BMA
Management Consulting Inc.

# Water and Wastewater Long-Range Financial Plan

## In Accordance with O.Reg. 453/07

April 2019

City of Greater Sudbury

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# *Introduction - Water and Wastewater Financial Plan*

### *Review of Regulatory and Legislative Requirements*

The City of Greater Sudbury, along with other Ontario municipalities that are responsible for the provision of drinking water, is required to meet the requirements set out in the Financial Plans Regulations O.Reg.453/07.

The City of Greater Sudbury is taking a proactive approach and has recognized the need for a long-term financial planning process that assesses the financial implications of current and proposed policies as well as Council approved decisions in its water and wastewater operations. The goal is to ensure that the City's operations are in a sound financial position and services can be provided on a sustainable basis.

Ontario Reg. 453/07 provides the following parameters with regards to s.30 (1) part b of the Safe Drinking Water Act for municipal drinking water licence renewal:

- The financial plan must be approved by Council resolution (or governing body)
- The financial plan must include details regarding lead service pipe replacement
- The financial plan must include a statement that the financial impacts have been considered and apply for a minimum six year period commencing in the year in which the existing municipal drinking water licence expires
- A copy of the financial plan must be submitted to the Ministry of Municipal Affairs and Housing
- For each year to which the financial plans apply, the financial plans must include the following:
  - Details of the proposed or projected financial position of the drinking water system itemized by:
    - total financial assets
    - total liabilities
    - net debt
    - non-financial assets that are tangible capital assets, tangible capital assets under construction, inventories of supplies and prepaid expenses
    - changes in tangible capital assets that are additions, donations, write downs and disposals
- Details of the drinking water system's proposed or projected gross cash receipts and gross cash payments itemized by:
  - operating transactions that are cash received from revenues, cash paid for operating expenses and finance charges
  - capital transactions that are proceeds on the sale of tangible capital assets and cash used to acquire capital assets
  - investing transactions that are acquisitions and disposal of investments
  - financing transactions that are proceeds from the issuance of debt and debt repayment
  - changes in cash and cash equivalents during the year, and
  - cash and cash equivalents at the beginning and end of the year.

- The financial plan 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 PSAB) for each year in which the financial plans apply
- The financial plan is 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

### *General Approach to Preparing the City's LRFP*

The LRFP identifies the key financial strategies that will influence the building of a sustainable long-term financial future and takes into account:

- Expected expenses and capital outlays for each year of the plan
- Expected revenues for each year
- Financial performance measures

### *Required Statements*

There are three statements that must be completed, in accordance with the O. Reg. 453/07. These include:


The ***Statement of Operations*** summarizes the revenues and operating expenses for a given period.


The ***Statement of Cash Flows*** reports on how activities were financed for a given period which provides a measure of the changes in cash for that period.


The ***Statement of Financial Position*** 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 categories of financial information have been developed to ensure:

- that they provide a sound picture of the financial position of a drinking water system
- that they are aligned with municipal financial statements prepared on a full accrual accounting basis
- consistent financial planning for municipal water services

The goal of the financial plan is to provide the City with a realistic and informed view of the water and wastewater operating and capital expenditures needed over time to maintain the integrity and health of its physical infrastructure and to accommodate growth and new environmental standards. As such, a Long Range Financial Plan (LRFP) creates a more purposeful approach to long-term financial management and helps align short term actions with long term financial strategies.

### *Importance of a Long Range Financial Plan*

A LRFP is a framework to guide the City in planning and decision-making and it:

- Examines fiscal trends;
- Identifies fiscal issues and opportunities;
- Increases communication & awareness;
- Stimulates long-term thinking;
- Helps establish fiscal policies and goals;
- Ensures a reasonable degree of stability and predictability in the rate burden;
- Provides a fair sharing in the distribution of resources between current and future ratepayers;
- Ensures sustainable cash flows;
- Maximizes financial flexibility; and
- Minimizes financial vulnerability during economic downturns.

### *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.

The LRFP will be instrumental in the City's ability to meet the Provincial reporting requirements included in O.Reg. 453/07 for water and wastewater operations and has been developed in recognition of the above noted principles.

### *The LRFP is Dynamic—Regular Updates Will Be Undertaken*

This document puts the City's water & wastewater financial condition in perspective, discusses the current challenges and risks and provides a sustainable financial forecast. The plan also provides a framework for guiding the annual budget and the financial planning over a longer horizon. The LRFP helps to understand the implications that today's decisions have on future budgets. The LRFP has been prepared to meet the regulatory requirements. It does not represent a formal multi-year budget. The approval of the budget is undertaken annually.

Great effort has been made to present accurate financial projections, based upon the data available at this time. In accordance with the regulations, financial plans must be updated in conjunction with an application for licence renewal (i.e. every 5 years), however, there are many potential circumstances that could occur within the short to medium term that would affect the assumptions in the projections for operating and capital. Council priorities, planning policies, changes to service levels, consumption projections and infrastructure requirements, will certainly lead to changes and the LRFP should be adjusted to reflect these changes as they occur.

As a best practice, The Ministry of the Environment document entitled "Toward Financial Sustainability" suggests that Financial Plans should be updated on an annual forward looking basis. By doing so, continuous improvement will be fostered and results can be considered as part of the annual budget process.

It is well recognized that a Financial Plan is a ***dynamic document*** that should be updated and re-evaluated, on an ***ongoing*** basis to:

- Amend the assumptions, projections and strategies based on changes in the municipal environment
- Continue building awareness of the results of projections of current operating and capital spending and funding levels
- Assist the City in determining the extent of its financial challenges
- Reconfirm the key financial goals and strategies that should guide future planning
- Spur the development of actions in future business plans that would respond to the long-term strategies

## *Background Information Used to Prepare the Water and Wastewater Financial Plan*

## System Overview

### Water System Overview

The City of Greater Sudbury (CGS) owns and operates six (6) municipal drinking water supply systems that service the various communities in the City, as listed below. Each respective Drinking Water Works Permit (DWWP) identification is included in the associated brackets.

1. Dowling Drinking Water System (DWWP 016-203)
2. Falconbridge Drinking Water System (DWWP 016-201)
3. Onaping/Levack Drinking Water System (DWWP 016-202)
4. Sudbury Drinking Water System (DWWP 016-206)
5. Valley Drinking Water System (DWWP 016-205)
6. Vermilion Drinking Water System (DWWP 016-204)

### Wastewater System Overview

As identified in the City's Water and Wastewater Master Plan, the CGS owns and operates thirteen (13) independent wastewater collection systems that service the various communities in the City. The names of the systems are listed below:

1. Azilda Wastewater System – 5 Lift Stations
2. Capreol Wastewater System – 2 Lift Stations
3. Chelmsford Wastewater System – 8 Lift Stations
4. Coniston Wastewater System – 2 Lift Stations
5. Copper Cliff Wastewater System – 2 Lift Stations
6. Dowling Wastewater System – 1 Lift Station
7. Falconbridge Wastewater System – O Lift Stations
8. Garson Wastewater System – 3 Lift Stations
9. Onaping-Levack Wastewater System – 1 Lift Station
10. Lively/Walden Wastewater System – 7 Lift Stations
11. Sudbury Wastewater System – 27 Lift Stations
12. Valley East Wastewater System – 9 Lift Stations
13. Wahnapitae Wastewater System – 1 Lift Station

Each system, with the exception of the Falconbridge which does not contain any lift stations, includes a wastewater treatment plant or lagoon and, at least one (1) lift station. This results in a total of ten (10) wastewater treatment plants, four (4) lagoons and sixty-eight (68) lift stations within the CGS.

### New Information to Support the Water/WW Financial Plan

A Financial Plan was developed in 2011 for the City of Greater Sudbury in accordance with O. Reg 453/07 based on the most current information available at the time the plan was prepared. Additional analysis has since been undertaken which will impact the financial forecast. This includes a Water and Wastewater Master Plan (2018), an Asset Management Plan (2016) and updated information with respect to growth and consumption trends and forecast.

### Water and Wastewater Master Plan

The City of Greater Sudbury (CGS) undertook a Water and Wastewater Master Plan (Master Plan) in 2018 to identify long term replacements and/or expansion to the water and wastewater servicing networks. The CGS Master Plan defines the water and wastewater infrastructure required to service existing and future development to 2041.

The 10 year financial plan contained in this report utilizes the findings contained in the Master Plan, with recognition that a phase-in strategy will be required to move toward financial sustainability and support ratepayer affordability.

One of the key findings, consistent with the 2011 Financial Plan, is a need to increase contributions to the capital program. Further, as will be discussed later in the report, ongoing refinements as new information becomes available will require the financial strategies to be updated on a regular basis.

### Excerpts—Water and Wastewater Master Plan

There are four (4) main objectives that are addressed throughout the CGS Master Plan:

1. To plan for safe, robust servicing systems;
2. To accommodate planned growth within the community
3. To ensure system performance and efficiency within the servicing systems is maintained, and
4. To comply with existing legal and regulatory requirements.

### *Annual Funding Shortfall*

- A key issue that the financing planning process identified is a funding gap between the capital needs of the water and wastewater operations and the reserves available to fund capital asset replacement.

- A recommended target is for the City to make annual contributions to the capital program based on replacement cost requirements, as outlined in the Master Plan. The following table reflects the extent of the challenge.

| 2018 Capital Contributions (000's) | Water | WW |
|---|---|---|
| Current Capital Contribution for Asset Replacement | $ 15,379 | $ 15,414 |
| Debt Principal Payment | $ 226 | $ 1,788 |
| Recommended Annual Average Contribution (Master Plan) | $ 56,884 | $ 60,145 |
| Estimated Annual funding Gap | $ (41,279) | $ (42,943) |

- As shown on the above, the 2019 annual contribution to the capital program which includes contributions to the capital reserves and the payment of debt principal is lower than the recommended target contributions as identified in the Master Plan.

- For example, there is an annual funding shortfall in the water capital program of approximately $41.3 million and, in the wastewater program, the annual shortfall is estimated to be $42.9 million.

- Taking into consideration ratepayer affordability, the plan that has been developed to gradually phase-in increased contributions to capital program to achieve these targets in 20 years.

### *Asset Management Plan*

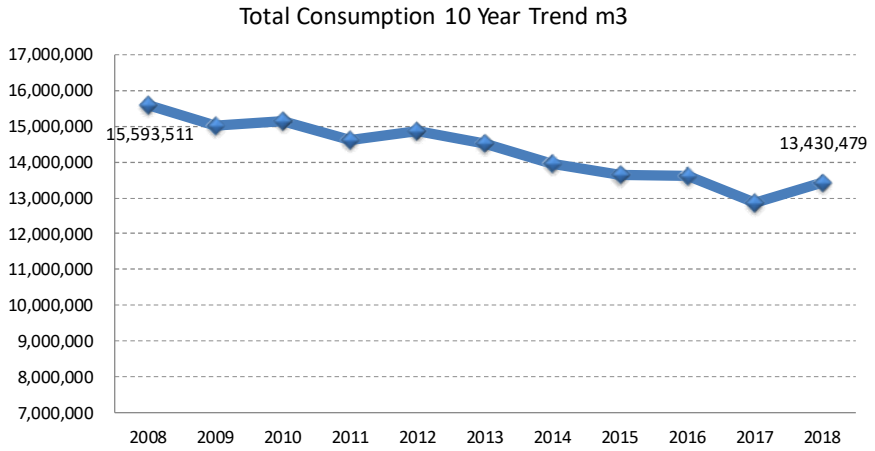
The City undertook an asset management plan in 2016 which identified the replacement value of the City's water and wastewater systems. The following provides highlights from the study with respect to water and wastewater assets.

- Water and wastewater mains have an estimated replacement value of $2 billion. Based on the estimated useful lives of the City's water and wastewater mains, an estimated $433.9 million should be expended to address water ($330.2 million) and wastewater ($103.7 million) mains that have reached the end of their useful lives and are in need of rehabilitation or replacement.

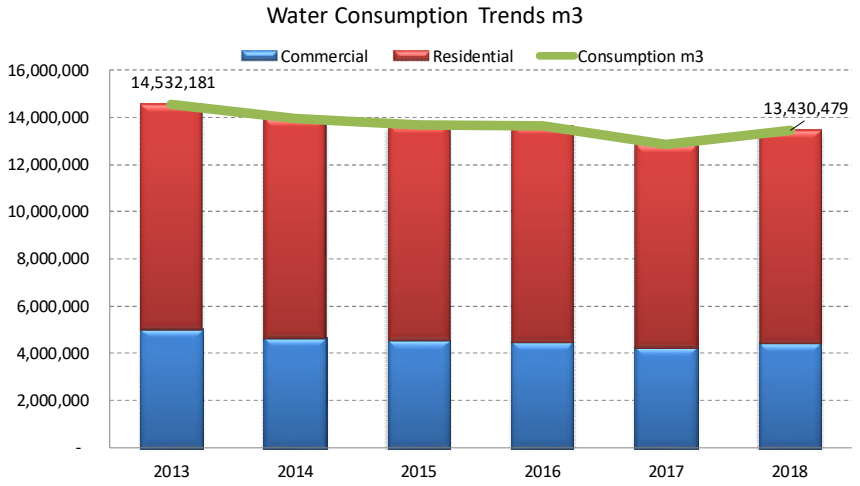
- In addition to water and wastewater mains, the estimated replacement cost of the City's approximately 150 water and wastewater facilities is in the order of $798.1 million, which includes treatment facilities, lift stations, booster stations and storage facilities. An analysis of the remaining useful lives of the City's treatment facilities indicates that the City's immediate investment need for water and wastewater facilities that are beyond their useful lives is in the order of $201.3 million, with an additional $182.9 million required over the next ten years.

### *Consumption Trends*

Consistent with the experiences in other Ontario municipalities, water consumption has been trending down in both the residential and the Industrial, Commercial and Institutional (ICI) sectors. While weather conditions creates some fluctuation, the overall trend in Greater Sudbury reflects a downward trend in residential and ICI consumption for the past 10 years. The following summarizes the key findings and observations:



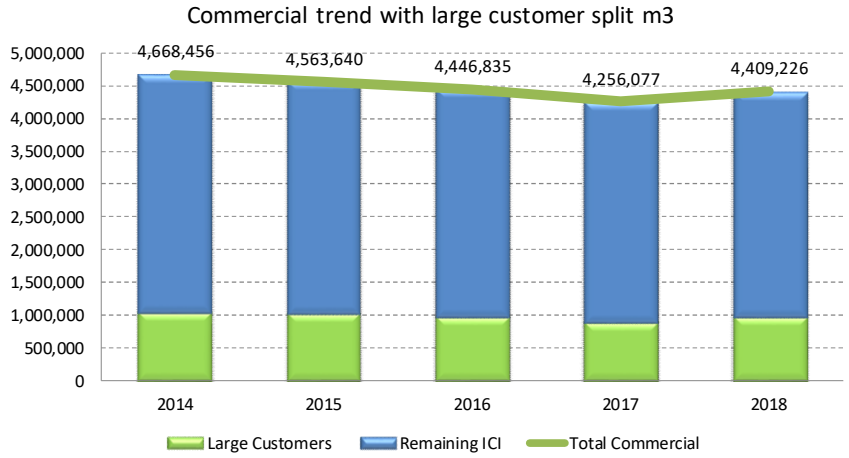

- Average annual reduction in total billable consumption was approximately 2% over the past 10 years.
- At the time that the last financial plan was undertaken in 2011, the consumption forecast assumed an annual reduction of approximately 0.3%. The forecasted consumption in the last study in 2018 was 14.55 million $m^3$ compared to the actual of $13.43 million $m^3$.
- Over the past 5 years, the Residential/ICI consumption percentage of the total was approximately two thirds Residential and one third ICI.
- Average annual residential consumption declined as a result of the replacement of inefficient toilets, showerheads to low flow fixtures, conservation efforts, the increase in the per unit cost of service and a lower per unit consumption for newly constructed dwellings.




