



# Water and Wastewater Financial Plan – Rate Analysis Study

City of Barrie

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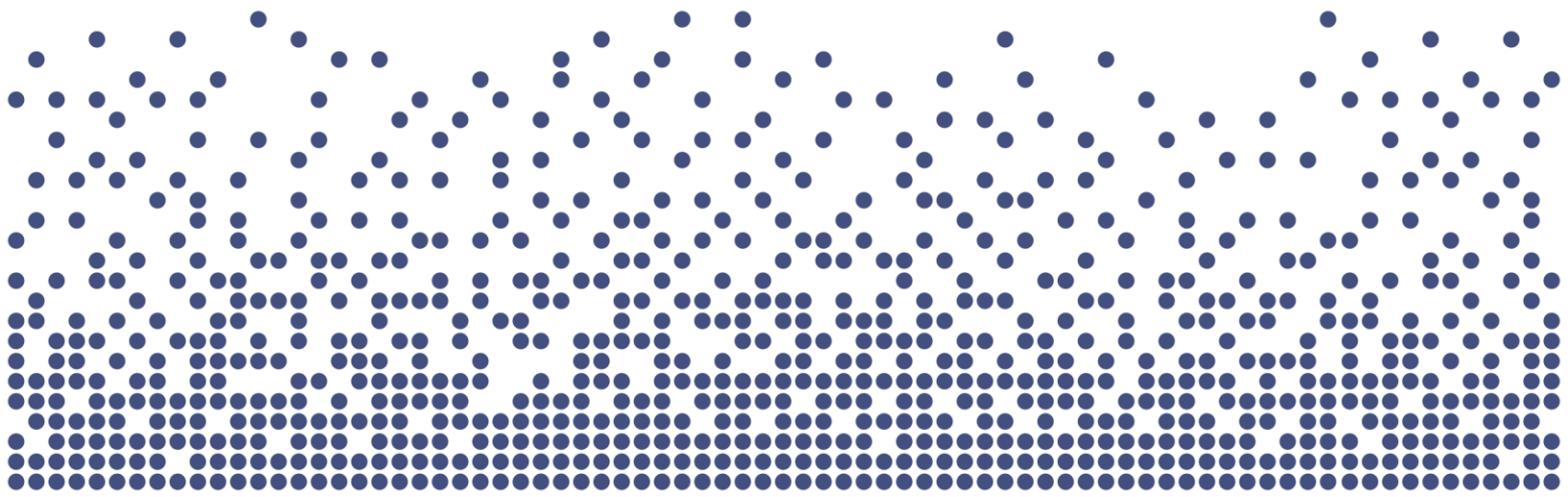
## List of Acronyms and Abbreviations

| Acronym    | Full Description of Acronym                          |
|------------|------------------------------------------------------|
| A.M.O.     | Association of Municipalities of Ontario             |
| cu.m.      | Cubic metres                                         |
| C.W.W.F.   | Clean Water and Wastewater Fund                      |
| D.C.A.     | Development Charges Act, 1997                        |
| F.I.R.     | Financial Information Return                         |
| I.J.P.A.   | Infrastructure for Jobs and Prosperity Act, 2015     |
| I.O.       | Infrastructure Ontario                               |
| L.P.A.T.   | Local Planning Appeal Tribunal                       |
| M.O.E.     | Ministry of Environment                              |
| O.C.I.F.   | Ontario Community Infrastructure Fund                |
| O.M.B.     | Ontario Municipal Board                              |
| O.Reg.     | Ontario Regulation                                   |
| O.S.I.F.A. | Ontario Strategic Infrastructure Financing Authority |
| P.S.A.B.   | Public Sector Accounting Board                       |
| P.T.I.F.   | Public Transit Infrastructure Fund                   |



## List of Acronyms and Abbreviations (Cont'd)

|            |                                                |
|------------|------------------------------------------------|
| S.W.S.S.A. | Sustainable Water and Sewage Systems Act, 2002 |
| S.W.T.P.   | Surface Water Treatment Plant                  |



# Executive Summary



# Executive Summary

The City of Barrie retained Watson & Associates Economists Ltd. (Watson) to undertake a water and wastewater financial plan including a rate analysis. This study aims to provide an analysis for current capital and operating forecasts, costing for lifecycle cost requirements (asset management), current volumes and customer profiles. The results of this analysis provides a forecast of both water and wastewater fixed charges and volume rates for both residential and non-residential customers within the City of Barrie. The rate analysis contained herein continues to provide fiscally responsible practices that are in line with current provincial legislation at a level of rate increases that are reasonable.

The analysis presented herein provides the following:

- The 2021 to 2030 capital spending program for water and wastewater is \$218.04 million and \$620.29 million (inflated), respectively;
- Annual operating expenditures for 2021 to 2024 are based on the City's estimates in their operating forecasts. For 2025 to 2030, costs are assumed to increase by 2% per annum for most expenditures; expenditures related to hydro, chemicals and other materials have been increased at 5% per annum. Expenditures have also been assumed throughout the forecast period, for both water and wastewater, to account for the addition of staff to meet the needs of a growing system.
- The present rate structures for water and wastewater are as follows, and are continued throughout the forecast period:
  - Fixed Charge:
    - Residential customers: constant fixed charge for all customers
    - Non-residential customers: varied fixed charge based on meter size
  - Volume Charge:
    - Residential customers: four-tier increasing block volumetric rate;
    - Non-residential customers: two-tier increasing block volumetric rate;
- For water, the fixed charge revenue accounts for 36% of water revenues and the volume charge revenue accounts for 64% of water revenues. This ratio has been maintained over the forecast period.



- For wastewater, the fixed charge revenue accounts for 37% of wastewater revenues and the volume charge revenue accounts for 63% of wastewater revenues. This ratio has been maintained over the forecast period to 2028, after which there is a slight shift in the ratio to 36% fixed charge/64% volume charges, similar to water.
- Existing residential and non-residential water customers within the City of Barrie total 42,231 and 2,727, respectively.
- Existing residential and non-residential wastewater customers total 41,781 and 2,699, respectively.
- Anticipated customer growth is as follows:
  - Salem and Hewitt's Secondary Plan Areas: anticipated to add 9,511 additional water and wastewater customers by 2030; and
  - Former City Municipal Boundary Areas: anticipated to add 8,920 additional water and wastewater customers by 2030.

Through the ongoing work being undertaken for the City's water and wastewater Asset Management Plans, it has been identified that there is a backlog of capital works that need to be addressed as well as additional replacement needs over the forecast period. For water, the backlog of works, in addition to the replacement needs from 2022 to 2030, is approximately \$121.86 million (uninflated). The replacement needs for the wastewater system include approximately \$192.29 million (uninflated) of backlog needs as well as the forecasted works for 2022 to 2030. In order to account for these needs that are required to maintain the existing system, additional asset replacement works have been included in the capital forecast for both water and wastewater.

Based on the above information, the following annual rate increases are anticipated for the fixed charge and volume rates: the needs for both water and wastewater are sizable over the forecast period. Hence, rate increases for the water system have been calculated with an initial 3% increase to the fixed and volume charges for 2022, and then annual 4% increases to both charges thereafter. For wastewater, the needs are more significant, and as such, the fixed and volume charges have been calculated with a 5% annual increase to both the fixed and volume charges. The combined impact for water and wastewater customers is equal to an annual increase of 4.2% in 2022 and 4.6% annually thereafter. This increase is for the total water and wastewater bill for a residential customer with annual volumes of 180 cu.m.





Table ES-1 and ES-2 summarize the recommended water and wastewater rates and average annual residential bill (assuming an annual volume of 180 cu.m.), respectively, based on the analysis provided herein over the forecast period. Note that with an annual residential volume of 180 cu.m., all volume would fall into Block 1.



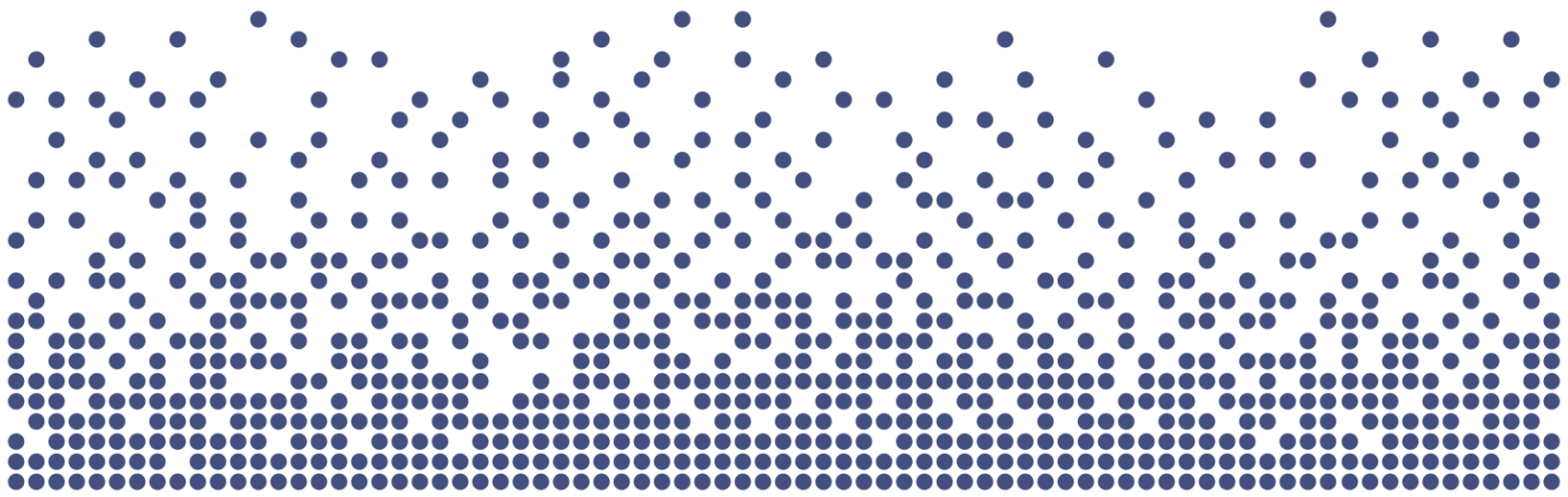
Table ES-1  
City of Barrie  
Water Services  
Average Annual Residential Water Bill (Based on an annual usage of 180 cu.m.)

| Description                           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Monthly Fixed Charge                  | \$14.02         | \$14.44         | \$15.01         | \$15.61         | \$16.24         | \$16.89         | \$17.56         | \$18.27         | \$19.00         | \$19.76         |
| Volume Rate:                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| Block 1 Rate (0-15 cu.m. per month)   | \$1.11          | \$1.14          | \$1.18          | \$1.23          | \$1.28          | \$1.33          | \$1.39          | \$1.44          | \$1.50          | \$1.56          |
| Block 2 Rate (16-30 cu.m. per month)  | \$2.21          | \$2.28          | \$2.37          | \$2.46          | \$2.56          | \$2.67          | \$2.77          | \$2.88          | \$3.00          | \$3.12          |
| Block 3 Rate (31-45 cu.m. per month)  | \$3.32          | \$3.42          | \$3.55          | \$3.70          | \$3.85          | \$4.00          | \$4.16          | \$4.33          | \$4.50          | \$4.68          |
| Block 4 Rate (>45 cu.m. per month)    | \$4.43          | \$4.56          | \$4.74          | \$4.93          | \$5.13          | \$5.33          | \$5.55          | \$5.77          | \$6.00          | \$6.24          |
| <b>Annual Fixed Charge Bill</b>       | <b>\$168.18</b> | <b>\$173.23</b> | <b>\$180.15</b> | <b>\$187.36</b> | <b>\$194.86</b> | <b>\$202.65</b> | <b>\$210.76</b> | <b>\$219.19</b> | <b>\$227.95</b> | <b>\$237.07</b> |
| Block 1 Volume (0-15 cu.m. per month) | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             |
| <b>Annual Volume Bill</b>             | <b>\$199.12</b> | <b>\$205.09</b> | <b>\$213.29</b> | <b>\$221.82</b> | <b>\$230.70</b> | <b>\$239.93</b> | <b>\$249.52</b> | <b>\$259.50</b> | <b>\$269.88</b> | <b>\$280.68</b> |
| <b>Total Annual Bill</b>              | <b>\$367.30</b> | <b>\$378.31</b> | <b>\$393.45</b> | <b>\$409.19</b> | <b>\$425.55</b> | <b>\$442.57</b> | <b>\$460.28</b> | <b>\$478.69</b> | <b>\$497.84</b> | <b>\$517.75</b> |
| % Increase - Fixed Charge             |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |
| % Increase - Volume Rate              |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |
| % Increase - Total Annual Bill        |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |



Table ES-2  
City of Barrie  
Wastewater Services  
Average Annual Residential Wastewater Bill (Based on an annual usage of 180 cu.m.)

| Description                           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Monthly Fixed Charge                  | \$18.96         | \$19.91         | \$20.90         | \$21.95         | \$23.05         | \$24.20         | \$25.41         | \$26.68         | \$28.01         | \$29.41         |
| Volume Rate:                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| Block 1 Rate (0-15 cu.m. per month)   | \$1.60          | \$1.68          | \$1.76          | \$1.85          | \$1.94          | \$2.04          | \$2.14          | \$2.25          | \$2.36          | \$2.48          |
| Block 2 Rate (16-30 cu.m. per month)  | \$2.72          | \$2.85          | \$2.99          | \$3.14          | \$3.30          | \$3.47          | \$3.64          | \$3.82          | \$4.01          | \$4.21          |
| Block 3 Rate (31-45 cu.m. per month)  | \$2.72          | \$2.85          | \$2.99          | \$3.14          | \$3.30          | \$3.47          | \$3.64          | \$3.82          | \$4.01          | \$4.21          |
| Block 4 Rate (>45 cu.m. per month)    | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |
| <b>Annual Fixed Charge Bill</b>       | <b>\$227.52</b> | <b>\$238.90</b> | <b>\$250.84</b> | <b>\$263.38</b> | <b>\$276.55</b> | <b>\$290.38</b> | <b>\$304.90</b> | <b>\$320.14</b> | <b>\$336.15</b> | <b>\$352.96</b> |
| Block 1 Volume (0-15 cu.m. per month) | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             |
| <b>Annual Volume Bill</b>             | <b>\$287.53</b> | <b>\$301.91</b> | <b>\$317.00</b> | <b>\$332.85</b> | <b>\$349.50</b> | <b>\$366.97</b> | <b>\$385.32</b> | <b>\$404.59</b> | <b>\$424.82</b> | <b>\$446.06</b> |
| <b>Total Annual Bill</b>              | <b>\$515.05</b> | <b>\$540.80</b> | <b>\$567.84</b> | <b>\$596.24</b> | <b>\$626.05</b> | <b>\$657.35</b> | <b>\$690.22</b> | <b>\$724.73</b> | <b>\$760.97</b> | <b>\$799.01</b> |
| % Increase - Fixed Charge             |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |
| % Increase - Volume Rate              |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |
| % Increase - Total Annual Bill        |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |



# Report



# Chapter 1

## Introduction



# 1. Introduction

## 1.1 Background

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The City of Barrie currently services 42,231 residential and 2,727 non-residential metered water customers. In addition, the City also services 41,781 residential and 2,699 non-residential metered wastewater customers.

The City's water system consists of a Surface Water Treatment Plant (S.W.T.P.), a low lift pumping station, 12 groundwater wells, 3 in-ground storage facilities, 7 booster stations, and 3 elevated storage towers. Water is distributed through approximately 3,800 hydrants and approximately 644 kilometers of watermains ranging in sizes from 32 mm to 1,200 mm.

The wastewater system consists of a wastewater treatment facility, a biosolids facility, six major pumping stations, approximately 550 kilometers of sanitary sewers, and associated maintenance holes. The current treatment process at the facility includes preliminary treatment (grit and screenings removal), primary clarification, secondary treatment using high purity oxygen reactors (also called the UNOX system), secondary clarification, tertiary nitrifying rotating biological contactors, flash mixing tanks and a sand filtration system with automatic backwash. This is followed by ultraviolet disinfection. The treated effluent from the wastewater treatment facility is discharged to Kempenfelt Bay which is connected to the larger Lake Simcoe.

The City imposes a monthly fixed charge for water and wastewater services. This fixed rate is constant for all residential customers but varies for non-residential customers based on meter size. In addition to the fixed charge, an increasing block volumetric rate is applied to all volumes. For water and wastewater there are four blocks for residential customers, and two blocks for non-residential customers. For wastewater, residential customers are imposed the same volumetric rate for blocks two and three; and are not charge for volumes that fall into block four. Table 1-1 provides the existing rates currently in effect.



Table 1-1  
City of Barrie  
Water and Wastewater Rates – 2021

| 2021 - Water Billing Rates                           |                                                    |
|------------------------------------------------------|----------------------------------------------------|
| Fixed Charge (Monthly)                               |                                                    |
| <b>Residential</b>                                   | 14.02                                              |
| <b>Non-Residential:</b>                              |                                                    |
| 13-19 mm                                             | 14.02                                              |
| 25-32 mm                                             | 35.05                                              |
| 38 mm                                                | 70.11                                              |
| 50 mm                                                | 112.17                                             |
| 75 mm                                                | 245.37                                             |
| 100 mm                                               | 420.66                                             |
| 150 mm                                               | 876.36                                             |
| 200 mm                                               | 1121.73                                            |
| 250 mm                                               | 1612.51                                            |
| 300mm                                                | 1612.51                                            |
| Volume Charge                                        |                                                    |
| Increasing Residential (Monthly m <sup>3</sup> )     |                                                    |
| \$ 1.1062                                            | Block 1 per m <sup>3</sup> (0-15 m <sup>3</sup> )  |
| \$ 2.2125                                            | Block 2 per m <sup>3</sup> (16-30 m <sup>3</sup> ) |
| \$ 3.3187                                            | Block 3 per m <sup>3</sup> (31-45 m <sup>3</sup> ) |
| \$ 4.4250                                            | Block 4 per m <sup>3</sup> (>45 m <sup>3</sup> )   |
| Increasing Non-Residential (Monthly m <sup>3</sup> ) |                                                    |
| \$ 1.1062                                            | Block 1 per m <sup>3</sup> (0-15 m <sup>3</sup> )  |
| \$ 1.6594                                            | Block 2 per m <sup>3</sup> (>15 m <sup>3</sup> )   |

| 2021 - Wastewater Billing Rates                      |                                                    |
|------------------------------------------------------|----------------------------------------------------|
| Fixed Charge (Monthly)                               |                                                    |
| <b>Residential</b>                                   | 18.96                                              |
| <b>Non-Residential:</b>                              |                                                    |
| 13-19 mm                                             | 18.96                                              |
| 25-32 mm                                             | 47.40                                              |
| 38 mm                                                | 94.81                                              |
| 50 mm                                                | 151.70                                             |
| 75 mm                                                | 331.82                                             |
| 100 mm                                               | 568.96                                             |
| 150 mm                                               | 1185.05                                            |
| 200 mm                                               | 1516.86                                            |
| 250 mm                                               | 2180.49                                            |
| 300mm                                                | 2180.49                                            |
| Volume Charge                                        |                                                    |
| Increasing Residential (Monthly m <sup>3</sup> )     |                                                    |
| \$ 1.5974                                            | Block 1 per m <sup>3</sup> (0-15 m <sup>3</sup> )  |
| \$ 2.7156                                            | Block 2 per m <sup>3</sup> (16-30 m <sup>3</sup> ) |
| \$ 2.7156                                            | Block 3 per m <sup>3</sup> (31-45 m <sup>3</sup> ) |
| \$ -                                                 | Block 4 per m <sup>3</sup> (>45 m <sup>3</sup> )   |
| Increasing Non-Residential (Monthly m <sup>3</sup> ) |                                                    |
| \$ 1.5213                                            | Block 1 per m <sup>3</sup> (0-15 m <sup>3</sup> )  |
| \$ 2.2822                                            | Block 2 per m <sup>3</sup> (>15 m <sup>3</sup> )   |

Since the Walkerton Crisis, the Province has continued to make legislative changes for municipal water and wastewater systems. Noted below are the historic changes along with pending legislation anticipated to be implemented in the future. Watson & Associates Economists Ltd. (Watson) was retained by the City of Barrie to assist in addressing these changes in a proactive manner as they relate to the water and wastewater systems. The assessment provided herein addresses changes recommended to the water and wastewater rates based on the most current information and forecasts the implications over the next ten-year period.



## 1.2 Study Process

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The objectives of the study and the steps involved in carrying out this assignment are summarized below:

- Identify all current and future water and wastewater system capital needs to assess the immediate and longer-term implications;
- Identify potential methods of cost recovery from the capital needs listing. These recovery methods may include other statutory authorities (e.g. *Development Charges Act, 1997* (D.C.A.), *Municipal Act*, etc.) as an offset to recovery through the water and wastewater rates;
- Identify existing operating costs by component and estimate future operating costs over the next ten years. This assessment identifies fixed and variable costs in order to project those costs sensitive to changes to the existing infrastructure inventory, as well as costs which may increase commensurate with growth; and
- Provide staff and Committee/Council the findings to assist in gaining approval of the rates for future years.

## 1.3 Regulatory Changes in Ontario

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Resulting from the water crisis in Walkerton, significant regulatory changes have been made in Ontario. These changes arise as a result of the Walkerton Commission and the 93 recommendations made by the Walkerton Inquiry Part II report. Areas of recommendation include:

- watershed management and source protection;
- quality management;
- preventative maintenance;
- research and development;
- new performance standards;
- sustainable asset management; and
- lifecycle costing.

The legislation which would have most impacted municipal water and wastewater rates was the *Sustainable Water and Sewage Systems Act* (S.W.S.S.A.) which would have





required municipalities to implement full cost pricing. The legislation was enacted in 2002, however, it had not been implemented pending the approval of its regulations. The Act was repealed as of January 1, 2013. It is expected that the provisions of the *Water Opportunities Act* will implement the fundamental requirements of S.W.S.S.A. Furthermore, on December 27, 2017, O.Reg. 588/17 was released under the *Infrastructure for Jobs and Prosperity Act, 2015* (I.J.P.A.), which outlines the requirements for asset management for municipalities. The results of the asset management review under this Act will need to be considered in light of the recent investments undertaken by the City and the capital spending plan provided herein. The following sections describe these various resulting changes.

## 1.4 Sustainable Water and Sewage Systems Act

---

As noted earlier, the S.W.S.S.A. was passed on December 13, 2002. The intent of the Act was to introduce the requirement for municipalities to undertake an assessment of the “full cost” of providing their water and wastewater services. It is noted, however, that this Act has been repealed. To provide broader context and understanding to other legislation discussed herein, a description of the Act is provided below.

Full costs for water service was defined in subsection 3(7) of the Act and included “...source protection costs, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public and such other costs which may be specified by regulation.” Similar provisions were made for wastewater services in subsection 4(7) with respect to “...collecting, treating or discharging waste water.”

The Act would have required the preparation of two reports for submission to the Ministry of the Environment (or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*). The first report was on the “full cost of services” and the second was the “cost recovery plan.” Once these reports were reviewed and approved by the Ministry, the municipality would have been required to implement the plans within a specified time period.

In regard to the **full cost of services** report, the municipality (deemed a regulated entity under the Act) would prepare and approve a report concerning the provision of water and sewage services. This report was to include an inventory of the infrastructure, a management plan providing for the long-term integrity of the systems and would



address the full cost of providing the services (other matters may be specified by the regulations) along with the revenue obtained to provide them. A professional engineer would certify the inventory and management plan portion of the report. The municipality's auditor would be required to provide a written opinion on the report. The report was to be approved by the municipality and then be forwarded to the Ministry along with the engineer's certification and the auditor's opinion. The regulations would stipulate the timing for this report.

The second report was referred to as a **cost recovery plan** and would address how the municipality intended to pay for the full costs of providing the service. The regulations were to specify limitations on what sources of revenue the municipality may use. The regulations may have also provided limits as to the level of increases any customer or class of customer may experience over any period of time. Provision was made for the municipality to implement increases above these limits; however, ministerial approval would be required first. Similar to the first report, the municipal auditor would provide a written opinion on the report prior to Council's adoption, and this opinion must accompany the report when submitted to the Province.

The Act provided the Minister the power to approve or not approve the plans. If the Minister was not satisfied with the report or if a municipality did not submit a plan, the Minister may have a plan prepared. The cost to the Crown for preparing the plan would be recovered from the municipality. As well, the Minister may direct two or more regulated municipalities to prepare a joint plan. This joint plan may be directed at the onset or be directed by the Minister after receiving the individual plans from the municipalities.

The Minister also had the power to order a municipality to generate revenue from a specific revenue source or in a specified manner. The Minister may have also ordered a regulated entity to do or refrain from doing such things as the Minister considered advisable to ensure that the entity pays the full cost of providing the services to the public.

Once the plans were approved and in place, the municipality would be required to submit progress reports. The timing of these reports and the information to be contained therein would be established by the regulations. A municipal auditor's opinion must be provided with the progress report. Municipalities would also revise the plans if they deem the estimate does not reflect the full cost of providing the services, as



a result of a change in circumstances, regulatory or other changes that affect their plan, etc. The municipality would then revise its prior plan, provide an auditor's opinion, and submit the plan to the Minister.

## 1.5 Financial Plans Regulation

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On August 16, 2007, the M.O.E. passed O.Reg 453/07 which requires the preparation of financial plans for water (and wastewater) systems. The M.O.E. has also provided a Financial Plan Guidance Document to assist in preparing the plans. A brief summary of the key elements of the regulation is provided below:

- The financial plan will represent one of the key elements for the municipality to obtain its Drinking Water Licence;
- The financial plans shall be for a period of at least six years, but longer planning horizons are encouraged;
- As the regulation is under the *Safe Drinking Water Act, 2002*, the preparation of the plan is mandatory for water and encouraged for wastewater;
- The plan is considered a living document (i.e. will be updated as annual budgets are prepared) but will need to be undertaken, at a minimum, every five years;
- The plans generally require the forecasting of capital, operating and reserve fund positions, providing detailed inventories, forecasting future users and volume usage and corresponding calculation of rates. In addition, P.S.A.B. information on the system must be provided for each year of the forecast (i.e. total non-financial assets, tangible capital asset acquisitions, tangible capital asset construction, betterments, write-downs, disposals, total liabilities and net debt);
- The financial plans must be made available to the public (at no charge) upon request and be available on the municipality's website. The availability of this information must also be advertised; and
- The financial plans are to be approved by Resolution of the Council or governing body indicating that the drinking water system is financially viable.

