/07, along with an overview of the way in which Niagara Region is satisfying those requirements. The regulations provide specific requirements with respect to the timing, content, and structure of the financial plan, as well as the means by which transparency to the public is ensured. Also included is the list of financial sustainability principles as outlined in the Ministry of the Environment's guideline, "Towards Financially Sustainable Drinking-Water and Wastewater Systems".

Appendix 2 to Report 45-2023 provides the full Water and Wastewater Financial Plan, and Appendix 3 to Report 45-2023 provides the three key pro forma schedules required under the provincial regulations, which are:

- Statement of Financial Operations – summarizes annual revenues and expenditures
- Statement of Cash Flow/Cash Receipts – summarizes cash generation and utilization
- Statement of Financial Position – summaries financial assets, tangible capital assets, and the accumulated surplus

Alternatives Reviewed

The preparation of the Water and Wastewater Financial Plan and approval by Council is required as per O.Reg. 453/07. Should the Region not have an approved Water and Wastewater Financial plan it would mean its Drinking Water Licenses would not be renewed and the Region would not be permitted to continue to provide drinking water to the residents, businesses, and visitors of Niagara.

An alternative financial plan is provided in Appendix 4 to Report PW 45-2023 that provides for an enhanced capital investment with the use of debt and with a 7.65% annual increase for 10 years. The scenario and risks are described in Appendix 4 to Report 45-2023. It should be highlighted that the scenario is based on a significant number of debt assumptions that would have to be re-evaluated each year to ensure the Region does not exceed its debt capacity and metrics and that there are sufficient projects that could leverage debt financing in accordance with the Capital Financing Policy.

Additionally, alternative strategies for 2024 are being considered as inflationary pressures are exceeding the 2% increase notionally allocated to operating costs. As the operating expenses (exclusive of capital funding) are approximately 59% of total requisition, this actually provides for inflationary pressures of 3.5% however staff is currently estimating that inflationary pressures for 2024 will exceed this amount. To that end, Council will be presented with alternatives for 2024 that include exceeding the plan recommendation or modifying capital contributions for the year.

Relationship to Council Strategic Priorities

The Water and Wastewater Financial Plan supports Council's performance outcome by maintaining existing infrastructure, while also supporting the fostering growth priority by providing new infrastructure to support growth and economic development in Niagara Region.

It also supports Council's Effective Region Strategic Priority by delivering fiscally responsible and sustainable core services through the water and wastewater long-term planning process while supporting the water and wastewater asset sustainability.

Other Pertinent Reports

- PW 13-2014 Financial Plan for Ontario Regulation 453/07
- PW 9-2019 Water and Wastewater Financial Plan for O.Reg. 453/07
- CSD 7-2022 2021 Asset Management Plan
- CSD 22-2022 2023 Budget Planning and Timetable
- PW 14-2023 2021 Water and Wastewater Master Servicing Plan Update

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Appendices

- Appendix 1 Summary of Financial Plan Requirements per O.Reg. 453/07 and Principles of Financial Sustainability
- Appendix 2 Niagara Region Water and Wastewater 10-Year Financial Plan
- Appendix 3 Niagara Region Water and Wastewater 10-Year Financial Plan – Financial Statements
- Appendix 4 Niagara Region Alternative Water and Wastewater 10-Year Financial Plan

Appendix 1 to PW 45-2023

Summary of Financial Plan Requirements per O. Reg. 453/07

Item	O. Reg. 453/07 Requirement	Niagara Region's Status
Approval	The Financial Plan must be approved by a resolution that indicates that the drinking water system is financially viable that is passed by the Council of the municipality. S.3(1)1.i.	By way of this report, staff are recommending Regional Council approve the Pro Forma statements as presented.
Period	The Financial Plan must apply for a period of at least six years. S.3(1)2.	Niagara Region's plan covers a period of 10 years.
Contents	For each year in which the Financial Plan applies, it must include details of the proposed or projected financial position, financial operations, and gross cash receipts and payments for the drinking water system. S.3(4).	Required details are included in the Financial Plan for all drinking water systems as presented.
Public Transparency	The Financial Plan must be available free of charge to the public, published on the internet and notice of its availability provided to members of the public who are serviced by the drinking water system. S.3(5).	Niagara Region's Financial Plan will be made available to the public as required once approved by Regional Council.
Submission	The owner of the drinking water system must give a copy of the Financial Plan to the Ministry of Municipal Affairs and Housing. S.3(6).	Niagara Region's Financial Plan will be submitted to the Ministry of Municipal Affairs and Housing once approved by Regional Council.
Multiple Systems	If two or more drinking water systems are solely owned by the same owner, they may be treated as if they were one drinking system. S.4.	Niagara Region prepared one Financial Plan which applies to all of its systems.
Updates	Financial Plans may be updated at any time. S.5. A new submission is required when drinking water licenses are renewed.	Niagara Region's Financial Plan will be regularly updated by staff to reflect future approvals in operating and capital spending and funding levels.

Principles of Financial Sustainability

The Ministry of the Environment released a guideline (“Towards Financially Sustainable Drinking-Water and Wastewater Systems”) that provides possible approaches to achieving sustainability. The Province’s Principles of Financially Sustainable Water and Wastewater Services are provided below:

- **Principle #1:** Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.
- **Principle #2:** An integrated approach to planning among water, wastewater, and storm water systems is desirable given the inherent relationship among these services.
- **Principle #3:** Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.
- **Principle #4:** 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.

Appendix 2 to Report PW 45-2023

Niagara Region Water and Wastewater 10-year Financial Plan

Section 1 – Introduction

Section 2 – Recommended Financial Plan and summary relative to guiding principles of:

- i. Smooth the rate increases over the 10-year period
- ii. Consider the water and wastewater asset renewal requirements in accordance with the approved Asset Management Plan
- iii. Support growth related capital in accordance with the approved Water and Wastewater Master Servicing Plan
- iv. Understand the impacts of investment on asset condition and asset level of service.
- v. Maintain capital reserve balances to manage asset risk.
- vi. Use of debt and reserves/pay-as-you-go for assets in accordance with the Capital Financing Strategy

Section 1 Introduction

Niagara Region's ten-year Water and Wastewater Financial Plan was developed to recommend a plan for sustainability of water and wastewater systems over the next ten years while respecting the Region's Budget Planning By-law and other policies as well. The Financial Plan is a requirement every five years in order to renew Niagara Region's license to treat water, mandated by the Safe Drinking Water Act, O.Reg. 453/07.

O.Reg. 453/07 requires the Water and Wastewater Financial Plan only cover water operations; however, information for wastewater operations has also been included in the same format in order to show a more complete picture and in accordance with the Ministry of the Environment Principle #2 in Appendix 1 to Report PW 45-2023. This is particularly important for the Region since it is experiencing greater fiscal challenges in wastewater operations related to both sustainability and growth. These regulations also only require a 6-year plan; however, this plan covers a period of 10 years to coincide with the Region's capital budget and forecast planning horizon.

Another important principle is the utilization of both the 2021 Asset Management Plan (AMP) for the sustainment of \$5,458 million in assets and 2021 Water and Wastewater Master Servicing Plan (MSP) to guide growth related infrastructure as key inputs into the Financial Plan. This Financial Plan will serve as a basis for future budget forecast recommendations, to guide the Region towards long-term sustainability while considering affordability for both water and wastewater operations.

Section 2 Recommended Financial Sustainability Plan

i. Smooth the rate increases over the 10-year period

The Water and Wastewater Financial Plan provides for an average annual increase to both the water and wastewater requisition from local area municipalities of 7.15% per year. This provides better cost certainty to the LAMs for their budgeting and rate setting requirements. The water plan provides for an average annual increase of 4.3% per year, and wastewater of 8.48% per year for a combined increase of 7.15%.