- Over the past 5 years, the residential consumption declined annually by 1%; ICI declined by 2.4% and the total consumption declined by 1.5%.

- ICI consumption decreased as a result of changes in processes, the implementation of conservation initiatives and contract and business retraction in some cases.

- An analysis of the top 10 large volume customers and the total ICI customers reflects a downward trend from 2014-2017.




- The 10 largest water volume customers account for approximately 22% of the total ICI consumption.

- Because many of the costs of operating water and wastewater plants are fixed, a decline in water consumption does not result in a commensurate reduction in the cost of service. As such, reductions in consumption impact the water and wastewater rates and must be factored into future rate calculations. This was the approach that was used in the development of the 10 year financial forecast.

- The 2019 assumed water consumption is approximately equal to the 5 year average. This was used to calculate the 2019 rates (average 13.5 million $m^3$).

- The financial forecast incorporates assumptions with respect to future growth in the number of customers, their consumption and additional anticipated conservation efforts that may impact future rates.

### *Ratepayer Affordability*

- Ratepayer affordability has also been taken into consideration by developing a phase-in strategy to gradually move toward a fully funded asset management financial plan to address the annual underfunding of the capital program.

- An analysis of the 2018 water and wastewater cost of service in Greater Sudbury was undertaken against other Northern municipalities and in relation to household income. As shown below, the cost of water/ww service for a typical residential customer consuming 200 $m^3$ is slightly higher than other Northern municipalities, however in relation to average household income the cost in Greater Sudbury is at the median.

| Residential 200 m3 | 2018 Water/WW Costs | 2018 Household Income | Water/WW Costs as a % of Income |
|---|---|---|---|
| Timmins | $ 876 | $ 96,423 | 0.9% |
| Sault Ste. Marie | $ 779 | $ 82,955 | 0.9% |
| Greater Sudbury | $ 1,189 | $ 97,604 | 1.2% |
| North Bay | $ 1,063 | $ 82,330 | 1.3% |
| Thunder Bay | $ 1,151 | $ 87,350 | 1.3% |

Source: 2018 rate by-laws, 2018 household income Manifold Data Mining.

- It should be noted that all of the above noted municipalities have identified funding and infrastructure deficits and each municipality may be at a different stage in addressing their respective issues which will impact the future cost of service.

- Differences in the cost of service is also impacted by the overall age of the system, the condition of the infrastructure, the complexity of the system and the strategies used to address infrastructure gaps.

### *Debt Comparison*

- A comparison of the debt outstanding per capita in Greater Sudbury reflects lower levels of debt than the majority of Northern of Ontario municipalities, reflecting future flexibility should debt be required to fund large projects. The following table summarizes the results.

| Water/WW Debt Outstanding Per Capita | |
|---|---|
| Sault Ste. Marie | $ 88 |
| Greater Sudbury | $ 268 |
| North Bay | $ 323 |
| Timmins | $ 912 |
| Thunder Bay | $ 908 |

Source: 2018 BMA Study

## *Forecast Assumptions*

## *Water and Wastewater Financial Plan*

### *Reserves and Revenue Stability Strategies*

A Reserve is a financial provision or amount that is designated for a future purpose that extends beyond the current fiscal year. While its balance may vary over the course of a year, the Reserve is carried forward from one fiscal year to the next to facilitate multi-year financial planning. Reserves can be established to meet specific liabilities such as the replacement/acquisition of capital assets or to protect against known risks or unforeseen circumstances that may create financial difficulties.

The purpose for maintaining reserves includes:

- To provide for rate stabilization
- To provide financing for one-time or short term requirements
- To make provisions for replacements/renewals/acquisitions of assets/infrastructure that are currently being consumed
- To avoid spikes in funding requirements for large capital projects by reducing their reliance on long-term debt borrowings
- To provide a source of internal financing
- To ensure adequate and sustainable cash flows
- To provide **financial sustainability**

- The following principles were used in preparing the Financial Plan:

*Reserve and Revenue Stability Strategies*

- *The City will maintain all infrastructure in a state of good repair by implementing life cycle costing and providing adequate annual contributions to the replacement reserves to fund the future rehabilitation/replacement of assets.*
- *The City will target setting aside a contribution to the Water and Wastewater Reserve based on average annual spending requirements in accordance with the Master Plan for the timely replacement of assets.*
- *A phase-in strategy has been implemented to gradually move the City toward capital reserve contributions that will support financial sustainability.*

### *Debt Financing Strategies*

As stated in the City's Asset Management Plan which was prepared in November 2016 (prepared by KPMG), historically, the City has not relied on borrowings as a means of funding infrastructure investments, with the City adopting a pay-as-you go strategy for most capital expenditures. On an ongoing basis, the City may wish to consider the use of debt for additional infrastructure investments, conditional upon one or more of the following:

- The infrastructure investment will provide a stream of non-taxation revenues that can be used to fund some or all of the associated debt servicing costs; and/or
- The City requires debt financing to fund its portion of infrastructure projects that are cost shared with senior government; and/or
- The infrastructure investment is unavoidable as a result of regulatory changes or concerns over public health and safety and cannot be funded through other means; and
- The associated debt servicing costs would not jeopardize the City's financial sustainability or result in the City exceeding its annual debt repayment limit.

The Long Term Financial Plan recommends that as debt charges decline, due to retirement of debt, savings will be applied to accelerate achievement of full life cycle costing for City infrastructure. This strategy has been incorporated into the Water/WW Financial Plan.

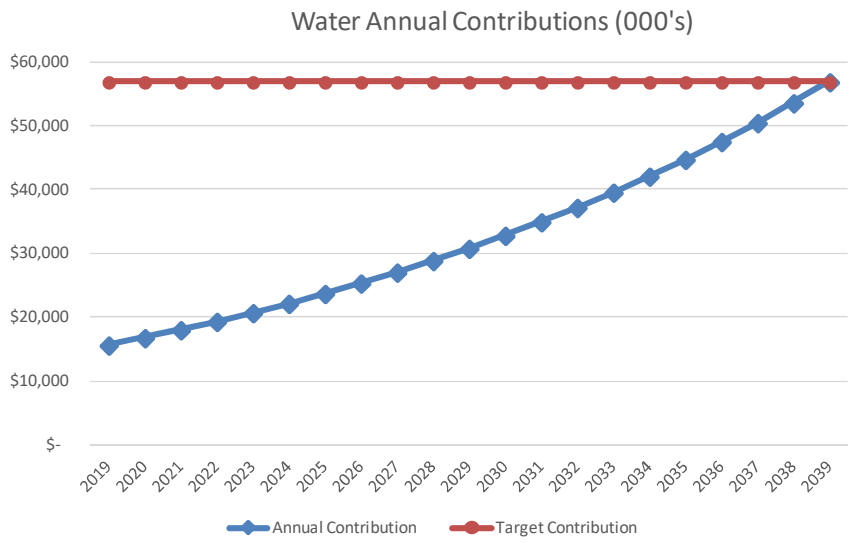
- As will be shown later in the report, there is no debt reduction over the forecast period in wastewater, based on the existing debt that has already been issued.
- Water debt declines over the forecast period and these reductions have been redirected to support full lifecycle costing.
- The following principle was used in preparing the Financial Plan:

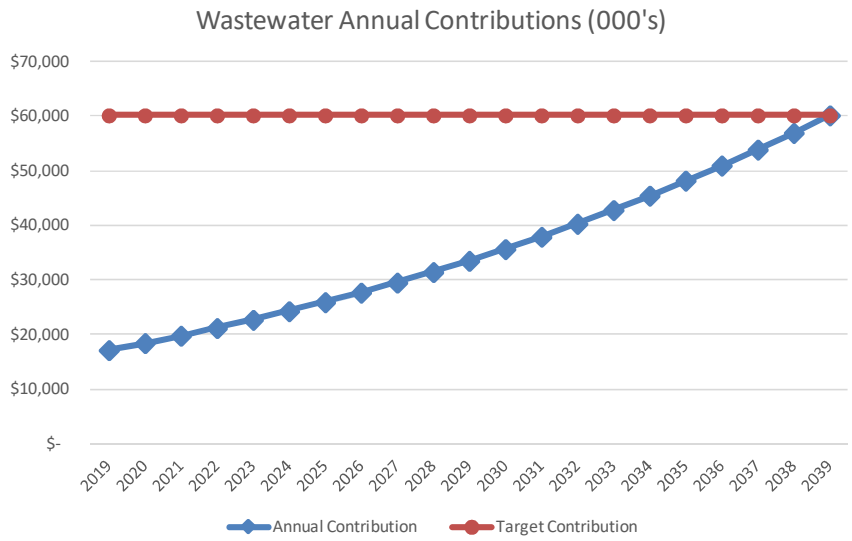
***Debt Financing Strategies***

- *As debt charges decline due to retirement of debt, the City will apply the savings to accelerate achievement of full life cycle costing for City infrastructure.*

### *Asset Replacement Strategies*

- The strategy in the Financial Plan is to gradually increase contributions to the reserves to develop a financially sustainable base upon which assets and infrastructure can be replaced on a timely basis.
- The graphs reflect the phase-in strategy for capital contributions to move toward the recommended annual replacement funding requirements from user fee revenues. The approach, as will be shown later in the report is to smooth the impact on rates over time to avoid spikes in rates.
- As shown in the first graph, the average annual capital contributions required to finance the capital requirements in water is $56.9 million annually. The capital contributions in 2019 were $15.6 million (capital and debt principal payments). By 2039, the annual contribution will be equal to the required annual contributions, as identified in the Master Plan.
- As shown in the second graph, the average annual capital contributions required to finance the capital requirements in wastewater is $60.2 million annually. The capital contributions in 2019 were $17.2 million (capital and debt principal payments). By 2039, the annual contribution will be equal to the required annual contributions, as identified in the Master Plan.
- Appendix A provides alternative options including closing the gap in 10, 15 and 25 years. Based on affordability, a 20 year plan is recommended.



## *Summary of Financial Environment and Assumptions*

## *(Challenges, Risks and Opportunities)*

## *Water and Wastewater Financial Plan*

***Summary of Financial Environment and Assumptions***

The following summarizes the key challenges, risks and opportunities to long-term financial sustainability which have been addressed as part of the Financial Plan:

- ***Increasing Costs, Many of Which are Uncontrollable***—A number of the City's water costs are expected to increase at a pace faster than inflation. For example, insurance costs, electricity, purchase of water and third party contract costs are forecast to increase at rates above general CPI. Assumptions have been made to reflect the impact of these increased costs on future operating budgets. The following provides the key assumptions in the Forecast:
    - ***Expenditure Increases***—3% annually.
    - ***Rate Revenue Requirements***—Water rate revenue requirement increases of 4.8% annually and wastewater increases of 4.6% annually from 2020 onward.
    - ***Other Revenues***— 2% annually
- ***Asset Renewal/Replacement***—Like most municipalities in Canada, Greater Sudbury faces a continued struggle to renew and replace aging water capital assets. The City has incorporated into it's 10 year plan, a gradual increase in the contributions to support financial sustainability.
- ***Meter Change Out***—The reductions in the consumption have placed pressures on the rates as many of the costs are fixed. There are circumstances where meters may slow and/or malfunction which requires a meter replacement program to ensure all billable water consumed is captured. In April 2018, City Council approved the issuance of a Request for Proposal to select an implementation partner that will supply hardware, software and related expertise to establish an Automated Meter Reading (AMR)/Advance Metering Infrastructure (AMI). This provides a number of customer benefits including improvements in customer service through the ability to provide accurate and instant consumption information to the customer, on-line access to water accounts, alerts to customers of abnormal water consumption, and efficient response to customers regarding water consumption. From an operational perspective the program will:
    - Improve revenue stability
    - Address meters that have slowed or are inaccurate
    - Provide real time data and analysis for staff
    - Provide rapid response to stopped meters
    - Improve Water Distribution System Operation – new system will enhance the City's ability to manage water losses from City water distribution systems by enabling district metering and leak detection programs, and dynamic water balance calculations
    - Improve water conservation

- ***Regulatory and Legislative Environment—***Municipalities across Ontario have consistently identified legislative and regulatory changes and requirements as a major factor driving the cost of service over the past 10 years and will continue to be a factor well into the future. Statutes and associated regulations that dictate service levels include:
  - Municipal Act;
  - Clean Water Act;
  - Water Opportunities Act;
  - Ontario Water Resources Act;
  - Safe Drinking Water Act (SDWA);
  - Sustainable Water and Sewage Systems Act; and
  - PSAB 3150, Tangible Capital Assets Reporting

- ***Revenue Challenges Related to Unpredictable Consumption—*** Billable consumption fluctuates annually based on weather conditions, growth and business expansions/retractions. Trends have been reviewed and forecast growth has been incorporated into the assumptions.

- ***Capital Requirements***—The City's share of the capital replacements is based on a phased-in approach to reserve contributions. The total capital replacement budget for the 10 year period 2020-2029 is as follows:
  - Water—$230.5 million
  - Wastewater—$232.3 million

- ***Debt Issuance***—Over the course of the forecast period, no new debt is anticipated, adhering to the pay-as-you go approach.

- ***Reserves***—Capital Reserve opening balances for 2019 have been used and excludes committed reserves.

- ***Fire Protection Levy***—Currently, the City funds a portion of the fire protection costs from the general levy. Most other municipalities surveyed recover these costs from the water rates. Charging on water rates provides the ability to recover public fire protection costs from entities that currently have tax free status. Council removed the fire protection costs from the operating levy to the water rates in 2019.

- ***Useful Life***—Useful life of the assets is based on Master Plan and Asset Management Plan with respect to the condition and remaining useful life and future amortization of assets as follows:

| | Years |
|---|---|
| Water | |
| linear | 40-80 |
| plants & facilities | 30 |
| studies | 5 |
| | |
| WW | |
| linear | 40-80 |
| plants & facilities | 30 |
| studies | 5 |

- ***Consumption***—Water and wastewater operations are very capital intensive where a large percentage of the costs are related to capital investment. For example, reductions in consumption do not have a linear relationship with the cost of service. The following assumptions were used to estimate water consumption:
    - Start with the 2018 assumption (which uses a 5 year average of the historical consumption);
    - Residential existing customer annual consumption reduction of 0.5% and residential new growth of 150 new customers annually;
    - ICI annual consumption reduction of 0.5%; and
    - Total consumption reduction (Residential and ICI of 0.3% annually

## *Forecast*

## *Water and Wastewater Financial Plan*

## *Summary of Water Operating Budget Forecast*

The City's objective in establishing the Water rates is to avoid large fluctuations from year to year and to ensure that rates are set at a level to adequately cover current operating costs, maintain and repair the City's existing asset base and replace assets where appropriate. The following table reflects the water operating budget forecast.