In general, the financial principles of the draft regulations follow the intent of S.W.S.S.A. to move municipalities towards financial sustainability. Many of the prescriptive requirements, however, have been removed (e.g. preparation of two separate documents for provincial approval, auditor opinions, engineer certifications, etc.).



A Guideline (“Towards Financially Sustainable Drinking Shores – Water and Wastewater Systems”) had been developed to assist municipalities in understanding the Province’s direction and provided a detailed discussion on possible approaches to sustainability. The Province’s Principles of Financially Sustainable Water and Wastewater Services are provided below:

Principle #1: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.

Principle #2: An integrated approach to planning among water, wastewater, and stormwater 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: Lifecycle planning with mid-course corrections is preferable to planning over the short term, or not planning at all.

Principle #5: An asset management plan is a key input to the development of a financial plan.

Principle #6: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.

Principle #7: Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.

Principle #8: Financial plans are “living” documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.

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



## 1.6 Water Opportunities Act, 2010

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As noted earlier, since the passage of the *Safe Drinking Water Act, 2002*, continuing changes and refinements to the legislation have been introduced. Some of these Bills have found their way into law, while others have not been approved. Bill 72, the *Water Opportunities Act, 2010*, was introduced into legislation on May 18, 2010 and received Royal Assent on November 29, 2010.

The Act provides for the following elements:

- The fostering of innovative water, wastewater and stormwater technologies, services, and practices in the private and public sectors;
- Preparation of water conservation plans to achieve water conservation targets established by the regulations; and
- Preparation of sustainability plans for municipal water services, municipal wastewater services and municipal stormwater services.

With regard to the sustainability plans:

- The Act extends from the water financial plans and requires a more detailed review of the water financial plan and requires a full plan for wastewater and stormwater services; and
- Regulations will provide performance targets for each service – these targets may vary based on the jurisdiction of the regulated entity or the class of entity.

The financial plan shall include:

- An asset management plan for the physical infrastructure;
- A financial plan;
- For water, a water conservation plan;
- An assessment of risks that may interfere with the future delivery of the municipal service, including, if required by the regulations, the risks posed by climate change and a plan to deal with those risks; and
- Strategies for maintaining and improving the municipal service, including strategies to ensure the municipal service can satisfy future demand, consider technologies, services and practices that promote the efficient use of water and



reduce negative impacts on Ontario's water resources, and increase co-operation with other municipal service providers.

Performance indicators will be established by service, with the following considerations:

- May relate to the financing, operation or maintenance of a municipal service or to any other matter in respect of what information may be required to be included in a plan;
- May be different for different municipal service providers or for municipal services in different areas of the Province.

Regulations will prescribe:

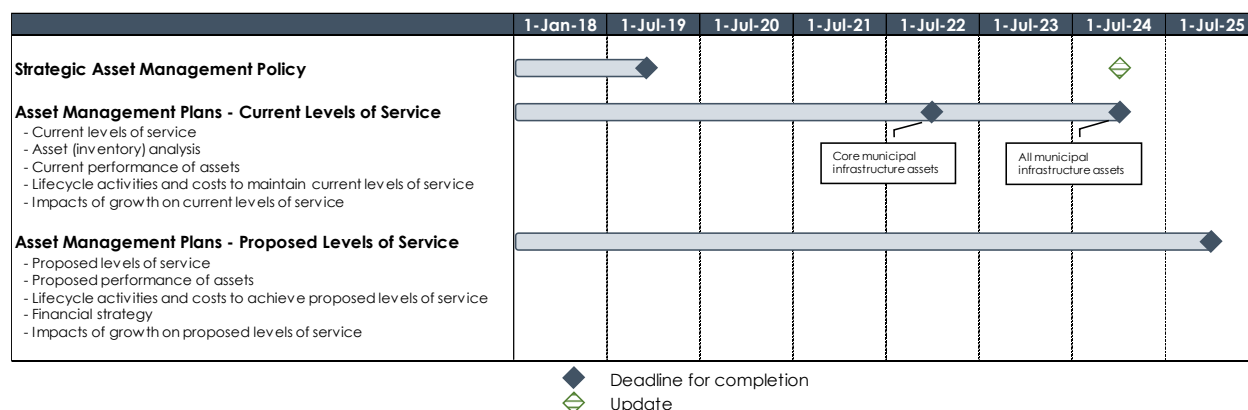
- Timing;
- Contents of the plans;
- Which identified portions of the plan will require certification;
- Public consultation process; and
- Limitations, updates, refinements, etc.

As noted earlier, it is expected that this Act will implement the principles of the S.W.S.S.A. once all regulations are put in place.

## **1.7 Infrastructure for Jobs and Prosperity Act, 2015 (I.J.P.A.)**

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



Note: on March 15, 2021, the Province filed Regulation 193/21 to extend all of the timelines of Regulation 588/17 by one year (reflected in the table above).

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

- Phase 1 – Asset Management Plan (by July 1, 2022):
  - For core assets, municipalities must have the following:
    - Inventory of assets;
    - Current levels of service measured by standard metrics; and
    - Costs to maintain levels of service.
- Phase 2 – Asset Management Plan (by July 1, 2024):
  - Same steps as Phase 1 but for all assets.
- Phase 3 – Asset Management Plan (by July 1, 2025):
  - Builds on Phase 1 and 2 by adding:
    - Proposed levels of service; and
    - Lifecycle management and financial strategy.

In relation to water and wastewater (which is considered a core asset), municipalities will need to have an asset management plan that addresses the related infrastructure by July 1, 2022 (Phase 1). O.Reg. 588/17 specifies that the municipality's asset management plan must include the following for each asset category:

- The current levels of service being provided, determined in accordance with the following qualitative descriptions and technical metrics and based on data from at



most the two calendar years prior to the year in which all information required under this section is included in the asset management plan;

- The current performance of each asset category, including:
  - a summary of the assets in the category;
  - the replacement cost of the assets in the category;
  - the average age of the assets in the category, determined by assessing the average age of the components of the assets;
  - the information available on the condition of the assets in the category;
  - a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate; and
- The lifecycle activities that would need to be undertaken to maintain the current levels of service.

The City is currently undertaking its water and wastewater Asset Management Plans. Draft information from these plans have been used for the purposes of assessing lifecycle needs within this study however, refinements may be made prior to completion of those plans. Consideration of the impacts on the capital plan provided herein will need to take place for future budgeting and forecasting purposes.

## **1.8 Forecast Growth and Servicing Requirements**

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The City of Barrie services 42,231 metered residential water customers and 41,781 metered residential wastewater customers. In addition, the City also services 2,727 and 2,699 metered non-residential customers with water and wastewater services, respectively. Information on the existing number of customers and existing billable volumes was obtained from the City.

For future water and wastewater customers to be added to the systems, consideration has been given to development potential within the serviced areas of the City over the forecast period. This data was derived from the Municipal Comprehensive Review, Long-Term Urban Land Needs Study, the Development Charges Background Study, as well as through discussions with City staff based on developments currently in various stages of the planning process.

Tables 1-2 and 1-3 provide for the forecast of water and wastewater users and volumes for areas within Barrie that are anticipated to experience additional growth. The





average annual volumes for new residential users have been assumed to be 180 cu.m. annually for low and medium density customers and 130 cu.m. annually for high density customers. These flow assumptions are based on recent historical trends in the consumption of water.

Over the forecast, each new residential user is anticipated to generate half a year's volume in the first year and then a full year's volume in subsequent years. This accounts for customers hooking into the system at various times throughout the year as new homes are occupied. As it is difficult to estimate the amount of volume that new non-residential users may generate, no additional volumes have been assumed for new non-residential customers, thus providing a conservative approach to forecasting future revenues.

It is noted that the growth rate assumed in the forecast is based on the development charges background study with adjustments made based on information from staff related to applications for growth in the planning process. The growth anticipated for the purposes of the rate analysis, has taken a conservative approach to ensure that anticipated revenues from new users is not overstated. Where anticipated growth is set too high, deficits can arise which may result in the City having to issue additional debt to cover capital costs and/or defer capital. Alternatively, if the growth is set too low, the capital needs to service new customers may not be put in place soon enough which could limit the amount of growth allowed to proceed. It is noted that the previous financial plan for the City anticipated a more aggressive growth forecast with the understanding that the Salem & Hewitt's Secondary Plans would begin developing earlier than what has actually taken place. City staff will continue to track actual growth and can adjust the capital program and/or growth assumptions during the annual budget process to ensure that rates are being set to ensure financial sustainability of the water and wastewater systems.



Table 1-2  
City of Barrie  
2021 to 2030 Water System Forecast

**Water Users Forecast - Former City Municipal Boundary Area (Low and Medium Density Residential)**

| Year               | Total Users  | 2021          | 2022          | 2023           | 2024           | 2025           | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 276          | 138           | 276           | 276            | 276            | 276            | 276            | 276            | 276            | 276            | 276            |
| 2022               | 276          |               | 138           | 276            | 276            | 276            | 276            | 276            | 276            | 276            | 276            |
| 2023               | 277          |               |               | 139            | 277            | 277            | 277            | 277            | 277            | 277            | 277            |
| 2024               | 352          |               |               |                | 176            | 352            | 352            | 352            | 352            | 352            | 352            |
| 2025               | 353          |               |               |                |                | 177            | 353            | 353            | 353            | 353            | 353            |
| 2026               | 354          |               |               |                |                |                | 177            | 354            | 354            | 354            | 354            |
| 2027               | 354          |               |               |                |                |                |                | 177            | 354            | 354            | 354            |
| 2028               | 354          |               |               |                |                |                |                |                | 177            | 354            | 354            |
| 2029               | 354          |               |               |                |                |                |                |                |                | 177            | 354            |
| 2030               | 354          |               |               |                |                |                |                |                |                |                | 177            |
| <b>Total</b>       | <b>3,304</b> | <b>138</b>    | <b>414</b>    | <b>691</b>     | <b>1,005</b>   | <b>1,358</b>   | <b>1,711</b>   | <b>2,065</b>   | <b>2,419</b>   | <b>2,773</b>   | <b>3,127</b>   |
| cu.m./user         | 180          | 180           | 180           | 180            | 180            | 180            | 180            | 180            | 180            | 180            | 180            |
| <b>Annual Flow</b> |              | <b>24,840</b> | <b>74,473</b> | <b>124,413</b> | <b>180,961</b> | <b>244,501</b> | <b>308,041</b> | <b>371,761</b> | <b>435,481</b> | <b>499,201</b> | <b>562,921</b> |

**Water Users Forecast - Salem & Hewitts Secondary Plan Area (Low and Medium Density Residential)**

| Year               | Total Users  | 2021          | 2022          | 2023           | 2024           | 2025           | 2026           | 2027           | 2028             | 2029             | 2030             |
|--------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|
| 2021               | 330          | 165           | 330           | 330            | 330            | 330            | 330            | 330            | 330              | 330              | 330              |
| 2022               | 287          |               | 144           | 287            | 287            | 287            | 287            | 287            | 287              | 287              | 287              |
| 2023               | 440          |               |               | 220            | 440            | 440            | 440            | 440            | 440              | 440              | 440              |
| 2024               | 1,017        |               |               |                | 509            | 1,017          | 1,017          | 1,017          | 1,017            | 1,017            | 1,017            |
| 2025               | 1,017        |               |               |                |                | 509            | 1,017          | 1,017          | 1,017            | 1,017            | 1,017            |
| 2026               | 1,017        |               |               |                |                |                | 509            | 1,017          | 1,017            | 1,017            | 1,017            |
| 2027               | 1,017        |               |               |                |                |                |                | 509            | 1,017            | 1,017            | 1,017            |
| 2028               | 1,017        |               |               |                |                |                |                |                | 509              | 1,017            | 1,017            |
| 2029               | 1,018        |               |               |                |                |                |                |                |                  | 509              | 1,018            |
| 2030               | 1,018        |               |               |                |                |                |                |                |                  |                  | 509              |
| <b>Total</b>       | <b>8,178</b> | <b>165</b>    | <b>474</b>    | <b>837</b>     | <b>1,566</b>   | <b>2,583</b>   | <b>3,600</b>   | <b>4,617</b>   | <b>5,634</b>     | <b>6,651</b>     | <b>7,669</b>     |
| cu.m./user         | 180          | 180           | 180           | 180            | 180            | 180            | 180            | 180            | 180              | 180              | 180              |
| <b>Annual Flow</b> |              | <b>29,700</b> | <b>85,249</b> | <b>150,604</b> | <b>281,857</b> | <b>464,917</b> | <b>647,977</b> | <b>831,037</b> | <b>1,014,097</b> | <b>1,197,157</b> | <b>1,380,397</b> |



Table 1-2 (Cont'd)

**Water Users Forecast - Former City Municipal Boundary Area (High Density Residential)**

| Year               | Total Users  | 2021         | 2022          | 2023          | 2024          | 2025           | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|--------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 113          | 57           | 113           | 113           | 113           | 113            | 113            | 113            | 113            | 113            | 113            |
| 2022               | 114          |              | 57            | 114           | 114           | 114            | 114            | 114            | 114            | 114            | 114            |
| 2023               | 114          |              |               | 57            | 114           | 114            | 114            | 114            | 114            | 114            | 114            |
| 2024               | 838          |              |               |               | 419           | 838            | 838            | 838            | 838            | 838            | 838            |
| 2025               | 838          |              |               |               |               | 419            | 838            | 838            | 838            | 838            | 838            |
| 2026               | 839          |              |               |               |               |                | 420            | 839            | 839            | 839            | 839            |
| 2027               | 839          |              |               |               |               |                |                | 420            | 839            | 839            | 839            |
| 2028               | 839          |              |               |               |               |                |                |                | 420            | 839            | 839            |
| 2029               | 839          |              |               |               |               |                |                |                |                | 420            | 839            |
| 2030               | 839          |              |               |               |               |                |                |                |                |                | 420            |
| <b>Total</b>       | <b>6,212</b> | <b>57</b>    | <b>170</b>    | <b>284</b>    | <b>760</b>    | <b>1,598</b>   | <b>2,437</b>   | <b>3,276</b>   | <b>4,115</b>   | <b>4,954</b>   | <b>5,793</b>   |
| cu.m./user         | 130          | 130          | 130           | 130           | 130           | 130            | 130            | 130            | 130            | 130            | 130            |
| <b>Annual Flow</b> |              | <b>7,410</b> | <b>22,134</b> | <b>36,896</b> | <b>98,756</b> | <b>207,696</b> | <b>316,766</b> | <b>425,836</b> | <b>534,906</b> | <b>643,976</b> | <b>753,046</b> |

**Water Users Forecast - Salem & Hewitts Secondary Plan Area (High Density Residential)**

| Year               | Total Users  | 2021         | 2022          | 2023          | 2024          | 2025          | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 135          | 68           | 135           | 135           | 135           | 135           | 135            | 135            | 135            | 135            | 135            |
| 2022               | 118          |              | 59            | 118           | 118           | 118           | 118            | 118            | 118            | 118            | 118            |
| 2023               | 181          |              |               | 90            | 181           | 181           | 181            | 181            | 181            | 181            | 181            |
| 2024               | 216          |              |               |               | 108           | 216           | 216            | 216            | 216            | 216            | 216            |
| 2025               | 216          |              |               |               |               | 108           | 216            | 216            | 216            | 216            | 216            |
| 2026               | 216          |              |               |               |               |               | 108            | 216            | 216            | 216            | 216            |
| 2027               | 217          |              |               |               |               |               |                | 109            | 217            | 217            | 217            |
| 2028               | 217          |              |               |               |               |               |                |                | 109            | 217            | 217            |
| 2029               | 217          |              |               |               |               |               |                |                |                | 109            | 217            |
| 2030               | 217          |              |               |               |               |               |                |                |                |                | 109            |
| <b>Total</b>       | <b>1,950</b> | <b>68</b>    | <b>194</b>    | <b>343</b>    | <b>542</b>    | <b>758</b>    | <b>974</b>     | <b>1,191</b>   | <b>1,408</b>   | <b>1,625</b>   | <b>1,842</b>   |
| cu.m./user         | 130          | 130          | 130           | 130           | 130           | 130           | 130            | 130            | 130            | 130            | 130            |
| <b>Annual Flow</b> |              | <b>8,840</b> | <b>25,271</b> | <b>44,631</b> | <b>70,477</b> | <b>98,557</b> | <b>126,637</b> | <b>154,847</b> | <b>183,057</b> | <b>211,267</b> | <b>239,477</b> |



Table 1-2 (Cont'd)

| Water Customer Forecast                            | 2021          | 2022          | 2023          | 2024          | 2025          | 2026          | 2027          | 2028          | 2029          | 2030          |
|----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Existing - Residential                             | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        | 42,231        |
| Existing - Non-Residential                         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         | 2,727         |
| New - Growth - Former City Municipal Boundary Area | 195           | 584           | 975           | 1,765         | 2,956         | 4,148         | 5,341         | 6,534         | 7,727         | 8,920         |
| New - Growth - Salem & Hewitts Secondary Plan Area | 233           | 668           | 1,180         | 2,108         | 3,341         | 4,574         | 5,808         | 7,042         | 8,276         | 9,511         |
| <b>Total</b>                                       | <b>45,386</b> | <b>46,210</b> | <b>47,113</b> | <b>48,831</b> | <b>51,255</b> | <b>53,680</b> | <b>56,107</b> | <b>58,534</b> | <b>60,961</b> | <b>63,389</b> |

| Water Volume Forecast - Residential (cu.m.) | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028              | 2029              | 2030              |
|---------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|
| <b>Block 1 (0-15 cu.m./month)</b>           |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| Existing - Residential                      | 6,052,800        | 6,052,800        | 6,052,800        | 6,052,800        | 6,052,800        | 6,052,800        | 6,052,800        | 6,052,800         | 6,052,800         | 6,052,800         |
| New - Former City Municipal Boundary Areas  | 32,250           | 96,607           | 161,309          | 279,717          | 452,197          | 624,807          | 797,597          | 970,387           | 1,143,177         | 1,315,967         |
| New - Salem & Hewitt's Secondary Plan Areas | 38,540           | 110,520          | 195,234          | 352,334          | 563,474          | 774,614          | 985,884          | 1,197,154         | 1,408,424         | 1,619,874         |
| <b>Subtotal Block 1</b>                     | <b>6,123,590</b> | <b>6,259,927</b> | <b>6,409,343</b> | <b>6,684,850</b> | <b>7,068,470</b> | <b>7,452,220</b> | <b>7,836,280</b> | <b>8,220,340</b>  | <b>8,604,400</b>  | <b>8,988,640</b>  |
| <b>Block 2 (16-30 cu.m./month)</b>          |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| Existing - Residential                      | 1,498,380        | 1,498,380        | 1,498,380        | 1,498,380        | 1,498,380        | 1,498,380        | 1,498,380        | 1,498,380         | 1,498,380         | 1,498,380         |
| New - Former City Municipal Boundary Areas  | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| <b>Subtotal Block 2</b>                     | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b> | <b>1,498,380</b>  | <b>1,498,380</b>  | <b>1,498,380</b>  |
| <b>Block 3 (31-45 cu.m./month)</b>          |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| Existing - Residential                      | 251,940          | 251,940          | 251,940          | 251,940          | 251,940          | 251,940          | 251,940          | 251,940           | 251,940           | 251,940           |
| New - Former City Municipal Boundary Areas  | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| <b>Subtotal Block 3</b>                     | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>   | <b>251,940</b>    | <b>251,940</b>    | <b>251,940</b>    |
| <b>Block 4 (&gt;45 cu.m./month)</b>         |                  |                  |                  |                  |                  |                  |                  |                   |                   |                   |
| Existing - Residential                      | 96,900           | 96,900           | 96,900           | 96,900           | 96,900           | 96,900           | 96,900           | 96,900            | 96,900            | 96,900            |
| New - Former City Municipal Boundary Areas  | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas | -                | -                | -                | -                | -                | -                | -                | -                 | -                 | -                 |
| <b>Subtotal Block 4</b>                     | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>    | <b>96,900</b>     | <b>96,900</b>     | <b>96,900</b>     |
| <b>Total</b>                                | <b>7,970,810</b> | <b>8,107,147</b> | <b>8,256,563</b> | <b>8,532,070</b> | <b>8,915,690</b> | <b>9,299,440</b> | <b>9,683,500</b> | <b>10,067,560</b> | <b>10,451,620</b> | <b>10,835,860</b> |



Table 1-2 (Cont'd)

| Water Volume Forecast - Non- Residential<br>(cu.m.) | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Block 1 (0-15 cu.m./month)</b>                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Existing - Non-Residential                          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          | 351,000          |
| New - Former City Municipal Boundary Areas          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| New - Salem & Hewitt's Secondary Plan Areas         | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Subtotal Block 1</b>                             | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   | <b>351,000</b>   |
| <b>Block 2 (&gt;15 cu.m./month)</b>                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Existing - Non-Residential                          | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        | 3,935,000        |
| New - Former City Municipal Boundary Areas          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| New - Salem & Hewitt's Secondary Plan Areas         | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Subtotal Block 2</b>                             | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> | <b>3,935,000</b> |
| <b>Total</b>                                        | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> | <b>4,286,000</b> |



Table 1-3  
City of Barrie  
2021 to 2030 Wastewater System Forecast

**Wastewater Users Forecast - Former City Municipal Boundary Area (Low and Medium Density Residential)**

| Year               | Total Users  | 2021          | 2022          | 2023           | 2024           | 2025           | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 276          | 138           | 276           | 276            | 276            | 276            | 276            | 276            | 276            | 276            | 276            |
| 2022               | 276          |               | 138           | 276            | 276            | 276            | 276            | 276            | 276            | 276            | 276            |
| 2023               | 277          |               |               | 139            | 277            | 277            | 277            | 277            | 277            | 277            | 277            |
| 2024               | 352          |               |               |                | 176            | 352            | 352            | 352            | 352            | 352            | 352            |
| 2025               | 353          |               |               |                |                | 177            | 353            | 353            | 353            | 353            | 353            |
| 2026               | 354          |               |               |                |                |                | 177            | 354            | 354            | 354            | 354            |
| 2027               | 354          |               |               |                |                |                |                | 177            | 354            | 354            | 354            |
| 2028               | 354          |               |               |                |                |                |                |                | 177            | 354            | 354            |
| 2029               | 354          |               |               |                |                |                |                |                |                | 177            | 354            |
| 2030               | 354          |               |               |                |                |                |                |                |                |                | 177            |
| <b>Total</b>       | <b>3,304</b> | <b>138</b>    | <b>414</b>    | <b>691</b>     | <b>1,005</b>   | <b>1,358</b>   | <b>1,711</b>   | <b>2,065</b>   | <b>2,419</b>   | <b>2,773</b>   | <b>3,127</b>   |
| cu.m./user         | 180          | 180           | 180           | 180            | 180            | 180            | 180            | 180            | 180            | 180            | 180            |
| <b>Annual Flow</b> |              | <b>24,840</b> | <b>74,473</b> | <b>124,413</b> | <b>180,961</b> | <b>244,501</b> | <b>308,041</b> | <b>371,761</b> | <b>435,481</b> | <b>499,201</b> | <b>562,921</b> |

**Wastewater Users Forecast - Salem & Hewitts Secondary Plan Area (Low and Medium Density Residential)**

| Year               | Total Users  | 2021          | 2022          | 2023           | 2024           | 2025           | 2026           | 2027           | 2028             | 2029             | 2030             |
|--------------------|--------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|------------------|
| 2021               | 330          | 165           | 330           | 330            | 330            | 330            | 330            | 330            | 330              | 330              | 330              |
| 2022               | 287          |               | 144           | 287            | 287            | 287            | 287            | 287            | 287              | 287              | 287              |
| 2023               | 440          |               |               | 220            | 440            | 440            | 440            | 440            | 440              | 440              | 440              |
| 2024               | 1,017        |               |               |                | 509            | 1,017          | 1,017          | 1,017          | 1,017            | 1,017            | 1,017            |
| 2025               | 1,017        |               |               |                |                | 509            | 1,017          | 1,017          | 1,017            | 1,017            | 1,017            |
| 2026               | 1,017        |               |               |                |                |                | 509            | 1,017          | 1,017            | 1,017            | 1,017            |
| 2027               | 1,017        |               |               |                |                |                |                | 509            | 1,017            | 1,017            | 1,017            |
| 2028               | 1,017        |               |               |                |                |                |                |                | 509              | 1,017            | 1,017            |
| 2029               | 1,018        |               |               |                |                |                |                |                |                  | 509              | 1,018            |
| 2030               | 1,018        |               |               |                |                |                |                |                |                  |                  | 509              |
| <b>Total</b>       | <b>8,178</b> | <b>165</b>    | <b>474</b>    | <b>837</b>     | <b>1,566</b>   | <b>2,583</b>   | <b>3,600</b>   | <b>4,617</b>   | <b>5,634</b>     | <b>6,651</b>     | <b>7,669</b>     |
| cu.m./user         | 180          | 180           | 180           | 180            | 180            | 180            | 180            | 180            | 180              | 180              | 180              |
| <b>Annual Flow</b> |              | <b>29,700</b> | <b>85,249</b> | <b>150,604</b> | <b>281,857</b> | <b>464,917</b> | <b>647,977</b> | <b>831,037</b> | <b>1,014,097</b> | <b>1,197,157</b> | <b>1,380,397</b> |



Table 1-3 (Cont'd)