The largest driver for this increase is the 5.15% annual increase for capital in addition to an average operating cost estimate of 2% per year. While recent rates of inflation have exceeded 2%, the plan proposes that over the long term that the Bank of Canada target inflation of 2% be used for planning purposes. As the Region compiles its operating budget every year this assumption will be evaluated, and when inflation exceeds 2% as is projected for 2023/2024, the budget recommendations will consider real inflation and identify the risks of not budgeting appropriately for the real cost of service. Additionally, as asset growth occurs this will also put pressure on operating costs and budgets that will be addressed annually.

Figure 1 Proposed Annual Rate Requisition Percentage Increases

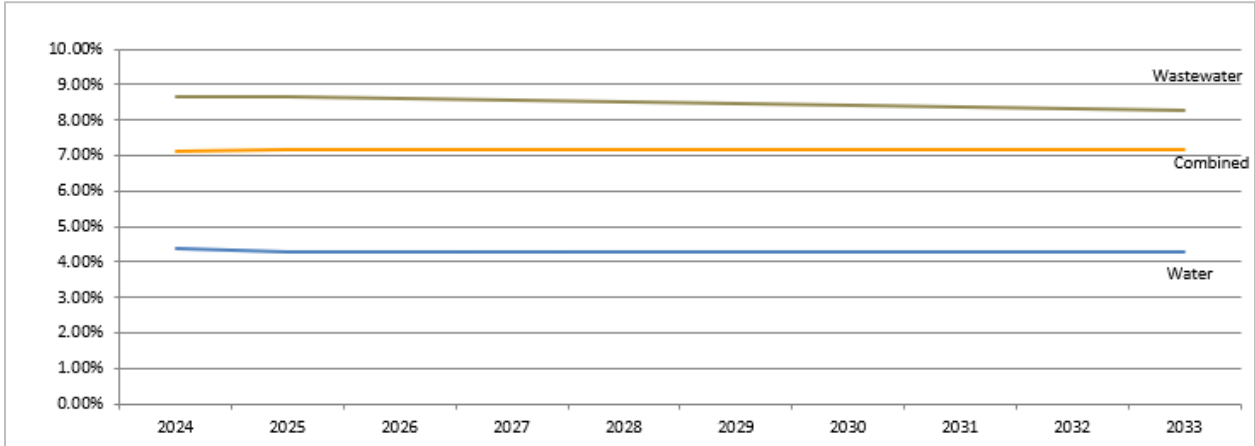
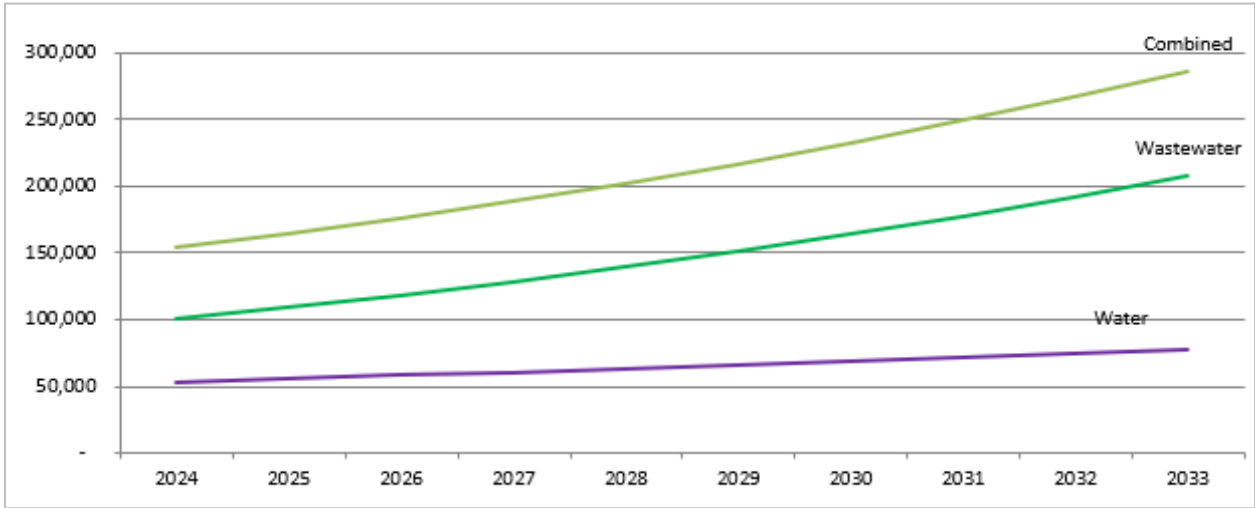


Figure 2 Proposed Annual Rate Requisition in Thousands of Dollars



Niagara Region is not the only jurisdiction faced with water and wastewater rate pressures to operate and maintain aging infrastructure. Table 1 below provides a summary of other municipalities rate increases in recent years. For context Niagara’s increases are also provided which show that Niagara strayed from the financial sustainability plan in 2021 during the COVID-19 pandemic.

Table 1 Annual Water & Wastewater Requisition Rate Increases of Comparable Municipalities

Municipality	2021 rate increase	2022 rate increase	2023 rate increase
Hamilton	4.28%	4.98%	6.49%
Toronto	1.50%	3.00%	3.00%
Sudbury	4.40%(W), 5.20% (WW)	4.80% (W) 4.80% (WW)	4.80% (W) 4.80% (WW)
Peel	5.50%	5.80%	7.90%
York	No change	5.80%(W), 1.60%(WW)	5.70%(W), 1.70%(WW)
Niagara	2.00%	5.15%	8.59%

The Region’s budget presentations include data from the BMA Municipal Study which looks at the average cost of Water/Wastewater services per household among surveyed Municipalities. Table 2 below shows that Niagara is within 2% of the average in 2022 and is general aligned with other municipalities in Ontario.

Table 2 BMA Study – Average Cost of Water/Wastewater Services per Household

BMA Study Average (Includes Region & Local)								
Cost per Household	2015	2016	2017	2018	2019	2020	2021	2022
BMA Survey Average	\$922	\$976	\$1,028	\$1,074	\$1,103	\$1,151	1,174	1,237
Niagara Average	\$953	\$975	\$1,037	\$1,069	\$1,123	\$1,164	1,202	1,251
Variance \$	\$31	-\$1	\$9	-\$5	\$19.6	\$13.4	28.2	24.0
Variance %	3%	0%	1%	0%	2%	1%	2%	2%