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Revenues** | | | | | | | | | | | |
| Rate and Fixed Revenues | $ 37,964 | $ 39,795 | $ 41,715 | $ 43,727 | $ 45,836 | $ 48,047 | $ 50,365 | $ 52,795 | $ 55,342 | $ 58,011 | $ 60,810 |
| Fire protection levy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Other revenues | $ 1,162 | $ 1,185 | $ 1,209 | $ 1,233 | $ 1,257 | $ 1,283 | $ 1,308 | $ 1,334 | $ 1,361 | $ 1,388 | $ 1,416 |
| **Total revenues** | **$ 39,125** | **$ 40,980** | **$ 42,923** | **$ 44,960** | **$ 47,094** | **$ 49,330** | **$ 51,673** | **$ 54,129** | **$ 56,703** | **$ 59,400** | **$ 62,226** |
| **Operating Expenses** | | | | | | | | | | | |
| Salaries & Benefits | $ 7,821 | $ 8,056 | $ 8,297 | $ 8,546 | $ 8,803 | $ 9,067 | $ 9,339 | $ 9,619 | $ 9,907 | $ 10,205 | $ 10,511 |
| Materials - Operating Expenses | $ 3,004 | $ 3,094 | $ 3,187 | $ 3,282 | $ 3,381 | $ 3,482 | $ 3,587 | $ 3,694 | $ 3,805 | $ 3,919 | $ 4,037 |
| Energy Costs | $ 2,005 | $ 2,065 | $ 2,127 | $ 2,190 | $ 2,256 | $ 2,324 | $ 2,394 | $ 2,465 | $ 2,539 | $ 2,615 | $ 2,694 |
| Rent and Financial Expenses | $ 38 | $ 39 | $ 40 | $ 41 | $ 42 | $ 44 | $ 45 | $ 46 | $ 48 | $ 49 | $ 51 |
| Purchased/Contract Services | $ 6,139 | $ 6,323 | $ 6,513 | $ 6,708 | $ 6,909 | $ 7,117 | $ 7,330 | $ 7,550 | $ 7,777 | $ 8,010 | $ 8,250 |
| Internal Charges | $ 4,387 | $ 4,518 | $ 4,654 | $ 4,794 | $ 4,937 | $ 5,086 | $ 5,238 | $ 5,395 | $ 5,557 | $ 5,724 | $ 5,896 |
| **Total Operating expenses** | **$ 23,393** | **$ 24,095** | **$ 24,817** | **$ 25,562** | **$ 26,329** | **$ 27,119** | **$ 27,932** | **$ 28,770** | **$ 29,633** | **$ 30,522** | **$ 31,438** |
| | | | | | | | | | | | |
| **Debt Charges & Capital** | | | | | | | | | | | |
| Debt Charges - Interest Expenses | $ 128 | $ 115 | $ 102 | $ 88 | $ 74 | $ 58 | $ 40 | $ 33 | $ 25 | $ 17 | $ 8 |
| Debt Charges - Principal Expenses | $ 226 | $ 238 | $ 251 | $ 265 | $ 280 | $ 295 | $ 177 | $ 140 | $ 148 | $ 156 | $ 150 |
| Capital Contributions | $ 15,379 | $ 16,532 | $ 17,752 | $ 19,044 | $ 20,411 | $ 21,858 | $ 23,524 | $ 25,187 | $ 26,897 | $ 28,705 | $ 30,630 |
| **Total Debt & Capital Expensese** | **$ 15,732** | **$ 16,885** | **$ 18,106** | **$ 19,398** | **$ 20,765** | **$ 22,211** | **$ 23,741** | **$ 25,359** | **$ 27,069** | **$ 28,877** | **$ 30,788** |
| | | | | | | | | | | | |
| **Total Expenses** | **$ 39,125** | **$ 40,980** | **$ 42,923** | **$ 44,960** | **$ 47,094** | **$ 49,330** | **$ 51,673** | **$ 54,129** | **$ 56,703** | **$ 59,400** | **$ 62,226** |
| | | | | | | | | | | | |
| **Net Operating Budget** | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **% Change in Rate Revenue Requirements** | | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** | **4.8%** |

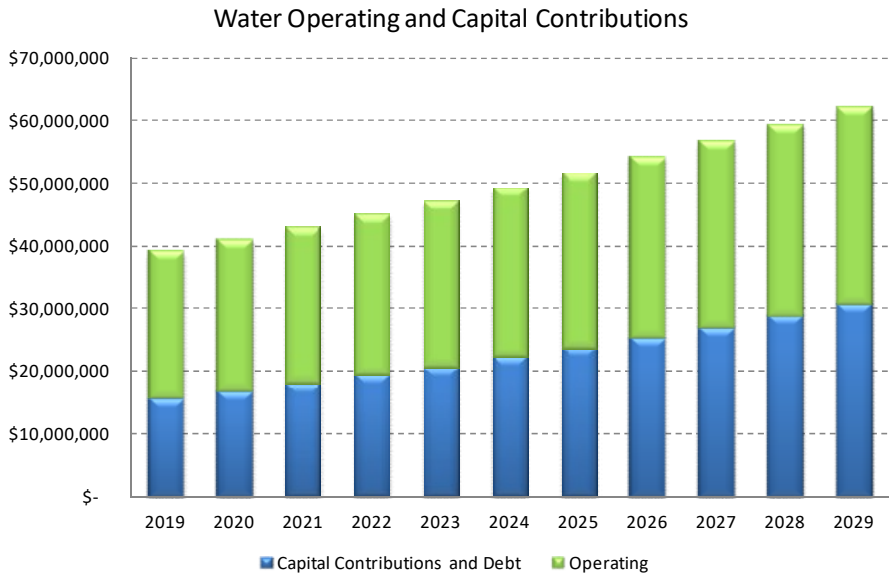
## *Summary of Wastewater Operating Budget Forecast*

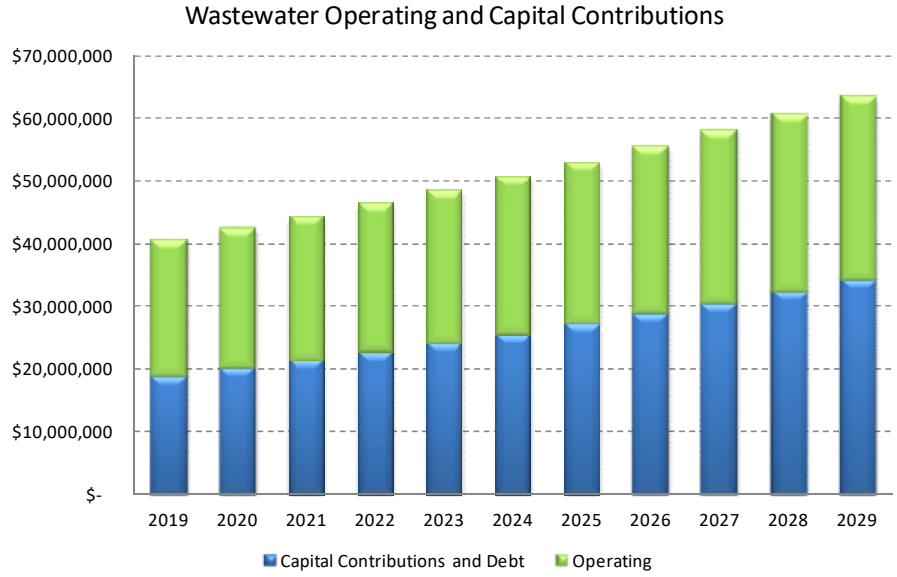
The City's objective in establishing the Wastewater rates is to avoid large fluctuations from year to year and to ensure that rates are set at a level to adequately cover current operating costs, maintain and repair the City's existing asset base and replace assets where appropriate. The following table reflects the wastewater operating budget forecast.

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Revenues** | | | | | | | | | | | |
| Rate and Fixed Revenues | $ 39,897 | $ 41,738 | $ 43,664 | $ 45,679 | $ 47,787 | $ 49,992 | $ 52,299 | $ 54,712 | $ 57,237 | $ 59,878 | $ 62,641 |
| Other revenues | $ 716 | $ 730 | $ 745 | $ 760 | $ 775 | $ 791 | $ 806 | $ 822 | $ 839 | $ 856 | $ 873 |
| **Total revenues** | **$ 40,613** | **$ 42,468** | **$ 44,409** | **$ 46,439** | **$ 48,562** | **$ 50,782** | **$ 53,105** | **$ 55,534** | **$ 58,075** | **$ 60,733** | **$ 63,514** |
| **Operating Expenses** | | | | | | | | | | | |
| Salaries & Benefits | $ 7,236 | $ 7,453 | $ 7,676 | $ 7,907 | $ 8,144 | $ 8,388 | $ 8,640 | $ 8,899 | $ 9,166 | $ 9,441 | $ 9,724 |
| Materials - Operating Expenses | $ 1,950 | $ 2,008 | $ 2,068 | $ 2,130 | $ 2,194 | $ 2,260 | $ 2,328 | $ 2,398 | $ 2,470 | $ 2,544 | $ 2,620 |
| Energy Costs | $ 2,535 | $ 2,611 | $ 2,689 | $ 2,770 | $ 2,853 | $ 2,939 | $ 3,027 | $ 3,118 | $ 3,211 | $ 3,308 | $ 3,407 |
| Other Expenses | $ 15 | $ 15 | $ 16 | $ 16 | $ 17 | $ 17 | $ 18 | $ 18 | $ 19 | $ 20 | $ 20 |
| Purchased/Contract Services | $ 5,805 | $ 5,979 | $ 6,159 | $ 6,344 | $ 6,534 | $ 6,730 | $ 6,932 | $ 7,140 | $ 7,354 | $ 7,575 | $ 7,802 |
| Internal Recoveries | $ 4,202 | $ 4,328 | $ 4,458 | $ 4,591 | $ 4,729 | $ 4,871 | $ 5,017 | $ 5,167 | $ 5,323 | $ 5,482 | $ 5,647 |
| **Total Operating expenses** | **$ 21,742** | **$ 22,395** | **$ 23,067** | **$ 23,759** | **$ 24,471** | **$ 25,205** | **$ 25,962** | **$ 26,740** | **$ 27,543** | **$ 28,369** | **$ 29,220** |
| **Debt Charges & Capital** | | | | | | | | | | | |
| Debt Charges - Interest Expenses | $ 1,668 | $ 1,596 | $ 1,520 | $ 1,440 | $ 1,357 | $ 1,270 | $ 1,178 | $ 1,083 | $ 983 | $ 878 | $ 768 |
| Debt Charges - Principal Expenses | $ 1,788 | $ 1,861 | $ 1,937 | $ 2,016 | $ 2,100 | $ 2,187 | $ 2,278 | $ 2,373 | $ 2,473 | $ 2,578 | $ 2,688 |
| Capital Contributions | $ 15,414 | $ 16,617 | $ 17,886 | $ 19,224 | $ 20,634 | $ 22,121 | $ 23,687 | $ 25,338 | $ 27,077 | $ 28,908 | $ 30,837 |
| **Total Debt & Capital Expensese** | **$ 18,870** | **$ 20,074** | **$ 21,342** | **$ 22,680** | **$ 24,090** | **$ 25,577** | **$ 27,143** | **$ 28,794** | **$ 30,533** | **$ 32,364** | **$ 34,294** |
| | | | | | | | | | | | |
| **Total Expenses** | **$ 40,613** | **$ 42,468** | **$ 44,409** | **$ 46,439** | **$ 48,562** | **$ 50,782** | **$ 53,105** | **$ 55,534** | **$ 58,075** | **$ 60,733** | **$ 63,514** |
| | | | | | | | | | | | |
| **Net Operating Budget** | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **% Change in Rate Revenue Requirements** | | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** | **4.6%** |

## *Summary of Water and Wastewater Operating Budget Breakdown*

The following graphs reflect the 10 year forecast for water and wastewater operations, breaking down the costs into operating and capital contributions (includes debt principal repayment and contributions to the capital reserve for replacement of assets).



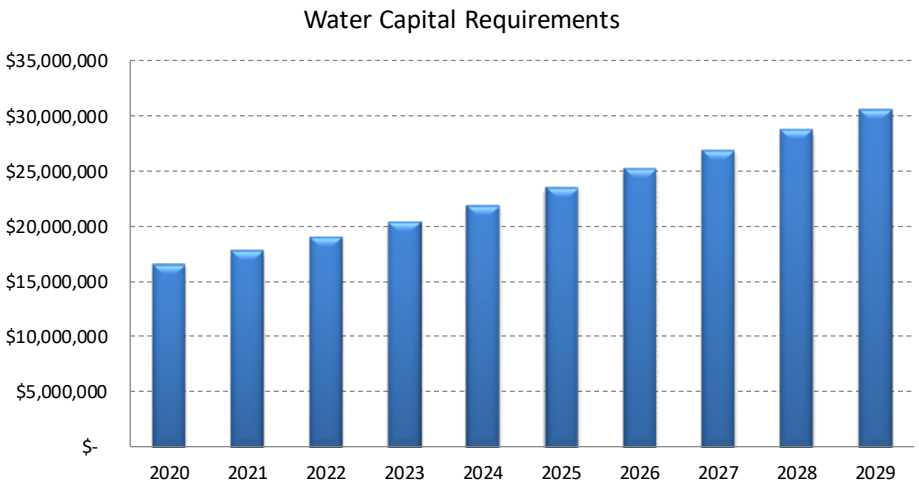




As shown above, the proportion of the operating budget that is to support operating expenditures versus capital changes over time whereby, the gradual increase of capital contributions results in capital being the largest percentage of the total operating budget. For example:

- Water—in 2019, 40% of the water operating budget supported capital replacement, compared with 49% in 2029.
- WW—in 2019, 46% of the water operating budget supported capital replacement, compared with 54% in 2029.

### *Summary of Water Capital Budget Forecast*

The following table summarizes the Capital Budget forecast for the next 10 years and the associated funding source.

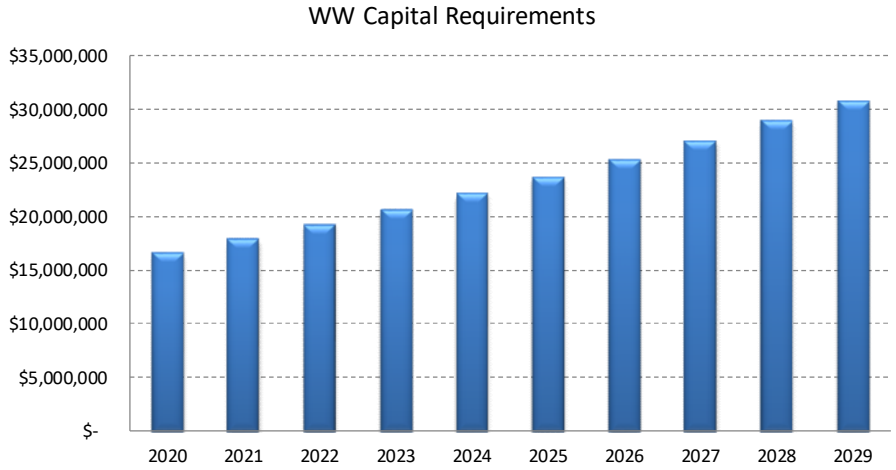



The 10 year capital plan, from 2020-2029 includes:

- $230.5 million is forecast in capital requirements to be funded from the user fees.
- Contributions to capital have been gradually increased over time to smooth rate impacts.
- By year 10 of the plan, the annual contribution to capital replacement is $30.6 million.

### *Summary of Wastewater Capital Budget Forecast*

The following table summarizes the Capital Budget forecast for the next 10 years and the associated funding source.