**Wastewater Users Forecast - Former City Municipal Boundary Area (High Density Residential)**

| Year               | Total Users  | 2021         | 2022          | 2023          | 2024          | 2025           | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|--------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 113          | 57           | 113           | 113           | 113           | 113            | 113            | 113            | 113            | 113            | 113            |
| 2022               | 114          |              | 57            | 114           | 114           | 114            | 114            | 114            | 114            | 114            | 114            |
| 2023               | 114          |              |               | 57            | 114           | 114            | 114            | 114            | 114            | 114            | 114            |
| 2024               | 838          |              |               |               | 419           | 838            | 838            | 838            | 838            | 838            | 838            |
| 2025               | 838          |              |               |               |               | 419            | 838            | 838            | 838            | 838            | 838            |
| 2026               | 839          |              |               |               |               |                | 420            | 839            | 839            | 839            | 839            |
| 2027               | 839          |              |               |               |               |                |                | 420            | 839            | 839            | 839            |
| 2028               | 839          |              |               |               |               |                |                |                | 420            | 839            | 839            |
| 2029               | 839          |              |               |               |               |                |                |                |                | 420            | 839            |
| 2030               | 839          |              |               |               |               |                |                |                |                |                | 420            |
| <b>Total</b>       | <b>6,212</b> | <b>57</b>    | <b>170</b>    | <b>284</b>    | <b>760</b>    | <b>1,598</b>   | <b>2,437</b>   | <b>3,276</b>   | <b>4,115</b>   | <b>4,954</b>   | <b>5,793</b>   |
| cu.m./user         | 130          | 130          | 130           | 130           | 130           | 130            | 130            | 130            | 130            | 130            | 130            |
| <b>Annual Flow</b> |              | <b>7,410</b> | <b>22,134</b> | <b>36,896</b> | <b>98,756</b> | <b>207,696</b> | <b>316,766</b> | <b>425,836</b> | <b>534,906</b> | <b>643,976</b> | <b>753,046</b> |

**Wastewater Users Forecast - Salem & Hewitts Secondary Plan Area (High Density Residential)**

| Year               | Total Users  | 2021         | 2022          | 2023          | 2024          | 2025          | 2026           | 2027           | 2028           | 2029           | 2030           |
|--------------------|--------------|--------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|
| 2021               | 135          | 68           | 135           | 135           | 135           | 135           | 135            | 135            | 135            | 135            | 135            |
| 2022               | 118          |              | 59            | 118           | 118           | 118           | 118            | 118            | 118            | 118            | 118            |
| 2023               | 181          |              |               | 90            | 181           | 181           | 181            | 181            | 181            | 181            | 181            |
| 2024               | 216          |              |               |               | 108           | 216           | 216            | 216            | 216            | 216            | 216            |
| 2025               | 216          |              |               |               |               | 108           | 216            | 216            | 216            | 216            | 216            |
| 2026               | 216          |              |               |               |               |               | 108            | 216            | 216            | 216            | 216            |
| 2027               | 217          |              |               |               |               |               |                | 109            | 217            | 217            | 217            |
| 2028               | 217          |              |               |               |               |               |                |                | 109            | 217            | 217            |
| 2029               | 217          |              |               |               |               |               |                |                |                | 109            | 217            |
| 2030               | 217          |              |               |               |               |               |                |                |                |                | 109            |
| <b>Total</b>       | <b>1,950</b> | <b>68</b>    | <b>194</b>    | <b>343</b>    | <b>542</b>    | <b>758</b>    | <b>974</b>     | <b>1,191</b>   | <b>1,408</b>   | <b>1,625</b>   | <b>1,842</b>   |
| cu.m./user         | 130          | 130          | 130           | 130           | 130           | 130           | 130            | 130            | 130            | 130            | 130            |
| <b>Annual Flow</b> |              | <b>8,840</b> | <b>25,271</b> | <b>44,631</b> | <b>70,477</b> | <b>98,557</b> | <b>126,637</b> | <b>154,847</b> | <b>183,057</b> | <b>211,267</b> | <b>239,477</b> |



Table 1-3 (Cont'd)

| Wastewater Customer Forecast                       | 2021          | 2022          | 2023          | 2024          | 2025          | 2026          | 2027          | 2028          | 2029          | 2030          |
|----------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Existing - Residential                             | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        | 41,781        |
| Existing - Non-Residential                         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         | 2,699         |
| New - Growth - Former City Municipal Boundary Area | 195           | 584           | 975           | 1,765         | 2,956         | 4,148         | 5,341         | 6,534         | 7,727         | 8,920         |
| New - Growth - Salem & Hewitts Secondary Plan Area | 233           | 668           | 1,180         | 2,108         | 3,341         | 4,574         | 5,808         | 7,042         | 8,276         | 9,511         |
| <b>Total</b>                                       | <b>44,908</b> | <b>45,732</b> | <b>46,635</b> | <b>48,353</b> | <b>50,777</b> | <b>53,202</b> | <b>55,629</b> | <b>58,056</b> | <b>60,483</b> | <b>62,911</b> |

| Wastewater Flows Forecast (cu.m.) - Residential | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029              | 2030              |
|-------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------|
| <b>Block 1 (0-15 cu.m./month)</b>               |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |
| Existing - Residential                          | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075        | 5,962,075         | 5,962,075         |
| New - Former City Municipal Boundary Areas      | 32,250           | 96,607           | 161,309          | 279,717          | 452,197          | 624,807          | 797,597          | 970,387          | 1,143,177         | 1,315,967         |
| New - Salem & Hewitt's Secondary Plan Areas     | 38,540           | 110,520          | 195,234          | 352,334          | 563,474          | 774,614          | 985,884          | 1,197,154        | 1,408,424         | 1,619,874         |
| <b>Subtotal Block 1</b>                         | <b>6,032,865</b> | <b>6,169,202</b> | <b>6,318,618</b> | <b>6,594,125</b> | <b>6,977,745</b> | <b>7,361,495</b> | <b>7,745,555</b> | <b>8,129,615</b> | <b>8,513,675</b>  | <b>8,897,915</b>  |
| <b>Block 2 (16-30 cu.m./month)</b>              |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |
| Existing - Residential                          | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271         | 1,474,271         |
| New - Former City Municipal Boundary Areas      | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas     | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| <b>Subtotal Block 2</b>                         | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b> | <b>1,474,271</b>  | <b>1,474,271</b>  |
| <b>Block 3 (31-45 cu.m./month)</b>              |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |
| Existing - Residential                          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139           | 245,139           |
| New - Former City Municipal Boundary Areas      | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas     | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| <b>Subtotal Block 3</b>                         | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>   | <b>245,139</b>    | <b>245,139</b>    |
| <b>Block 4 (&gt;45 cu.m./month)</b>             |                  |                  |                  |                  |                  |                  |                  |                  |                   |                   |
| Existing - Residential                          | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| New - Former City Municipal Boundary Areas      | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| New - Salem & Hewitt's Secondary Plan Areas     | -                | -                | -                | -                | -                | -                | -                | -                | -                 | -                 |
| <b>Subtotal Block 4</b>                         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>         | <b>-</b>          | <b>-</b>          |
| <b>Total</b>                                    | <b>7,752,275</b> | <b>7,888,612</b> | <b>8,038,028</b> | <b>8,313,535</b> | <b>8,697,155</b> | <b>9,080,905</b> | <b>9,464,965</b> | <b>9,849,025</b> | <b>10,233,085</b> | <b>10,617,325</b> |

Note: Above flows are water flows on which the wastewater billing will be calculated





Table 1-3 (Cont'd)

| Wastewater Flows Forecast (cu.m.) - Non-Residential | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Block 1 (0-15 cu.m./month)</b>                   |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Existing - Non-Residential                          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          |
| New - Former City Municipal Boundary Areas          | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| New - Salem & Hewitt's Secondary Plan Areas         | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Subtotal Block 1</b>                             | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   | <b>351,230</b>   |
| <b>Block 2 (&gt;15 cu.m./month)</b>                 |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| Existing - Non-Residential                          | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        |
| New - Former City Municipal Boundary Areas          | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| New - Salem & Hewitt's Secondary Plan Areas         | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Subtotal Block 2</b>                             | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> | <b>3,839,409</b> |
| <b>Total</b>                                        | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> | <b>4,190,639</b> |

Note: Above flows are water flows on which the wastewater billing will be calculated



# Chapter 2

## Capital Infrastructure Needs



## 2. Capital Infrastructure Needs

### 2.1 Capital Forecast

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Capital forecasts have been provided for the water and wastewater systems and are presented on Tables 2-1 and 2-2 (note: the costs are in uninflated dollars). The basis for these forecasts is the City's 2021 Capital Budgets, Capital Forecasts, works identified in the 2019 Development Charges Background Study required for growth, in addition to asset replacement works identified through the currently ongoing draft water and wastewater Asset Management Plans.

A summary of the capital works related to the water and wastewater services is provided in Tables 2-1 and 2-2, respectfully.



Table 2-1  
City of Barrie  
2021 to 2030 Water Capital Forecast Summary (Uninflated \$)

| Description                                                                                    | Total<br>2021-2030 | Years Undertaken |
|------------------------------------------------------------------------------------------------|--------------------|------------------|
| <b>Capital Expenditures</b>                                                                    |                    |                  |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    | 35,000             | 2024             |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    | 195,000            | 2026-2027        |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    | 313,900            | 2030             |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    | 382,800            | 2027-2029        |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          | 405,000            | 2029             |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          | 65,000             | 2023             |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     | 1,245,500          | 2026-2027        |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     | 190,000            | 2023-2024        |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      | 125,000            | 2028             |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      | 800,000            | 2030             |
| 000203 - Surface Water Treatment Plant Facility Renewal Assessment                             | 240,000            | 2024-2025, 2027  |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                        | 178,000            | 2024-2025        |
| 000725 - NRP- HNS Grove B2 Neighbourhood Reconstruction                                        | 98,000             | 2030             |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                | 2,859,400          | 2022-2028        |
| 001014 - SWTP-Garage Floor Structural Rehabilitation and Prevention                            | 1,550,000          | 2022-2023        |
| 001016 - SWTP Control System Upgrade                                                           | 5,597,000          | 2021-2023        |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                | 973,368            | 2021-2022        |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster | 195,000            | 2022             |
| EN1150 - Big Bay Point Road Booster Station VFD Upgrade                                        | 175,000            | 2021-2022        |
| EN1152 - Water Service and Backflow Prevention Upgrades for Parks and Open Spaces              | 645,000            | 2021-2023        |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                       | 10,298             | 2021             |
| EN1169 - Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                        | 197,303            | 2021             |



Table 2-1 (Cont'd)

| Description                                                                                          | Total<br>2021-2030 | Years Undertaken     |
|------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                           | 2,185,400          | 2021-2023            |
| EN1178 - Interim Watermain Replacement Pilot Program                                                 | 512,985            | 2021                 |
| EN1189 - Watermain Cathodic Protection Program                                                       | 4,960,000          | 2021-2025            |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                             | 967,120            | 2021-2024            |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                             | 1,088,402          | 2021, 2026-2027      |
| EN1252 - PRV Chamber Replacement Program                                                             | 4,146,430          | 2021-2024            |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement | 1,220,500          | 2026-2027, 2029-2030 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 1,197,000          | 2021-2023            |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                           | 1,940,000          | 2025-2027            |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                           | 2,659,740          | 2021-2027            |
| EN1294 - Watermain Renewal Program                                                                   | 4,770,000          | 2021-2024            |
| EN1305 - Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction          | 15,935,000         | 2023-2026            |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                            | 1,910,000          | 2021-2022, 2022-2026 |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth      | 754,000            | 2021, 2023-2024      |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                         | 2,380,000          | 2027-2029            |
| EN1355 - Grove Street East Watermain Replacement and Road Renewal – Duckworth to Fletcher            | 1,474,200          | 2021-2023            |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                          | 2,004,000          | 2023-2024, 2028-2030 |
| EN1395 - Ferndale Drive South Watermain Replacement – Tiffin to Ardagh                               | 100,000            | 2021                 |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                           | 769,000            | 2021, 2023-2024      |
| EN1435 - Alliance Boulevard Expansion - Bell Farm to Bell Farm                                       | 167,000            | 2027, 2029           |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                          | 2,536,000          | 2024-2030            |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon               | 1,638,100          | 2021-2022, 2024-2026 |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                          | 1,200,000          | 2024, 2028           |



Table 2-1 (Cont'd)

| Description                                                                              | Total<br>2021-2030 | Years Undertaken |
|------------------------------------------------------------------------------------------|--------------------|------------------|
| 000472 - Technology Forecasted Needs                                                     | 1,223,600          | 2022-2030        |
| CC1000 - ERP Sustainment Program                                                         | 420,000            | 2021-2026        |
| EN1429 - Water and Transportation Asset Management Plans - Update                        | 45,000             | 2021             |
| IT1010 - Network Technology Infrastructure Program                                       | 224,000            | 2021-2024        |
| IT1012 - Server and Storage Technology Infrastructure Program                            | 182,000            | 2021-2026        |
| Additional Asset Replacement Needs                                                       | 24,400,000         | 2027-2030        |
| <b>Carryforwards:</b>                                                                    |                    |                  |
| Watermain Renewal Program                                                                | 696,900            | 2021-2023        |
| Air Valve/Main Valve Chamber Condition Assessment and Rehabilitation Program             | 99,900             | 2021-2023        |
| Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction       | 71,100             | 2021-2023        |
| BAS Component Replacement                                                                | 34,500             | 2021-2023        |
| Bayfield Street Water Tower - Repairs and Interior Lining Replacement                    | 531,900            | 2021-2023        |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                  | 545,700            | 2021-2023        |
| Big Bay Point Road Booster Station VFD Upgrade                                           | 75,000             | 2021-2023        |
| Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore              | 6,300              | 2021-2023        |
| Citizen Relationship Management (CRM) Solution                                           | 51,000             | 2021-2023        |
| City Hall Customer Contact Centre Renovation                                             | 900                | 2021-2023        |
| CMMS Improvement Project - Cityworks                                                     | 323,700            | 2021-2023        |
| Corealis Meters                                                                          | 14,700             | 2021-2023        |
| Corporate Audio Visual Technology Infrastructure                                         | 300                | 2021-2023        |
| Corporate Communications Infrastructure Program                                          | 5,100              | 2021-2023        |
| Corporate PC Infrastructure Program                                                      | 10,200             | 2021-2023        |
| Corporate Printing Infrastructure                                                        | 2,100              | 2021-2023        |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 195,900            | 2021-2023        |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)          | 28,500             | 2021-2023        |
| Dunlop Street West ROW Replacement - Eccles to Toronto                                   | 98,700             | 2021-2023        |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 259,800            | 2021-2023        |
| ERP Sustainment Program                                                                  | 179,700            | 2021-2023        |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 27,000             | 2021-2023        |



Table 2-1 (Cont'd)

| Description                                                                          | Total<br>2021-2030 | Years Undertaken |
|--------------------------------------------------------------------------------------|--------------------|------------------|
| Frozen Water Service Repair                                                          | 554,400            | 2021-2023        |
| Fuel Tank Repairs 2017                                                               | 35,100             | 2021-2023        |
| Gunn Street ROW Replacement - Peel to St. Vincent                                    | 23,700             | 2021-2023        |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                        | 266,400            | 2021-2023        |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                   | 6,000              | 2021-2023        |
| Huronina and Big Bay Point Large Diameter Watermain Condition Assessment             | 382,200            | 2021-2023        |
| Interim Watermain Replacement Pilot Program                                          | 653,400            | 2021-2023        |
| Lampman to Anne New Transmission Watermain and Lampman to Leacock ROW Rehabilitation | 131,700            | 2021-2023        |
| Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                       | 225,000            | 2021-2023        |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                     | 2,700              | 2021-2023        |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)             | 18,600             | 2021-2023        |
| Microsoft Office 365 and Windows Enterprise                                          | 3,900              | 2021-2023        |
| Network Technology Infrastructure Program                                            | 57,900             | 2021-2023        |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                    | 131,100            | 2021-2023        |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                    | 46,800             | 2021-2023        |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                 | 15,600             | 2021-2023        |
| NRP- Wellington D1 Neighbourhood Reconstruction                                      | 34,200             | 2021-2023        |
| NRP- Wellington D2 Neighbourhood Reconstruction                                      | 86,100             | 2021-2023        |
| PC Replacements                                                                      | 300                | 2021-2023        |
| PRV Chamber Replacement Program                                                      | 485,400            | 2021-2023        |
| Public Safety Communication Program                                                  | 1,800              | 2021-2023        |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                    | 15,900             | 2021-2023        |
| Rodney St-Blake to Kempenfelt                                                        | 20,100             | 2021-2023        |
| Ross, Collier, Bayfield Intersection Realignment                                     | 4,500              | 2021-2023        |
| Secondary Plan Area New Bulk Water Filling Station                                   | 91,500             | 2021-2023        |
| Server and Desktop Software Program                                                  | 300                | 2021-2023        |
| Server and Storage Technology Infrastructure Program                                 | 5,100              | 2021-2023        |
| South L/fill Leachate Gal Repl                                                       | 44,100             | 2021-2023        |
| Sunnidale: Letitia-Wellington Transmission Watermain                                 | 1,722,000          | 2021-2023        |
| TCE Groundwater Monitor Wells                                                        | 82,200             | 2021-2023        |
| TCE Plume Mitigation Solution                                                        | 74,100             | 2021-2023        |
| Tiffin Street - Ferndale to Anne Street                                              | 1,200              | 2021-2023        |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                      | 117,900            | 2021-2023        |



Table 2-1 (Cont'd)

| Description                                                                                                   | Total<br>2021-2030 | Years Undertaken     |
|---------------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| Water Dispensing Event Trailer                                                                                | 2,400              | 2021-2023            |
| Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                                      | 59,700             | 2021-2023            |
| Watermain Cathodic Protection Program                                                                         | 1,034,100          | 2021-2023            |
| Water and Transportation Asset Management Plans - Update                                                      | 70,200             | 2021-2023            |
| Watermain Renewal Program                                                                                     | 1,020,000          | 2021-2023            |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                      | 77,100             | 2021-2023            |
| Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)                 | 35,400             | 2021-2023            |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                               | (118,900)          | 2021                 |
| <b>Growth Related:</b>                                                                                        |                    |                      |
| <b>Facilities</b>                                                                                             |                    |                      |
| 000461 - SWTP Optimization                                                                                    | 1,041,000          | 2025                 |
| <b>Water Distribution - Salem &amp; Hewitt's Secondary Plan Areas:</b>                                        |                    |                      |
| 000293 - Huronia Road New Transmission Watermain - Mapleview to Lockhart (City)                               | 5,637,000          | 2027-2030            |
| 000926 - Salem Road Reservoir and Pumping Station                                                             | 4,024,000          | 2026-2028            |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)  | 491,430            | 2021                 |
| EN1250 - Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                            | 2,760,773          | 2021                 |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                      | 86,700             | 2021, 2022-2023      |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                             | 1,246,300          | 2021-2023, 2025-2026 |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                      | 5,125,302          | 2021, 2024-2026      |
| EN1259 - Big Bay Point New Transmission Watermain and Road Expansion - Prince William to Street N (Developer) | 350,844            | 2023                 |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                           | 453,100            | 2021, 2026-2028      |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)  | 234,963            | 2022                 |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                               | 3,622,601          | 2022-2023, 2025-2027 |
| EN1272 - Salem Rd New Watermain, New Trunk Sanitary Sewer and ROW Expansion - Veterans to Saunders (City)     | (508,000)          | 2022, 2026-2028      |





Table 2-1 (Cont'd)

| Description                                                                                            | Total<br>2021-2030 | Years Undertaken |
|--------------------------------------------------------------------------------------------------------|--------------------|------------------|
| EN1275 - Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                         | 261,000            | 2021             |
| EN1276 - Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer) | 241,000            | 2021-2022        |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                              | 311,800            | 2027-2029        |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                  | 266,710            | 2026-2027        |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South) extension to Lockhart (City)             | 932,300            | 2023, 2026-2028  |
| <b>Carryforwards</b>                                                                                   |                    |                  |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain -Big Bay Point to Mplview (City)   | 600                | 2021-2023        |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)    | 175,800            | 2021-2023        |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                              | 49,800             | 2021-2023        |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                                       | 2,265,000          | 2021-2023        |
| McKay Road New Interchange - Highway 400 (City)                                                        | 56,100             | 2021-2023        |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                 | 35,100             | 2021-2023        |
| Secondary Plan Area New Bulk Water Filling Station                                                     | 91,500             | 2021-2023        |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)    | 48,000             | 2021-2023        |
| Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                  | 2,164,500          | 2021-2023        |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                              | 1,848,600          | 2021-2023        |
| Mapleview Drive E New Transmisison Watermain - Yonge to Royal Jubilee (Developer)                      | 5,783,700          | 2021-2023        |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                               | 2,660,700          | 2021-2023        |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                        | 2,478,900          | 2021-2023        |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain -Big Bay Point to Mplview (City)   | 336,900            | 2021-2023        |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)    | 33,900             | 2021-2023        |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                 | 176,100            | 2021-2023        |



Table 2-1 (Cont'd)

| Description                                                                                              | Total<br>2021-2030 | Years Undertaken     |
|----------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| <b>Former Municipal Boundary Areas:</b>                                                                  | -                  |                      |
| 000924 - Fairview Road Right of Way Expansion - Big Bay Point to Little                                  | 10,000             | 2027-2028            |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                            | 6,202,000          | 2021-2023            |
| EN1016 - Tiffin Street - Well 7 to Ferndale                                                              | 6,736,000          | 2021-2024            |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                                | 1,447,540          | 2021-2022            |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster           | 1,000,000          | 2021                 |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        | 1,218,800          | 2023-2024            |
| EN1168 - Dyments Creek Culvert Expansion - Bradford St.                                                  | 424,260            | 2023-2025            |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                                 | 261,000            | 2028-2029            |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                | 171,000            | 2030                 |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | 183,090            | 2023-2025            |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 364,300            | 2021-2024            |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 1,130,800          | 2021-2022            |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 1,256,245          | 2021-2026            |
| EN1333 - Huronia Road Right of Way Expansion - Yonge to Herrell                                          | 52,000             | 2030                 |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | 747,000            | 2024-2026            |
| EN1377 - Anne Street Right of Way Expansion - Wellington to Dunlop                                       | 452,000            | 2024-2025, 2028-2029 |
| Z423 - Cundles Road East New Transmission Watermain - St Vincent to Golden Eagle                         | 978,000            | 2028-2029            |
| Z436 - Huronia Road Right of Way Expansion - Herrell to Big Bay Point                                    | 6,000              | 2028-2029            |
| Z438 - Lakeshore/Hurst Drive ROW Expansion - Tiffin Street to Cox Mill                                   | 6,000              | 2028-2029            |
| <b>Carryforwards</b>                                                                                     |                    |                      |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 845,100            | 2021-2023            |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent                 | 348,300            | 2021-2023            |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)                          | 21,600             | 2021-2023            |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster                    | 85,500             | 2021-2023            |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                                            | 26,400             | 2021-2023            |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                     | 873,300            | 2021-2023            |
| Tiffin Street - Ferndale to Anne Street                                                                  | 3,300              | 2021-2023            |
| <b>Total Water Capital Expenditures</b>                                                                  | <b>179,898,704</b> |                      |



Table 2-2  
City of Barrie  
2021 to 2030 Wastewater Capital Forecast Summary (Uninflated \$)

| Description                                                                                          | Total<br>2021-2030 | Years Undertaken     |
|------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| <b>Capital Expenditures</b>                                                                          |                    |                      |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                          | 274,000            | 2024, 2026-2027      |
| 000061 - Johnson Street wastewater pump station valve chamber, back up pump and flow meter           | 225,000            | 2021                 |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                          | 765,300            | 2027-2030            |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                                | 505,000            | 2023, 2029           |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                           | 1,623,000          | 2023-2024, 2026-2027 |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                            | 955,000            | 2028, 2030           |
| 000208 - Waste Water Maintenance Facility Renewal Assessment                                         | 64,000             | 2028-2029            |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                              | 379,200            | 2024-2025, 2030      |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                      | 2,315,000          | 2022-2023, 2026-2028 |
| 000952 - Mobile Response Technology Replacement                                                      | 40,000             | 2022-2023            |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                      | 1,383,922          | 2021-2022            |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster       | 195,000            | 2022                 |
| EN1127 - WwTF Biosolids Storage Tank Mixers                                                          | 6,730,200          | 2021, 2023-2026      |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                             | 2,080              | 2021                 |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                           | 2,185,400          | 2021-2023            |
| EN1184 - Sewer Rehabilitation Program                                                                | 2,860,000          | 2021-2029            |
| EN1237 - WwTF Sludge Thickening System Process - Polymer System Replacement                          | 3,073,000          | 2021-2024            |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                             | 1,289,660          | 2021-2024            |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                             | 1,451,203          | 2021, 2026-2027      |
| EN1243 - WwTF Cogeneration Building Ventilation Upgrades                                             | 300,000            | 2021                 |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement | 1,900,900          | 2026-2027, 2029-2030 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 1,110,000          | 2021-2023            |



Table 2-2 (Cont'd)

| Description                                                                                           | Total<br>2021-2030 | Years Undertaken     |
|-------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                            | 1,940,000          | 2025-2027            |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                            | 3,544,820          | 2021-2027            |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                             | 1,699,731          | 2021-2022, 2025-2026 |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth       | 993,000            | 2021, 2023-2024      |
| EN1328 - WwTF Septage/Supernating Dosing Tank Pre-Treatment Upgrade                                   | 250,000            | 2022-2023            |
| EN1330 - WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment | 2,400,000          | 2021, 2023-2024      |
| EN1335 - WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                               | 100,000            | 2021                 |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                          | 2,400,000          | 2027-2029            |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                           | 2,030,000          | 2023-2024, 2028-2030 |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                            | 1,009,000          | 2021, 2023-2024      |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                           | 3,563,000          | 2024-2030            |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon                | 1,042,000          | 2021-2022, 2024-2026 |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                           | 710,000            | 2024, 2028           |
| Additional Asset Replacement Needs                                                                    | 15,750,000         | 2022-2030            |
| <b>Carryforwards:</b>                                                                                 |                    |                      |
| Automatic Transfer Switch                                                                             | 399,900            | 2021-2023            |
| BCSC Elec Surge Protect Upgrad                                                                        | 173,700            | 2021-2023            |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                               | 131,100            | 2021-2023            |
| Biosolids Electrical Protect                                                                          | 49,200             | 2021-2023            |
| Biosolids Facility Roof Coating Rehabilitation                                                        | 24,900             | 2021-2023            |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                                   | 38,100             | 2021-2023            |
| Capital Purchase - New Vehicles from Intake Forms                                                     | 135,000            | 2021-2023            |
| Citizen Relationship Management (CRM) Solution                                                        | 51,000             | 2021-2023            |
| City Hall Customer Contact Centre Renovation                                                          | 900                | 2021-2023            |
| CMMS Improvement Project - Cityworks                                                                  | 48,900             | 2021-2023            |
| Corporate Audio Visual Technology Infrastructure                                                      | 300                | 2021-2023            |