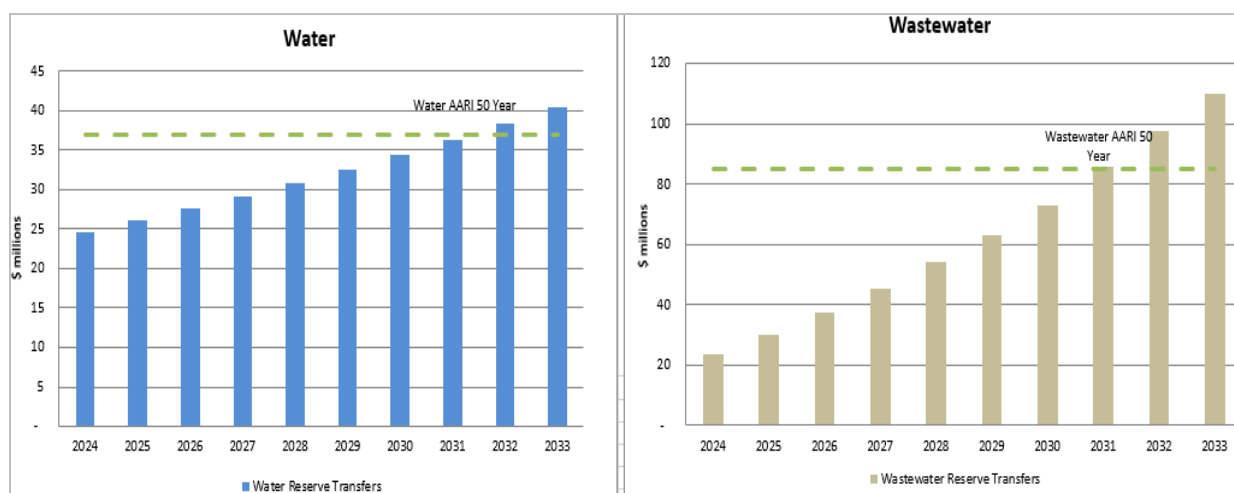
ii. Consider the water and wastewater asset renewal requirements in accordance with the approved Asset Management Plan

Another principle of a sustainable Financial Plan for Water and Wastewater includes annual capital contributions based on an asset management plan. The Region’s Asset Management Plan (AMP) has identified that in order to properly sustain these assets, a total of \$164 million in capital renewal is required annually for the next 10 years which also addresses the backlog within these 10 years. This is referred to as the Average Annual Renewal Investment (AARI). This AARI would require an annual operating budget increase of 7.22% per year. Understanding that presents challenges to rate payers, staffing and supply chain issues, the Budget Strategy proposed a more modest annual increase for capital of 5.15% per year to target a 50-year AARI of \$122 million (\$37 million for Water and \$85 million for Wastewater). The 2016 AMP had proposed a 3.15% increase per year be dedicated to the infrastructure funding gap. The new plan of 5.15% increase per year therefore represents the 2.0% increase over the prior financial plan. Water will achieve the 2021 AARI target by 2032 and Wastewater by 2031. As we continue to navigate capital requirements until the targets are met, capital projects will be prioritized annually to align with available funding.

While it appears that Water and Wastewater AARI will exceed the target in the latter years of the plan, we recognize that this will provide for inflationary pressures, existing backlog and service the lifecycle replacement costs of growth related infrastructure.

The annual contributions are collected through Transfers to Reserve, which are shown in Figure 3 below.

Figure 3 Annual Capital Contributions from Operating – Transfer to Reserves



iii. Support growth related capital in accordance with the approved Water and Wastewater Master Servicing Plan

In addition to requirements to sustain existing infrastructure, the Region’s Water and Wastewater Master Servicing Plan has also identified a significant amount of new infrastructure that is required to support growth. A total of \$493 million in growth related capital is included in the water and wastewater capital budget and forecast. While the majority of growth related capital is funded externally from the collection of development charges in the amount of \$348 million, there is a total of \$145 million of the new infrastructure that is considered a “benefit to existing” and therefore must be funded from regional funds.

iv. Understand the impacts of investment on asset condition and asset level of service.

The proposed 10-year Capital Budget, net of deferrals, which can be accommodated in the recommended financial plan is \$792 million for Sustainability and \$493 million for Growth, of which \$145 million is “benefit to existing” infrastructure, for a combined total Capital Program of \$1,285 million as shown in Figure 4 below. The 10-year Capital Forecast per the Asset Management Plan and Water and Wastewater Master Servicing Plan Update recommends \$754 million for Water with \$1,179 million for Wastewater for a combined total Capital Program of \$1,933 million. The recommended plan therefore requires a deferral of \$273 million for Water and \$375 million for Wastewater for a total of \$648 million or 34% of the capital proposed in the Asset Management Plan.

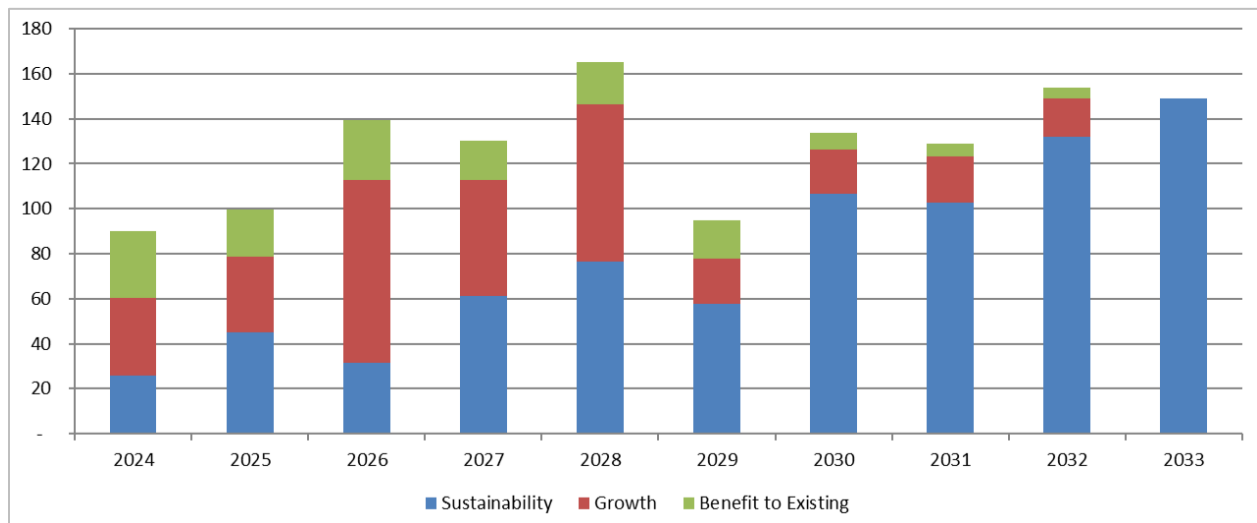
Included in the \$648 million of deferrals are a number of significantly large projects that will have to be considered as the financial plan is executed in the annual budgets. Two

plants, Welland Water Treatment Plant and Welland Wastewater Treatment Plant, require significant investment currently estimated at \$360 million in total.

The Region has implemented a three-pronged investment strategy. Firstly, to renew very poor condition asset in priority of high operational risk to low operational risks. Secondly, the Water and Wastewater Financial Plan includes budgets for growth projects which assists the Local Area Municipalities (LAMs) to implement their growth strategies. Thirdly, to co-finance “benefit to existing” in growth projects without any conditionality on asset condition.

The first strategy aims to reduce (or at least maintain) the magnitude of assets reported in very poor condition as a primary investment focus. Sustainability projects are specifically targeting assets in very poor condition that are at the end or beyond the end of their useful life. The Water and Wastewater Financial Plan includes budgets for growth projects which assists the LAMs in implementing their growth strategies. The growth strategy will increase the combined asset base for Water and Wastewater from \$5,680 million (2024) to \$7,613 million (2033). The model assumes that \$145 million of rate generated funds will fund the Region’s share of growth projects (i.e. “benefit to existing”) in Water and Wastewater over the next 10 years. This often results in non-essential improvements of the asset base and does not strictly target the improvement of assets in very poor condition.

Figure 4 10-Year Capital Budget & Forecast



As reported in the 2021 Asset Management Plan, the Water and Wastewater operates a significantly large asset base. In Water Services, 80% of assets are in fair condition or better condition (by current replacement value) and 20% of assets were reported in poor or very poor condition. This is shown in Table 3 below. In this financial plan, the percentage of water assets (by value) in very poor condition, relative to the overall value of the entire water asset base, will increase from 8.7% in 2021 to 18.1% in 2026. From

2027 onwards, the percentage of water assets in very poor condition will reduce to 14.0% in 2033, thus showing improvement (see Figure 5 below).