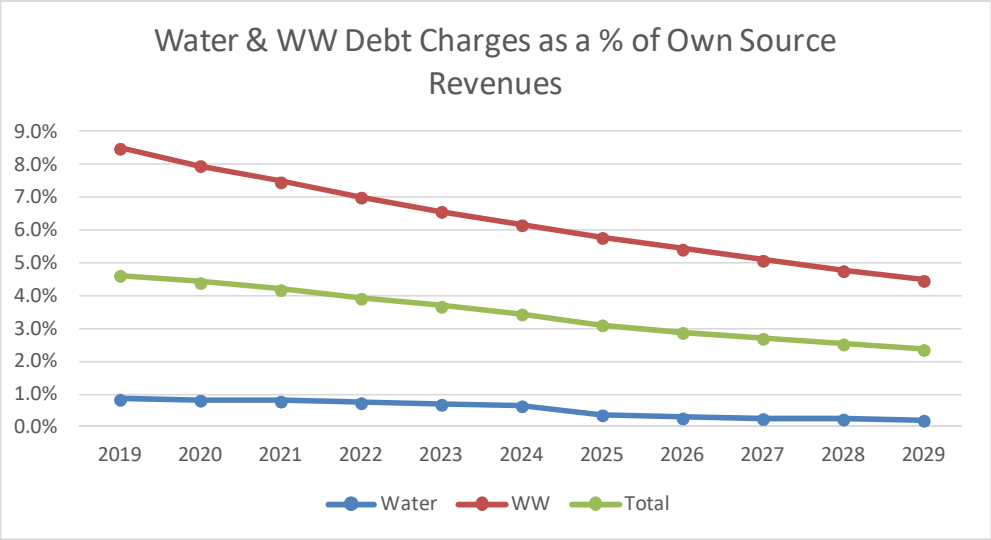


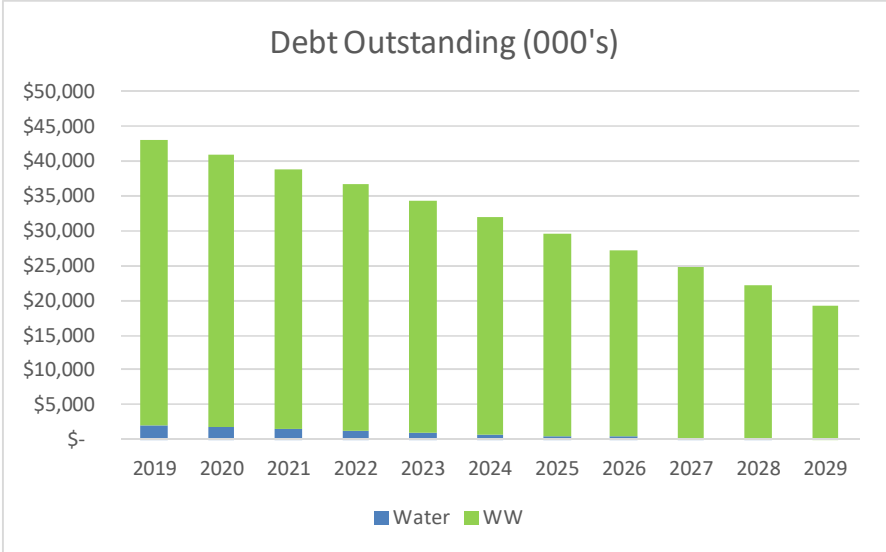

The 10 year capital plan, from 2020-2029 includes:

- $232.3 million is forecast in capital requirements to be funded from the user fees.
- Contributions to capital have been gradually increased over time to smooth rate impacts.
- By year 10 of the plan, the annual contribution to capital replacement is $30.8 million.

### *Debt Forecast*

The following graph provides a summary of the debt charges as a percentage of own source revenues and the total debt outstanding for water and wastewater over the next 10 years.



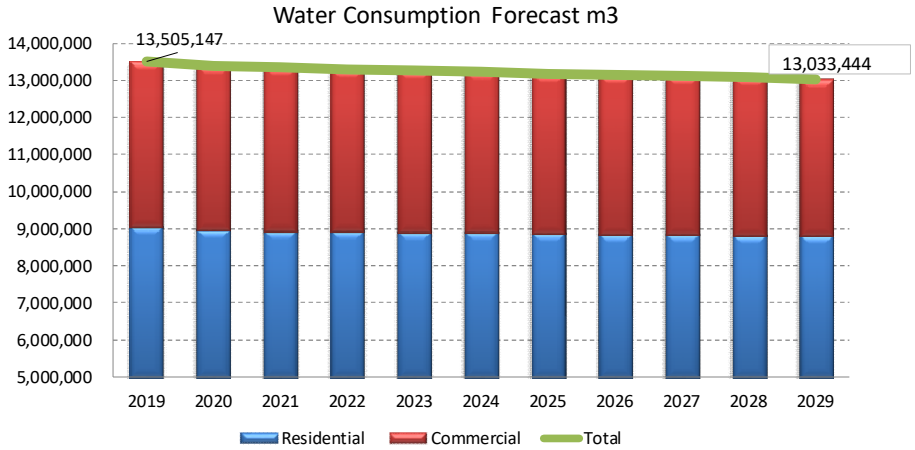




As shown above, debt charges are a not a significant component of the financing strategy due to a pay-as-you-go approach for funding the replacement of capital assets. Debt charges as a percentage own source revenues gradually reduce over the forecast as no new debt is forecast to be issued over the next 10 years. Total debt charges as a percentage of own source revenues was 4.6% in 2019 and reduces to 2.4% in 2029.

Debt outstanding for water and wastewater are also shown above. By 2029, the combined water/ww debt outstanding is $19.3 million compared with the 2019 level of $43 million. Should a large project be required before there are sufficient funds available in reserves, the City is well positioned to issue debt based on the existing low levels of debt.

## *Water Consumption Forecast*

The following graph provides a summary of the water consumption forecast in 2019 to establish rates and over the 10 year forecast period:




- Despite modest growth, the overall declining trend in water consumption is anticipated to continue for the next 10 years.
- The assumption for continued reduction in consumption is expected to continue although to a lesser extent than has occurred over the past 10 years as opportunities to realize further conservation savings will eventually reduce.
- New annual net anticipated reduction in water consumption is in the range of 0.3%. With much of the system costs fixed, this reduction in consumption will increase the water rates

## *Summary of Forecast Number of Meters*

- The following table summarizes the number of water meters and the anticipated growth over the forecast period:

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/8" | 46,182 | 46,360 | 46,539 | 46,718 | 46,896 | 47,075 | 47,254 | 47,432 | 47,611 | 47,790 | 47,968 |
| 3/4" | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 | 1,113 |
| 1.5 | 464 | 464 | 464 | 464 | 464 | 464 | 464 | 464 | 464 | 464 | 464 |
| 2 | 468 | 468 | 468 | 468 | 468 | 468 | 468 | 468 | 468 | 468 | 468 |
| 3 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| 4 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 6 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 10 | - | - | - | - | - | - | - | - | - | - | - |
| **Total** | **48,307** | **48,485** | **48,664** | **48,843** | **49,021** | **49,200** | **49,379** | **49,557** | **49,736** | **49,915** | **50,093** |



BMA MANAGEMENT CONSULTING INC.

### *Projected Water and Wastewater Rates*

Based on the assumptions in terms of the rate revenue requirement, consumption and growth, the following provides a summary of the forecast rates over the forecast period for a residential customer consuming 200 $m^3$ annually. The table also summarizes the percentage surcharge for wastewater.

| 200 $m^3$ residential impact - 5/8" | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Water | | WW | Cost of service | | | |
| Year | Annual Consumption m3 | Fixed Monthly | Volumetric | WW Surcharge | Water | WW | Total | Perecentage Increase From Prior Year |
| 2019 | 200 | $ 21.46 | $ 1.728 | 111.8% | $ 603 | $ 674 | $ 1,277 | |
| 2020 | 200 | $ 22.17 | $ 1.835 | 111.4% | $ 633 | $ 705 | $ 1,338 | 4.8% |
| 2021 | 200 | $ 23.16 | $ 1.930 | 111.3% | $ 664 | $ 739 | $ 1,403 | 4.8% |
| 2022 | 200 | $ 24.21 | $ 2.029 | 111.2% | $ 696 | $ 775 | $ 1,471 | 4.8% |
| 2023 | 200 | $ 25.30 | $ 2.133 | 111.2% | $ 730 | $ 812 | $ 1,542 | 4.8% |
| 2024 | 200 | $ 26.43 | $ 2.243 | 111.1% | $ 766 | $ 851 | $ 1,616 | 4.8% |
| 2025 | 200 | $ 27.62 | $ 2.358 | 111.0% | $ 803 | $ 891 | $ 1,694 | 4.8% |
| 2026 | 200 | $ 28.87 | $ 2.479 | 111.0% | $ 842 | $ 934 | $ 1,776 | 4.8% |
| 2027 | 200 | $ 30.17 | $ 2.606 | 110.8% | $ 883 | $ 979 | $ 1,862 | 4.8% |
| 2028 | 200 | $ 31.53 | $ 2.740 | 110.8% | $ 926 | $ 1,026 | $ 1,952 | 4.8% |
| 2029 | 200 | $ 32.95 | $ 2.880 | 110.7% | $ 971 | $ 1,075 | $ 2,047 | 4.8% |

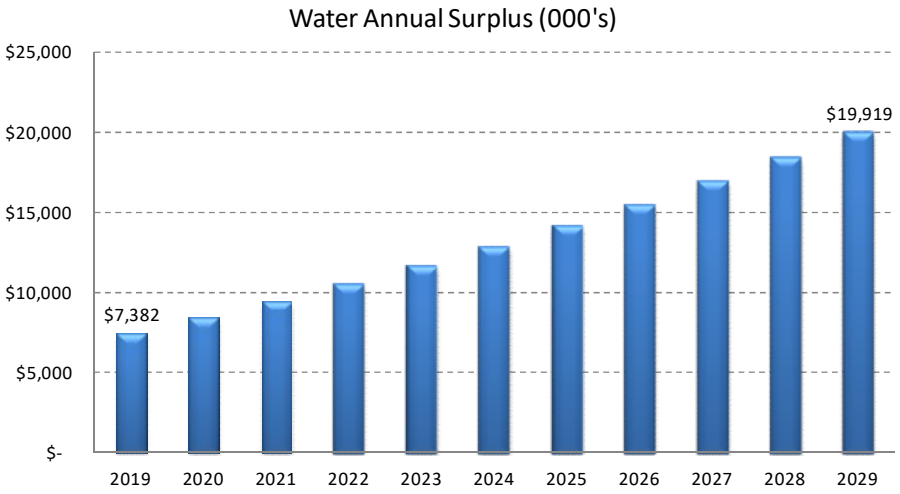
On a blended average annual basis, the cost of water/ww service for a typical customer is approximately 4.8%.

## *Reporting Requirements*
## *O. Reg 453/07*

## *Water Financial Plan—O.Reg. 453/07*

The Financial Plan has been prepared in accordance with the regulation (O.Reg. 453/07) made under the Safe Drinking Water Act. The Financial Plan regulation requires that the plans be updated every five years along with the request for the renewal of the drinking water licence. This ongoing update will assist in revisiting the assumptions made to develop the operating and funding plans as well as reassessing the needs for capital renewal and major maintenance expenses.

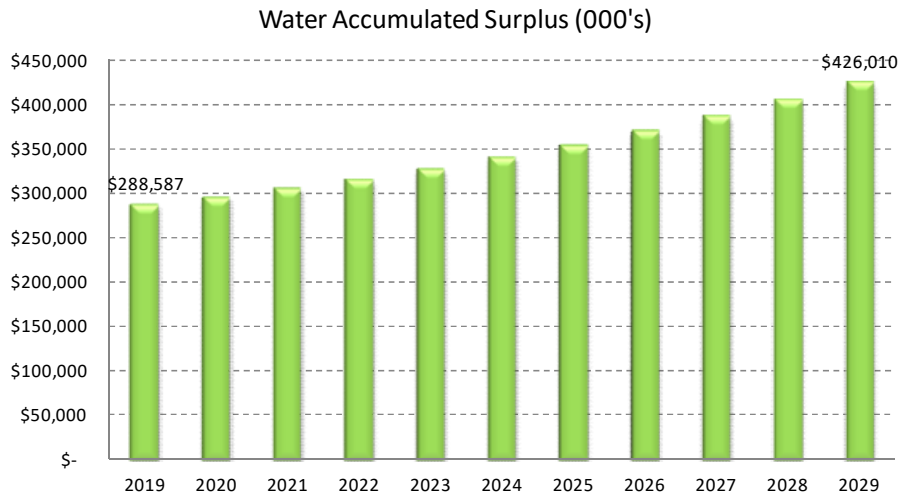
- ***Statement of Financial Operations—***This statement summarizes the revenues and expenditures. The expenditures include ongoing operating costs plus asset amortization. This statement indicates that the system and its asset base are projected to be maintained with funds being available each year for future capital renewal or major maintenance. As shown in the statement of financial operations and in the graph below, the City is generating excess revenues over expenses including amortization for water, throughout the forecast period.




- ***Cash Receipts or Gross Cash Payments (Cash Flows) —***The cash flow statement summarizes how the water system is expected to generate and utilize cash resources. The transactions that generate and use cash include the projection of cash to be received from revenues, cash to be used for operating expenditures and financing charges, cash projected to be used to acquire capital assets and projected financial transactions that are the proceeds from debt or debt principal repayment. Cash balances are positive throughout the forecast period, as reflected in the Financial Statements.

- ***Net Financial Assets***—An important feature of a water system is its net financial assets. A positive number indicates that the system has the resources to deal with future capital and other needs. A negative number indicates that past capital and other investments must be financed from future revenues. Water net financial assets are in a positive position throughout the forecast. No debt was anticipated throughout the term.

- ***Accumulated Surplus***—Another financial indicator that is reflected in the financial position statement is the accumulated surplus. This indicator represents cash on hand plus the net book value of tangible capital assets less debt. The accumulated surplus is forecast to increase from 2019 to 2029, as shown below and in the Statement of Financial Position.




- ***Tangible Capital Assets (Net Book Value)*** - Water systems have a great deal of resources tied up in tangible capital assets and managing these assets is critical to maintaining current and future levels of service. An increase in net book value of tangible capital assets is an indication that assets have been renewed faster than they were used. A decrease in net book value indicates that assets are being used, or amortized, faster than they are renewed. The net book value is projected to increase for water, from $278 million in 2019 to $411 million in 2029.