Table 2-2 (Cont'd)

| Description                                                                                 | Total<br>2021-2030 | Years Undertaken |
|---------------------------------------------------------------------------------------------|--------------------|------------------|
| Corporate Communications Infrastructure Program                                             | 3,300              | 2021-2023        |
| Corporate PC Infrastructure Program                                                         | 10,500             | 2021-2023        |
| Corporate Printing Infrastructure                                                           | 1,500              | 2021-2023        |
| Duckworth Street New Transmission Watermain and ROW<br>Expansion - Bell Farm to St. Vincent | 286,800            | 2021-2023        |
| Dunlop Street East Corridor Improvements - Toronto to<br>Mulcaster                          | 5,400              | 2021-2023        |
| Dunlop Street Interchange Replacement - Sarjeant Drive to<br>Anne Street                    | 205,200            | 2021-2023        |
| Dunlop, Poyntz and Berczy New Watermain and ROW<br>Replacement - Codrington to Mulcaster    | 774,300            | 2021-2023        |
| ERP Sustainment Program                                                                     | 179,700            | 2021-2023        |
| eTendering Platform New System                                                              | 12,000             | 2021-2023        |
| Eugenia Street ROW Reconstruction and New Transmission<br>Watermain - Berczy to Duckworth   | 20,100             | 2021-2023        |
| Grove Street Pumping Station New Sewage Pump                                                | 44,700             | 2021-2023        |
| Gunn Street ROW Replacement - Peel to St. Vincent                                           | 27,900             | 2021-2023        |
| Harvie Road and Big Bay Point Road New Crossing -<br>Highway 400                            | 62,100             | 2021-2023        |
| Harvie Road ROW Expansion - Essa to Bryne                                                   | 405,000            | 2021-2023        |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to<br>Lockhart (Developer)              | 618,600            | 2021-2023        |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of<br>Tiffin                       | 687,300            | 2021-2023        |
| Huron Road New Trunk Sanitary Sewer and Road<br>Replacement - Lockhart to McKay (City)      | 45,000             | 2021-2023        |
| Inlet Wks Screen Install                                                                    | 20,100             | 2021-2023        |
| Little Lk Sew Pump Station Upg                                                              | 52,500             | 2021-2023        |
| Lockhart Rd Trunk San Sew/Pump (City)                                                       | 21,300             | 2021-2023        |
| Mapleview Dr E Sewer Watermain                                                              | 15,000             | 2021-2023        |
| Mapleview Drive East Improvements - Country Lane to<br>Yonge (City)                         | 544,200            | 2021-2023        |
| McKay Road ROW Expansion - Reid Drive to West of<br>Highway 400 (Developer)                 | 118,200            | 2021-2023        |
| Microsoft Office 365 and Windows Enterprise                                                 | 2,100              | 2021-2023        |
| Mobility Technology Program                                                                 | 141                | 2021-2023        |
| Network Technology Infrastructure Program                                                   | 31,200             | 2021-2023        |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                           | 130,200            | 2021-2023        |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                           | 43,200             | 2021-2023        |
| NRP- HNS Brock Park Neighbourhood Reconstruction                                            | 111,000            | 2021-2023        |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 14,700             | 2021-2023        |



Table 2-2 (Cont'd)

| Description                                                                                      | Total<br>2021-2030 | Years Undertaken |
|--------------------------------------------------------------------------------------------------|--------------------|------------------|
| NRP- Wellington D1 Neighbourhood Reconstruction                                                  | 34,800             | 2021-2023        |
| NRP- Wellington D2 Neighbourhood Reconstruction                                                  | 96,000             | 2021-2023        |
| PC Replacements                                                                                  | 300                | 2021-2023        |
| Process Instrumentation                                                                          | 24,900             | 2021-2023        |
| Public Safety Communication Program                                                              | 1,800              | 2021-2023        |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                                | 48,900             | 2021-2023        |
| Ross, Collier, Bayfield Intersection Realignment                                                 | 8,400              | 2021-2023        |
| Server and Desktop Software Program                                                              | 600                | 2021-2023        |
| Server and Storage Technology Infrastructure Program                                             | 2,700              | 2021-2023        |
| Sewer Rehabilitation Program                                                                     | 366,900            | 2021-2023        |
| Sophia Creek Culvert Expansion - Grove, 130m East of Davidson                                    | 900                | 2021-2023        |
| South L/fill Leachate Gal Repl                                                                   | 44,100             | 2021-2023        |
| Sunnidale Road Hwy 400 Crossing Reconstruction (within CAH limits)                               | 656,100            | 2021-2023        |
| Utilization of Wastewater Collection System as Active Storage                                    | 69,600             | 2021-2023        |
| Waste Water Treatment Facility Administrative Office Fit-Up                                      | 33,600             | 2021-2023        |
| Wastewat- Auto ValvesFlowmeter                                                                   | 132,600            | 2021-2023        |
| Wastewater Asset Management Plan                                                                 | 95,700             | 2021-2023        |
| Wastewater Peak Flow Attenuation Facility                                                        | 475,500            | 2021-2023        |
| Well Installations for Biosolids Storage Facility Groundwater Monitoring Program                 | 56,700             | 2021-2023        |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                            | 328,500            | 2021-2023        |
| WwTF Administration Building Retrofit of Laboratory Fume Hood Ventilation Unit - Laboratory Room | 24,900             | 2021-2023        |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                 | 880,200            | 2021-2023        |
| WwTF Biosolids Storage Tank Mixers                                                               | 3,407,400          | 2021-2023        |
| WwTF Chemical Building Upgrade                                                                   | 25,200             | 2021-2023        |
| WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment     | 300,000            | 2021-2023        |
| WwTF Cogenerat Engine #2 Rehab                                                                   | 112,500            | 2021-2023        |
| WwTF Cogeneration Building Ventilation Upgrades                                                  | 87,900             | 2021-2023        |
| WwTF Electrical Substation and Transformer Upgrade                                               | 856,800            | 2021-2023        |
| WwTF Feasibility Study - Reuse of Final Effluent                                                 | (50,900)           | 2021             |
| WwTF Filter Beds 1 and 2 Diffuser Upgrade                                                        | 39,000             | 2021-2023        |
| WWTF Innovation Center                                                                           | 35,100             | 2021-2023        |
| WwTF New Advanced Nutrient Removal                                                               | 2,169,300          | 2021-2023        |





Table 2-2 (Cont'd)

| Description                                                                                                  | Total<br>2021-2030 | Years Undertaken |
|--------------------------------------------------------------------------------------------------------------|--------------------|------------------|
| WwTF New Heat Exchanger - Primary Digester 3                                                                 | 52,200             | 2021-2023        |
| WwTF Redundant Power Feed to Secondary Effluent Pumps                                                        | 150,000            | 2021-2023        |
| WwTF Sand Filter Controls & Instrumentation Replacement                                                      | 165,000            | 2021-2023        |
| WWTF Secondary Digester Facade Replacement                                                                   | 101,700            | 2021-2023        |
| WwTF Selector Tank Mixer Upgrade                                                                             | 600                | 2021-2023        |
| WwTF Sludge Thickening System Process - Polymer System Replacement                                           | 219,600            | 2021-2023        |
| WwTF Splitter Gallery Concrete and Expansion Joint Repairs                                                   | 350,100            | 2021-2023        |
| WwTF Travelling Bridge Frame Renewal - Filters 1 - 4                                                         | 139,500            | 2021-2023        |
| WwTF Underground Sludge Transfer Pipe Replacement - Admin Building                                           | 1,017,000          | 2021-2023        |
| WwTF Unox Tank Isolation Gate Replacement                                                                    | 99,900             | 2021-2023        |
| WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                                               | 109,800            | 2021-2023        |
| WwTF Feasibility Study - Reuse of Final Effluent                                                             | 55,200             | 2021-2023        |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 92,700             | 2021-2023        |
| WwTF Biosolids Storage Tank Mixers                                                                           | 2,400,000          | 2021-2023        |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 1,378,500          | 2021-2023        |
| Co-generation & Biogas Trmt                                                                                  | (2,500)            | 2021             |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | (200,400)          | 2021             |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 44,700             | 2021-2023        |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 15,000             | 2021-2023        |
| <b>Growth Related:</b>                                                                                       |                    |                  |
| <b>Salem &amp; Hewitt's Secondary Plan Areas</b>                                                             |                    |                  |
| 000332 - McKay Pump Station (City)                                                                           | 3,975,000          | 2027-2030        |
| 000458 - Hewitts Pump Station (City)                                                                         | 959,000            | 2029-2030        |
| EN1137 - Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                         | 5,413,750          | 2024, 2026       |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer) | 830,800            | 2021             |
| EN1255 - Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)               | 11,856,700         | 2021, 2024-2027  |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                     | 23,722,300         | 2021, 2023-2026  |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                            | 7,192,536          | 2021-2023        |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                     | 2,459,700          | 2021, 2024-2026  |



Table 2-2 (Cont'd)

| Description                                                                                                  | Total<br>2021-2030 | Years Undertaken     |
|--------------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                          | 453,100            | 2021, 2026-2028      |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer) | 75,795             | 2021                 |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                              | 3,622,601          | 2022-2023, 2025-2027 |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                    | 311,800            | 2027-2029            |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                        | 116,000            | 2025-2027            |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South) extension to Lockhart (City)                   | 1,450,200          | 2023, 2026-2028      |
| <b>Carryforwards:</b>                                                                                        |                    |                      |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                        | 254,400            | 2021-2023            |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 1,679,100          | 2021-2023            |
| County Rd 27 Sanitary Sewer - Holly SPS to Loughheed                                                         | 350,100            | 2021-2023            |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)          | 48,000             | 2021-2023            |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                                  | 855,000            | 2021-2023            |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview (Developer)                                  | 3,250,200          | 2021-2023            |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                        | 1,359,900          | 2021-2023            |
| Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)          | 3,815,100          | 2021-2023            |
| McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                              | 8,560,800          | 2021-2023            |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 7,095,300          | 2021-2023            |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                                  | 462,900            | 2021-2023            |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview (Developer)                                  | 189,900            | 2021-2023            |
| Lockhart Rd Trunk San Sew/Pump (City)                                                                        | 193,800            | 2021-2023            |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 437,700            | 2021-2023            |
| Sanitary Pump Station 3 Decommissioning (City)                                                               | 93,600             | 2021-2023            |





Table 2-2 (Cont'd)

| Description                                                                                              | Total<br>2021-2030 | Years Undertaken     |
|----------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                             | 78,600             | 2021-2023            |
|                                                                                                          |                    |                      |
| <b>Former Municipal Boundary Areas</b>                                                                   |                    |                      |
| 000931 - Wastewater Inflow/Infiltration Reduction Action Plan                                            | 4,700,000          | 2021-2030            |
| 001018 - Dunlop Street Bridge Sanitary - Sarjeant Drive to Anne Street                                   | 33,108,763         | 2021-2023, 2025-2028 |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                            | 448,000            | 2021                 |
| EN1097 - Maplevue Drive East Improvements - Country Lane to Yonge (City)                                 | 87,555             | 2021-2022            |
| EN1122 - Little Lk Sew Pump Station Upg                                                                  | 5,502,000          | 2022-2024            |
| EN1132 - Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                             | 3,298,000          | 2021-2024            |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        | 1,750,000          | 2023-2024            |
| EN1170 - Essa Road ROW Expansion - Coughlin to Maplevue                                                  | 600,400            | 2021, 2027           |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                | 25,000             | 2030                 |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | 366,180            | 2023-2025            |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 364,300            | 2021-2024            |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 125,800            | 2021-2025            |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 1,550,900          | 2021-2026            |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | 985,000            | 2024-2026            |
| <b>Carryforwards:</b>                                                                                    |                    |                      |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 97,500             | 2021-2023            |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                                      | 4,200              | 2021-2023            |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                                    | 154,800            | 2021-2023            |
| Wastewater Asset Management Plan                                                                         | 180,300            | 2021-2023            |
|                                                                                                          |                    |                      |
| <b>Facilities</b>                                                                                        |                    |                      |
| EN1091 - WwTF New Advanced Nutrient Removal                                                              | 148,944,150        | 2021-2030            |
| EN1245 - WwTF Chemical Building Upgrade                                                                  | 1,240,000          | 2021-2022            |
| EN1297 - WwTF Electrical Substation and Transformer Upgrade                                              | 15,644,000         | 2021-2026            |



Table 2-2 (Cont'd)

| Description                                                                    | Total<br>2021-2030 | Years Undertaken     |
|--------------------------------------------------------------------------------|--------------------|----------------------|
| EN1390 - Wastewater Peak Flow Attenuation Facility                             | 25,183,000         | 2021-2024, 2026-2029 |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR | 1,257,400          | 2021-2022            |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR | 12,988,600         | 2023-2025            |
| EN1438 - WwTF Digester Capacity Expansion                                      | 30,725,000         | 2021-2029            |
| FC1215 - WWTF Innovation Center                                                | 15,000,000         | 2021-2024            |
| Z162 - WwTF New Cogeneration and Biogas Treatment System                       | 500,000            | 2021-2023            |
| <b>Carryforwards:</b>                                                          |                    |                      |
| Wastewater Peak Flow Attenuation Facility                                      | 186,000            | 2021-2023            |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR          | 583,800            | 2021-2023            |
| WwTF Alum System Upgrade at Secondary Clarifiers                               | 474,000            | 2021-2023            |
| WwTF Digester Capacity Expansion                                               | 777,600            | 2021-2023            |
| WwTF Electrical Substation and Transformer Upgrade                             | 675,000            | 2021-2023            |
| WWTF Innovation Center                                                         | 35,100             | 2021-2023            |
| WwTF New Heat Exchanger - Primary Digester 3                                   | 469,800            | 2021-2023            |
| WwTF Selector Tank Mixer Upgrade                                               | 5,100              | 2021-2023            |
| WwTF Biosolids Storage Tank Mixers                                             | 348,000            | 2021-2023            |
| WwTF New Advanced Nutrient Removal                                             | 650,100            | 2021-2023            |
| <b>Total Wastewater Capital Expenditures</b>                                   | <b>489,358,287</b> |                      |



# Chapter 3

## Lifecycle Costing



## 3. Lifecycle Costing

### 3.1 Overview of Lifecycle Costing

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#### 3.1.1 *Definition*

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

By definition, lifecycle costs are all the costs which are incurred during the lifecycle of a physical asset, from the time its acquisition is first considered to the time it is taken out of service for disposal or redeployment. The stages which the asset goes through in its lifecycle are specification, design, manufacture (or build), install, commission, operate, maintain and disposal. Figure 3-1 depicts these stages in a schematic form.

#### 3.1.2 *Financing Costs*

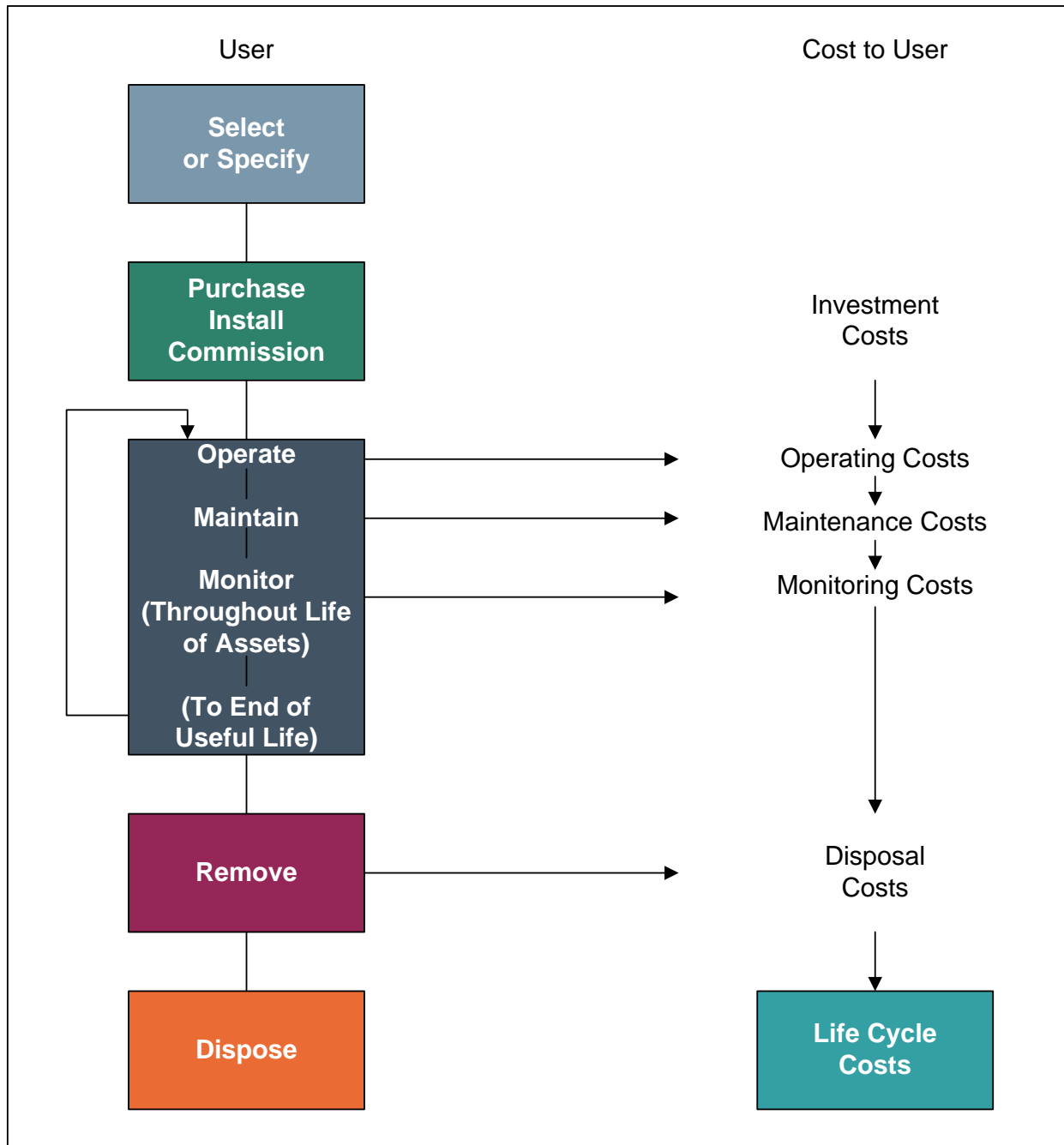
This section will focus on financing mechanisms in place to fund the costs incurred throughout the asset's life.

In a municipal context, services are provided to benefit tax/rate payers. Acquisition of assets is normally timed in relation to direct needs within the community. At times, economies of scale or technical efficiencies will lead to oversizing an asset to accommodate future growth within the City. Over the past few decades, new financing techniques such as development charges have been employed based on the underlying principle of having tax/rate payers who benefit directly from the service paying for that service. Operating costs which reflect the cost of the service for that year are charged directly to all existing tax/rate payers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

Capital expenditures are recouped through several methods, with operating budget contributions, development charges, reserves, developer contributions and debentures, being the most common.



Figure 3-1  
Lifecycle Costing



New construction related to growth could produce development charges and developer contributions (e.g. works internal to a subdivision which are the responsibility of the developer to construct) to fund a significant portion of projects, where new assets are



being acquired to allow growth within the City to continue. As well, debentures could be used to fund such works, with the debt charge carrying costs recouped from taxpayers in the future.

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

Figure 3-2 depicts the costs of an asset from its initial conception through to replacement and then continues to follow the associated costs through to the next replacement.

As referred to earlier, growth-related financing methods such as development charges and developer contributions could be utilized to finance the growth-related component of the new asset. These revenues are collected (indirectly) from the new homeowner who benefits directly from the installation of this asset. Other financing methods may be used as well to finance the non-growth-related component of this project, such as reserves which have been collected from past tax/rate payers, operating budget contributions which are collected from existing tax/rate payers and debenturing which will be carried by future tax/rate payers. Ongoing costs for monitoring, operating and maintaining the asset will be charged annually to the existing tax/rate payer.

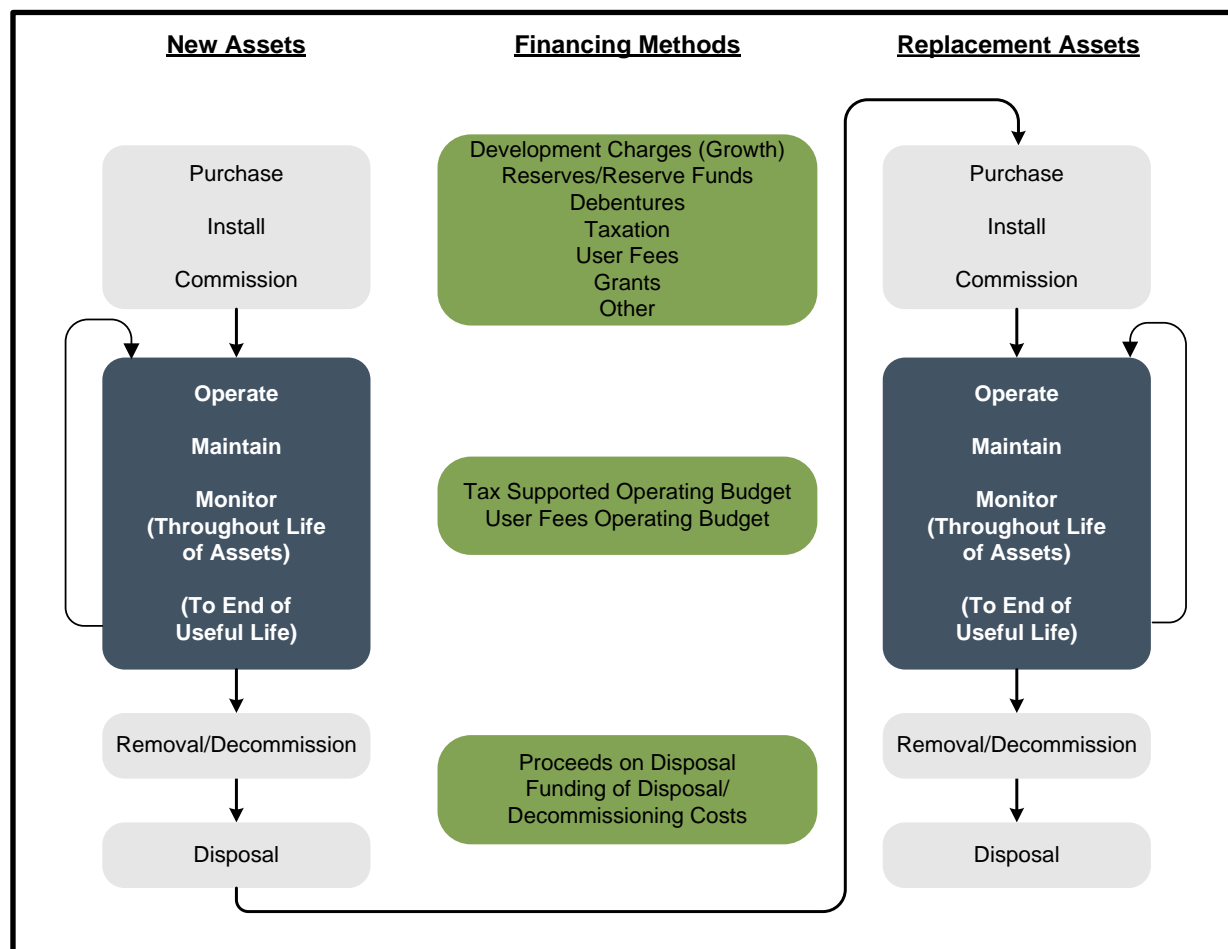
When the asset requires replacement, the sources of financing will be limited to reserves, debentures and contributions from the operating budget. At this point, the question is raised: "If the cost of replacement is to be assessed against the tax/rate payer who benefits from the replacement of the asset,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

Charging for the cost of using up an asset is the fundamental concept behind depreciation methods utilized by the private sector. This concept allows for expending the asset as it is used up in the production process. The tracking of these costs' forms



part of the product's selling price and, hence, end-users are charged for the asset's depreciation. The same concept can be applied in a municipal setting to charge existing users for the asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

Figure 3-2  
Financing Lifecycle Costs



### 3.1.3 Costing Methods

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



forms of depreciation: the straight-line method and the reducing balance method (shown graphically in Figure 3-3).

The straight-line method is calculated by taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is disposed of) and dividing this by the estimated number of years of useful life. The reducing balance method is calculated by utilizing a fixed percentage rate and this rate is applied annually to the undepreciated balance of the asset value.