Table 3 2022 Asset Condition Rating – Water

		Total Water	Facility (WTW, PS, Reservoirs, ET)	Linear Network (Transmission)
	Replacement value (2022)	\$1.8 billion	\$1. Billion	\$0.8 billion
Condition rating (percentage by replacement value)	Very good	33.00%	8.10%	65.10%
	Good	34.10%	42.00%	23.90%
	Fair	12.90%	15.90%	8.90%
	Poor	11.30%	20.00%	0.20%
	Very poor	8.70%	14.00%	1.90%

In the Wastewater section, 72% of all assets were reported to be fair or better condition (by current replacement value) and 28% of all assets (WWTP, Pumping Station including sewers and forcemains, etc.) were reported in very poor or poor condition. However, nearly 40% of all Wastewater facilities (WWTP, Pumping Station) are in either very poor or poor condition which is of increasing concern for the safety and reliability of their operation as per Table 4 below. In this financial plan, the percentage of wastewater assets (by value) in very poor condition, relative to the overall value of the entire wastewater asset base, will reduce from 14.0% in 2021 to 13.4% in 2028. From 2029 onwards, the percentage of wastewater assets in very poor condition will reduce to 8.9% in 2033. This reduction is primarily the result of a significantly growing asset base which increases from \$3,700 million in 2024 to over \$5,000 million in 2033. The total value of assets in very poor condition will increase from currently \$210 million (unfunded) to \$600 million in 2029. From 2030 onwards, the value of assets in very poor condition will reduce to \$447 million, thus showing improvement (see Figure 5 below).

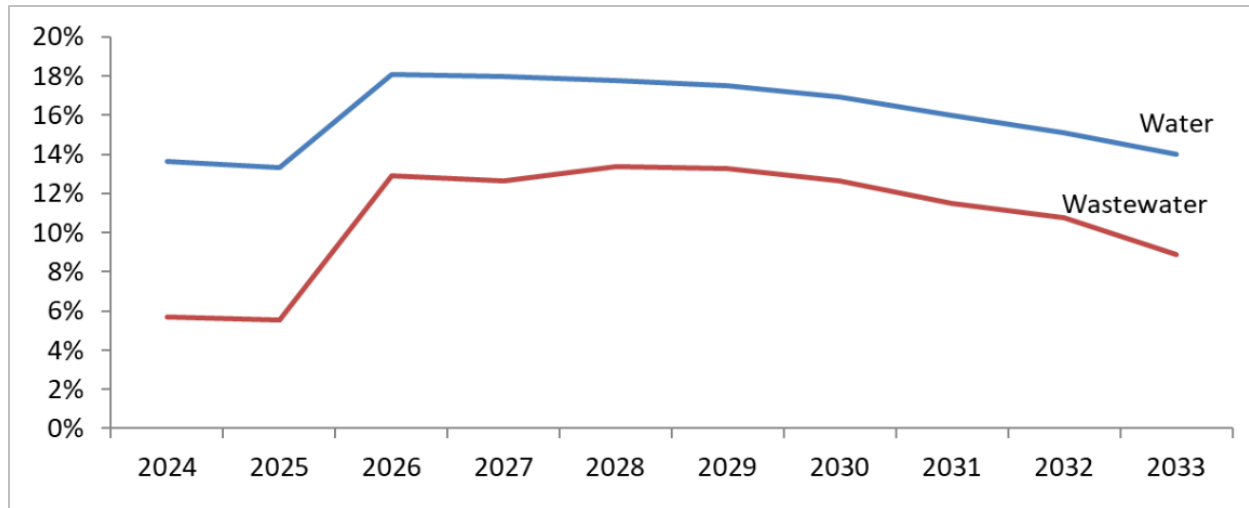
Table 4 2022 Asset Condition Rating - Wastewater

		Total Wastewater (Facilities and Linear network)	Facilities (WWTP, SPS, etc.)	Linear Network (Sewers, Forcemains)
	Replacement value (2022)	\$3.3 billion	\$2.3 billion	\$1. billion
Condition rating (percentage by replacement value)	Very good	12.30%	3.80%	31.10%
	Good	32.70%	34.50%	28.70%
	Fair	27.00%	23.30%	35.10%
	Poor	14.00%	19.70%	1.50%
	Very poor	14.00%	18.70%	3.60%

Assets in very poor condition are considered beyond their useful expected life and represent a significantly increased asset failure risk with potential impact on the safety

and reliability of the services they provide for public health and the environment. These elevated risks also represent a direct operational cost for the Division for increased operational maintenance, repair and consequential cost if assets fail.

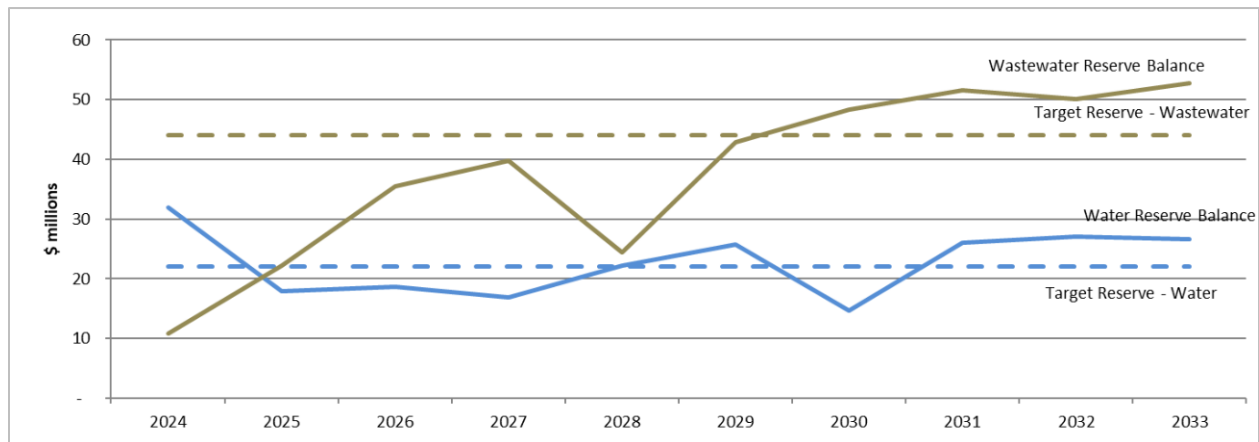
Figure 5 Percentage of Assets in Very Poor Condition



v. Maintain Capital reserve balances to manage asset risk

The Water and Wastewater Financial Plan has been created with the guideline of maintaining minimum reserve balances at 1% of the replacement value of assets. In previous financial plans, we had targeted a minimum reserve balance of 2% of the asset replacement value which was based on one-year average life cycle investment of assets with average useful life of 50 years. The main reason for the lowering of the reserve target was to address critically needed investments. Maintaining a reserve balance of 1% still provides an appropriate level of funding to manage in-year risks and annual budget fluctuations while allowing for critical capital investments to prioritize each year. This provides a Water target balance of \$22 million, and a Wastewater target balance of \$44 million. When the backlog of required asset investment reduces, the Region can then again prioritize reserve target balance at the optimal 2% of asset value in the future.