## *Statement of Financial Operations—Water*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Revenues** | | | | | | | | | | | |
| Rate and Fixed Revenues | $ 37,964 | $ 39,795 | $ 41,715 | $ 43,727 | $ 45,836 | $ 48,047 | $ 50,365 | $ 52,795 | $ 55,342 | $ 58,011 | $ 60,810 |
| Fire protection levy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Other revenues | $ 1,162 | $ 1,185 | $ 1,209 | $ 1,233 | $ 1,257 | $ 1,283 | $ 1,308 | $ 1,334 | $ 1,361 | $ 1,388 | $ 1,416 |
| Interest Earnings | $ 241 | $ 246 | $ 251 | $ 256 | $ 261 | $ 266 | $ 272 | $ 277 | $ 283 | $ 288 | $ 294 |
| **Total revenues** | **$ 39,366** | **$ 41,226** | **$ 43,174** | **$ 45,216** | **$ 47,355** | **$ 49,596** | **$ 51,945** | **$ 54,406** | **$ 56,985** | **$ 59,688** | **$ 62,520** |
| **Operating Expenses** | | | | | | | | | | | |
| Salaries & Benefits | $ 7,821 | $ 8,056 | $ 8,297 | $ 8,546 | $ 8,803 | $ 9,067 | $ 9,339 | $ 9,619 | $ 9,907 | $ 10,205 | $ 10,511 |
| Materials - Operating Expenses | $ 3,004 | $ 3,094 | $ 3,187 | $ 3,282 | $ 3,381 | $ 3,482 | $ 3,587 | $ 3,694 | $ 3,805 | $ 3,919 | $ 4,037 |
| Energy Costs | $ 2,005 | $ 2,065 | $ 2,127 | $ 2,190 | $ 2,256 | $ 2,324 | $ 2,394 | $ 2,465 | $ 2,539 | $ 2,615 | $ 2,694 |
| Rent and Financial Expenses | $ 38 | $ 39 | $ 40 | $ 41 | $ 42 | $ 44 | $ 45 | $ 46 | $ 48 | $ 49 | $ 51 |
| Purchased/Contract Services | $ 6,139 | $ 6,323 | $ 6,513 | $ 6,708 | $ 6,909 | $ 7,117 | $ 7,330 | $ 7,550 | $ 7,777 | $ 8,010 | $ 8,250 |
| Internal Charges | $ 4,387 | $ 4,518 | $ 4,654 | $ 4,794 | $ 4,937 | $ 5,086 | $ 5,238 | $ 5,395 | $ 5,557 | $ 5,724 | $ 5,896 |
| **Total Operating expenses** | **$ 23,393** | **$ 24,095** | **$ 24,817** | **$ 25,562** | **$ 26,329** | **$ 27,119** | **$ 27,932** | **$ 28,770** | **$ 29,633** | **$ 30,522** | **$ 31,438** |
| **Debt Charges** | | | | | | | | | | | |
| Debt Charges - Interest Expenses | $ 128 | $ 115 | $ 102 | $ 88 | $ 74 | $ 58 | $ 40 | $ 33 | $ 25 | $ 17 | $ 8 |
| **Amortization Expense** | | | | | | | | | | | |
| Amortization of tangible capital assets | $ 8,464 | $ 8,656 | $ 8,863 | $ 9,085 | $ 9,323 | $ 9,578 | $ 9,851 | $ 10,145 | $ 10,460 | $ 10,796 | $ 11,155 |
| **Total Expenses** | $ 31,984 | $ 32,866 | $ 33,782 | $ 34,735 | $ 35,725 | $ 36,755 | $ 37,824 | $ 38,948 | $ 40,118 | $ 41,335 | $ 42,601 |
| | | | | | | | | | | | |
| Annual Surplus/Deficit | $ 7,382 | $ 8,360 | $ 9,392 | $ 10,481 | $ 11,630 | $ 12,841 | $ 14,121 | $ 15,459 | $ 16,867 | $ 18,353 | $ 19,919 |
| | | | | | | | | | | | |

## *Statement of Cash Flow/Cash Receipts—Water*

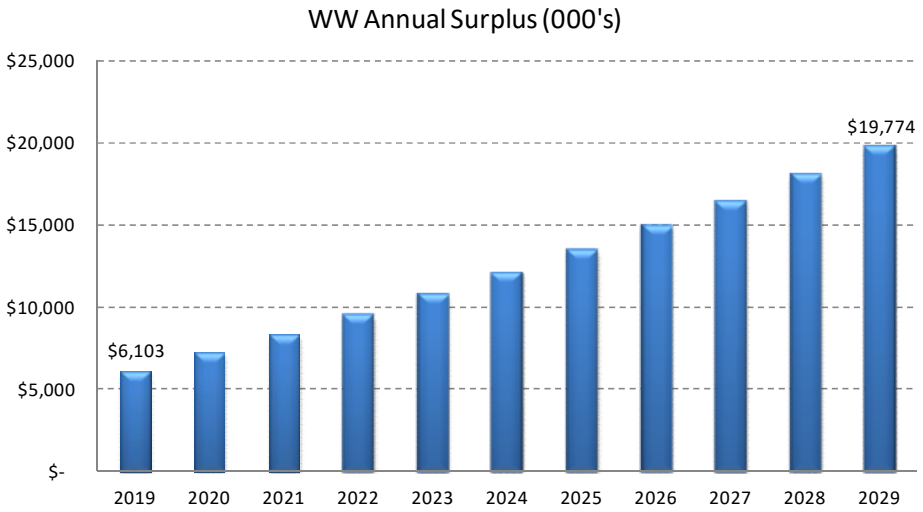
| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Total Revenues** | $ 39,366 | $ 41,226 | $ 43,174 | $ 45,216 | $ 47,355 | $ 49,596 | $ 51,945 | $ 54,406 | $ 56,985 | $ 59,688 | $ 62,520 |
| **Cash Paid For** | | | | | | | | | | | |
| Operating Costs | $ 23,393 | $ 24,095 | $ 24,817 | $ 25,562 | $ 26,329 | $ 27,119 | $ 27,932 | $ 28,770 | $ 29,633 | $ 30,522 | $ 31,438 |
| Debt Repayment - Debt Interest | $ 128 | $ 115 | $ 102 | $ 88 | $ 74 | $ 58 | $ 40 | $ 33 | $ 25 | $ 17 | $ 8 |
| **Cash Provided from Operating Transactions** | $ 15,846 | $ 17,016 | $ 18,255 | $ 19,565 | $ 20,952 | $ 22,419 | $ 23,972 | $ 25,604 | $ 27,327 | $ 29,149 | $ 31,074 |
| **Capital Transactions** | | | | | | | | | | | |
| Acquisition of TCA | $ 15,379 | $ 16,532 | $ 17,752 | $ 19,044 | $ 20,411 | $ 21,858 | $ 23,524 | $ 25,187 | $ 26,897 | $ 28,705 | $ 30,630 |
| **Finance Transactions** | | | | | | | | | | | |
| Proceeds from Debt Issuance | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Proceeds from Grants and Subsidies | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Debt Repayment Principal | $ 226 | $ 238 | $ 251 | $ 265 | $ 280 | $ 295 | $ 177 | $ 140 | $ 148 | $ 156 | $ 150 |
| Increase/(Descrease) in Cash Equivalents | $ 241 | $ 246 | $ 251 | $ 256 | $ 261 | $ 266 | $ 272 | $ 277 | $ 283 | $ 288 | $ 294 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Beginning Balance | $ 12,064 | $ 12,306 | $ 12,552 | $ 12,803 | $ 13,059 | $ 13,320 | $ 13,587 | $ 13,858 | $ 14,135 | $ 14,418 | $ 14,707 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Ending Balance | $ 12,306 | $ 12,552 | $ 12,803 | $ 13,059 | $ 13,320 | $ 13,587 | $ 13,858 | $ 14,135 | $ 14,418 | $ 14,707 | $ 15,001 |

## *Statement of Financial Position—Water*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Financial Assets** | | | | | | | | | | | |
| Cash | $ 12,306 | $ 12,552 | $ 12,803 | $ 13,059 | $ 13,320 | $ 13,587 | $ 13,858 | $ 14,135 | $ 14,418 | $ 14,707 | $ 15,001 |
| **Liabilities** | | | | | | | | | | | |
| Debt - Principal Outstanding | $ 2,099 | $ 1,861 | $ 1,610 | $ 1,345 | $ 1,065 | $ 770 | $ 593 | $ 453 | $ 306 | $ 150 | $ - |
| **Net Financial Assets** | $ 10,206 | $ 10,691 | $ 11,193 | $ 11,714 | $ 12,255 | $ 12,817 | $ 13,265 | $ 13,682 | $ 14,113 | $ 14,557 | $ 15,001 |
| **Non-Financial Assets** | | | | | | | | | | | |
| Tangible Capital Assets | $ 423,146 | $ 438,525 | $ 455,056 | $ 472,808 | $ 491,853 | $ 512,264 | $ 534,122 | $ 557,646 | $ 582,832 | $ 609,729 | $ 638,434 |
| Additions to Tangible Capital Assets | $ 15,379 | $ 16,532 | $ 17,752 | $ 19,044 | $ 20,411 | $ 21,858 | $ 23,524 | $ 25,187 | $ 26,897 | $ 28,705 | $ 30,630 |
| Accumulated Amortization | $ 160,144 | $ 168,800 | $ 177,663 | $ 186,747 | $ 196,070 | $ 205,648 | $ 215,499 | $ 225,644 | $ 236,103 | $ 246,900 | $ 258,054 |
| **Total Non-Financial Assets** | $ 278,381 | $ 286,256 | $ 295,146 | $ 305,105 | $ 316,194 | $ 328,474 | $ 342,147 | $ 357,189 | $ 373,626 | $ 391,535 | $ 411,009 |
| Accumulated Surplus | $ 288,587 | $ 296,947 | $ 306,339 | $ 316,820 | $ 328,449 | $ 341,291 | $ 355,412 | $ 370,871 | $ 387,738 | $ 406,091 | $ 426,010 |
| Cash as a % of Non-Financial Assets | 4.4% | 4.4% | 4.3% | 4.3% | 4.2% | 4.1% | 4.1% | 4.0% | 3.9% | 3.8% | 3.6% |
| | | | | | | | | | | | |
| Debt as a % of Non-Financial Assets | 0.8% | 0.7% | 0.5% | 0.4% | 0.3% | 0.2% | 0.2% | 0.1% | 0.1% | 0.0% | 0.0% |

## *Wastewater Financial Plan—O.Reg. 453/07*

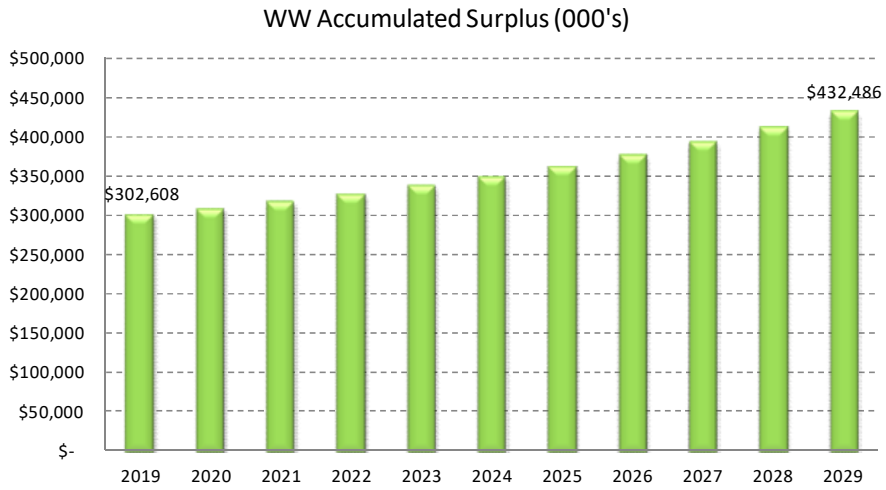
- ***Statement of Financial Operations***—This statement summarizes the revenues and expenditures. The expenditures include ongoing operating costs plus asset amortization. This statement indicates that the system and its asset base are projected to be maintained with funds being available each year for future capital renewal or major maintenance. As shown in the statement of financial operations and in the graph below, the City is generating excess revenues over expenses including amortization for wastewater, throughout the forecast period.




- ***Cash Receipts or Gross Cash Payments (Cash Flows)*** —The cash flow statement summarizes how the wastewater system is expected to generate and utilize cash resources. The transactions that generate and use cash include the projection of cash to be received from revenues, cash to be used for operating expenditures and financing charges, cash projected to be used to acquire capital assets and projected financial transactions that are the proceeds from debt or debt principal repayment. Cash balances are positive throughout the forecast period as shown the Cash Receipts Statement.

- ***Net Financial Assets***—An important feature of a wastewater system is its net financial assets. A positive number indicates that the system has the resources to deal with future capital and other needs. A negative number indicates that past capital and other investments must be financed from future revenues. Wastewater net financial assets are in a positive position throughout the forecast. No debt was anticipated throughout the term.

- ***Accumulated Surplus***—Another financial indicator that is reflected in the financial position statement is the accumulated surplus. This indicator represents cash on hand plus the net book value of tangible capital assets less debt. The accumulated surplus is forecast to increase from 2019 to 2029, as shown below and in the Statement of Financial Position.




- ***Tangible Capital Assets (Net Book Value)*** - Wastewater systems have a great deal of resources tied up in tangible capital assets and managing these assets is critical to maintaining current and future levels of service. An increase in net book value of tangible capital assets is an indication that assets have been renewed faster than they were used. A decrease in net book value indicates that assets are being used, or amortized, faster than they are renewed. The net book value is projected to increase for wastewater, from $329.8 million in 2019 to $435.1 million in 2029.

## *Statement of Financial Operations—Wastewater*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Revenues** | | | | | | | | | | | |
| Rate and Fixed Revenues | $ 39,897 | $ 41,738 | $ 43,664 | $ 45,679 | $ 47,787 | $ 49,992 | $ 52,299 | $ 54,712 | $ 57,237 | $ 59,878 | $ 62,641 |
| Other revenues | $ 716 | $ 730 | $ 745 | $ 760 | $ 775 | $ 791 | $ 806 | $ 822 | $ 839 | $ 856 | $ 873 |
| Interest Earnings | $ 269 | $ 274 | $ 280 | $ 285 | $ 291 | $ 297 | $ 303 | $ 309 | $ 315 | $ 321 | $ 328 |
| **Total revenues** | **$ 40,882** | **$ 42,742** | **$ 44,688** | **$ 46,724** | **$ 48,853** | **$ 51,079** | **$ 53,408** | **$ 55,843** | **$ 58,390** | **$ 61,055** | **$ 63,841** |
| **Operating Expenses** | | | | | | | | | | | |
| Salaries & Benefits | $ 7,236 | $ 7,453 | $ 7,676 | $ 7,907 | $ 8,144 | $ 8,388 | $ 8,640 | $ 8,899 | $ 9,166 | $ 9,441 | $ 9,724 |
| Materials - Operating Expenses | $ 1,950 | $ 2,008 | $ 2,068 | $ 2,130 | $ 2,194 | $ 2,260 | $ 2,328 | $ 2,398 | $ 2,470 | $ 2,544 | $ 2,620 |
| Energy Costs | $ 2,535 | $ 2,611 | $ 2,689 | $ 2,770 | $ 2,853 | $ 2,939 | $ 3,027 | $ 3,118 | $ 3,211 | $ 3,308 | $ 3,407 |
| Other Expenses | $ 15 | $ 15 | $ 16 | $ 16 | $ 17 | $ 17 | $ 18 | $ 18 | $ 19 | $ 20 | $ 20 |
| Purchased/Contract Services | $ 5,805 | $ 5,979 | $ 6,159 | $ 6,344 | $ 6,534 | $ 6,730 | $ 6,932 | $ 7,140 | $ 7,354 | $ 7,575 | $ 7,802 |
| Internal Recoveries | $ 4,202 | $ 4,328 | $ 4,458 | $ 4,591 | $ 4,729 | $ 4,871 | $ 5,017 | $ 5,167 | $ 5,323 | $ 5,482 | $ 5,647 |
| **Total Operating expenses** | **$ 21,742** | **$ 22,395** | **$ 23,067** | **$ 23,759** | **$ 24,471** | **$ 25,205** | **$ 25,962** | **$ 26,740** | **$ 27,543** | **$ 28,369** | **$ 29,220** |
| **Debt Charges** | | | | | | | | | | | |
| Debt Charges - Interest Expenses | $ 1,668 | $ 1,596 | $ 1,520 | $ 1,440 | $ 1,357 | $ 1,270 | $ 1,178 | $ 1,083 | $ 983 | $ 878 | $ 768 |
| **Amortization Expense** | | | | | | | | | | | |
| Amortization of tangible capital assets | $ 11,367 | $ 11,560 | $ 11,768 | $ 11,991 | $ 12,232 | $ 12,490 | $ 12,766 | $ 13,062 | $ 13,379 | $ 13,717 | $ 14,079 |
| **Total Expenses** | $ 34,778 | $ 35,550 | $ 36,354 | $ 37,190 | $ 38,060 | $ 38,965 | $ 39,906 | $ 40,885 | $ 41,904 | $ 42,964 | $ 44,067 |
| | | | | | | | | | | | |
| Annual Surplus/Deficit | $ 6,103 | $ 7,192 | $ 8,335 | $ 9,534 | $ 10,793 | $ 12,114 | $ 13,502 | $ 14,958 | $ 16,486 | $ 18,090 | $ 19,774 |