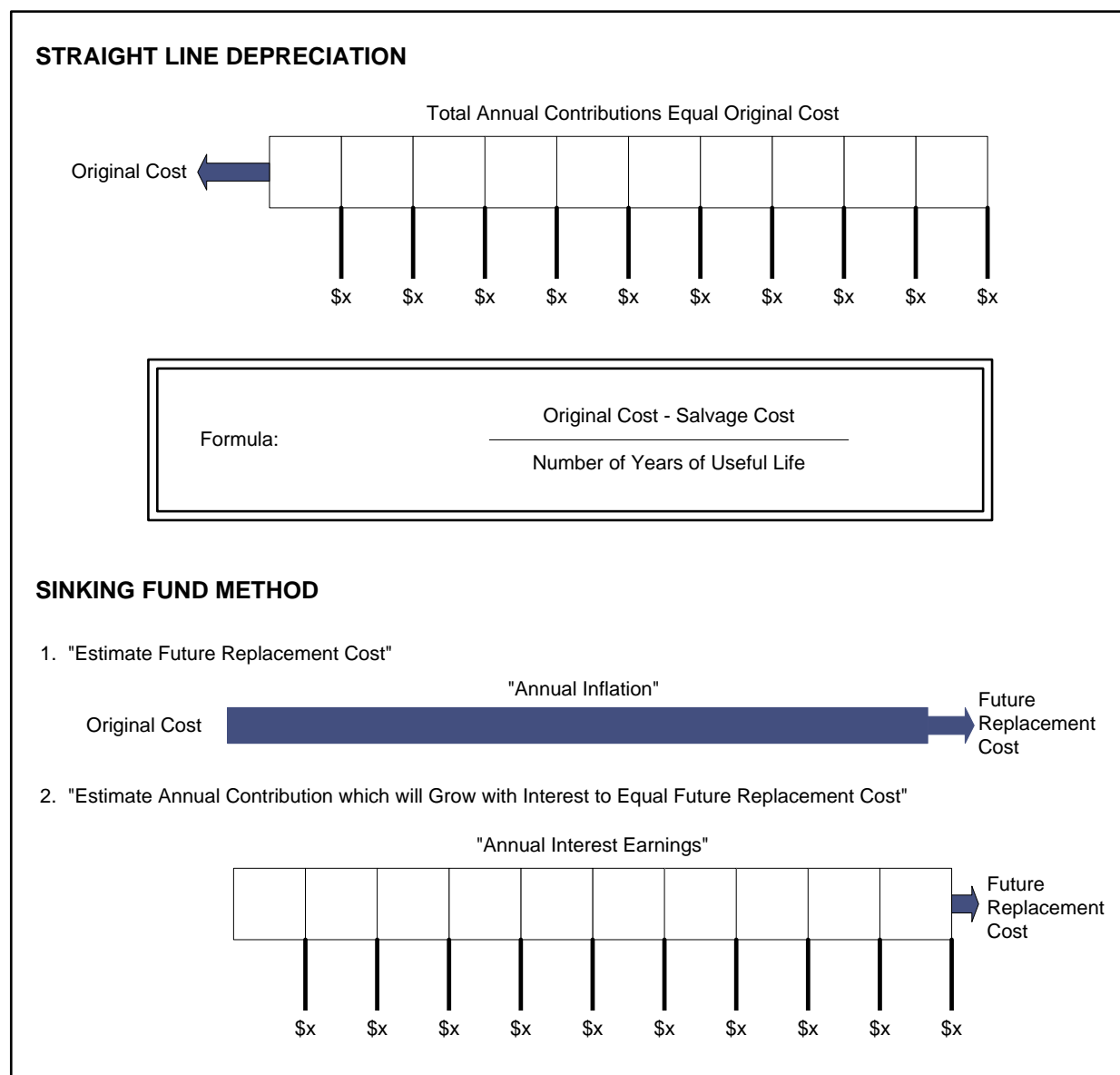
The second method of lifecycle costing is the sinking fund method. This method first estimates the future value of the asset at the time of replacement. This is done by inflating the original cost of the asset at an assumed annual inflation rate. A calculation is then performed to determine annual contributions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

The preferred method used herein for forecasting purposes is the sinking fund method of lifecycle costing.





Figure 3-3



## 3.2 Impact on Budgets

Detailed water and wastewater systems inventory information was obtained from the City through the ongoing work currently being undertaken for the water and wastewater Asset Management Plans. The age of the water and wastewater systems dates back to the early 1910s. The systems have been expanded throughout the years. The total



value of existing water infrastructure is \$1.19 billion, and the value of existing wastewater infrastructure is \$1.41 billion.

A lifecycle “sinking fund” calculation was undertaken for each piece of infrastructure. These calculations determine the level of investment the City may wish to consider as part of its budgeting practices. This information is summarized in Figure 3-4.

**Figure 3-4**  
**City of Barrie**  
**Summary of Water and Wastewater Infrastructure**

| Area                                                                         | Total Replacement Value | Suggested amount to be included in 10-year forecast based on estimated life | Amount included in 2021-2030 forecast | Net Replacement for Future Lifecycle | Annual Lifecycle Replacement |
|------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------|---------------------------------------|--------------------------------------|------------------------------|
| <b>Water</b>                                                                 |                         |                                                                             |                                       |                                      |                              |
| SWTP                                                                         | 268,900,162             | 40,713,757                                                                  | 121,856,104                           | 228,186,405                          | 10,903,195                   |
| Other Water Facilities                                                       | 117,374,845             | 36,806,196                                                                  |                                       | 80,568,649                           | 3,441,597                    |
| Meters                                                                       | 12,201,658              | 9,588,216                                                                   |                                       | 2,613,442                            | 206,214                      |
| Miscellaneous (Backflow Devices, Yard Hydrants, Bulk Water Filling Stations) | 488,697                 | 18,034                                                                      |                                       | 470,664                              | 26,708                       |
| Valves & Chambers                                                            | 55,896,178              | 2,664,361                                                                   |                                       | 53,231,817                           | 2,376,031                    |
| PRV & Chambers                                                               | 19,199,787              | 1,043,632                                                                   |                                       | 18,156,154                           | 493,338                      |
| Hydrants                                                                     | 47,311,762              | 2,805,653                                                                   |                                       | 44,506,109                           | 1,919,186                    |
| Watermains                                                                   | 667,326,626             | 31,372,673                                                                  |                                       | 635,953,953                          | 21,123,716                   |
| <b>Total Water</b>                                                           | <b>1,188,699,715</b>    | <b>125,012,522</b>                                                          | <b>121,856,104</b>                    | <b>1,063,687,193</b>                 | <b>40,489,984</b>            |
| <b>Wastewater</b>                                                            |                         |                                                                             |                                       |                                      |                              |
| Wastewater Facilities                                                        | 815,906,713             | 157,291,309                                                                 | 192,319,757                           | 658,615,404                          | 26,651,881                   |
| Biosolids Facility                                                           | 121,266,391             | 6,371,548                                                                   |                                       | 114,894,843                          | 3,846,949                    |
| Pumping Stations                                                             | 59,655,965              | 25,629,572                                                                  |                                       | 34,026,393                           | 1,600,291                    |
| Maintenance Holes                                                            | 75,706,686              | 1,190,732                                                                   |                                       | 74,515,954                           | 2,483,972                    |
| Sanitary Sewers                                                              | 338,088,222             | 2,667,700                                                                   |                                       | 335,420,522                          | 9,877,460                    |
| <b>Total Wastewater</b>                                                      | <b>1,410,623,976</b>    | <b>193,150,861</b>                                                          | <b>192,319,757</b>                    | <b>1,217,473,115</b>                 | <b>44,460,553</b>            |
| <b>Total</b>                                                                 | <b>2,599,323,691</b>    | <b>318,163,383</b>                                                          | <b>314,175,862</b>                    | <b>2,281,160,308</b>                 | <b>84,950,537</b>            |

Investment per customer is \$26,440 for water and \$31,714 for wastewater

With respect to lifecycle costing, the following information was taken into consideration:

- approximate age;
- material type;
- main lengths;
- diameter of the mains;
- estimated useful life; and
- estimated replacement costs.

Summaries of both water and wastewater assets are shown on Figures 3-5 and 3-6. These figures show when the assets are coming due and the cost of replacement in 2021 dollars.



It is noted that a portion of the asset replacement needs required for the Wastewater Treatment Facility are being addressed through the Membrane Bioreactor project which is forecasted to take place between 2021-2031.



Figure 3-5  
City of Barrie  
Summary of Water Infrastructure Replacement Years (2021 \$)

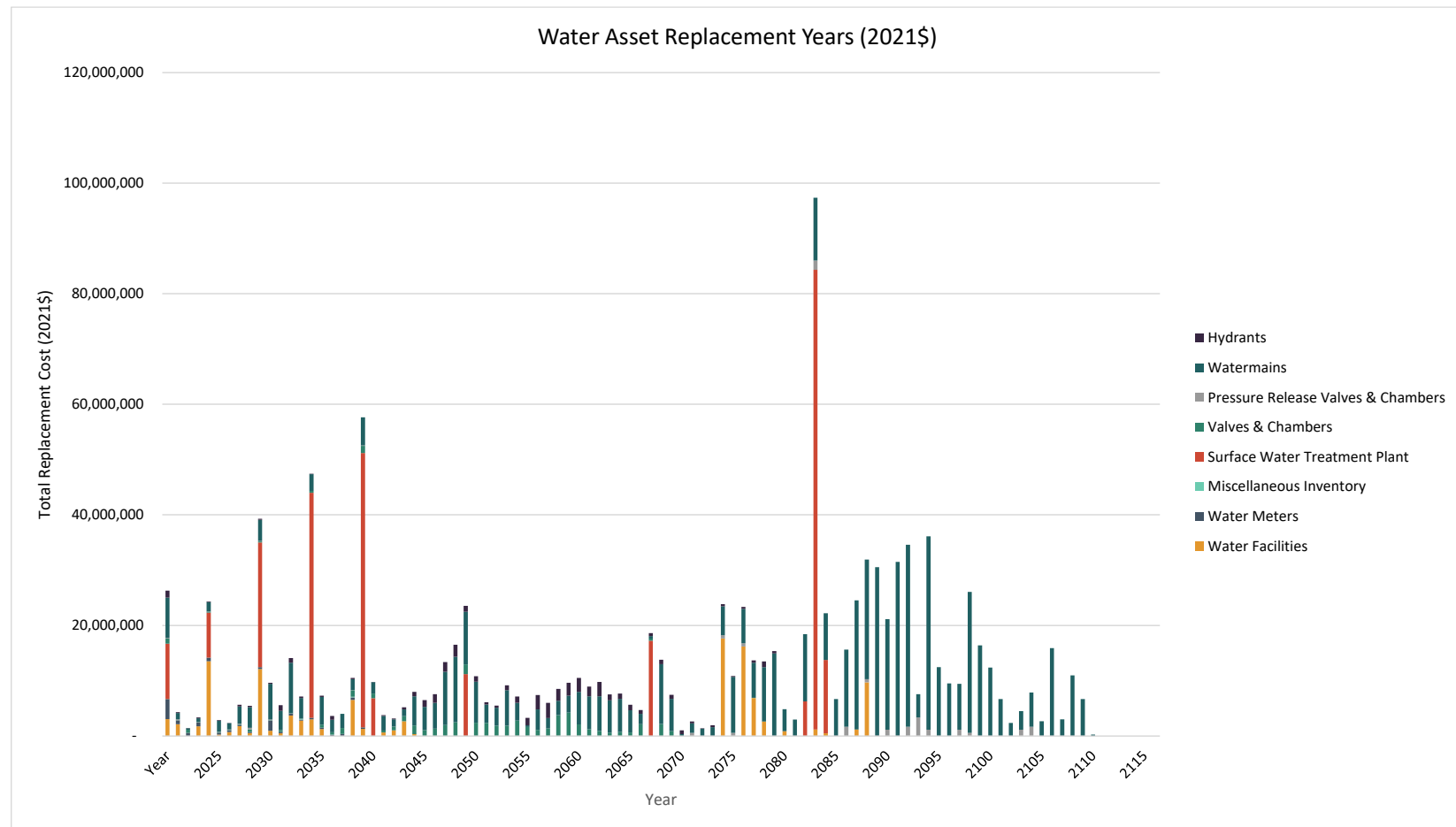
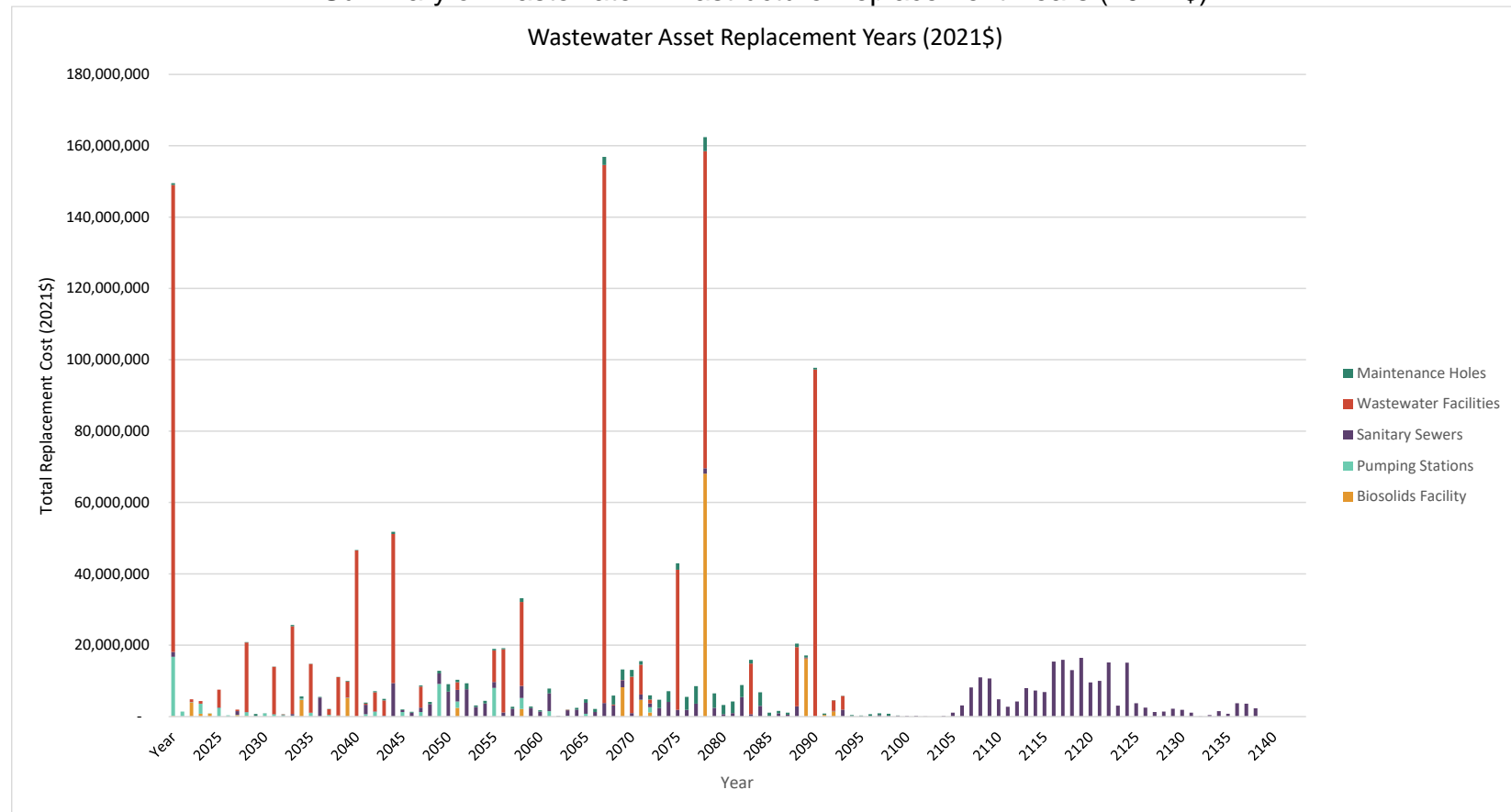




Figure 3-6  
City of Barrie  
Summary of Wastewater Infrastructure Replacement Years (2021 \$)





# Chapter 4

## Capital Cost Financing Options



## 4. Capital Cost Financing Options

### 4.1 Summary of Capital Cost Financing Alternatives

---

Historically, the powers that municipalities had to raise alternative revenues to taxation to fund capital services have been restrictive. Over the past decade, legislative reforms have been introduced. Some of these have expanded municipal powers (e.g. Bill 26 introduced in 1996 to provide for expanded powers for imposing fees and charges), while others appear to restrict them (Bill 98 in 1997 providing amendments to the D.C.A. with additional amendments in effect as of 2020 which may further restricts revenues from growth as per Bills 108, 197, and 213).

The Province passed a new *Municipal Act* which came into force on January 1, 2003. Part XII of the Act and O.Reg. 584/06 govern a municipality's ability to impose fees and charges. In contrast to the previous *Municipal Act*, this Act provides municipalities with broadly defined powers and does not differentiate between fees for operating and capital purposes. It is anticipated that the powers to recover capital costs under the previous *Municipal Act* will continue within the new Statutes and Regulations, as indicated by s.9(2) and s.452 of the new *Municipal Act*.

Under s.484 of *Municipal Act, 2001*, the *Local Improvement Act* was repealed with the in-force date of the *Municipal Act* (January 1, 2003). The municipal powers granted under the *Local Improvement Act* now fall under the jurisdiction of the *Municipal Act*. To this end, on December 20, 2002, O.Reg. 390/02 was filed, which allowed for the *Local Improvement Act* to be deemed to remain in force until April 1, 2003. O.Reg. 119/03 was enacted on April 19, 2003, which restored many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

The methods of capital cost recovery available to municipalities are provided as follows:



| Recovery Methods                       | Section Reference |
|----------------------------------------|-------------------|
| • <i>Development Charges Act, 1997</i> | 4.2               |
| • <i>Municipal Act</i>                 | 4.3               |
| ○ Fees and Charges                     |                   |
| ○ Sewer and Water Area Charges         |                   |
| ○ Connection Fees                      |                   |
| ○ Local Improvements                   |                   |
| • Grant Funding Availability           | 4.4               |
| • Existing Reserves/Reserve Funds      | 4.5               |
| • Debenture Financing                  | 4.6               |

## 4.2 Development Charges Act, 1997

---

In November, 1996, the Ontario Government introduced Bill 98, a new *Development Charges Act*. The Province's stated intentions were to "create new construction jobs and make home ownership more affordable" by reducing the charges and to "make municipal Council decisions more accountable and more cost effective." The basis for this Act is to allow municipalities to recover the growth-related capital cost of infrastructure necessary to accommodate new growth within the municipality. Generally, the Act provided the following changes to the former Act:

- Replace those sections of the 1989 Act that govern municipal development charges;
- Limit services which can be financed from development charges, specifically excluding parkland acquisition, administration buildings, and cultural, entertainment, tourism, solid waste management and hospital facilities;
- Ensure that the level of service used in the calculation of capital costs will not exceed the average level of service over the previous decade. Level of service is to be measured from both a quality and quantity perspective;
- Provide that uncommitted excess capacity available in existing municipal facilities and benefits to existing residents are removed from the calculation of the charge;
- Ensure that the development charge revenues collected by municipalities are spent only on those capital costs identified in the calculation of the development charge;





- Require municipalities to contribute funds (e.g. taxes, user charges or other non-development charge revenues) to the financing of certain projects primarily funded from development charges. The municipal contribution is 10 percent for services such as recreation, parkland development, libraries, etc.;
- Permit (but apparently not require) municipalities to grant developers credits for the direct provision of services identified in the development charge calculation and, when credits are granted, require the municipality to reimburse the developer for the costs the municipality would have incurred if the project had been financed from the development charge reserve fund;
- Set out provisions for front-end financing capital projects (limited to essential services) required to service new development; and
- Set out provisions for appeals and complaints.

In late 2015, the Province approved further amendments to the D.C.A. With respect to water and wastewater, the only changes are for the municipality to provide an asset management calculation for the growth-related works and for the Council to consider (but not necessarily approve) area-specific rates.

Most recently, a number of amendments to the D.C.A. were made through the Bill 108 the *More Homes, More Choice Act, 2019*, Bill 138 the *Plan to Build Ontario Together Act, 2019*, Bill 197 the *COVID-19 Economic Recovery Act, 2020*, and Bill 213 the *Better for People, Smarter for Business Act, 2020*. With respect to water and wastewater, a few changes may impact D.C. revenue collections:

1. Timing of Collection:

- a. D.C. Rate Freeze – For developments proceeding through site plan or zoning by-law amendment, the D.C. rate is frozen at the time the application is submitted. The D.C. remains frozen for two years after the application is approved. Should the D.C. study be updated to increase water and wastewater D.C. rates during this period, the City would not be able to collect for this increase.
- b. D.C. Installment Payments – For rental housing and institutional development D.C.s are paid over 5 years and for non-profit housing, D.C.s are paid over 20 years. This provides a delay in receipt of D.C. revenues which will need to be cash-flowed by the City.



2. Mandatory Exemption (additional units) – For existing dwellings, one additional dwelling unit could be constructed within the existing dwelling. This additional dwelling unit is exempt from D.C.s. With the changes to the Act, one additional dwelling unit may be constructed within a new residential dwelling, which would be exempt from D.C.s. Further, one ancillary dwelling unit may be constructed on the same property as a new unit. This ancillary dwelling would be exempt from D.C.s. As these new additional units are exempt from D.C.s, no D.C. revenue may be collected for these units, however, each additional unit provides additional population which requires capacity in the water and wastewater treatment plants. As a result, consideration for these additional units should be made during the D.C. study process to ensure all capacity available to growth is allocated appropriately.
3. Mandatory Exemption (universities) – A new mandatory exemption has been introduced which exempts the payment of D.C.s for developments of land intended for use by a university that receives operating funds from the Government.

Note that the water and wastewater operating budgets have provided an estimate of anticipated funding required to be recovered from rates due to the D.C. exemptions for residential intensification.

## 4.3 Municipal Act

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Part XII of the *Municipal Act* provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in s.391(1), include imposing fees or charges:

- “for services or activities provided or done by or on behalf of it;
- for costs payable by it for services or activities provided or done by or on behalf of any other municipality or local board; and
- for the use of its property including property under its control.”

Restrictions are provided to ensure that the form of the charge is not akin to a poll tax. Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Local Planning Appeal Tribunal (L.P.A.T., formerly known as the O.M.B.).



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

- A variety of different means could be used to establish the rate and recovery of the costs and could be imposed by a number of methods at the discretion of Council (i.e. lot size, frontage, number of benefiting properties, etc.);
- Rates could be imposed with respect to costs of major capital works, even though an immediate benefit was not enjoyed;
- Non-abutting owners could be charged;
- Recovery was authorized against existing works, where a new water or sewer main was added to such works, "notwithstanding that the capital costs of existing works has in whole or in part been paid;"
- Charges on individual parcels could be deferred;
- Exemptions could be established;
- Repayment was secured; and
- LPAT approval was not required.

While under the new *Municipal Act* no provisions are provided specific to the previous s.221, the intent to allow capital cost recovery through fees and charges is embraced within s.391. The new *Municipal Act* also maintains the ability of municipalities to impose capital charges for water and sewer services on landowners not receiving an immediate benefit from the works. Under s.391(2) of the Act, "a fee or charge imposed under subsection (1) for capital costs related to sewage or water services or activities may be imposed on persons not receiving an immediate benefit from the services or activities but who will receive a benefit at some later point in time." Also, capital charges imposed under s.391 are not appealable to the LPAT on the grounds that the charges are "unfair or unjust."

Section 222 of the previous *Municipal Act* permitted municipalities to pass a by-law requiring buildings to connect to the municipality's sewer and water systems, charging the owner for the cost of constructing services from the mains to the property line. Under the new *Municipal Act*, this power still exists under Part II, General Municipal Powers (s.9 (3) b of the *Municipal Act*). Enforcement and penalties for this use of power are contained in s.427 (1) of the *Municipal Act*.



Under the previous *Local Improvement Act*:

- A variety of different types of works could be undertaken, such as watermain, storm and sanitary sewer projects, supply of electrical light or power, bridge construction, sidewalks, road widening and paving;
- Council could pass a by-law for undertaking such work on petition of a majority of benefiting taxpayers, on a 2/3 vote of Council and on sanitary grounds, based on the recommendation of the Minister of Health. The by-law was required to go to the LPAT, which might hold hearings and alter the by-law, particularly if there were objections;
- The entire cost of a work was assessed only upon the lots abutting directly on the work, according to the extent of their respective frontages, using an equal special rate per metre of frontage; and
- As noted, this Act was repealed as of April 1, 2003; however, O.Reg. 119/03 was enacted on April 19, 2003 which restores many of the previous *Local Improvement Act* provisions; however, the authority is now provided under the *Municipal Act*.

## 4.4 Grant Funding Availability

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### Federal Infrastructure Funding

#### Phase 1 (April 1, 2016 to March 31, 2018)

Funding was provided by the Government of Canada to expressly help municipalities with repair and rehabilitation projects. Funding was mainly provided through the Clean Water and Wastewater Fund (C.W.W.F.) and Public Transit Infrastructure Fund (P.T.I.F.) in Federal Phase 1 projects. The C.W.W.F. was announced in Ontario on September 15, 2016. The Fund is \$1.1 billion for water, wastewater, and storm water systems in Ontario. The federal government provided \$569 million and Ontario and municipal governments provided \$275 million each.

Over 1,300 water, wastewater, and storm water projects have been approved in Ontario through the C.W.W.F. In Ontario, P.T.I.F. accounted for nearly \$1.5 billion of the national total of \$3.4 billion. The program was allocated by ridership numbers from the Canadian Urban Transit Association. The Association of Municipalities of Ontario (A.M.O.) understands that \$1 billion of Ontario's share has been approved.



## Phase 2: Next Steps

The federal government announced Phase 2 of its infrastructure funding plan with a total of \$180 billion spent over 11 years. In addition to the balance of funding for previous green, social, and public transit infrastructure funds (\$20 billion each, including Phase 1), the government has added \$10.1 billion for trade and transportation infrastructure and \$2 billion for rural and northern communities. This funding must be implemented by agreements with each Province and Territory.

In Phase 2, Ontario will be eligible for \$11.8 billion including \$8.3 billion for transit, \$2.8 billion for green infrastructure, \$407 million for community, culture and recreation and \$250 million for rural and northern communities.

## Federal Gas Tax

The federal Gas Tax is a permanent source of funding provided up front, twice-a-year, to Provinces and Territories, who in turn flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank and borrow against this funding, providing significant financial flexibility. Every year, the federal Gas Tax provides over \$2 billion and supports approximately 2,500 projects in communities across Canada. Each municipality selects how best to direct the funds with the flexibility provided to make strategic investments across 18 different project categories, which include other water and wastewater servicing.

## Ontario Government

The Province has taken steps to increase municipal infrastructure funding. The Ontario Community Infrastructure Fund (O.C.I.F.) was increased in 2016 with formula-based support growing to \$200 million, and application funding growing to \$100 million annually by 2018/2019. As well, \$15 million annually will go to the new Connecting Links program to help pay for the construction and repair costs of municipal roads that connect communities to provincial highways. This is on top of the Building Ontario Up investment of \$130 billion in public infrastructure over 10 years starting in 2015.

## Potential Grant Funding

From time to time, programs are made available by senior levels of government to assist municipalities in funding capital projects subsequent to major economic



downturns (funding for municipalities was available after the U.S. financial crisis in 2008 rippled into Canada). If major grant funding were to be available after COVID-19, the City could revisit the proposed capital forecast and rates provided herein.