Figure 6 Forecasted Reserve Balances



vi. Use of debt and reserves/pay-as-you-go for assets in accordance with the Capital Financing Strategy

The Water and Wastewater Financial Plan ensures that debt remains sustainable and affordable within the operating budget. In the recommended plan of 7.15% increase to the net requisition, debt costs remain stable throughout the 10-year plan with Water averaging \$2.2 million and Wastewater \$13.8 million per year related to past approved debt including that of the South Niagara Falls Wastewater Plant (SNFWWTP). There is no new debt considered for Water and Wastewater capital in the recommended financial plan.

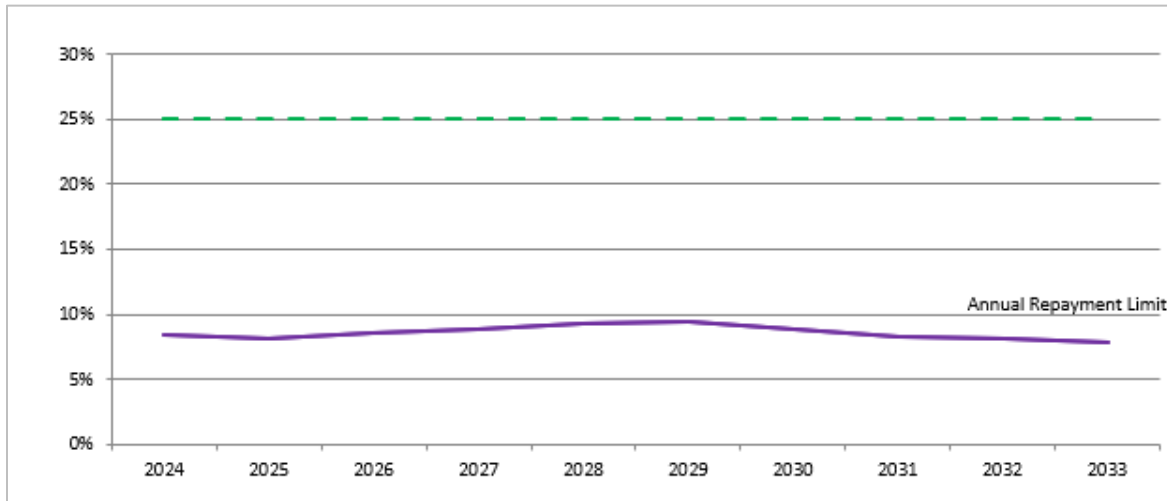
These debt servicing costs are estimates using interest rates ranging from 4.0% to 4.45% over the 10-year plan and assume that the approved SNFWWTP debt will be issued in 2028 upon completion of the project.

There are two key limits that are considered when evaluating debt levels.

1. The Provincial Annual Repayment Limit (ARL)

The ARL is a limit imposed by the Province to ensure municipalities are issuing debt responsibly and are able to service future debt charges. The limit says that debt charges (principle and interest) cannot exceed 25% of own source revenues. The ARL looks at the Region's consolidated position, both Levy and Rate for this calculation. As shown in Figure 7 below, the Region is well below the 25% provincial limit. Even with increasing levels of debt for water and wastewater, the ratio grows only slightly in the middle of the forecast period and then declines in future years.

Figure 7 Annual Repayment Limit (Debt Charges as a Percentage of Revenue)

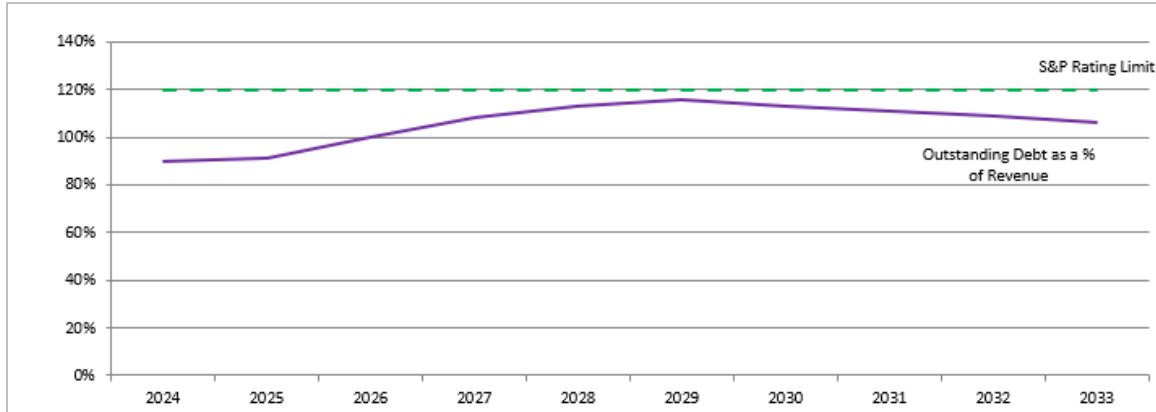


2. Standard & Poor's (S&P) Credit Rating Debt Limit

Niagara Region currently has a Standard & Poor's credit rating of AA+. The rating incorporates S&P's opinion of Niagara's exceptional liquidity, strong budgetary performance and financial management, and moderate debt burden. Niagara continually strives to improve our credit rating, as it sends a strong, positive message to investors, and directly impacts our cost of borrowing in the capital markets.

One of the S&P measures is the total outstanding debt principle compared to revenue. Debt principle from local area municipalities is included in this calculation since the Region is legislatively required to issue debt on behalf of the LAMs. The S&P limit is debt principle at 120% of revenue. Exceeding this amount could jeopardize the Region's credit rating. Figure 8 below shows that that the Region stays below the S&P limit for the forecast where it peaks at 115.7% in 2029 based on current estimates of Regional and local area municipality debt requirements.

Figure 8 Standard & Poor's Debt Limit



Appendix 3 to Report PW 45-2023

Niagara Region Water and Wastewater 10-Year Financial Plan - Financial Statements