## *Statement of Cash Flow/Cash Receipts—Wastewater*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Total Revenues** | $ 40,882 | $ 42,742 | $ 44,688 | $ 46,724 | $ 48,853 | $ 51,079 | $ 53,408 | $ 55,843 | $ 58,390 | $ 61,055 | $ 63,841 |
| **Cash Paid For** | | | | | | | | | | | |
| Operating Costs | $ 21,742 | $ 22,395 | $ 23,067 | $ 23,759 | $ 24,471 | $ 25,205 | $ 25,962 | $ 26,740 | $ 27,543 | $ 28,369 | $ 29,220 |
| Debt Repayment - Debt Interest | $ 1,668 | $ 1,596 | $ 1,520 | $ 1,440 | $ 1,357 | $ 1,270 | $ 1,178 | $ 1,083 | $ 983 | $ 878 | $ 768 |
| **Cash Provided from Operating Transactions** | $ 17,471 | $ 18,752 | $ 20,102 | $ 21,525 | $ 23,025 | $ 24,604 | $ 26,268 | $ 28,020 | $ 29,865 | $ 31,808 | $ 33,853 |
| **Capital Transactions** | | | | | | | | | | | |
| Acquisition of TCA | $ 15,414 | $ 16,617 | $ 17,886 | $ 19,224 | $ 20,634 | $ 22,121 | $ 23,687 | $ 25,338 | $ 27,077 | $ 28,908 | $ 30,837 |
| **Finance Transactions** | | | | | | | | | | | |
| Proceeds from Debt Issuance | | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Proceeds from Grants and Subsidies | | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Debt Repayment Principal | $ 1,788 | $ 1,861 | $ 1,937 | $ 2,016 | $ 2,100 | $ 2,187 | $ 2,278 | $ 2,373 | $ 2,473 | $ 2,578 | $ 2,688 |
| Increase/(Descrease) in Cash Equivalents | $ 269 | $ 274 | $ 280 | $ 285 | $ 291 | $ 297 | $ 303 | $ 309 | $ 315 | $ 321 | $ 328 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Beginning Balance | $ 13,441 | $ 13,709 | $ 13,984 | $ 14,263 | $ 14,548 | $ 14,839 | $ 15,136 | $ 15,439 | $ 15,748 | $ 16,063 | $ 16,384 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Ending Balance | $ 13,709 | $ 13,984 | $ 14,263 | $ 14,548 | $ 14,839 | $ 15,136 | $ 15,439 | $ 15,748 | $ 16,063 | $ 16,384 | $ 16,712 |

## *Statement of Financial Position—Wastewater*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Financial Assets** | | | | | | | | | | | |
| Cash | $ 13,709 | $ 13,984 | $ 14,263 | $ 14,548 | $ 14,839 | $ 15,136 | $ 15,439 | $ 15,748 | $ 16,063 | $ 16,384 | $ 16,712 |
| **Liabilities** | | | | | | | | | | | |
| Debt - Principal Outstanding | $ 40,898 | $ 39,111 | $ 37,250 | $ 35,313 | $ 33,297 | $ 31,198 | $ 29,011 | $ 26,733 | $ 24,360 | $ 21,886 | $ 19,308 |
| **Net Financial Assets** | $ (27,189) | $ (25,127) | $ (22,987) | $ (20,765) | $ (18,458) | $ (16,062) | $ (13,572) | $ (10,985) | $ (8,297) | $ (5,502) | $ (2,596) |
| **Non-Financial Assets** | | | | | | | | | | | |
| Tangible Capital Assets | $ 583,262 | $ 598,676 | $ 615,293 | $ 633,179 | $ 652,403 | $ 673,037 | $ 695,158 | $ 718,845 | $ 744,182 | $ 771,259 | $ 800,167 |
| Additions to Tangible Capital Assets | $ 15,414 | $ 16,617 | $ 17,886 | $ 19,224 | $ 20,634 | $ 22,121 | $ 23,687 | $ 25,338 | $ 27,077 | $ 28,908 | $ 30,837 |
| Accumulated Amortization | $ 268,878 | $ 280,439 | $ 292,206 | $ 304,198 | $ 316,430 | $ 328,919 | $ 341,685 | $ 354,748 | $ 368,127 | $ 381,844 | $ 395,923 |
| **Total Non-Financial Assets** | $ 329,797 | $ 334,854 | $ 340,973 | $ 348,205 | $ 356,607 | $ 366,238 | $ 377,159 | $ 389,435 | $ 403,132 | $ 418,323 | $ 435,082 |
| Accumulated Surplus | $ 302,608 | $ 309,727 | $ 317,986 | $ 327,440 | $ 338,150 | $ 350,177 | $ 363,587 | $ 378,449 | $ 394,835 | $ 412,821 | $ 432,486 |
| Cash as a % of Non-Financial Assets | 4.2% | 4.2% | 4.2% | 4.2% | 4.2% | 4.1% | 4.1% | 4.0% | 4.0% | 3.9% | 3.8% |
| | | | | | | | | | | | |
| Debt as a % of Non-Financial Assets | 12.4% | 11.7% | 10.9% | 10.1% | 9.3% | 8.5% | 7.7% | 6.9% | 6.0% | 5.2% | 4.4% |

## *Statement of Financial Operations—Water and Wastewater—Consolidated*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Revenues** | | | | | | | | | | | |
| Rate and Fixed Revenues | $ 77,860 | $ 81,533 | $ 85,378 | $ 89,406 | $ 93,623 | $ 98,039 | $ 102,664 | $ 107,507 | $ 112,578 | $ 117,889 | $ 123,451 |
| Fire protection levy | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Other revenues | $ 1,878 | $ 1,915 | $ 1,954 | $ 1,993 | $ 2,032 | $ 2,073 | $ 2,115 | $ 2,157 | $ 2,200 | $ 2,244 | $ 2,289 |
| Interest Earnings | $ 510 | $ 520 | $ 531 | $ 541 | $ 552 | $ 563 | $ 574 | $ 586 | $ 598 | $ 610 | $ 622 |
| Proceeds from DCs | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| **Total revenues** | **$ 80,248** | **$ 83,968** | **$ 87,863** | **$ 91,940** | **$ 96,207** | **$ 100,675** | **$ 105,353** | **$ 110,250** | **$ 115,376** | **$ 120,743** | **$ 126,361** |
| **Operating Expenses** | | | | | | | | | | | |
| Salaries & Benefits | $ 15,057 | $ 15,509 | $ 15,974 | $ 16,453 | $ 16,947 | $ 17,455 | $ 17,979 | $ 18,518 | $ 19,074 | $ 19,646 | $ 20,235 |
| Materials - Operating Expenses | $ 4,953 | $ 5,102 | $ 5,255 | $ 5,413 | $ 5,575 | $ 5,742 | $ 5,915 | $ 6,092 | $ 6,275 | $ 6,463 | $ 6,657 |
| Energy Costs | $ 4,539 | $ 4,676 | $ 4,816 | $ 4,960 | $ 5,109 | $ 5,262 | $ 5,420 | $ 5,583 | $ 5,750 | $ 5,923 | $ 6,101 |
| Rent and Financial Expenses | $ 38 | $ 39 | $ 40 | $ 41 | $ 42 | $ 44 | $ 45 | $ 46 | $ 48 | $ 49 | $ 51 |
| Other Expenses | $ 15 | $ 15 | $ 16 | $ 16 | $ 17 | $ 17 | $ 18 | $ 18 | $ 19 | $ 20 | $ 20 |
| Internal Recoveries | $ 4,202 | $ 4,328 | $ 4,458 | $ 4,591 | $ 4,729 | $ 4,871 | $ 5,017 | $ 5,167 | $ 5,323 | $ 5,482 | $ 5,647 |
| Purchased/Contract Services | $ 11,944 | $ 12,303 | $ 12,672 | $ 13,052 | $ 13,443 | $ 13,847 | $ 14,262 | $ 14,690 | $ 15,131 | $ 15,585 | $ 16,052 |
| Internal Charges | $ 4,387 | $ 4,518 | $ 4,654 | $ 4,794 | $ 4,937 | $ 5,086 | $ 5,238 | $ 5,395 | $ 5,557 | $ 5,724 | $ 5,896 |
| **Total Operating expenses** | **$ 45,135** | **$ 46,489** | **$ 47,884** | **$ 49,321** | **$ 50,800** | **$ 52,324** | **$ 53,894** | **$ 55,511** | **$ 57,176** | **$ 58,891** | **$ 60,658** |
| **Debt Charges** | | | | | | | | | | | |
| Debt Charges - Interest Expenses | $ 1,796 | $ 1,711 | $ 1,622 | $ 1,528 | $ 1,430 | $ 1,328 | $ 1,219 | $ 1,115 | $ 1,008 | $ 895 | $ 776 |
| **Amortization Expense** | | | | | | | | | | | |
| Amortization of tangible capital assets | $ 19,831 | $ 20,216 | $ 20,631 | $ 21,076 | $ 21,554 | $ 22,067 | $ 22,617 | $ 23,207 | $ 23,839 | $ 24,514 | $ 25,234 |
| **Total Expenses** | $ 66,762 | $ 68,416 | $ 70,136 | $ 71,925 | $ 73,785 | $ 75,720 | $ 77,730 | $ 79,833 | $ 82,022 | $ 84,299 | $ 86,668 |
| | | | | | | | | | | | |
| Annual Surplus/Deficit | $ 13,486 | $ 15,552 | $ 17,727 | $ 20,015 | $ 22,423 | $ 24,956 | $ 27,623 | $ 30,416 | $ 33,353 | $ 36,443 | $ 39,693 |

## *Statement of Cash Flow/Cash Receipts—Water and Wastewater—Consolidated*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Total Revenues** | $ 80,248 | $ 83,968 | $ 87,863 | $ 91,940 | $ 96,207 | $ 100,675 | $ 105,353 | $ 110,250 | $ 115,376 | $ 120,743 | $ 126,361 |
| **Cash Paid For** | | | | | | | | | | | |
| Operating Costs | $ 45,135 | $ 46,489 | $ 47,884 | $ 49,321 | $ 50,800 | $ 52,324 | $ 53,894 | $ 55,511 | $ 57,176 | $ 58,891 | $ 60,658 |
| Debt Repayment - Debt Interest | $ 1,796 | $ 1,711 | $ 1,622 | $ 1,528 | $ 1,430 | $ 1,328 | $ 1,219 | $ 1,115 | $ 1,008 | $ 895 | $ 776 |
| **Cash Provided from Operating Transactions** | $ 33,317 | $ 35,768 | $ 38,357 | $ 41,091 | $ 43,977 | $ 47,023 | $ 50,240 | $ 53,624 | $ 57,192 | $ 60,957 | $ 64,927 |
| **Capital Transactions** | | | | | | | | | | | |
| Acquisition of TCA | $ 30,793 | $ 33,149 | $ 35,638 | $ 38,268 | $ 41,045 | $ 43,978 | $ 47,211 | $ 50,524 | $ 53,974 | $ 57,613 | $ 61,467 |
| **Finance Transactions** | | | | | | | | | | | |
| Proceeds from Debt Issuance | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Proceeds from Grants and Subsidies | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Debt Repayment Principal | $ 2,014 | $ 2,099 | $ 2,188 | $ 2,281 | $ 2,379 | $ 2,482 | $ 2,455 | $ 2,513 | $ 2,621 | $ 2,734 | $ 2,838 |
| Increase/(Descrease) in Cash Equivalents | $ 510 | $ 520 | $ 531 | $ 541 | $ 552 | $ 563 | $ 574 | $ 586 | $ 598 | $ 610 | $ 622 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Beginning Balance | $ 25,505 | $ 26,015 | $ 26,535 | $ 27,066 | $ 27,607 | $ 28,160 | $ 28,723 | $ 29,297 | $ 29,883 | $ 30,481 | $ 31,090 |
| | | | | | | | | | | | |
| Cash and Cash Equivalents at Ending Balance | $ 26,015 | $ 26,535 | $ 27,066 | $ 27,607 | $ 28,160 | $ 28,723 | $ 29,297 | $ 29,883 | $ 30,481 | $ 31,090 | $ 31,712 |

## *Statement of Financial Position—Water and Wastewater—Consolidated*

| | Projected | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
| **Financial Assets** | | | | | | | | | | | |
| Cash | $ 26,015 | $ 26,535 | $ 27,066 | $ 27,607 | $ 28,160 | $ 28,723 | $ 29,297 | $ 29,883 | $ 30,481 | $ 31,090 | $ 31,712 |
| **Liabilities** | | | | | | | | | | | |
| Debt - Principal Outstanding | $ 42,998 | $ 40,972 | $ 38,860 | $ 36,658 | $ 34,362 | $ 31,968 | $ 29,604 | $ 27,186 | $ 24,665 | $ 22,036 | $ 19,308 |
| **Net Financial Assets** | $ (16,983) | $ (14,436) | $ (11,794) | $ (9,051) | $ (6,202) | $ (3,245) | $ (307) | $ 2,697 | $ 5,816 | $ 9,054 | $ 12,404 |
| **Non-Financial Assets** | | | | | | | | | | | |
| Tangible Capital Assets | $ 1,006,407 | $ 1,037,200 | $ 1,070,349 | $ 1,105,988 | $ 1,144,256 | $ 1,185,301 | $ 1,229,279 | $ 1,276,491 | $ 1,327,015 | $ 1,380,988 | $ 1,438,601 |
| Additions to Tangible Capital Assets | $ 30,793 | $ 33,149 | $ 35,638 | $ 38,268 | $ 41,045 | $ 43,978 | $ 47,211 | $ 50,524 | $ 53,974 | $ 57,613 | $ 61,467 |
| Accumulated Amortization | $ 429,022 | $ 449,239 | $ 469,869 | $ 490,945 | $ 512,499 | $ 534,567 | $ 557,184 | $ 580,391 | $ 604,230 | $ 628,744 | $ 653,977 |
| **Total Non-Financial Assets** | $ 608,178 | $ 621,111 | $ 636,118 | $ 653,310 | $ 672,802 | $ 694,713 | $ 719,307 | $ 746,623 | $ 776,758 | $ 809,858 | $ 846,091 |
| Accumulated Surplus | $ 591,195 | $ 606,674 | $ 624,325 | $ 644,260 | $ 666,599 | $ 691,468 | $ 719,000 | $ 749,320 | $ 782,574 | $ 818,912 | $ 858,496 |
| Cash as a % of Non-Financial Assets | 4.3% | 4.3% | 4.3% | 4.2% | 4.2% | 4.1% | 4.1% | 4.0% | 3.9% | 3.8% | 3.7% |
| | | | | | | | | | | | |
| Debt as a % of Non-Financial Assets | 7.1% | 6.6% | 6.1% | 5.6% | 5.1% | 4.6% | 4.1% | 3.6% | 3.2% | 2.7% | 2.3% |

***Appendix A—Alternative Options***

# *Appendix A*

# Closing the Infrastructure Gap

Three additional scenarios were run to close the annual infrastructure gap over various timeframes

| Scenario | Annual Gap Closure | Annual Rate Increase |
|---|---|---|
| 1 | 10 years | 8.8% |
| 2 | 15 years | 6.2% |
| 3 | 25 years | 4.1% |