## 4.5 Existing Reserves/Reserve Funds

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The City has established reserves and reserve funds for water and wastewater costs. The following table summarizes the water and wastewater reserves utilized in this analysis and their respective balances as of December 31, 2020:

Table 4-1  
Water and Wastewater Reserve Balances  
as of December 31, 2020

| Reserve                                                                                          | Dec. 31 2020 |
|--------------------------------------------------------------------------------------------------|--------------|
| <b>Water</b>                                                                                     |              |
| Water Rate Capital Reserve Fund                                                                  | 19,399,469   |
| Water Rate Stabilization Reserve Fund                                                            | 3,127,216    |
| Development Charges Reserve Fund - Water Facilities                                              | 118,481      |
| Development Charges Reserve Fund - Water Facilities Related Debt                                 | (31,675,579) |
| Development Charges Reserve Fund - Water Distribution - Former Municipal Boundary Areas          | (2,110,447)  |
| Development Charges Reserve Fund - Water Distribution - Salem & Hewitt's Secondary Plan Areas    | (12,381,102) |
| <b>Wastewater</b>                                                                                |              |
| Wastewater Rate Capital Reserve Fund                                                             | 55,582,924   |
| Wastewater Rate Stabilization Reserve Fund                                                       | 2,530,674    |
| Development Charges Reserve Fund - Wastewater Facilities                                         | 21,305,493   |
| Development Charges Reserve Fund - Wastewater Facilities Related Debt                            | (41,529,132) |
| Development Charges Reserve Fund - Wastewater Collection - Former Municipal Boundary Areas       | (3,476,726)  |
| Development Charges Reserve Fund - Wastewater Collection - Salem & Hewitt's Secondary Plan Areas | (11,738,164) |

## 4.6 Debenture Financing

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



The Ministry of Municipal Affairs regulates the level of debt incurred by Ontario municipalities, through its powers established under the *Municipal Act*. Ontario Regulation 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own purpose revenue may be allotted for servicing the debt (i.e. debt charges). The City of Barrie's Financial Policy Framework caps debt charges at 20% of own source revenues and estimated to be at 10% in 2021.

As of December 31, 2020, the City's total debt outstanding is \$316 million. Annual debt servicing costs are estimated at \$36 million with 54%, or \$19 million, funded from Development Charges, 38%, or \$13.5 million, from property taxes, and the remainder from wastewater and parking fees.

The analysis provided herein assumes that the City will require additional non-growth-related debt financing for water services of \$21.10 million for works to be undertaken from 2021 to 2025. This additional debt is not included in the City's current debt forecasts but is needed to offset future pressures on the Water Capital Reserve while keeping current water rates reasonably affordable. For wastewater, debt needs are more significant. Growth-related debt financing of \$125.58 million is required throughout the forecast period for works related to treatment facilities. This debt has been forecasted within the City's current capital plan.

## **4.7 Recommended Capital Financing Approach**

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Of the various funding alternatives provided in this section, the following are recommended for further consideration by the City of Barrie for the capital expenditures (inflated) provided in Chapter 2:





Table 4-2  
City of Barrie  
Water and Wastewater Capital Funding Forecast  
2021-2030  
(Inflated)

| Description                                                                     | Water<br>2021-2030   | Wastewater<br>2021-2030 |
|---------------------------------------------------------------------------------|----------------------|-------------------------|
| Provincial/Federal Grants                                                       | -                    | -                       |
| Development Charges Reserve Fund - Facilities                                   | \$1,265,000          | \$102,265,813           |
| Development Charges Reserve Fund - Facilities Related Debt                      | -                    | -                       |
| Development Charges Reserve Fund - Distribution Systems - Former Barrie         | \$14,681,765         | \$39,029,453            |
| Development Charges Reserve Fund - Distribution Systems - Salem & Hewitt's      | \$52,451,913         | \$108,865,485           |
| Non-Growth Related Debenture Requirements                                       | \$21,101,600         | -                       |
| Growth Related Debenture Requirements - Facilities                              | -                    | \$125,583,649           |
| Growth Related Debenture Requirements - Facilities Related Debt                 | -                    | -                       |
| Growth Related Debenture Requirements - Distribution Systems - Former Barrie    | -                    | -                       |
| Growth Related Debenture Requirements - Distribution Systems - Salem & Hewitt's | -                    | -                       |
| Operating Contributions                                                         | -                    | -                       |
| Rate Stabilization Reserve Fund                                                 | -                    | -                       |
| Capital Reserve Fund                                                            | \$128,537,118        | \$244,546,813           |
| <b>Total Capital Financing</b>                                                  | <b>\$218,037,397</b> | <b>\$620,291,213</b>    |

Note that the City continues to work with the developing landowners to assist in financing and/or constructing growth-related works to minimize the financial impacts and debt capacity to the City. Arrangements are in place with some developing landowners where D.C. credits will be provided to repay the cost of the capital works they are undertaking. For the purposes of this analysis, we have assumed that the capital works will flow through the D.C. reserve funds.

As a result of the capital financing approach recommended above, the following table provides the estimated reserve balances for water and wastewater as of 2030:





Table 4-3  
City of Barrie  
Projected Reserve/Reserve Fund Balances – 2030

| Reserve Fund                                  | Projected Balance (2030) |
|-----------------------------------------------|--------------------------|
| Water Capital Reserve Fund                    | \$5,953,521              |
| Water Rate Stabilization Reserve Fund         | \$3,812,059              |
| Water DC Reserve Funds                        | (\$4,837,120)            |
| <b>Total Water Reserve Funds Balance</b>      | <b>\$4,928,460</b>       |
| Wastewater Capital Reserve Fund               | \$83,538,973             |
| Wastewater Rate Stabilization Reserve Fund    | \$3,084,878              |
| Wastewater DC Reserve Funds                   | (\$96,624,204)           |
| <b>Total Wastewater Reserve Funds Balance</b> | <b>(\$10,000,353)</b>    |

By 2030, the water capital reserve fund will have a projected balance of approximately \$5.95 million. Additional lifecycle contributions will need to be made to this reserve in order to meet future asset replacement needs beyond the 10-year forecast period.

Although the wastewater capital reserve fund has a projected positive balance of \$83.54 million by 2030, the D.C. reserve funds for wastewater are in a significant deficit. These negative balances will need to be cash flowed through the capital reserve fund in the interim before D.C. revenues are realized. In addition, there are significant asset replacement needs in the 2031-2041 period for wastewater, as exhibited in Figure 3-6. These works will need to be funded through the capital reserve fund balance.

Given the investments in growth-related infrastructure over the next ten years, the D.C. reserve funds remain in an overall deficit position by 2030. The City may address these deficits by continuing to work with developing landowners in order to fund these capital works that are required for growth.

Tables 4-4 and 4-5 provide for the full capital expenditure and funding program by year for water and wastewater, respectively.



Table 4-4  
City of Barrie  
Capital Budget Forecast – Water (inflated \$)

| Description                                                                                          | Budget<br>2021 | Total     | Forecast  |           |           |           |           |           |         |         |           |
|------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|-----------|
|                                                                                                      |                |           | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028    | 2029    | 2030      |
| <b>Capital Expenditures</b>                                                                          |                |           |           |           |           |           |           |           |         |         |           |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                          | -              | 41,000    | -         | -         | 41,000    | -         | -         | -         | -       | -       | -         |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                          | -              | 250,000   | -         | -         | -         | -         | 224,000   | 26,000    | -       | -       | -         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                          | -              | 487,000   | -         | -         | -         | -         | -         | -         | -       | -       | 487,000   |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                          | -              | 546,000   | -         | -         | -         | -         | -         | 128,000   | 135,000 | 283,000 | -         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                                | -              | 598,000   | -         | -         | -         | -         | -         | -         | -       | 598,000 | -         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                                | -              | 72,000    | -         | 72,000    | -         | -         | -         | -         | -       | -       | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                           | -              | 1,637,000 | -         | -         | -         | -         | 637,000   | 1,000,000 | -       | -       | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                           | -              | 215,000   | -         | 105,000   | 110,000   | -         | -         | -         | -       | -       | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                            | -              | 176,000   | -         | -         | -         | -         | -         | -         | 176,000 | -       | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                            | -              | 1,241,000 | -         | -         | -         | -         | -         | -         | -       | -       | 1,241,000 |
| 000203 - Surface Water Treatment Plant Facility Renewal Assessment                                   | -              | 290,000   | -         | -         | 145,000   | 91,000    | -         | 54,000    | -       | -       | -         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                              | -              | 211,000   | -         | -         | 124,000   | 87,000    | -         | -         | -       | -       | -         |
| 000725 - NRP- HNS Grove B2 Neighbourhood Reconstruction                                              | -              | 152,000   | -         | -         | -         | -         | -         | -         | -       | -       | 152,000   |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                      | -              | 3,687,000 | 99,000    | 10,000    | -         | 835,000   | 1,201,000 | 921,000   | 621,000 | -       | -         |
| 001014 - SWTP-Garage Floor Structural Rehabilitation and Prevention                                  | -              | 1,693,000 | 315,000   | 1,378,000 | -         | -         | -         | -         | -       | -       | -         |
| 001016 - SWTP Control System Upgrade                                                                 | 902,100        | 5,059,000 | 2,335,000 | 2,724,000 | -         | -         | -         | -         | -       | -       | -         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                      | 182,246        | 831,000   | 831,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster       | -              | 205,000   | 205,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1150 - Big Bay Point Road Booster Station VFD Upgrade                                              | 75,000         | 105,000   | 105,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1152 - Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                    | 225,000        | 451,000   | 236,000   | 215,000   | -         | -         | -         | -         | -       | -       | -         |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                             | 10,298         | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1169 - Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                              | 197,303        | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                           | 218,540        | 2,117,000 | 1,033,000 | 1,084,000 | -         | -         | -         | -         | -       | -       | -         |
| EN1178 - Interim Watermain Replacement Pilot Program                                                 | 512,985        | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1189 - Watermain Cathodic Protection Program                                                       | 1,000,000      | 4,478,000 | 1,050,000 | 1,103,000 | 1,158,000 | 1,167,000 | -         | -         | -       | -       | -         |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                             | 29,000         | 1,057,000 | 30,000    | 501,000   | 526,000   | -         | -         | -         | -       | -       | -         |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                             | 28,202         | 1,387,000 | -         | -         | -         | -         | 677,000   | 710,000   | -       | -       | -         |
| EN1252 - PRV Chamber Replacement Program                                                             | 813,215        | 3,761,000 | 144,000   | 1,655,000 | 1,962,000 | -         | -         | -         | -       | -       | -         |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement | -              | 1,846,000 | -         | -         | -         | -         | 30,000    | 50,000    | -       | 686,000 | 1,080,000 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 40,000         | 1,237,000 | 788,000   | 449,000   | -         | -         | -         | -         | -       | -       | -         |



Table 4-4 (Cont'd)

| Description                                                                                     | Budget<br>2021 | Total      | Forecast |           |           |           |           |           |           |            |            |
|-------------------------------------------------------------------------------------------------|----------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
|                                                                                                 |                |            | 2022     | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029       | 2030       |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                      | -              | 2,479,000  | -        | -         | -         | 778,000   | 830,000   | 871,000   | -         | -          | -          |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                      | 43,500         | 3,249,000  | 46,000   | 48,000    | 732,000   | 769,000   | 807,000   | 847,000   | -         | -          | -          |
| EN1294 - Watermain Renewal Program                                                              | 1,713,000      | 3,411,000  | 305,000  | 1,948,000 | 1,158,000 | -         | -         | -         | -         | -          | -          |
| EN1305 - Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction     | -              | 18,738,000 | -        | 3,514,000 | 7,379,000 | 5,811,000 | 2,034,000 | -         | -         | -          | -          |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                       | 60,000         | 2,186,000  | 641,000  | -         | -         | 754,000   | 791,000   | -         | -         | -          | -          |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth | 42,000         | 804,000    | -        | 392,000   | 412,000   | -         | -         | -         | -         | -          | -          |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                    | -              | 3,382,000  | -        | -         | -         | -         | -         | 670,000   | 1,323,000 | 1,389,000  | -          |
| EN1355 - Grove Street East Watermain Replacement and Road Renewal – Duckworth to Fletcher       | 144,000        | 1,460,000  | 131,000  | 1,329,000 | -         | -         | -         | -         | -         | -          | -          |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                     | -              | 3,001,000  | -        | 30,000    | 31,000    | -         | -         | -         | 549,000   | 576,000    | 1,815,000  |
| EN1395 - Ferndale Drive South Watermain Replacement – Tiffin to Ardagh                          | 100,000        | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                      | 61,000         | 800,000    | -        | 390,000   | 410,000   | -         | -         | -         | -         | -          | -          |
| EN1435 - Alliance Boulevard Expansion - Bell Farm to Bell Farm                                  | -              | 245,000    | -        | -         | -         | -         | -         | 23,000    | -         | 222,000    | -          |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                     | -              | 3,640,000  | -        | -         | 35,000    | 55,000    | -         | 659,000   | 1,038,000 | 1,090,000  | 763,000    |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon          | 62,000         | 1,906,000  | 65,000   | -         | 584,000   | 613,000   | 644,000   | -         | -         | -          | -          |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                     | -              | 1,655,000  | -        | -         | 156,000   | -         | -         | -         | 1,499,000 | -          | -          |
| 000472 - Technology Forecasted Needs                                                            | -              | 1,610,000  | 100,000  | 126,000   | 145,000   | 152,000   | 160,000   | 183,000   | 214,000   | 247,000    | 283,000    |
| CC1000 - ERP Sustainment Program                                                                | 70,000         | 406,000    | 74,000   | 77,000    | 81,000    | 85,000    | 89,000    | -         | -         | -          | -          |
| EN1429 - Water and Transportation Asset Management Plans - Update                               | 45,000         | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| IT1010 - Network Technology Infrastructure Program                                              | 56,000         | 186,000    | 59,000   | 62,000    | 65,000    | -         | -         | -         | -         | -          | -          |
| IT1012 - Server and Storage Technology Infrastructure Program                                   | 30,000         | 176,000    | 32,000   | 33,000    | 37,000    | 36,000    | 38,000    | -         | -         | -          | -          |
| Additional Asset Replacement Needs                                                              | -              | 35,558,000 | -        | -         | -         | -         | -         | 6,700,000 | 7,036,000 | 10,342,000 | 11,480,000 |
| <b>Carryforwards:</b>                                                                           | -              | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| Watermain Renewal Program                                                                       | 232,300        | 500,000    | 244,000  | 256,000   | -         | -         | -         | -         | -         | -          | -          |
| Air Valve/Main Valve Chamber Condition Assessment and Rehabilitation Program                    | 33,300         | 72,000     | 35,000   | 37,000    | -         | -         | -         | -         | -         | -          | -          |
| Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction              | 23,700         | 51,000     | 25,000   | 26,000    | -         | -         | -         | -         | -         | -          | -          |
| BAS Component Replacement                                                                       | 11,500         | 25,000     | 12,000   | 13,000    | -         | -         | -         | -         | -         | -          | -          |
| Bayfield Street Water Tower - Repairs and Interior Lining Replacement                           | 177,300        | 381,000    | 186,000  | 195,000   | -         | -         | -         | -         | -         | -          | -          |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                         | 181,900        | 392,000    | 191,000  | 201,000   | -         | -         | -         | -         | -         | -          | -          |
| Big Bay Point Road Booster Station VFD Upgrade                                                  | 25,000         | 54,000     | 26,000   | 28,000    | -         | -         | -         | -         | -         | -          | -          |
| Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | 2,100          | 4,000      | 2,000    | 2,000     | -         | -         | -         | -         | -         | -          | -          |
| Citizen Relationship Management (CRM) Solution                                                  | 17,000         | 37,000     | 18,000   | 19,000    | -         | -         | -         | -         | -         | -          | -          |
| City Hall Customer Contact Centre Renovation                                                    | 300            | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| CMMS Improvement Project - Cityworks                                                            | 107,900        | 232,000    | 113,000  | 119,000   | -         | -         | -         | -         | -         | -          | -          |
| Corealis Meters                                                                                 | 4,900          | 10,000     | 5,000    | 5,000     | -         | -         | -         | -         | -         | -          | -          |
| Corporate Audio Visual Technology Infrastructure                                                | 100            | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |



Table 4-4 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total   | Forecast |         |      |      |      |      |      |      |      |
|------------------------------------------------------------------------------------------|----------------|---------|----------|---------|------|------|------|------|------|------|------|
|                                                                                          |                |         | 2022     | 2023    | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Corporate Communications Infrastructure Program                                          | 1,700          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Corporate PC Infrastructure Program                                                      | 3,400          | 8,000   | 4,000    | 4,000   | -    | -    | -    | -    | -    | -    | -    |
| Corporate Printing Infrastructure                                                        | 700            | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 65,300         | 141,000 | 69,000   | 72,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)          | 9,500          | 20,000  | 10,000   | 10,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop Street West ROW Replacement - Eccles to Toronto                                   | 32,900         | 71,000  | 35,000   | 36,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 86,600         | 186,000 | 91,000   | 95,000  | -    | -    | -    | -    | -    | -    | -    |
| ERP Sustainment Program                                                                  | 59,900         | 129,000 | 63,000   | 66,000  | -    | -    | -    | -    | -    | -    | -    |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 9,000          | 19,000  | 9,000    | 10,000  | -    | -    | -    | -    | -    | -    | -    |
| Frozen Water Service Repair                                                              | 184,800        | 398,000 | 194,000  | 204,000 | -    | -    | -    | -    | -    | -    | -    |
| Fuel Tank Repairs 2017                                                                   | 11,700         | 25,000  | 12,000   | 13,000  | -    | -    | -    | -    | -    | -    | -    |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 7,900          | 17,000  | 8,000    | 9,000   | -    | -    | -    | -    | -    | -    | -    |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 88,800         | 191,000 | 93,000   | 98,000  | -    | -    | -    | -    | -    | -    | -    |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 2,000          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Huron and Big Bay Point Large Diameter Watermain Condition Assessment                    | 127,400        | 274,000 | 134,000  | 140,000 | -    | -    | -    | -    | -    | -    | -    |
| Interim Watermain Replacement Pilot Program                                              | 217,800        | 469,000 | 229,000  | 240,000 | -    | -    | -    | -    | -    | -    | -    |
| Lampman to Anne New Transmission Watermain and Lampman to Leacock ROW Rehabilitation     | 43,900         | 94,000  | 46,000   | 48,000  | -    | -    | -    | -    | -    | -    | -    |
| Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                           | 75,000         | 162,000 | 79,000   | 83,000  | -    | -    | -    | -    | -    | -    | -    |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                         | 900            | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                 | 6,200          | 14,000  | 7,000    | 7,000   | -    | -    | -    | -    | -    | -    | -    |
| Microsoft Office 365 and Windows Enterprise                                              | 1,300          | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| Network Technology Infrastructure Program                                                | 19,300         | 41,000  | 20,000   | 21,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                        | 43,700         | 94,000  | 46,000   | 48,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                        | 15,600         | 33,000  | 16,000   | 17,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                     | 5,200          | 11,000  | 5,000    | 6,000   | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D1 Neighbourhood Reconstruction                                          | 11,400         | 25,000  | 12,000   | 13,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D2 Neighbourhood Reconstruction                                          | 28,700         | 62,000  | 30,000   | 32,000  | -    | -    | -    | -    | -    | -    | -    |
| PC Replacements                                                                          | 100            | -       | -        | -       | -    | -    | -    | -    | -    | -    | -    |
| PRV Chamber Replacement Program                                                          | 161,800        | 348,000 | 170,000  | 178,000 | -    | -    | -    | -    | -    | -    | -    |
| Public Safety Communication Program                                                      | 600            | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                        | 5,300          | 12,000  | 6,000    | 6,000   | -    | -    | -    | -    | -    | -    | -    |
| Rodney St-Blake to Kempenfelt                                                            | 6,700          | 14,000  | 7,000    | 7,000   | -    | -    | -    | -    | -    | -    | -    |
| Ross, Collier, Bayfield Intersection Realignment                                         | 1,500          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Secondary Plan Area New Bulk Water Filling Station                                       | 30,500         | 66,000  | 32,000   | 34,000  | -    | -    | -    | -    | -    | -    | -    |
| Server and Desktop Software Program                                                      | 100            | -       | -        | -       | -    | -    | -    | -    | -    | -    | -    |
| Server and Storage Technology Infrastructure Program                                     | 1,700          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| South L/ill Leachate Gal Repl                                                            | 14,700         | 31,000  | 15,000   | 16,000  | -    | -    | -    | -    | -    | -    | -    |



Table 4-4 (Cont'd)

| Description                                                                                                   | Budget<br>2021 | Total     | Forecast    |         |         |           |           |           |           |         |           |
|---------------------------------------------------------------------------------------------------------------|----------------|-----------|-------------|---------|---------|-----------|-----------|-----------|-----------|---------|-----------|
|                                                                                                               |                |           | 2022        | 2023    | 2024    | 2025      | 2026      | 2027      | 2028      | 2029    | 2030      |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                          | 574,000        | 1,236,000 | 603,000     | 633,000 | -       | -         | -         | -         | -         | -       | -         |
| TCE Groundwater Monitor Wells                                                                                 | 27,400         | 59,000    | 29,000      | 30,000  | -       | -         | -         | -         | -         | -       | -         |
| TCE Plume Mitigation Solution                                                                                 | 24,700         | 53,000    | 26,000      | 27,000  | -       | -         | -         | -         | -         | -       | -         |
| Tiffin Street - Ferndale to Anne Street                                                                       | 400            | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                               | 39,300         | 84,000    | 41,000      | 43,000  | -       | -         | -         | -         | -         | -       | -         |
| Water Dispensing Event Trailer                                                                                | 800            | 2,000     | 1,000       | 1,000   | -       | -         | -         | -         | -         | -       | -         |
| Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                                      | 19,900         | 43,000    | 21,000      | 22,000  | -       | -         | -         | -         | -         | -       | -         |
| Watermain Cathodic Protection Program                                                                         | 344,700        | 742,000   | 362,000     | 380,000 | -       | -         | -         | -         | -         | -       | -         |
| Water and Transportation Asset Management Plans - Update                                                      | 23,400         | 51,000    | 25,000      | 26,000  | -       | -         | -         | -         | -         | -       | -         |
| Watermain Renewal Program                                                                                     | 340,000        | 732,000   | 357,000     | 375,000 | -       | -         | -         | -         | -         | -       | -         |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                      | 25,700         | 55,000    | 27,000      | 28,000  | -       | -         | -         | -         | -         | -       | -         |
| Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)                 | 11,800         | 25,000    | 12,000      | 13,000  | -       | -         | -         | -         | -         | -       | -         |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                               | (118,900)      | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| <b>Growth Related:</b>                                                                                        | -              | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| <b>Facilities</b>                                                                                             | -              | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| 000461 - SWTP Optimization                                                                                    | -              | 1,265,000 | -           | -       | -       | 1,265,000 | -         | -         | -         | -       | -         |
| <b>Water Distribution - Salem &amp; Hewitt's Secondary Plan Areas:</b>                                        | -              | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| 000293 - Huronia Road New Transmission Watermain - Mapleview to Lockhart (City)                               | -              | 8,630,000 | -           | -       | -       | -         | -         | 66,000    | 715,000   | 626,000 | 7,223,000 |
| 000926 - Salem Road Reservoir and Pumping Station                                                             | -              | 5,491,000 | -           | -       | -       | -         | 477,000   | 2,446,000 | 2,568,000 | -       | -         |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)  | 491,430        | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1250 - Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                            | 2,760,773      | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                      | (560,800)      | 748,000   | -           | 39,000  | 709,000 | -         | -         | -         | -         | -       | -         |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                             | 72,400         | 1,447,000 | 14,000      | 101,000 | -       | 650,000   | 682,000   | -         | -         | -       | -         |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                      | 255,600        | 6,001,000 | -           | -       | 804,000 | 2,644,000 | 2,553,000 | -         | -         | -       | -         |
| EN1259 - Big Bay Point New Transmission Watermain and Road Expansion - Prince William to Street N (Developer) | -              | 387,000   | -           | 387,000 | -       | -         | -         | -         | -         | -       | -         |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                           | 16,600         | 600,000   | -           | -       | -       | -         | 26,000    | 223,000   | 351,000   | -       | -         |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)  | -              | 247,000   | 247,000     | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                               | -              | 4,596,000 | 70,000      | 107,000 | -       | 1,402,000 | 1,472,000 | 1,545,000 | -         | -       | -         |
| EN1272 - Salem Rd New Watermain, New Trunk Sanitary Sewer and ROW Expansion - Veterans to Saunders (City)     | -              | (358,000) | (1,120,000) | -       | -       | -         | 71,000    | 337,000   | 354,000   | -       | -         |
| EN1275 - Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                | 261,000        | -         | -           | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1276 - Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)        | 15,000         | 237,000   | 237,000     | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                     | -              | 443,000   | -           | -       | -       | -         | -         | 84,000    | 175,000   | 184,000 | -         |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                         | -              | 355,000   | -           | -       | -       | -         | 44,000    | 311,000   | -         | -       | -         |