Statement of Financial Operations - Water										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Water Total Revenues										
Rate Revenues	\$ 53,288,549	\$ 55,573,635	\$ 57,956,511	\$ 60,431,541	\$ 63,025,280	\$ 65,726,746	\$ 68,542,979	\$ 71,478,312	\$ 74,538,740	\$ 77,727,923
Other Revenues	449,303	458,289	467,455	476,804	486,340	496,067	505,988	516,108	526,430	536,959
DC earned	15,930,000	9,339,000	71,200,000	37,154,000	450,000	7,320,000	200,000	600,000	10,140,000	-
Interest Revenues	392,528	307,797	225,322	220,268	242,902	298,341	250,745	252,465	329,861	333,724
Total Revenues	\$ 70,060,379	\$ 65,678,721	\$ 129,849,288	\$ 98,282,613	\$ 64,204,522	\$ 73,841,153	\$ 69,499,712	\$ 72,846,885	\$ 85,535,031	\$ 78,598,606
Water Expenses										
Labour Related Costs	\$ 8,244,238	\$ 8,450,344	\$ 8,661,603	\$ 8,878,143	\$ 9,100,097	\$ 9,327,599	\$ 9,560,789	\$ 9,799,809	\$ 10,044,804	\$ 10,295,924
Administrative	508,015	518,175	528,539	539,110	549,892	560,890	572,107	583,550	595,221	607,125
Operational & Supply	2,807,172	2,975,602	3,154,138	3,343,387	3,543,990	3,756,629	3,982,027	4,220,948	4,474,205	4,742,658
Occupancy & Infrastructure	5,991,361	6,265,007	6,552,497	6,854,584	7,172,065	7,505,780	7,856,620	8,225,525	8,613,490	9,021,566
Equipment, Vehicles & Technology	1,497,389	1,527,337	1,557,884	1,589,041	1,620,822	1,653,239	1,686,303	1,720,029	1,754,430	1,789,519
Partnerships, Rebate, Exemption	66,850	66,850	66,850	66,850	66,850	66,850	66,850	66,850	66,850	66,850
Intercompany Charges	5,508,159	5,618,322	5,730,688	5,845,302	5,962,208	6,081,452	6,203,081	6,327,143	6,453,686	6,582,760
Indirect Allocation (Excl Debt)	2,211,529	2,255,760	2,300,875	2,346,892	2,393,830	2,441,707	2,490,541	2,540,352	2,591,159	2,642,982
Total Operating Expenses	\$ 26,834,713	\$ 27,677,398	\$ 28,553,074	\$ 29,463,309	\$ 30,409,753	\$ 31,394,146	\$ 32,418,319	\$ 33,484,206	\$ 34,593,845	\$ 35,749,383
Debt Charges										
Debt Charges - Interest Payments	1,137,767	1,185,383	1,197,540	1,336,868	1,317,729	1,296,762	1,276,195	1,255,255	1,234,607	1,212,304
Amortization Expense										
Water Assets	15,927,973	17,005,124	18,426,484	21,871,150	23,870,385	23,967,764	24,516,755	25,442,040	25,454,637	26,412,692
Total Expenses	\$ 43,900,453	\$ 45,867,905	\$ 48,177,097	\$ 52,671,327	\$ 55,597,868	\$ 56,658,672	\$ 58,211,269	\$ 60,181,501	\$ 61,283,089	\$ 63,374,380
Annual Surplus / (Deficit)	\$ 26,159,926	\$ 19,810,816	\$ 81,672,191	\$ 45,611,286	\$ 8,606,654	\$ 17,182,482	\$ 11,288,443	\$ 12,665,384	\$ 24,251,942	\$ 15,224,226
Accumulated Surplus	\$ 310,812,871	\$ 330,623,687	\$ 412,295,878	\$ 457,907,164	\$ 466,513,818	\$ 483,696,300	\$ 494,984,743	\$ 507,650,127	\$ 531,902,069	\$ 547,126,295
Note: The surplus is based on accrual basis of accounting and is required to support the transfers to capital reserves for infrastructure investment										

Statement of Cash Flow/Cash Receipts - Water										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Operating Activities										
Annual Surplus	\$ 26,159,926	\$ 19,810,816	\$ 81,672,191	\$ 45,611,286	\$ 8,606,654	\$ 17,182,482	\$ 11,288,443	\$ 12,665,384	\$ 24,251,942	\$ 15,224,226
Not involving cash										
Amortization	\$ 15,927,973	\$ 17,005,124	\$ 18,426,484	\$ 21,871,150	\$ 23,870,385	\$ 23,967,764	\$ 24,516,755	\$ 25,442,040	\$ 25,454,637	\$ 26,412,692
Cash Provided From Operating Transactions	\$ 42,087,899	\$ 36,815,940	\$ 100,098,675	\$ 67,482,436	\$ 32,477,039	\$ 41,150,246	\$ 35,805,198	\$ 38,107,424	\$ 49,706,579	\$ 41,636,919
Capital Transactions										
Acquisition of TCA ¹	\$ (41,709,500)	\$ (51,502,500)	\$ (99,201,803)	\$ (72,270,000)	\$ (26,135,000)	\$ (36,735,000)	\$ (46,035,000)	\$ (25,735,000)	\$ (47,735,000)	\$ (41,085,000)
Finance Transactions										
Proceeds from Debt Issues ²	\$ 731,500	\$ 1,442,500	\$ 666,803	\$ 3,905,000						
Proceeds from DCs	-	-	-	-	-	-	-	-	-	-
Proceeds from Gas Tax Funding	-	-	-	-	-	-	-	-	-	-
Proceeds from Other Grant Funding	-	-	-	-	-	-	-	-	-	-
Debt Repayment - Principal	(787,227)	(813,814)	(829,837)	(903,642)	(911,701)	(919,970)	(928,461)	(937,180)	(946,138)	(955,345)
Increase / (Decrease) in Cash Equivalents	\$ 322,672	\$ (14,057,874)	\$ 733,837	\$ (1,786,206)	\$ 5,430,339	\$ 3,495,275	\$ (11,158,263)	\$ 11,435,244	\$ 1,025,441	\$ (403,427)
Cash and Cash Equivalents at Ending Balance	\$ 31,948,709	\$ 17,890,835	\$ 18,624,672	\$ 16,838,466	\$ 22,268,805	\$ 25,764,080	\$ 14,605,817	\$ 26,041,061	\$ 27,066,501	\$ 26,663,075
Note: 1) The acquisition of TCA via capital projects can occur over several periods, however have been reflected in the year of budget approval for this schedule. 2) Proceeds from debt issuance for prior approvals are also included which is based on current estimate of when the debt will be issued.										

Statement of Financial Position - Water										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Financial Assets										
Cash	\$ 31,948,709	\$ 17,890,835	\$ 18,624,672	\$ 16,838,466	\$ 22,268,805	\$ 25,764,080	\$ 14,605,817	\$ 26,041,061	\$ 27,066,501	\$ 26,663,075
Liabilities										
Debt - Principal Outstanding	(23,119,112)	(23,747,798)	(23,584,764)	(26,586,122)	(25,674,421)	(24,754,451)	(23,825,990)	(22,888,811)	(21,942,672)	(20,987,327)
Net Debt	\$ 8,829,597	\$ (5,856,963)	\$ (4,960,092)	\$ (9,747,656)	\$ (3,405,617)	\$ 1,009,629	\$ (9,220,173)	\$ 3,152,250	\$ 5,123,829	\$ 5,675,748
Non-Financial Assets										
Tangible Capital Assets	\$ 531,562,738	\$ 573,272,238	\$ 624,774,738	\$ 723,976,541	\$ 796,246,541	\$ 822,381,541	\$ 859,116,541	\$ 905,151,541	\$ 930,886,541	\$ 978,621,541
Additions to Tangible Capital Assets	41,709,500	51,502,500	99,201,803	72,270,000	26,135,000	36,735,000	46,035,000	25,735,000	47,735,000	41,085,000
Accumulated Amortization	(271,288,963)	(288,294,087)	(306,720,571)	(328,591,720)	(352,462,106)	(376,429,870)	(400,946,625)	(426,388,664)	(451,843,301)	(478,255,994)
Total Non-Financial Assets	\$ 301,983,275	\$ 336,480,651	\$ 417,255,970	\$ 467,654,820	\$ 469,919,435	\$ 482,686,671	\$ 504,204,916	\$ 504,497,877	\$ 526,778,240	\$ 541,450,547
Accumulated Surplus	\$ 310,812,871	\$ 330,623,687	\$ 412,295,878	\$ 457,907,164	\$ 466,513,818	\$ 483,696,300	\$ 494,984,743	\$ 507,650,127	\$ 531,902,069	\$ 547,126,295