# Scenario 1: 10 year timeframe

Closing the gap in 2029



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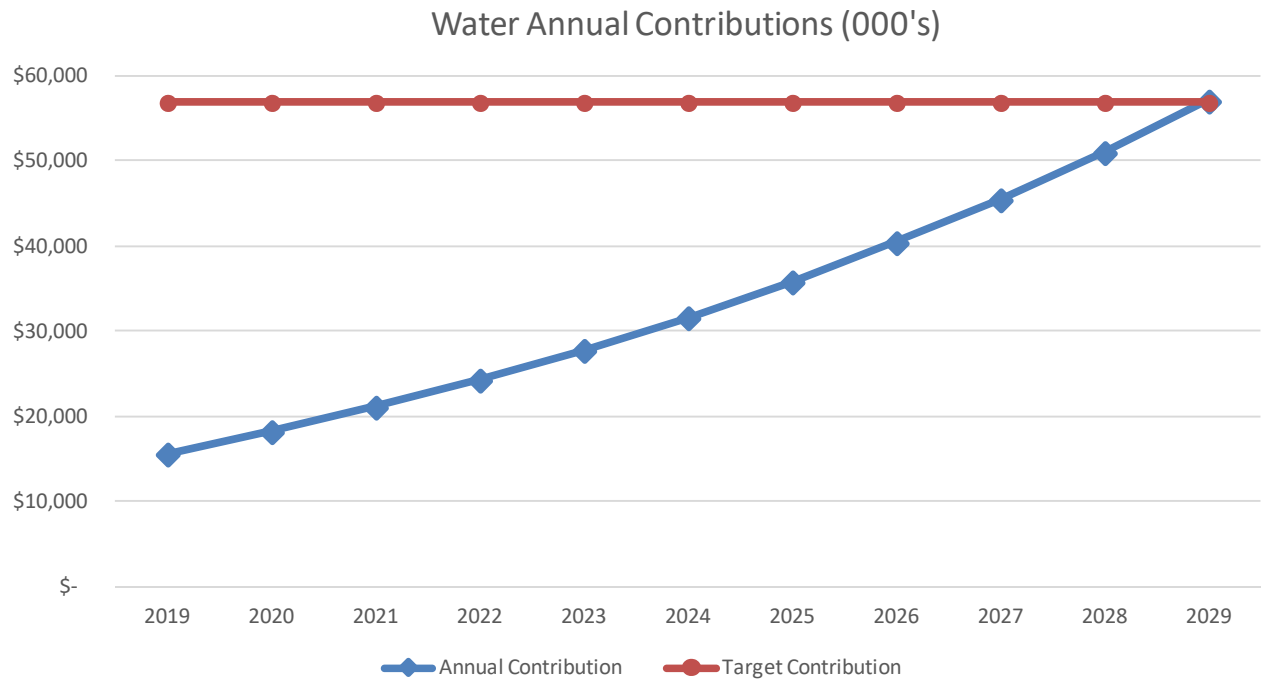
# Scenario 1 : Water Annual Contributions



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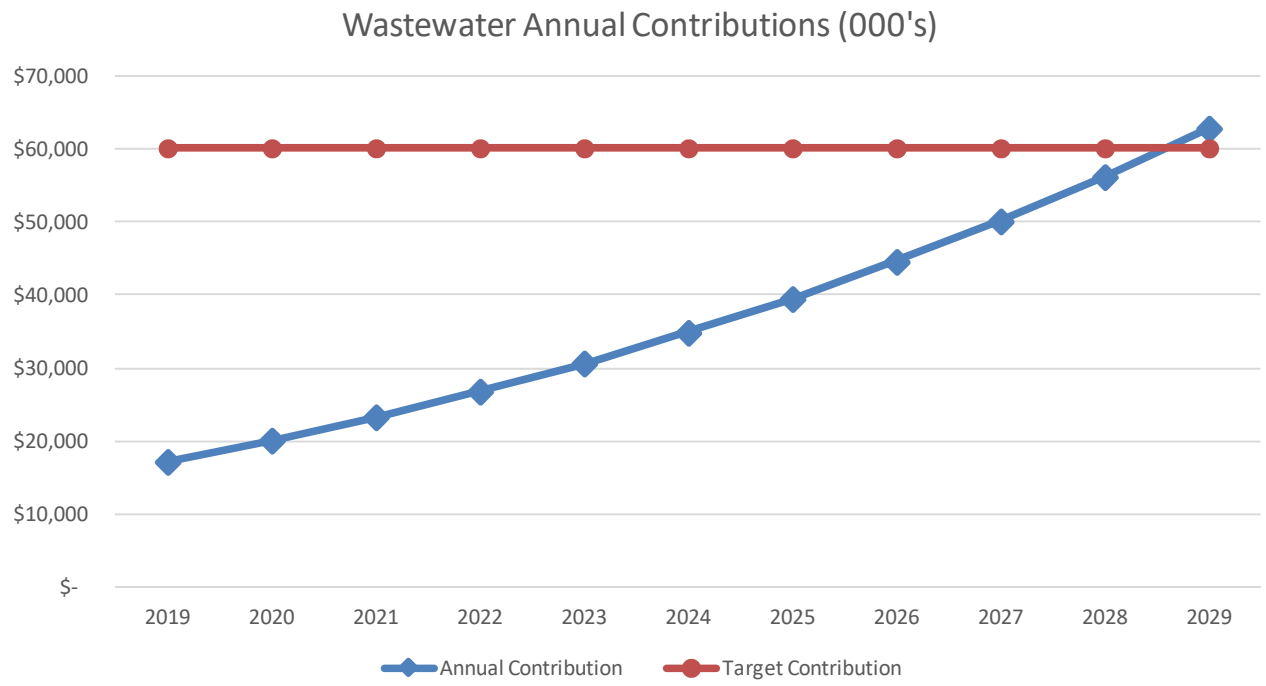
MANAGEMENT CONSULTING INC.

# Scenario 1 : Wastewater Annual Contributions



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MANAGEMENT CONSULTING INC.

# Scenario 1 : Residential Impact

| 200 $m^3$ residential impact - 5/8" | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Water | | WW | Cost of service | | | | |
| Year | Annual Consumption m3 | Fixed Monthly | Volumetric | WW Surcharge | Water | WW | Total | Perecentage Increase From Prior Year |
| 2019 | 200 | $ 21.46 | $ 1.728 | 111.8% | $ 603 | $ 674 | $ 1,277 | |
| 2020 | 200 | $ 22.98 | $ 1.902 | 111.7% | $ 656 | $ 733 | $ 1,389 | 8.7% |
| 2021 | 200 | $ 24.89 | $ 2.073 | 111.9% | $ 713 | $ 798 | $ 1,511 | 8.8% |
| 2022 | 200 | $ 26.96 | $ 2.259 | 112.1% | $ 775 | $ 869 | $ 1,644 | 8.8% |
| 2023 | 200 | $ 29.20 | $ 2.462 | 112.3% | $ 843 | $ 946 | $ 1,789 | 8.8% |
| 2024 | 200 | $ 31.63 | $ 2.683 | 112.5% | $ 916 | $ 1,031 | $ 1,947 | 8.8% |
| 2025 | 200 | $ 34.26 | $ 2.924 | 112.7% | $ 996 | $ 1,122 | $ 2,118 | 8.8% |
| 2026 | 200 | $ 37.11 | $ 3.187 | 112.9% | $ 1,083 | $ 1,222 | $ 2,305 | 8.8% |
| 2027 | 200 | $ 40.20 | $ 3.473 | 113.1% | $ 1,177 | $ 1,331 | $ 2,508 | 8.8% |
| 2028 | 200 | $ 43.55 | $ 3.784 | 113.3% | $ 1,279 | $ 1,449 | $ 2,729 | 8.8% |
| 2029 | 200 | $ 47.17 | $ 4.124 | 113.5% | $ 1,391 | $ 1,578 | $ 2,969 | 8.8% |



BMA MANAGEMENT CONSULTING INC.

# Scenario 2: 15 year timeframe

Closing the gap in 2034



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# *Appendix A*

# Closing the Infrastructure Gap

Three additional scenarios were run to close the annual infrastructure gap over various timeframes

| Scenario | Annual Gap Closure | Annual Rate Increase |
|---|---|---|
| 1 | 10 years | 8.8% |
| 2 | 15 years | 6.2% |
| 3 | 25 years | 4.1% |

# Scenario 1: 10 year timeframe

Closing the gap in 2029



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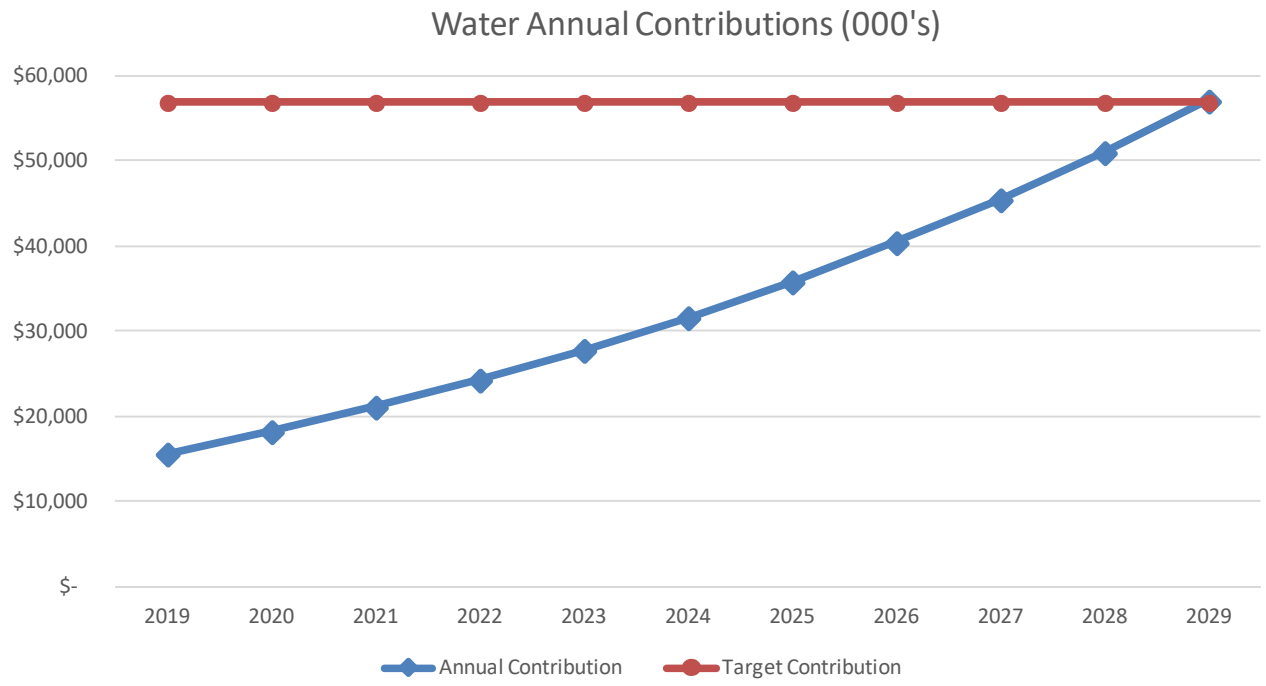
# Scenario 1 : Water Annual Contributions



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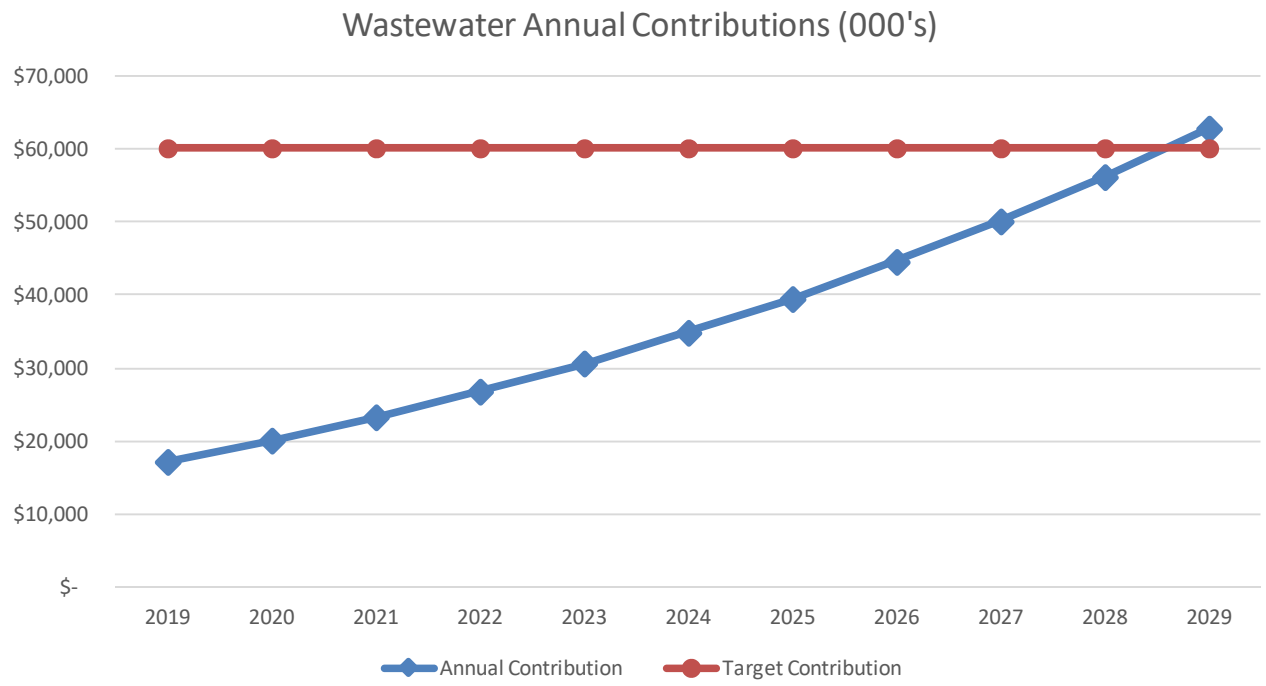
# Scenario 1 : Wastewater Annual Contributions



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# Scenario 1 : Residential Impact

| 200 $m^3$ residential impact - 5/8" | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Water | | WW | Cost of service | | | | |
| Year | Annual Consumption m3 | Fixed Monthly | Volumetric | WW Surcharge | Water | WW | Total | Perecentage Increase From Prior Year |
| 2019 | 200 | $ 21.46 | $ 1.728 | 111.8% | $ 603 | $ 674 | $ 1,277 | |
| 2020 | 200 | $ 22.98 | $ 1.902 | 111.7% | $ 656 | $ 733 | $ 1,389 | 8.7% |
| 2021 | 200 | $ 24.89 | $ 2.073 | 111.9% | $ 713 | $ 798 | $ 1,511 | 8.8% |
| 2022 | 200 | $ 26.96 | $ 2.259 | 112.1% | $ 775 | $ 869 | $ 1,644 | 8.8% |
| 2023 | 200 | $ 29.20 | $ 2.462 | 112.3% | $ 843 | $ 946 | $ 1,789 | 8.8% |
| 2024 | 200 | $ 31.63 | $ 2.683 | 112.5% | $ 916 | $ 1,031 | $ 1,947 | 8.8% |
| 2025 | 200 | $ 34.26 | $ 2.924 | 112.7% | $ 996 | $ 1,122 | $ 2,118 | 8.8% |
| 2026 | 200 | $ 37.11 | $ 3.187 | 112.9% | $ 1,083 | $ 1,222 | $ 2,305 | 8.8% |
| 2027 | 200 | $ 40.20 | $ 3.473 | 113.1% | $ 1,177 | $ 1,331 | $ 2,508 | 8.8% |
| 2028 | 200 | $ 43.55 | $ 3.784 | 113.3% | $ 1,279 | $ 1,449 | $ 2,729 | 8.8% |
| 2029 | 200 | $ 47.17 | $ 4.124 | 113.5% | $ 1,391 | $ 1,578 | $ 2,969 | 8.8% |