Statement of Financial Operations - Wastewater

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Wastewater Total Revenues										
Rate Revenues	\$ 100,141,537	\$ 108,826,701	\$ 118,198,449	\$ 128,318,499	\$ 139,220,388	\$ 150,979,488	\$ 163,657,750	\$ 177,324,769	\$ 192,053,761	\$ 207,925,942
Other Revenues	1,720,146	1,754,549	1,789,640	1,825,433	1,861,942	1,899,181	1,937,164	1,975,907	2,015,426	2,055,734
DC earned	29,505,926	35,060,924	20,700,525	24,631,772	81,521,772	23,261,772	30,041,772	30,261,772	16,941,772	10,261,772
Grant Funding -SNF					144,670,000					
Interest Revenues	124,526	199,671	353,318	464,762	398,527	417,946	566,588	621,309	631,861	638,732
Total Revenues	\$ 131,492,136	\$ 145,841,846	\$ 141,041,932	\$ 155,240,467	\$ 367,672,629	\$ 176,558,387	\$ 196,203,274	\$ 210,183,757	\$ 211,642,820	\$ 220,882,180
Wastewater Expenses										
Labour Related Costs	\$ 11,695,836	\$ 11,988,232	\$ 12,287,938	\$ 12,595,136	\$ 12,910,015	\$ 13,232,765	\$ 13,563,584	\$ 13,902,674	\$ 14,250,241	\$ 14,606,497
Administrative	1,278,784	1,304,360	1,330,447	1,357,056	1,384,197	1,411,881	1,440,119	1,468,921	1,498,300	1,528,265
Operational & Supply	14,966,836	15,864,846	16,816,737	17,825,741	18,895,285	20,029,002	21,230,743	22,504,587	23,854,862	25,286,154
Occupancy & Infrastructure	12,126,148	12,722,095	13,349,849	14,011,202	20,621,504	21,533,248	22,489,931	23,493,956	24,547,861	25,654,328
Equipment, Vehicles & Technology	3,341,098	3,407,920	3,476,079	3,545,600	3,616,512	3,688,842	3,762,619	3,837,872	3,914,629	3,992,922
Partnerships, Rebate, Exemption (CSO)	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
DC Portion - Sewer (CSO's)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)
Intercompany Charges	8,649,768	8,822,764	8,999,219	9,179,203	9,362,787	9,550,043	9,741,044	9,935,865	10,134,582	10,337,274
Indirect Allocation (Excl Debt)	3,747,084	3,822,026	3,898,466	3,976,436	4,055,964	4,137,084	4,219,825	4,304,222	4,390,306	4,478,112
Total Operating Expenses	\$ 57,805,554	\$ 59,932,242	\$ 62,158,734	\$ 64,490,374	\$ 72,846,265	\$ 75,582,866	\$ 78,447,865	\$ 81,448,096	\$ 84,590,780	\$ 87,883,551
Debt Charges										
Debt Charges - Interest Payments	\$ 20,796,573	\$ 21,002,242	\$ 20,618,805	\$ 20,282,034	\$ 15,633,772	\$ 15,308,467	\$ 14,972,092	\$ 14,622,698	\$ 14,351,152	\$ 14,067,038
Amortization Expense										
Wastewater Assets	21,187,212	22,391,332	23,564,529	24,305,655	25,928,661	43,103,779	43,750,766	45,642,733	47,040,546	49,372,627
Total Expenses	\$ 99,789,339	\$ 103,325,815	\$ 106,342,069	\$ 109,078,063	\$ 114,408,698	\$ 133,995,112	\$ 137,170,723	\$ 141,713,527	\$ 145,982,478	\$ 151,323,217
Annual Surplus / (Deficit)	\$ 31,702,797	\$ 42,516,031	\$ 34,699,864	\$ 46,162,404	\$ 253,263,932	\$ 42,563,275	\$ 59,032,551	\$ 68,470,230	\$ 65,660,342	\$ 69,558,964
Accumulated Surplus	\$ 348,800,378	\$ 380,503,175	\$ 423,019,206	\$ 457,719,070	\$ 503,881,473	\$ 757,145,405	\$ 799,708,680	\$ 858,741,232	\$ 927,211,462	\$ 992,871,803
Note: The surplus is based on accrual basis of accounting and is required to support the transfers to capital reserves for infrastructure investment										

Statement of Cash Flow/Cash Receipts - Wastewater

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Annual Surplus	\$ 31,702,797	\$ 42,516,031	\$ 34,699,864	\$ 46,162,404	\$ 253,263,932	\$ 42,563,275	\$ 59,032,551	\$ 68,470,230	\$ 65,660,342	\$ 69,558,964
Not involving cash										
Amortization	\$ 21,187,212	\$ 22,391,332	\$ 23,564,529	\$ 24,305,655	\$ 25,928,661	\$ 43,103,779	\$ 43,750,766	\$ 45,642,733	\$ 47,040,546	\$ 49,372,627
Cash Provided From Operating Transactions	\$ 52,890,008	\$ 64,907,363	\$ 58,264,393	\$ 70,468,058	\$ 279,192,593	\$ 85,667,054	\$ 102,783,318	\$ 114,112,964	\$ 112,700,887	\$ 118,931,591
Capital Transactions										
Acquisition of TCA ¹	\$ (76,119,133)	\$ (60,675,000)	\$ (41,100,000)	\$ (68,050,000)	\$ (538,590,000)	\$ (58,150,000)	\$ (87,750,000)	\$ (103,150,000)	\$ (106,275,000)	\$ (108,050,000)
Finance Transactions										
Proceeds from Debt Issues ²	\$ 26,929,133	\$ 11,000,000	\$ 300,000	\$ 6,000,000	\$ 253,017,647					
Proceeds from Gas Tax Funding	-	-	-	-	-	-	-	-	-	-
Proceeds from Other Grant Funding	-	-	-	-	-	-	-	-	-	-
Debt Repayment - Principal	(3,627,632)	(3,901,486)	(4,009,107)	(4,223,276)	(8,850,759)	(9,152,426)	(9,466,592)	(7,719,719)	(7,970,241)	(8,230,961)
Increase / (Decrease) in Cash Equivalents	\$ 72,377	\$ 11,330,877	\$ 13,455,286	\$ 4,194,782	\$ (15,230,519)	\$ 18,364,628	\$ 5,566,726	\$ 3,243,245	\$ (1,544,354)	\$ 2,650,630
Cash and Cash Equivalents at Ending Balance	\$ 10,721,332	\$ 10,793,709	\$ 22,124,586	\$ 35,579,872	\$ 39,774,654	\$ 24,544,135	\$ 42,908,763	\$ 48,475,489	\$ 51,718,734	\$ 50,174,380
Note: 1) The acquisition of TCA via capital projects can occur over several periods, however have been reflected in the year of budget approval for this schedule with the exception of SNFWWTPT. 2) Proceeds from debt issuance for prior approvals are also included which is based on current estimate of when the debt will be issued.										

Statement of Financial Position - Wastewater

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Financial Assets										
Cash	\$ 10,721,332	\$ 10,793,709	\$ 22,124,586	\$ 35,579,872	\$ 39,774,654	\$ 24,544,135	\$ 42,908,763	\$ 48,475,489	\$ 51,718,734	\$ 50,174,380
Liabilities										
Debt - Principal Outstanding	(65,772,608)	(89,074,110)	(96,172,624)	(92,463,517)	(94,240,241)	(338,407,129)	(329,254,703)	(319,788,111)	(312,068,392)	(304,098,151)
Net Debt	\$ (55,051,276)	\$ (78,280,401)	\$ (74,048,038)	\$ (56,883,645)	\$ (54,465,587)	\$ (313,862,994)	\$ (286,345,940)	\$ (271,312,622)	\$ (260,349,658)	\$ (253,923,771)
Non-Financial Assets										
Tangible Capital Assets	\$ 870,698,853	\$ 870,698,853	\$ 946,817,986	\$ 1,007,492,986	\$ 1,048,592,986	\$ 1,116,642,986	\$ 1,655,232,986	\$ 1,713,382,986	\$ 1,801,132,986	\$ 1,904,282,986
Additions to Tangible Capital Assets	76,119,133	60,675,000	41,100,000	68,050,000	538,590,000	58,150,000	87,750,000	103,150,000	106,275,000	108,050,000
Accumulated Amortization	(466,847,198)	(488,034,410)	(510,425,741)	(533,990,271)	(558,295,925)	(584,224,586)	(627,328,365)	(671,079,132)	(716,721,865)	(763,762,411)
Total Non-Financial Assets	\$ 403,851,655	\$ 458,783,576	\$ 497,067,244	\$ 514,602,715	\$ 558,347,060	\$ 1,071,008,399	\$ 1,086,054,620	\$ 1,130,053,854	\$ 1,187,561,120	\$ 1,246,795,574
Accumulated Surplus	\$ 348,800,378	\$ 380,503,175	\$ 423,019,206	\$ 457,719,070	\$ 503,881,473	\$ 757,145,405	\$ 799,708,680	\$ 858,741,232	\$ 927,211,462	\$ 992,871,803

Appendix 4 to Report PW 45-2023

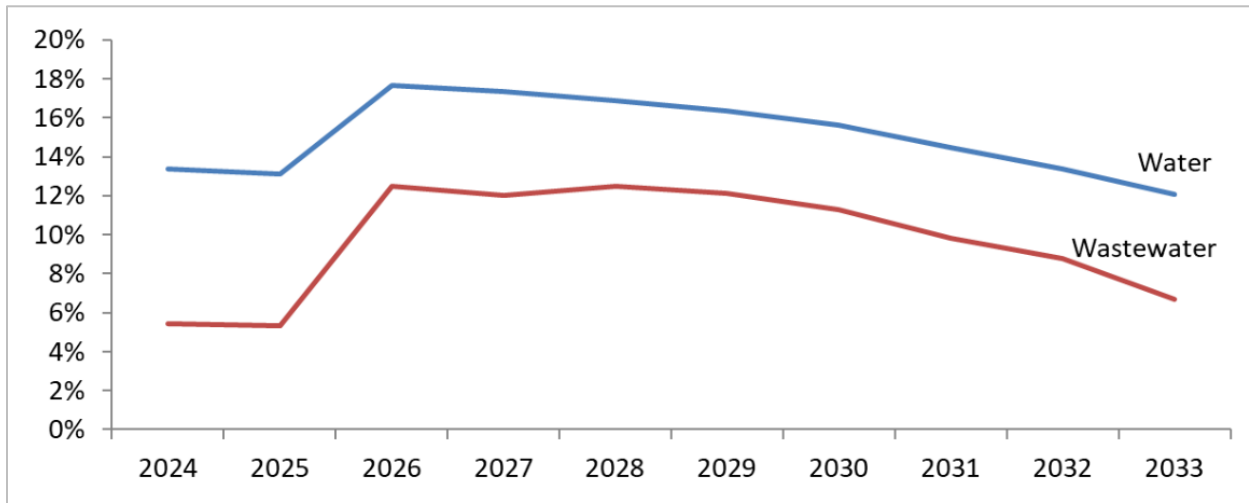
Niagara Region Alternative Water and Wastewater 10-year Financial Plan

An alternative to the proposed financial plan is an option to consider additional budget specifically for debt servicing costs to execute more capital and improve the overall level of service of the Region's infrastructure. The option provides that with an additional 0.5% in addition to the 7.15% average annual increase, the Region can accommodate additional debt servicing costs and reduce the capital deferrals by \$50 million in Water and \$112 million in Wastewater which increases the total 10-year capital program to \$531 million for Water and \$916 million for Wastewater. This would increase the average annual combined rate to 7.65% per year for the 10-year plan which is 4.72% for Water and 8.94% for Wastewater. This model assumes that over the 10-year plan there will be adequate strategic projects that could utilize debt in accordance with the Capital Financial Policy, however this has not been verified at this time.

This alternative also includes annual capital contributions based on the 2021 Asset Management Plan and supports the scenario where the backlog is addressed over 50 years with an AARI of \$122 million (\$37 million for Water and \$85 million for Wastewater) with annual increases of 5% per year which has been recommended in the budget strategy to balance sustainability with affordability. There is no change using the average annual combined rate of 7.65% to achieving these targets by 2031 and 2032 in Wastewater and Water, respectively.

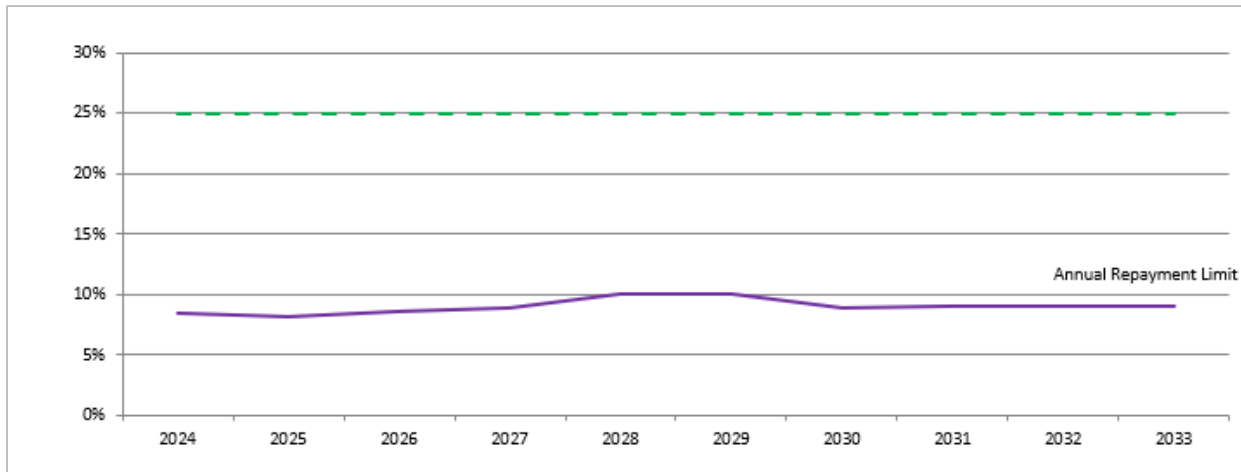
This alternative would improve the percentage of assets in very poor condition as a result of the reduction in capital deferrals by \$50 million in Water and \$112 million in Wastewater. The result would be a reduction in the percentage of assets in very poor condition of approximately 2% in Water and 2% in Wastewater by the end of the 10-year plan as demonstrated below in Figure 1.

Figure 1 Percentage of Assets in Very Poor Condition



There are many assumptions that go into the timing of the debt issuance; however, even with the increased debt for Water and Wastewater, the Annual Repayment Limit goes to a maximum of 10% as shown below in Figure 2. Even with increasing levels of debt for Water and Wastewater, the Region remains well below the 25% provincial limit.

Figure 2 Annual Repayment Limit (Debt Charges as a Percentage of Revenue)



The additional debt for Water and Wastewater could have an implication on our Standard & Poor's (S&P) credit rating. The Region strives to limit the debt outstanding to less than 120% of total revenues in accordance with the threshold monitored by S&P. Based on the many assumptions around timing of debt, the debt needs of the local area

municipalities (included in this metric) and debt requirements for other Regional lines of business, the Region could go over the debt principle at 120% of revenue in 2029 as shown below in Figure 3. This could compromise our AA+ credit rating which will weaken our currently strong, positive message to investors and likely negatively impact our cost of borrowing in the capital markets exposing the Region and municipalities to higher interest rates.

Figure 3 Standard & Poor's Debt Limit