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# Scenario 2: 15 year timeframe

Closing the gap in 2034



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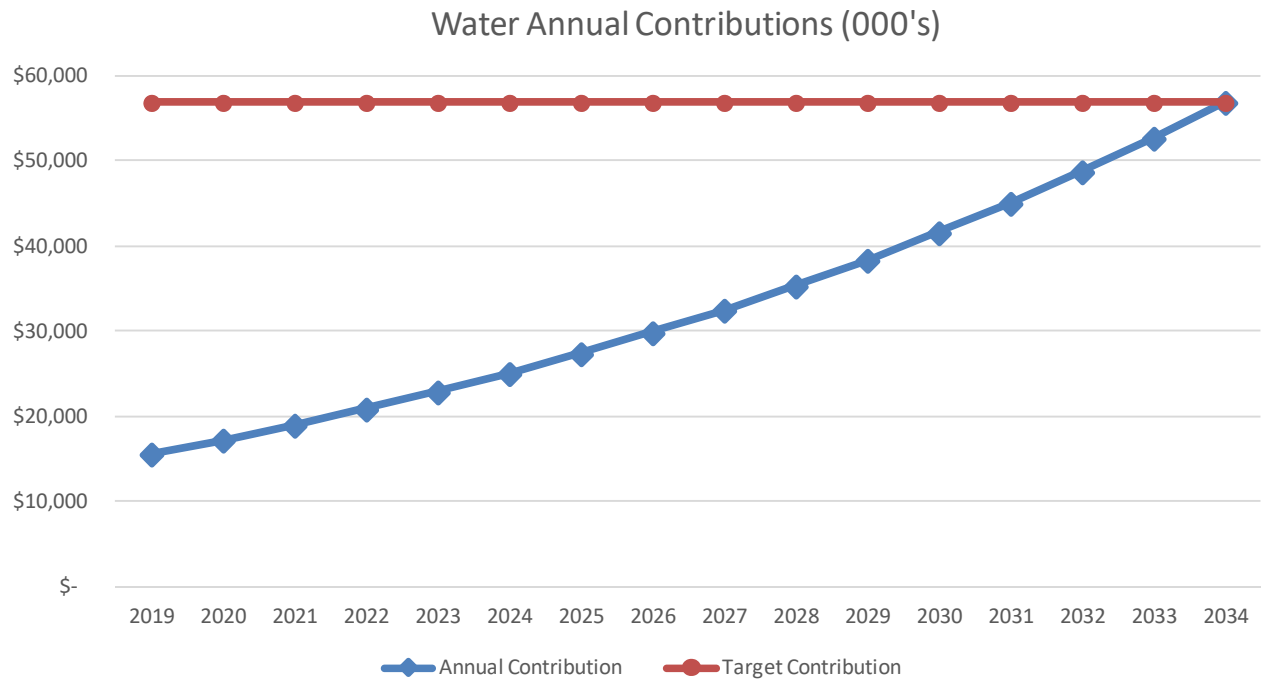
# Scenario 2 : Water Annual Contributions



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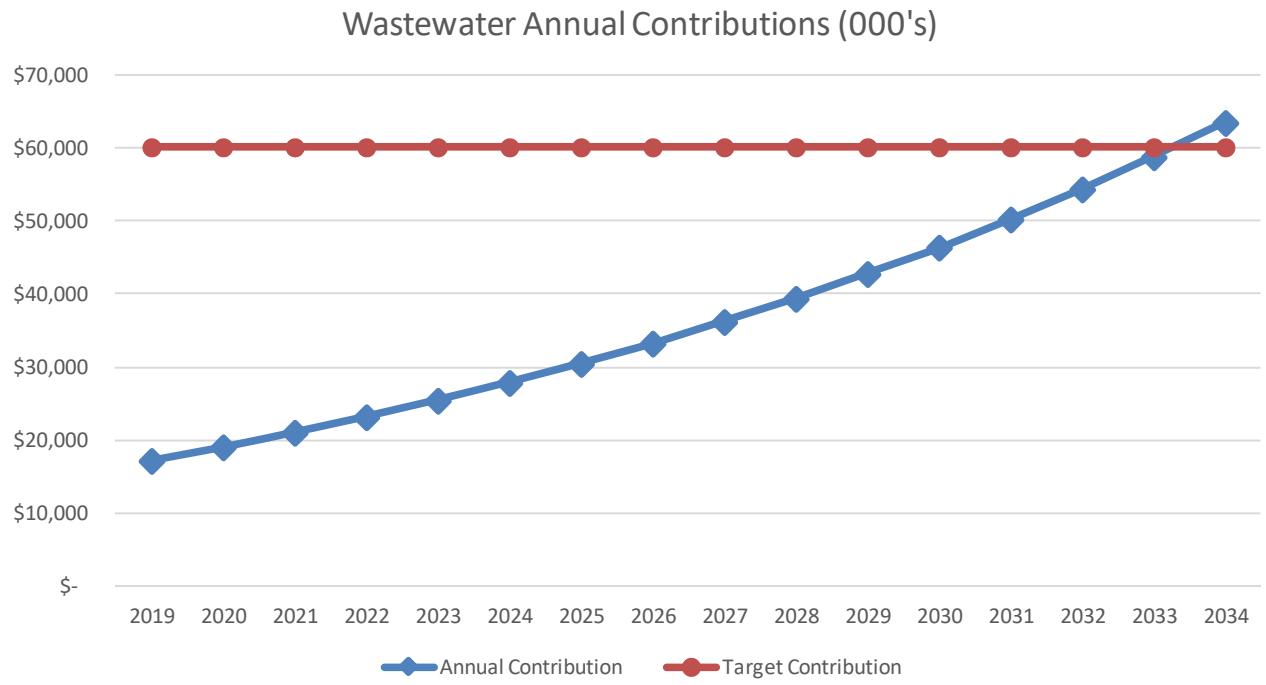
# Scenario 2 : Wastewater Annual Contributions



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# Scenario 2 : Residential Impact

| 200 $m^3$ residential impact - 5/8" | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Water | | WW | Cost of service | | | | |
| Year | Annual Consumption m3 | Fixed Monthly | Volumetric | WW Surcharge | Water | WW | Total | Perecentage Increase From Prior Year |
| 2019 | 200 | $ 21.46 | $ 1.728 | 111.8% | $ 603 | $ 674 | $ 1,277 | |
| 2020 | 200 | $ 22.43 | $ 1.857 | 111.6% | $ 641 | $ 715 | $ 1,356 | 6.1% |
| 2021 | 200 | $ 23.71 | $ 1.975 | 111.8% | $ 680 | $ 760 | $ 1,439 | 6.2% |
| 2022 | 200 | $ 25.07 | $ 2.101 | 111.9% | $ 721 | $ 807 | $ 1,528 | 6.2% |
| 2023 | 200 | $ 26.51 | $ 2.235 | 112.1% | $ 765 | $ 858 | $ 1,623 | 6.2% |
| 2024 | 200 | $ 28.03 | $ 2.378 | 112.2% | $ 812 | $ 911 | $ 1,723 | 6.2% |
| 2025 | 200 | $ 29.64 | $ 2.530 | 112.4% | $ 862 | $ 968 | $ 1,830 | 6.2% |
| 2026 | 200 | $ 31.34 | $ 2.691 | 112.6% | $ 914 | $ 1,029 | $ 1,943 | 6.2% |
| 2027 | 200 | $ 33.14 | $ 2.862 | 112.7% | $ 970 | $ 1,093 | $ 2,063 | 6.2% |
| 2028 | 200 | $ 35.04 | $ 3.045 | 112.8% | $ 1,029 | $ 1,161 | $ 2,191 | 6.2% |
| 2029 | 200 | $ 37.05 | $ 3.239 | 113.0% | $ 1,092 | $ 1,234 | $ 2,326 | 6.2% |



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# Scenario 3: 25 year timeframe

Closing the gap in 2044



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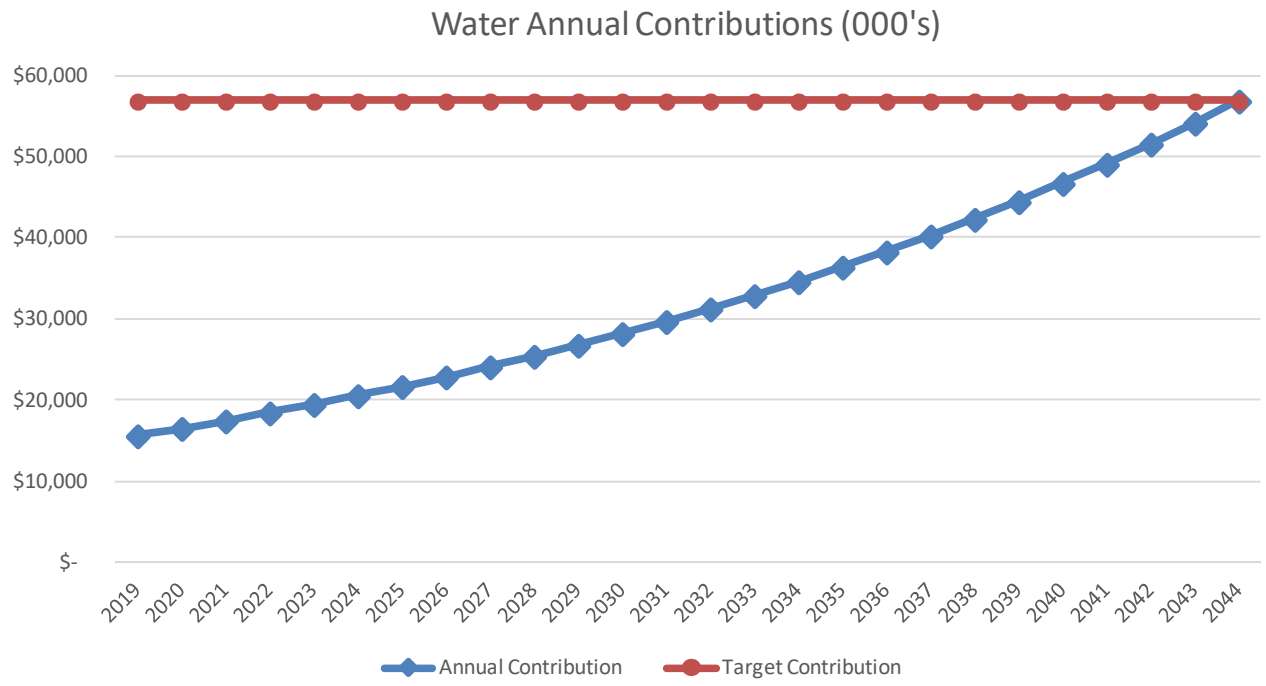
# Scenario 3 : Water Annual Contributions



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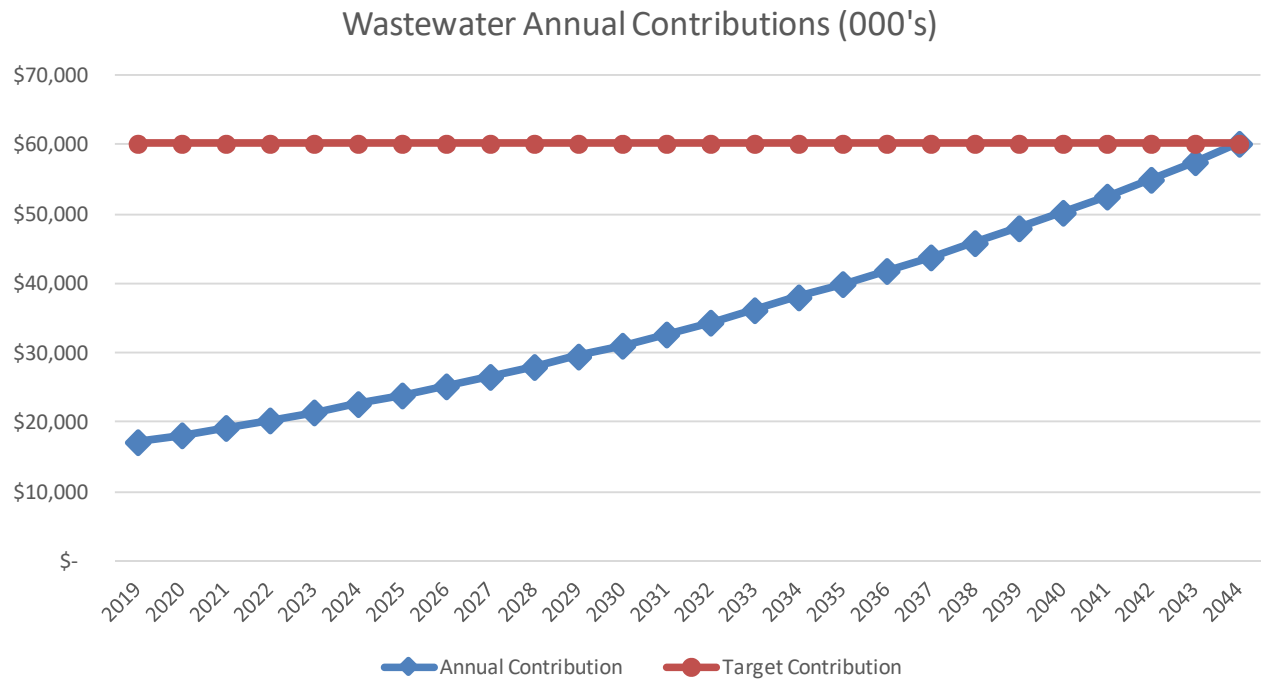
# Scenario 3 : Wastewater Annual Contributions



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# Scenario 3 : Residential Impact

| 200 $m^3$ residential impact - 5/8" | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Water | | WW | Cost of service | | | |
| Year | Annual Consumption m3 | Fixed Monthly | Volumetric | WW Surcharge | Water | WW | Total | Perecentage Increase From Prior Year |
| 2019 | 200 | $ 21.46 | $ 1.728 | 111.8% | $ 603 | $ 674 | $ 1,277 | |
| 2020 | 200 | $ 22.02 | $ 1.823 | 111.4% | $ 629 | $ 701 | $ 1,329 | 4.1% |
| 2021 | 200 | $ 22.85 | $ 1.904 | 111.4% | $ 655 | $ 729 | $ 1,384 | 4.1% |
| 2022 | 200 | $ 23.72 | $ 1.988 | 111.3% | $ 682 | $ 759 | $ 1,442 | 4.1% |
| 2023 | 200 | $ 24.62 | $ 2.076 | 111.3% | $ 711 | $ 791 | $ 1,501 | 4.1% |
| 2024 | 200 | $ 25.55 | $ 2.167 | 111.2% | $ 740 | $ 823 | $ 1,563 | 4.1% |
| 2025 | 200 | $ 26.52 | $ 2.263 | 111.1% | $ 771 | $ 857 | $ 1,628 | 4.1% |
| 2026 | 200 | $ 27.52 | $ 2.363 | 111.1% | $ 803 | $ 892 | $ 1,695 | 4.1% |
| 2027 | 200 | $ 28.57 | $ 2.468 | 111.0% | $ 836 | $ 929 | $ 1,765 | 4.1% |
| 2028 | 200 | $ 29.65 | $ 2.577 | 111.0% | $ 871 | $ 967 | $ 1,838 | 4.1% |
| 2029 | 200 | $ 30.78 | $ 2.691 | 110.9% | $ 907 | $ 1,006 | $ 1,914 | 4.1% |



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