Table 4-4 (Cont'd)

| Description                                                                                           | Budget<br>2021 | Total     | Forecast  |           |           |         |        |         |         |         |         |
|-------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|---------|--------|---------|---------|---------|---------|
|                                                                                                       |                |           | 2022      | 2023      | 2024      | 2025    | 2026   | 2027    | 2028    | 2029    | 2030    |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South) extension to Lockhart (City)            | -              | 1,276,000 | -         | 20,000    | -         | -       | 77,000 | 458,000 | 721,000 | -       | -       |
| <b>Carryforwards</b>                                                                                  | -              | -         | -         | -         | -         | -       | -      | -       | -       | -       | -       |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain - Big Bay Point to Mplview (City) | 200            | -         | -         | -         | -         | -       | -      | -       | -       | -       | -       |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)   | 58,600         | 127,000   | 62,000    | 65,000    | -         | -       | -      | -       | -       | -       | -       |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                             | 16,600         | 35,000    | 17,000    | 18,000    | -         | -       | -      | -       | -       | -       | -       |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                                      | 755,000        | 1,625,000 | 793,000   | 832,000   | -         | -       | -      | -       | -       | -       | -       |
| McKay Road New Interchange - Highway 400 (City)                                                       | 18,700         | 41,000    | 20,000    | 21,000    | -         | -       | -      | -       | -       | -       | -       |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                | 11,700         | 25,000    | 12,000    | 13,000    | -         | -       | -      | -       | -       | -       | -       |
| Secondary Plan Area New Bulk Water Filling Station                                                    | 30,500         | 66,000    | 32,000    | 34,000    | -         | -       | -      | -       | -       | -       | -       |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)   | 16,000         | 35,000    | 17,000    | 18,000    | -         | -       | -      | -       | -       | -       | -       |
| Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                 | 721,500        | 1,553,000 | 758,000   | 795,000   | -         | -       | -      | -       | -       | -       | -       |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                             | 616,200        | 1,326,000 | 647,000   | 679,000   | -         | -       | -      | -       | -       | -       | -       |
| Mapleview Drive E New Transmisison Watermain - Yonge to Royal Jubilee (Developer)                     | 1,927,900      | 4,150,000 | 2,024,000 | 2,126,000 | -         | -       | -      | -       | -       | -       | -       |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                              | 886,900        | 1,909,000 | 931,000   | 978,000   | -         | -       | -      | -       | -       | -       | -       |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                       | 826,300        | 1,779,000 | 868,000   | 911,000   | -         | -       | -      | -       | -       | -       | -       |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain - Big Bay Point to Mplview (City) | 112,300        | 242,000   | 118,000   | 124,000   | -         | -       | -      | -       | -       | -       | -       |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)   | 11,300         | 24,000    | 12,000    | 12,000    | -         | -       | -      | -       | -       | -       | -       |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                | 58,700         | 127,000   | 62,000    | 65,000    | -         | -       | -      | -       | -       | -       | -       |
| <b>Former Municipal Boundary Areas:</b>                                                               | -              | -         | -         | -         | -         | -       | -      | -       | -       | -       | -       |
| 000924 - Fairview Road Right of Way Expansion - Big Bay Point to Little                               | -              | 14,000    | -         | -         | -         | -       | -      | 7,000   | 7,000   | -       | -       |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                         | 1,351,550      | 5,198,000 | 2,993,000 | 2,205,000 | -         | -       | -      | -       | -       | -       | -       |
| EN1016 - Tiffin Street - Well 7 to Ferndale                                                           | 342,000        | 6,921,000 | 2,835,000 | 3,816,000 | 270,000   | -       | -      | -       | -       | -       | -       |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                             | 434,250        | 1,064,000 | 1,064,000 | -         | -         | -       | -      | -       | -       | -       | -       |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster        | 1,000,000      | -         | -         | -         | -         | -       | -      | -       | -       | -       | -       |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent     | -              | 1,405,000 | -         | 122,000   | 1,283,000 | -       | -      | -       | -       | -       | -       |
| EN1168 - Dyments Creek Culvert Expansion - Bradford St.                                               | -              | 488,000   | -         | 180,000   | 191,000   | 117,000 | -      | -       | -       | -       | -       |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                              | -              | 378,000   | -         | -         | -         | -       | -      | -       | 147,000 | 231,000 | -       |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                             | -              | 265,000   | -         | -         | -         | -       | -      | -       | -       | -       | 265,000 |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                  | -              | 212,000   | -         | 81,000    | 64,000    | 67,000  | -      | -       | -       | -       | -       |
| EN1277 - Byrne Drive New Road Construction - Harvie to North of Caplan                                | 48,100         | 351,000   | 66,000    | 139,000   | 146,000   | -       | -      | -       | -       | -       | -       |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                        | 466,060        | 698,000   | 698,000   | -         | -         | -       | -      | -       | -       | -       | -       |



Table 4-4 (Cont'd)

| Description                                                                                              | Budget<br>2021 | Total       | Forecast   |            |            |            |            |            |            |            |            |
|----------------------------------------------------------------------------------------------------------|----------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                                                                                          |                |             | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 122,045        | 1,346,000   | 24,000     | 60,000     | 599,000    | 525,000    | 138,000    | -          | -          | -          | -          |
| EN1333 - Huronia Road Right of Way Expansion - Yonge to Herrell                                          | -              | 81,000      | -          | -          | -          | -          | -          | -          | -          | -          | 81,000     |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | -              | 929,000     | -          | -          | 29,000     | 439,000    | 461,000    | -          | -          | -          | -          |
| EN1377 - Anne Street Right of Way Expansion - Wellington to Dunlop                                       | -              | 638,000     | -          | -          | 30,000     | 32,000     | -          | -          | 281,000    | 295,000    | -          |
| Z423 - Cundles Road East New Transmission Watermain - St Vincent to Golden Eagle                         | -              | 1,428,000   | -          | -          | -          | -          | -          | -          | 345,000    | 1,083,000  | -          |
| Z436 - Huronia Road Right of Way Expansion - Herrell to Big Bay Point                                    | -              | 8,000       | -          | -          | -          | -          | -          | -          | 4,000      | 4,000      | -          |
| Z438 - Lakeshore/Hurst Drive ROW Expansion - Tiffin Street to Cox Mill                                   | -              | 8,000       | -          | -          | -          | -          | -          | -          | 4,000      | 4,000      | -          |
| Carryforwards                                                                                            | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 281,700        | 607,000     | 296,000    | 311,000    | -          | -          | -          | -          | -          | -          | -          |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent                 | 116,100        | 250,000     | 122,000    | 128,000    | -          | -          | -          | -          | -          | -          | -          |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)                          | 7,200          | 16,000      | 8,000      | 8,000      | -          | -          | -          | -          | -          | -          | -          |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster                    | 28,500         | 61,000      | 30,000     | 31,000     | -          | -          | -          | -          | -          | -          | -          |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                                            | 8,800          | 19,000      | 9,000      | 10,000     | -          | -          | -          | -          | -          | -          | -          |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                     | 291,100        | 627,000     | 306,000    | 321,000    | -          | -          | -          | -          | -          | -          | -          |
| Tiffin Street - Ferndale to Anne Street                                                                  | 1,100          | 2,000       | 1,000      | 1,000      | -          | -          | -          | -          | -          | -          | -          |
| Total Capital Expenditures                                                                               | 24,053,397     | 193,984,000 | 26,712,000 | 36,007,000 | 19,416,000 | 18,374,000 | 14,163,000 | 18,319,000 | 18,263,000 | 17,860,000 | 24,870,000 |
| Capital Financing                                                                                        |                |             |            |            |            |            |            |            |            |            |            |
| Provincial/Federal Grants                                                                                | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Development Charges Reserve Fund - Facilities                                                            | -              | 1,265,000   | -          | -          | -          | 1,265,000  | -          | -          | -          | -          | -          |
| Development Charges Reserve Fund - Facilities Related Debt                                               | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Development Charges Reserve Fund - Distribution Systems - Former Barrie                                  | 2,550,495      | 12,131,270  | 4,872,060  | 3,730,140  | 1,220,640  | 612,360    | 358,990    | 4,550      | 403,960    | 761,970    | 166,600    |
| Development Charges Reserve Fund - Distribution Systems - Salem & Hewitt's                               | 9,377,913      | 43,074,000  | 5,821,000  | 7,345,000  | 1,513,000  | 4,696,000  | 5,398,100  | 5,436,550  | 4,831,350  | 810,000    | 7,223,000  |
| Non-Growth Related Debenture Requirements                                                                | 258,600        | 20,843,000  | -          | 10,364,000 | 8,179,000  | 2,300,000  | -          | -          | -          | -          | -          |
| Growth Related Debenture Requirements - Facilities                                                       | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Growth Related Debenture Requirements - Facilities Related Debt                                          | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Growth Related Debenture Requirements - Distribution Systems - Former Barrie                             | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Growth Related Debenture Requirements - Distribution Systems - Salem & Hewitt's                          | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Operating Contributions                                                                                  | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Water Rate Stabilization Reserve Fund                                                                    | -              | -           | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| Water Rate Capital Reserve Fund                                                                          | 11,866,388     | 116,670,730 | 16,018,940 | 14,567,860 | 8,503,360  | 9,500,640  | 8,405,910  | 12,877,900 | 13,027,690 | 16,288,030 | 17,480,400 |
| Total Capital Financing                                                                                  | 24,053,397     | 193,984,000 | 26,712,000 | 36,007,000 | 19,416,000 | 18,374,000 | 14,163,000 | 18,319,000 | 18,263,000 | 17,860,000 | 24,870,000 |



**Table 4-5**  
**City of Barrie**  
**Capital Budget Forecast – Wastewater (inflated \$)**

| Description                                                                                           | Budget<br>2021 | Total      | Forecast  |           |           |           |           |           |           |           |           |
|-------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                                                                       |                |            | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| <b>Capital Expenditures</b>                                                                           |                |            |           |           |           |           |           |           |           |           |           |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                           | -              | 345,000    | -         | -         | 57,000    | -         | 258,000   | 30,000    | -         | -         | -         |
| 000061 - Johnson Street wastewater pump station valve chamber, back up pump and flow meter            | 225,000        | -          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                           | -              | 1,135,000  | -         | -         | -         | -         | -         | 142,000   | 149,000   | 312,000   | 532,000   |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                                 | -              | 720,000    | -         | 77,000    | -         | -         | -         | -         | -         | 643,000   | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                            | -              | 2,094,000  | -         | 119,000   | 124,000   | -         | 719,000   | 1,132,000 | -         | -         | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                             | -              | 1,464,000  | -         | -         | -         | -         | -         | -         | 176,000   | -         | 1,288,000 |
| 000208 - Waste Water Maintenance Facility Renewal Assessment                                          | -              | 92,000     | -         | -         | -         | -         | -         | -         | 45,000    | 47,000    | -         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                               | -              | 511,000    | -         | -         | 144,000   | 101,000   | -         | -         | -         | -         | 266,000   |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                       | -              | 3,039,000  | 101,000   | 106,000   | -         | -         | 1,085,000 | 875,000   | 872,000   | -         | -         |
| 000952 - Mobile Response Technology Replacement                                                       | -              | 43,000     | 21,000    | 22,000    | -         | -         | -         | -         | -         | -         | -         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                       | 227,948        | 1,214,000  | 1,214,000 | -         | -         | -         | -         | -         | -         | -         | -         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster        | -              | 205,000    | 205,000   | -         | -         | -         | -         | -         | -         | -         | -         |
| EN1127 - WwTF Biosolids Storage Tank Mixers                                                           | (2,599,400)    | 11,169,000 | -         | 1,745,000 | 2,989,000 | 3,139,000 | 3,296,000 | -         | -         | -         | -         |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                              | 2,080          | -          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                            | 218,540        | 2,117,000  | 1,033,000 | 1,084,000 | -         | -         | -         | -         | -         | -         | -         |
| EN1184 - Sewer Rehabilitation Program                                                                 | 320,000        | 3,178,000  | 336,000   | 353,000   | 370,000   | 389,000   | 408,000   | 429,000   | 450,000   | 443,000   | -         |
| EN1237 - WwTF Sludge Thickening System Process - Polymer System Replacement                           | 91,000         | 3,409,000  | 105,000   | 655,000   | 2,649,000 | -         | -         | -         | -         | -         | -         |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                              | 38,750         | 1,411,000  | 41,000    | 668,000   | 702,000   | -         | -         | -         | -         | -         | -         |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                              | 37,603         | 1,849,000  | -         | -         | -         | -         | 902,000   | 947,000   | -         | -         | -         |
| EN1243 - WwTF Cogeneration Building Ventilation Upgrades                                              | 300,000        | -          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement  | -              | 2,868,000  | -         | -         | -         | -         | 59,000    | 100,000   | -         | 1,052,000 | 1,657,000 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                         | 35,000         | 1,143,000  | 840,000   | 303,000   | -         | -         | -         | -         | -         | -         | -         |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                            | -              | 2,479,000  | -         | -         | -         | 778,000   | 830,000   | 871,000   | -         | -         | -         |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                            | 57,500         | 4,330,000  | 60,000    | 63,000    | 976,000   | 1,025,000 | 1,076,000 | 1,130,000 | -         | -         | -         |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                             | 54,731         | 1,950,000  | 530,000   | -         | -         | 693,000   | 727,000   | -         | -         | -         | -         |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth       | 45,000         | 1,072,000  | -         | 523,000   | 549,000   | -         | -         | -         | -         | -         | -         |
| EN1328 - WwTF Septage/Supernating Dosing Tank Pre-Treatment Upgrade                                   | -              | 270,000    | 105,000   | 165,000   | -         | -         | -         | -         | -         | -         | -         |
| EN1330 - WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment | 100,000        | 2,586,000  | -         | 1,521,000 | 1,065,000 | -         | -         | -         | -         | -         | -         |
| EN1335 - WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                               | 100,000        | -          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                          | -              | 3,411,000  | -         | -         | -         | -         | -         | 670,000   | 1,337,000 | 1,404,000 | -         |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                           | -              | 3,040,000  | -         | 30,000    | 31,000    | -         | -         | -         | 556,000   | 584,000   | 1,839,000 |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                            | 65,000         | 1,066,000  | -         | 520,000   | 546,000   | -         | -         | -         | -         | -         | -         |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                           | -              | 5,125,000  | -         | -         | 35,000    | 55,000    | -         | 935,000   | 1,472,000 | 1,546,000 | 1,082,000 |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon                | 62,000         | 1,182,000  | 65,000    | -         | 354,000   | 372,000   | 391,000   | -         | -         | -         | -         |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                           | -              | 979,000    | -         | -         | 93,000    | -         | -         | -         | 886,000   | -         | -         |





Table 4-5 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total      | Forecast |         |         |           |           |           |           |           |           |
|------------------------------------------------------------------------------------------|----------------|------------|----------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                                                          |                |            | 2022     | 2023    | 2024    | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| Additional Asset Replacement Needs                                                       | -              | 22,017,000 | 263,000  | 551,000 | 868,000 | 1,216,000 | 1,914,000 | 2,680,000 | 3,518,000 | 4,802,000 | 6,205,000 |
| <b>Carryforwards:</b>                                                                    | -              | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| Automatic Transfer Switch                                                                | 133,300        | 287,000    | 140,000  | 147,000 | -       | -         | -         | -         | -         | -         | -         |
| BCSC Elec Surge Protect Upgrad                                                           | 57,900         | 125,000    | 61,000   | 64,000  | -       | -         | -         | -         | -         | -         | -         |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                  | 43,700         | 94,000     | 46,000   | 48,000  | -       | -         | -         | -         | -         | -         | -         |
| Biosolids Electrical Protect                                                             | 16,400         | 35,000     | 17,000   | 18,000  | -       | -         | -         | -         | -         | -         | -         |
| Biosolids Facility Roof Coating Rehabilitation                                           | 8,300          | 18,000     | 9,000    | 9,000   | -       | -         | -         | -         | -         | -         | -         |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                      | 12,700         | 27,000     | 13,000   | 14,000  | -       | -         | -         | -         | -         | -         | -         |
| Capital Purchase - New Vehicles from Intake Forms                                        | 45,000         | 97,000     | 47,000   | 50,000  | -       | -         | -         | -         | -         | -         | -         |
| Citizen Relationship Management (CRM) Solution                                           | 17,000         | 37,000     | 18,000   | 19,000  | -       | -         | -         | -         | -         | -         | -         |
| City Hall Customer Contact Centre Renovation                                             | 300            | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| CMMS Improvement Project - Cityworks                                                     | 16,300         | 35,000     | 17,000   | 18,000  | -       | -         | -         | -         | -         | -         | -         |
| Corporate Audio Visual Technology Infrastructure                                         | 100            | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| Corporate Communications Infrastructure Program                                          | 1,100          | 2,000      | 1,000    | 1,000   | -       | -         | -         | -         | -         | -         | -         |
| Corporate PC Infrastructure Program                                                      | 3,500          | 8,000      | 4,000    | 4,000   | -       | -         | -         | -         | -         | -         | -         |
| Corporate Printing Infrastructure                                                        | 500            | 2,000      | 1,000    | 1,000   | -       | -         | -         | -         | -         | -         | -         |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 95,600         | 205,000    | 100,000  | 105,000 | -       | -         | -         | -         | -         | -         | -         |
| Dunlop Street East Corridor Improvements - Toronto to Mulcaster                          | 1,800          | 4,000      | 2,000    | 2,000   | -       | -         | -         | -         | -         | -         | -         |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                    | 68,400         | 147,000    | 72,000   | 75,000  | -       | -         | -         | -         | -         | -         | -         |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 258,100        | 556,000    | 271,000  | 285,000 | -       | -         | -         | -         | -         | -         | -         |
| ERP Sustainment Program                                                                  | 59,900         | 129,000    | 63,000   | 66,000  | -       | -         | -         | -         | -         | -         | -         |
| eTendering Platform New System                                                           | 4,000          | 8,000      | 4,000    | 4,000   | -       | -         | -         | -         | -         | -         | -         |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 6,700          | 14,000     | 7,000    | 7,000   | -       | -         | -         | -         | -         | -         | -         |
| Grove Street Pumping Station New Sewage Pump                                             | 14,900         | 32,000     | 16,000   | 16,000  | -       | -         | -         | -         | -         | -         | -         |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 9,300          | 20,000     | 10,000   | 10,000  | -       | -         | -         | -         | -         | -         | -         |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 20,700         | 45,000     | 22,000   | 23,000  | -       | -         | -         | -         | -         | -         | -         |
| Harvie Road ROW Expansion - Essa to Bryne                                                | 135,000        | 291,000    | 142,000  | 149,000 | -       | -         | -         | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)              | 206,200        | 444,000    | 217,000  | 227,000 | -       | -         | -         | -         | -         | -         | -         |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 229,100        | 494,000    | 241,000  | 253,000 | -       | -         | -         | -         | -         | -         | -         |
| Huron Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)      | 15,000         | 33,000     | 16,000   | 17,000  | -       | -         | -         | -         | -         | -         | -         |
| Inlet Wks Screen Install                                                                 | 6,700          | 14,000     | 7,000    | 7,000   | -       | -         | -         | -         | -         | -         | -         |
| Little Lk Sew Pump Station Upg                                                           | 17,500         | 37,000     | 18,000   | 19,000  | -       | -         | -         | -         | -         | -         | -         |
| Lockhart Rd Trunk San Sew/Pump (City)                                                    | 7,100          | 15,000     | 7,000    | 8,000   | -       | -         | -         | -         | -         | -         | -         |
| Mapleview Dr E Sewer Watermain                                                           | 5,000          | 11,000     | 5,000    | 6,000   | -       | -         | -         | -         | -         | -         | -         |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                         | 181,400        | 390,000    | 190,000  | 200,000 | -       | -         | -         | -         | -         | -         | -         |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                 | 39,400         | 84,000     | 41,000   | 43,000  | -       | -         | -         | -         | -         | -         | -         |
| Microsoft Office 365 and Windows Enterprise                                              | 700            | 2,000      | 1,000    | 1,000   | -       | -         | -         | -         | -         | -         | -         |
| Mobility Technology Program                                                              | 47             | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| Network Technology Infrastructure Program                                                | 10,400         | 22,000     | 11,000   | 11,000  | -       | -         | -         | -         | -         | -         | -         |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                        | 43,400         | 94,000     | 46,000   | 48,000  | -       | -         | -         | -         | -         | -         | -         |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                        | 14,400         | 31,000     | 15,000   | 16,000  | -       | -         | -         | -         | -         | -         | -         |
| NRP- HNS Brock Park Neighbourhood Reconstruction                                         | 37,000         | 80,000     | 39,000   | 41,000  | -       | -         | -         | -         | -         | -         | -         |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                     | 4,900          | 10,000     | 5,000    | 5,000   | -       | -         | -         | -         | -         | -         | -         |
| NRP- Wellington D1 Neighbourhood Reconstruction                                          | 11,600         | 25,000     | 12,000   | 13,000  | -       | -         | -         | -         | -         | -         | -         |
| NRP- Wellington D2 Neighbourhood Reconstruction                                          | 32,000         | 69,000     | 34,000   | 35,000  | -       | -         | -         | -         | -         | -         | -         |



Table 4-5 (Cont'd)

| Description                                                                                        | Budget<br>2021 | Total     | Forecast  |           |      |      |      |      |      |      |      |
|----------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|------|------|------|------|------|------|------|
|                                                                                                    |                |           | 2022      | 2023      | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| PC Replacements                                                                                    | 100            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Process Instrumentation                                                                            | 8,300          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| Public Safety Communication Program                                                                | 600            | 2,000     | 1,000     | 1,000     | -    | -    | -    | -    | -    | -    | -    |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                                  | 16,300         | 35,000    | 17,000    | 18,000    | -    | -    | -    | -    | -    | -    | -    |
| Ross, Collier, Bayfield Intersection Realignment                                                   | 2,800          | 6,000     | 3,000     | 3,000     | -    | -    | -    | -    | -    | -    | -    |
| Server and Desktop Software Program                                                                | 200            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Server and Storage Technology Infrastructure Program                                               | 900            | 2,000     | 1,000     | 1,000     | -    | -    | -    | -    | -    | -    | -    |
| Sewer Rehabilitation Program                                                                       | 122,300        | 263,000   | 128,000   | 135,000   | -    | -    | -    | -    | -    | -    | -    |
| Sophia Creek Culvert Expansion - Grove, 130m East of Davidson                                      | 300            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| South L/Hill Leachate Gal Repl                                                                     | 14,700         | 31,000    | 15,000    | 16,000    | -    | -    | -    | -    | -    | -    | -    |
| Sunnidale Road Hwy 400 Crossing Reconstruction (within CAH limits)                                 | 218,700        | 471,000   | 230,000   | 241,000   | -    | -    | -    | -    | -    | -    | -    |
| Utilization of Wastewater Collection System as Active Storage                                      | 23,200         | 50,000    | 24,000    | 26,000    | -    | -    | -    | -    | -    | -    | -    |
| Waste Water Treatment Facility Administrative Office Fit-Up                                        | 11,200         | 24,000    | 12,000    | 12,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewater- Auto Valves/Flowmeter                                                                  | 44,200         | 95,000    | 46,000    | 49,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewater Asset Management Plan                                                                   | 31,900         | 68,000    | 33,000    | 35,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewater Peak Flow Attenuation Facility                                                          | 158,500        | 341,000   | 166,000   | 175,000   | -    | -    | -    | -    | -    | -    | -    |
| Well Installations for Biosolids Storage Facility Groundwater Monitoring Program                   | 18,900         | 41,000    | 20,000    | 21,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                              | 109,500        | 236,000   | 115,000   | 121,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Administration Building Retrofit of Laboratory Fume Hood Ventilation Unit - Laboratory Room   | 8,300          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                   | 293,400        | 631,000   | 308,000   | 323,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Biosolids Storage Tank Mixers                                                                 | 1,135,800      | 2,445,000 | 1,193,000 | 1,252,000 | -    | -    | -    | -    | -    | -    | -    |
| WwTF Chemical Building Upgrade                                                                     | 8,400          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment       | 100,000        | 215,000   | 105,000   | 110,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cogeneration Engine #2 Rehab                                                                  | 37,500         | 80,000    | 39,000    | 41,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cogeneration Building Ventilation Upgrades                                                    | 29,300         | 63,000    | 31,000    | 32,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Electrical Substation and Transformer Upgrade                                                 | 285,600        | 615,000   | 300,000   | 315,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Feasibility Study - Reuse of Final Effluent                                                   | (50,900)       | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| WwTF Filter Beds 1 and 2 Diffuser Upgrade                                                          | 13,000         | 28,000    | 14,000    | 14,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Innovation Center                                                                             | 11,700         | 25,000    | 12,000    | 13,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF New Advanced Nutrient Removal                                                                 | 723,100        | 1,556,000 | 759,000   | 797,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF New Heat Exchanger - Primary Digester 3                                                       | 17,400         | 37,000    | 18,000    | 19,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Redundant Power Feed to Secondary Effluent Pumps                                              | 50,000         | 108,000   | 53,000    | 55,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Sand Filter Controls & Instrumentation Replacement                                            | 55,000         | 119,000   | 58,000    | 61,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Secondary Digester Facade Replacement                                                         | 33,900         | 73,000    | 36,000    | 37,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Selector Tank Mixer Upgrade                                                                   | 200            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| WwTF Sludge Thickening System Process - Polymer System Replacement                                 | 73,200         | 158,000   | 77,000    | 81,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Splitter Gallery Concrete and Expansion Joint Repairs                                         | 116,700        | 252,000   | 123,000   | 129,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Travelling Bridge Frame Renewal - Filters 1 - 4                                               | 46,500         | 100,000   | 49,000    | 51,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Underground Sludge Transfer Pipe Replacement - Admin Building                                 | 339,000        | 730,000   | 356,000   | 374,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Unox Tank Isolation Gate Replacement                                                          | 33,300         | 72,000    | 35,000    | 37,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                                     | 36,600         | 78,000    | 38,000    | 40,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Feasibility Study - Reuse of Final Effluent                                                   | 18,400         | 39,000    | 19,000    | 20,000    | -    | -    | -    | -    | -    | -    | -    |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                           | 30,900         | 66,000    | 32,000    | 34,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Biosolids Storage Tank Mixers                                                                 | 800,000        | 1,722,000 | 840,000   | 882,000   | -    | -    | -    | -    | -    | -    | -    |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                       | 459,500        | 989,000   | 482,000   | 507,000   | -    | -    | -    | -    | -    | -    | -    |
| Co-generation & Biogas Trmt                                                                        | (2,500)        | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City) | (200,400)      | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |



Table 4-5 (Cont'd)

| Description                                                                                                     | Budget<br>2021 | Total      | Forecast  |           |           |            |            |           |           |           |           |
|-----------------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|
|                                                                                                                 |                |            | 2022      | 2023      | 2024      | 2025       | 2026       | 2027      | 2028      | 2029      | 2030      |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                    | 14,900         | 32,000     | 16,000    | 16,000    | -         | -          | -          | -         | -         | -         | -         |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station<br>5 Upgrades & Expansion (City)           | 5,000          | 11,000     | 5,000     | 6,000     | -         | -          | -          | -         | -         | -         | -         |
| <b>Growth Related:</b>                                                                                          | -              | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| Salem & Hewitt's Secondary Plan Areas                                                                           | -              | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| 000332 - McKay Pump Station (City)                                                                              | -              | 5,995,000  | -         | -         | -         | -          | -          | 118,000   | 892,000   | 1,232,000 | 3,753,000 |
| 000458 - Hewitt's Pump Station (City)                                                                           | -              | 1,481,000  | -         | -         | -         | -          | -          | -         | -         | 134,000   | 1,347,000 |
| EN1137 - Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to<br>Lockhart (Developer)                         | -              | 6,588,000  | -         | -         | 3,131,000 | -          | 3,457,000  | -         | -         | -         | -         |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to<br>Former Barrie South City Limits (Developer) | 830,800        | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| EN1255 - Huronia Road New Trunk Sanitary Sewer and Road<br>Replacement - Lockhart to McKay (City)               | (1,321,400)    | 16,434,000 | -         | -         | 3,051,000 | 4,805,000  | 5,046,000  | 3,532,000 | -         | -         | -         |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia<br>(City)                                     | (8,000,000)    | 38,747,000 | -         | 1,900,000 | 6,946,000 | 14,586,000 | 15,315,000 | -         | -         | -         | -         |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway<br>400 (Developer)                            | 1,398,200      | 6,177,000  | 4,231,000 | 1,946,000 | -         | -          | -          | -         | -         | -         | -         |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay<br>(Developer)                                     | 135,800        | 2,873,000  | -         | -         | 254,000   | 1,343,000  | 1,276,000  | -         | -         | -         | -         |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                             | 16,600         | 600,000    | -         | -         | -         | -          | 26,000     | 223,000   | 351,000   | -         | -         |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion -<br>Prince William to Phase 1 Boundary (Developer) | 75,795         | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince<br>William (City)                              | -              | 4,596,000  | 70,000    | 107,000   | -         | 1,402,000  | 1,472,000  | 1,545,000 | -         | -         | -         |
| EN1278 - Byrne Drive (North) New Road Construction - Harvie Rd to<br>Essa Rd                                    | -              | 443,000    | -         | -         | -         | -          | -          | 84,000    | 175,000   | 184,000   | -         |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain -<br>Saunders to Huronia (City)                        | -              | 151,000    | -         | -         | -         | 15,000     | 66,000     | 70,000    | -         | -         | -         |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South)<br>extension to Lockhart (City)                   | -              | 1,984,000  | -         | 31,000    | -         | -          | 119,000    | 712,000   | 1,122,000 | -         | -         |
| <b>Carryforwards:</b>                                                                                           | -              | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement -<br>Lockhart to McKay (City)                        | 84,800         | 182,000    | 89,000    | 93,000    | -         | -          | -          | -         | -         | -         | -         |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station<br>5 Upgrades & Expansion (City)           | 559,700        | 1,205,000  | 588,000   | 617,000   | -         | -          | -          | -         | -         | -         | -         |
| County Rd 27 Sanitary Sewer - Holly SPS to Lougheed                                                             | 116,700        | 252,000    | 123,000   | 129,000   | -         | -          | -          | -         | -         | -         | -         |
| County Road 27 New Transmission Watermain - Holly PS to Former<br>Barrie South City Limits (Developer)          | 16,000         | 35,000     | 17,000    | 18,000    | -         | -          | -          | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart<br>(Developer)                                  | 285,000        | 613,000    | 299,000   | 314,000   | -         | -          | -          | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview<br>(Developer)                                  | 1,083,400      | 2,332,000  | 1,138,000 | 1,194,000 | -         | -          | -          | -         | -         | -         | -         |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement -<br>Lockhart to McKay (City)                        | 453,300        | 976,000    | 476,000   | 500,000   | -         | -          | -          | -         | -         | -         | -         |
| Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William<br>to Phase 1 Boundary (Developer)          | 1,271,700      | 2,737,000  | 1,335,000 | 1,402,000 | -         | -          | -          | -         | -         | -         | -         |
| McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                                 | 2,853,600      | 6,142,000  | 2,996,000 | 3,146,000 | -         | -          | -          | -         | -         | -         | -         |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400<br>(Developer)                                     | 2,365,100      | 5,091,000  | 2,483,000 | 2,608,000 | -         | -          | -          | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart<br>(Developer)                                  | 154,300        | 332,000    | 162,000   | 170,000   | -         | -          | -          | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview<br>(Developer)                                  | 63,300         | 136,000    | 66,000    | 70,000    | -         | -          | -          | -         | -         | -         | -         |
| Lockhart Rd Trunk San Sew/Pump (City)                                                                           | 64,600         | 139,000    | 68,000    | 71,000    | -         | -          | -          | -         | -         | -         | -         |



Table 4-5 (Cont'd)

| Description                                                                                              | Budget<br>2021 | Total       | Forecast  |           |            |            |            |            |            |            |            |
|----------------------------------------------------------------------------------------------------------|----------------|-------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
|                                                                                                          |                |             | 2022      | 2023      | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)       | 145,900        | 314,000     | 153,000   | 161,000   | -          | -          | -          | -          | -          | -          | -          |
| Sanitary Pump Station 3 Decommissioning (City)                                                           | 31,200         | 67,000      | 33,000    | 34,000    | -          | -          | -          | -          | -          | -          | -          |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                             | 26,200         | 57,000      | 28,000    | 29,000    | -          | -          | -          | -          | -          | -          | -          |
| 0                                                                                                        | -              | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| <b>Former Municipal Boundary Areas</b>                                                                   | -              | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| 000931 - Wastewater Inflow/Infiltration Reduction Action Plan                                            | 200,000        | 5,790,000   | 525,000   | 551,000   | 579,000    | 608,000    | 638,000    | 670,000    | 704,000    | 739,000    | 776,000    |
| 001018 - Dunlop Street Bridge Sanitary - Sarjeant Drive to Anne Street                                   | 1,208,069      | 41,897,000  | 1,050,000 | 1,103,000 | -          | 3,460,000  | 11,510,000 | 12,085,000 | 12,689,000 | -          | -          |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                            | 448,000        | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                                | 56,250         | 33,000      | 33,000    | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1122 - Little Lk Sew Pump Station Upg                                                                  | -              | 6,205,000   | 527,000   | 2,205,000 | 3,473,000  | -          | -          | -          | -          | -          | -          |
| EN1132 - Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                             | 167,500        | 3,483,000   | 710,000   | 1,353,000 | 1,420,000  | -          | -          | -          | -          | -          | -          |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        | -              | 1,978,000   | -         | 965,000   | 1,013,000  | -          | -          | -          | -          | -          | -          |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                                 | 35,700         | 757,000     | -         | -         | -          | -          | -          | 757,000    | -          | -          | -          |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                | -              | 39,000      | -         | -         | -          | -          | -          | -          | -          | -          | 39,000     |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | -              | 422,000     | -         | 161,000   | 127,000    | 134,000    | -          | -          | -          | -          | -          |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 48,100         | 351,000     | 66,000    | 139,000   | 146,000    | -          | -          | -          | -          | -          | -          |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 125,800        | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 107,400        | 1,711,000   | 30,000    | 76,000    | 762,000    | 668,000    | 175,000    | -          | -          | -          | -          |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | -              | 1,225,000   | -         | -         | 24,000     | 586,000    | 615,000    | -          | -          | -          | -          |
| <b>Carryforwards:</b>                                                                                    | -              | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 32,500         | 70,000      | 34,000    | 36,000    | -          | -          | -          | -          | -          | -          | -          |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                                      | 1,400          | 3,000       | 1,000     | 2,000     | -          | -          | -          | -          | -          | -          | -          |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                                    | 51,600         | 111,000     | 54,000    | 57,000    | -          | -          | -          | -          | -          | -          | -          |
| Wastewater Asset Management Plan                                                                         | 60,100         | 129,000     | 63,000    | 66,000    | -          | -          | -          | -          | -          | -          | -          |
| <b>Facilities</b>                                                                                        | -              | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1091 - WwTF New Advanced Nutrient Removal                                                              | 2,500,000      | 199,997,000 | 7,375,000 | 5,163,000 | 12,422,000 | 16,748,000 | 17,585,000 | 18,465,000 | 38,775,000 | 40,714,000 | 42,750,000 |
| EN1245 - WwTF Chemical Building Upgrade                                                                  | 364,000        | 920,000     | 920,000   | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1297 - WwTF Electrical Substation and Transformer Upgrade                                              | 570,000        | 17,877,000  | 630,000   | 3,271,000 | 4,293,000  | 5,409,000  | 4,274,000  | -          | -          | -          | -          |
| EN1390 - Wastewater Peak Flow Attenuation Facility                                                       | 473,200        | 33,203,000  | 1,414,000 | 1,113,000 | 232,000    | -          | 2,827,000  | 11,875,000 | 12,469,000 | 3,273,000  | -          |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                           | 600,000        | 690,000     | 690,000   | -         | -          | -          | -          | -          | -          | -          | -          |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                           | -              | 15,384,000  | -         | 3,309,000 | 4,336,000  | 4,552,000  | 3,187,000  | -          | -          | -          | -          |
| EN1438 - WwTF Digester Capacity Expansion                                                                | 500,000        | 39,769,000  | 1,166,000 | 808,000   | 732,000    | 3,373,000  | 10,625,000 | 11,156,000 | 7,809,000  | 4,100,000  | -          |
| FC1215 - WWTF Innovation Center                                                                          | 1,000,000      | 15,230,000  | 6,300,000 | 6,615,000 | 2,315,000  | -          | -          | -          | -          | -          | -          |
| Z162 - WwTF New Cogeneration and Biogas Treatment System                                                 | 80,000         | 452,000     | 231,000   | 221,000   | -          | -          | -          | -          | -          | -          | -          |
| <b>Carryforwards:</b>                                                                                    | -              | -           | -         | -         | -          | -          | -          | -          | -          | -          | -          |
| Wastewater Peak Flow Attenuation Facility                                                                | 62,000         | 133,000     | 65,000    | 68,000    | -          | -          | -          | -          | -          | -          | -          |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                                    | 194,600        | 419,000     | 204,000   | 215,000   | -          | -          | -          | -          | -          | -          | -          |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                         | 158,000        | 340,000     | 166,000   | 174,000   | -          | -          | -          | -          | -          | -          | -          |
| WwTF Digester Capacity Expansion                                                                         | 259,200        | 558,000     | 272,000   | 286,000   | -          | -          | -          | -          | -          | -          | -          |
| WwTF Electrical Substation and Transformer Upgrade                                                       | 225,000        | 484,000     | 236,000   | 248,000   | -          | -          | -          | -          | -          | -          | -          |
| WWTF Innovation Center                                                                                   | 11,700         | 25,000      | 12,000    | 13,000    | -          | -          | -          | -          | -          | -          | -          |



Table 4-5 (Cont'd)

| Description                                                                                           | Budget<br>2021    | Total              | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------------------------------------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                                       |                   |                    | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| WwTF New Heat Exchanger - Primary Digester 3                                                          | 156,600           | 337,000            | 164,000           | 173,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Selector Tank Mixer Upgrade                                                                      | 1,700             | 4,000              | 2,000             | 2,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Biosolids Storage Tank Mixers                                                                    | 116,000           | 250,000            | 122,000           | 128,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF New Advanced Nutrient Removal                                                                    | 216,700           | 467,000            | 228,000           | 239,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>Total Capital Expenditures</b>                                                                     | <b>19,320,213</b> | <b>600,971,000</b> | <b>50,388,000</b> | <b>60,017,000</b> | <b>56,808,000</b> | <b>65,457,000</b> | <b>89,878,000</b> | <b>71,233,000</b> | <b>84,447,000</b> | <b>61,209,000</b> | <b>61,534,000</b> |
| <b>Capital Financing</b>                                                                              |                   |                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Provincial/Federal Grants                                                                             | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Facilities                                                         | 3,549,167         | 98,716,646         | 7,940,897         | 11,559,077        | 9,812,578         | 11,953,482        | 18,301,475        | 16,649,572        | 14,233,366        | 6,819,618         | 1,446,582         |
| Development Charges Reserve Fund - Facilities Related Debt                                            | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Wastewater Collection - Former Municipal Boundary Areas            | 1,529,163         | 37,500,290         | 1,704,060         | 3,303,900         | 3,334,960         | 3,238,880         | 8,230,840         | 8,468,860         | 8,550,570         | 317,770           | 350,450           |
| Development Charges Reserve Fund - Wastewater Collection - Salem & Hewitt's Secondary Plan Areas      | 2,696,485         | 106,169,000        | 14,355,000        | 14,540,000        | 13,382,000        | 22,151,000        | 26,754,900        | 6,094,450         | 2,241,650         | 1,550,000         | 5,100,000         |
| Non-Growth Related Debenture Requirements                                                             | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Facilities                                                    | 1,848,105         | 123,735,544        | 5,692,443         | 4,412,613         | 7,529,742         | 10,151,998        | 10,659,355        | 11,192,778        | 23,503,924        | 24,679,272        | 25,913,418        |
| Growth Related Debenture Requirements - Facilities Related Debt                                       | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Wastewater Collection - Former Municipal Boundary Areas       | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Wastewater Collection - Salem & Hewitt's Secondary Plan Areas | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Operating Contributions                                                                               | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Rate Stabilization Reserve Fund                                                            | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Rate Capital Reserve Fund                                                                  | 9,697,293         | 234,849,520        | 20,695,600        | 26,201,410        | 22,748,720        | 17,961,640        | 25,931,430        | 28,827,340        | 35,917,490        | 27,842,340        | 28,723,550        |
| <b>Total Capital Financing</b>                                                                        | <b>19,320,213</b> | <b>600,971,000</b> | <b>50,388,000</b> | <b>60,017,000</b> | <b>56,808,000</b> | <b>65,457,000</b> | <b>89,878,000</b> | <b>71,233,000</b> | <b>84,447,000</b> | <b>61,209,000</b> | <b>61,534,000</b> |



# Chapter 5

## Overview of Expenditures and Revenues



## 5. Overview of Expenditures and Revenues

### 5.1 Water Operating Expenditures

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In this report, the forecast water budget figures for 2021 to 2024 are based on the operating forecasts provided by staff. The forecast for the remaining years (2025-2030) has been inflated from 2024 estimates. The costs for each component of the operating budget have been reviewed with staff to establish forecast inflationary adjustments. Most of the expenditures have been assumed to increase at a rate of 2.0% annually. Operating expenditures that involve hydro and chemicals have been inflated by 5.0% annually. It is anticipated that an additional full-time staff member will be required for water services in 2022. The salaries and benefits for this staff member have been incorporated into the forecast, based on current salary levels for a similar position. Note that annual contributions have been provided to the capital reserves in order to minimize the need for additional debt to finance the capital program. Also included are any debenture expenditures and contributions to reserve funds.

As noted in Section 4.2, the water operating budget has provided an estimate of anticipate funding required to be recovered from rates due to the D.C. exemptions for residential intensification. This expenditure is based on an anticipated estimate of 15% of new apartments dwellings being exempt under the new mandatory residential intensification exemption under the D.C.A. The loss of the water component of the D.C. due to exemptions must be funded from other sources.

Further, a new expenditure related to a low-income support grant program has been included beginning in 2022 at an estimated cost of \$300,000. This amount has been inflated at 2% annually over the forecast period.

### 5.2 Water Operating Revenues

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The City has fixed charge revenue and miscellaneous revenue sources to help contribute towards operating expenditures. These miscellaneous revenues, including swimming pool fills, water tapping fees, backflow fees, etc. have been assumed to increase at 2% per year over the forecast period. In addition to these revenue sources, local improvements revenue is included in the forecast to account for repayment to the City for works conducted on behalf of developing landowners. This revenue is based on

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the repayment schedule negotiated with the landowners. Table 5-1 provides for the operating budget for the water system.





Table 5-1  
City of Barrie  
Operating Budget Forecast – Water (inflated \$)

| Description                                    | Budget<br>2021 | Forecast  |           |           |           |           |           |           |           |           |
|------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                |                | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| <b>Expenditures</b>                            |                |           |           |           |           |           |           |           |           |           |
| <b>Operating Costs</b>                         |                |           |           |           |           |           |           |           |           |           |
| 400000 - Full-time Salaries                    | 6,051,907      | 6,206,281 | 6,346,102 | 6,463,396 | 6,592,700 | 6,724,600 | 6,859,100 | 6,996,300 | 7,136,200 | 7,278,900 |
| 400100 - Full-time Salaries - Casual           | 290,979        | 373,346   | 279,633   | 221,111   | 225,500   | 230,000   | 234,600   | 239,300   | 244,100   | 249,000   |
| 400700 - Full-time Overtime                    | 162,590        | 165,856   | 169,173   | 172,556   | 176,000   | 179,500   | 183,100   | 186,800   | 190,500   | 194,300   |
| 401000 - Full-time Salary Recovery             | (123,846)      | (214,322) | (90,731)  | -         | -         | -         | -         | -         | -         | -         |
| 401100 - Full-time Fringe Benefits             | 1,642,068      | 1,672,108 | 1,699,210 | 1,721,943 | 1,756,400 | 1,791,500 | 1,827,300 | 1,863,800 | 1,901,100 | 1,939,100 |
| 401200 - Full-time Fringe Benefits - Casual    | 37,440         | 44,443    | 35,883    | 28,236    | 28,800    | 29,400    | 30,000    | 30,600    | 31,200    | 31,800    |
| 433100 - Part-time Salaries - Casual           | 117,487        | 123,093   | 129,314   | 135,432   | 138,100   | 140,900   | 143,700   | 146,600   | 149,500   | 152,500   |
| 433500 - Part-time Fringe Benefits - Casual    | 15,548         | 16,336    | 17,210    | 18,069    | 18,400    | 18,800    | 19,200    | 19,600    | 20,000    | 20,400    |
| Salaries & Benefits for Additional Staff       |                | 86,200    | 87,900    | 89,700    | 91,500    | 93,300    | 95,200    | 97,100    | 99,000    | 101,000   |
| 500400 - Stationery & Office Supplies          | 47,643         | 52,151    | 53,194    | 54,257    | 55,300    | 56,400    | 57,500    | 58,700    | 59,900    | 61,100    |
| 500500 - Preprinted Forms, Tags & Passes       | 4,735          | 3,589     | 3,661     | 3,734     | 3,800     | 3,900     | 4,000     | 4,100     | 4,200     | 4,300     |
| 500800 - Meetings & Meal Expenses              | 10,127         | 10,476    | 10,686    | 10,899    | 11,100    | 11,300    | 11,500    | 11,700    | 11,900    | 12,100    |
| 501000 - Award & Ceremony Expenses             | 1,875          | 1,950     | 1,989     | 2,029     | 2,100     | 2,100     | 2,100     | 2,100     | 2,100     | 2,100     |
| 501100 - Protective Clothing                   | 24,290         | 25,494    | 26,004    | 26,524    | 27,100    | 27,600    | 28,200    | 28,800    | 29,400    | 30,000    |
| 501300 - Clothing Allowance                    | 6,710          | 6,947     | 7,086     | 7,228     | 7,400     | 7,500     | 7,700     | 7,900     | 8,100     | 8,300     |
| 501500 - Protective Equipment                  | 27,970         | 28,867    | 29,444    | 30,033    | 30,600    | 31,200    | 31,800    | 32,400    | 33,000    | 33,700    |
| 510100 - Chemicals                             | 171,606        | 172,428   | 173,267   | 174,122   | 182,800   | 191,900   | 201,500   | 211,600   | 222,200   | 233,300   |
| 520000 - Gasoline                              | 3,798          | 3,874     | 3,951     | 4,030     | 4,200     | 4,400     | 4,600     | 4,800     | 5,000     | 5,300     |
| 520100 - Hydro                                 | 1,761,153      | 1,796,376 | 1,832,304 | 1,868,950 | 1,962,400 | 2,060,500 | 2,163,500 | 2,271,700 | 2,385,300 | 2,504,600 |
| 520200 - Water & Wastewater                    | 96,068         | 97,989    | 99,949    | 101,948   | 104,000   | 106,100   | 108,200   | 110,400   | 112,600   | 114,900   |
| 520300 - Natural Gas                           | 125,007        | 127,507   | 130,057   | 132,658   | 135,300   | 138,000   | 140,800   | 143,600   | 146,500   | 149,400   |
| 540300 - Small Parts                           | 93,083         | 96,248    | 98,051    | 99,891    | 101,900   | 103,900   | 106,000   | 108,100   | 110,300   | 112,500   |
| 540500 - Asphalt                               | 48,000         | 49,915    | 50,913    | 51,931    | 53,000    | 54,100    | 55,200    | 56,300    | 57,400    | 58,500    |
| 540900 - Field & Other Supplies                | 474,227        | 486,096   | 494,228   | 502,502   | 512,600   | 522,900   | 533,400   | 544,100   | 555,000   | 566,100   |
| 541400 - Laboratory Supplies                   | 15,240         | 15,550    | 15,861    | 16,178    | 16,500    | 16,800    | 17,100    | 17,400    | 17,700    | 18,100    |
| 541600 - Purchases for Resale                  | 102,170        | 104,213   | 106,298   | 108,424   | 110,600   | 112,800   | 115,100   | 117,400   | 119,700   | 122,100   |
| 560200 - Minor Capital - General               | 424,446        | 437,466   | 444,714   | 452,107   | 461,100   | 470,300   | 479,700   | 489,300   | 499,100   | 509,100   |
| 570000 - Small Tools                           | 25,447         | 26,398    | 26,926    | 27,464    | 28,000    | 28,600    | 29,200    | 29,800    | 30,400    | 31,000    |
| 600000 - Conferences & Trade Show Registration | 32,377         | 35,353    | 36,060    | 36,781    | 37,500    | 38,300    | 39,100    | 39,900    | 40,700    | 41,500    |
| 600100 - Kilometer Reimbursement               | 9,359          | 9,722     | 9,916     | 10,114    | 10,300    | 10,500    | 10,700    | 10,900    | 11,100    | 11,300    |
| 620000 - Staff Training & Development          | 132,030        | 144,128   | 147,011   | 149,951   | 152,900   | 156,000   | 159,100   | 162,300   | 165,500   | 168,800   |
| 620200 - Memberships & Subscriptions           | 148,816        | 160,453   | 163,652   | 166,915   | 170,300   | 173,700   | 177,200   | 180,700   | 184,300   | 188,000   |
| 640500 - Consultants - General                 | 1,436          | 1,542     | 1,573     | 1,605     | 1,600     | 1,600     | 1,600     | 1,600     | 1,600     | 1,600     |
| 660400 - Examination Services                  | 250            | 255       | 260       | 265       | 300       | 300       | 300       | 300       | 300       | 300       |
| 661100 - Advertising Services                  | 2,360          | 2,454     | 2,503     | 2,553     | 2,600     | 2,700     | 2,800     | 2,900     | 3,000     | 3,100     |
| 661200 - Application & Permit Services         | 3,784          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| 661400 - Cellular Telephone Services           | 44,785         | 45,788    | 46,353    | 46,929    | 47,900    | 48,900    | 49,900    | 50,900    | 51,900    | 52,900    |
| 661800 - Telephone Services                    | 29,910         | 30,225    | 30,390    | 30,558    | 31,200    | 31,800    | 32,400    | 33,000    | 33,700    | 34,400    |
| 670700 - Contracted Services - General         | 904,635        | 915,040   | 926,415   | 940,018   | 958,800   | 978,000   | 997,600   | 1,017,600 | 1,038,000 | 1,058,800 |
| 671900 - Contracted Services - Snow Clearing   | 118,280        | 122,998   | 125,458   | 127,967   | 130,500   | 133,100   | 135,800   | 138,500   | 141,300   | 144,100   |
| 672200 - Contracted Services - Water           | 9,050          | 9,411     | 9,599     | 9,791     | 10,000    | 10,200    | 10,400    | 10,600    | 10,800    | 11,000    |
| 672600 - Contracted Services - Painting        | 57,000         | 58,140    | 59,303    | 60,489    | 61,700    | 62,900    | 64,200    | 65,500    | 66,800    | 68,100    |
| 675100 - Repairs & Maintenance - Building      | 5,820          | 6,053     | 6,174     | 6,297     | 6,400     | 6,500     | 6,600     | 6,700     | 6,800     | 6,900     |
| 675400 - Repairs & Maintenance - Equipment     | 232,239        | 234,604   | 236,224   | 237,877   | 242,600   | 247,500   | 252,500   | 257,600   | 262,800   | 268,100   |



Table 5-1 (Cont'd)

| Description                                                                   | Budget            | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                               | 2021              | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| 676100 - Repairs & Maintenance - Hydrants                                     | 101,966           | 104,005           | 106,085           | 108,207           | 110,400           | 112,600           | 114,900           | 117,200           | 119,500           | 121,900           |
| 676400 - Repairs & Maintenance - Parking                                      | 32,219            | 32,606            | 33,001            | 33,403            | 34,100            | 34,800            | 35,500            | 36,200            | 36,900            | 37,600            |
| 700000 - Equipment Rental/Lease                                               | 84,633            | 23,103            | 25,258            | 27,056            | 27,600            | 28,200            | 28,800            | 29,400            | 30,000            | 30,600            |
| 720400 - Debit & Credit Card Fees                                             | 1,315             | 1,341             | 1,368             | 1,395             | 1,400             | 1,400             | 1,400             | 1,400             | 1,400             | 1,400             |
| 720800 - Insurance Premium                                                    | 219,043           | 223,424           | 227,892           | 232,450           | 237,100           | 241,800           | 246,600           | 251,500           | 256,500           | 261,600           |
| 721100 - Insurance Settlement                                                 | 29,260            | 29,845            | 30,442            | 31,051            | 31,700            | 32,300            | 32,900            | 33,600            | 34,300            | 35,000            |
| 900500 - Interdepartmental - General                                          | 100,000           | 100,000           | 132,118           | 166,236           | 169,600           | 173,000           | 176,500           | 180,000           | 183,600           | 187,300           |
| 901000 - Interdepartmental - Fleet                                            | 298,690           | 304,664           | 310,757           | 316,972           | 323,300           | 329,800           | 336,400           | 343,100           | 350,000           | 357,000           |
| 901599 - Interdepartmental - Property (Automated)                             | 946,770           | 961,145           | 976,297           | 991,654           | 1,011,500         | 1,031,700         | 1,052,300         | 1,073,300         | 1,094,800         | 1,116,700         |
| 902000 - Interdepartmental - Corporate Support                                | 5,898,416         | 5,994,070         | 6,091,577         | 6,183,636         | 6,307,300         | 6,433,400         | 6,562,100         | 6,693,300         | 6,827,200         | 6,963,700         |
| 903000 - Interdepartmental - Water Rates (Manual)                             | 694,973           | 697,178           | 738,592           | 741,881           | 756,700           | 771,800           | 787,200           | 802,900           | 819,000           | 835,400           |
| 903099 - Interdepartmental - Water Rates (Automated)                          | 77,728            | 78,834            | 80,400            | 82,000            | 83,600            | 85,300            | 87,000            | 88,700            | 90,500            | 92,300            |
| Low-Income Support Grant Program                                              |                   | 300,000           | 306,000           | 312,100           | 318,300           | 324,700           | 331,200           | 337,800           | 344,600           | 351,500           |
| Transfer to Fleet Management Reserve                                          | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           |
| Funding of DC Exemptions for Residential Intensification                      | 152,439           | 141,653           | 195,881           | 581,505           | 593,120           | 605,430           | 618,400           | 630,835           | 643,484           | 656,323           |
| <b>Sub Total Operating</b>                                                    | <b>22,372,350</b> | <b>23,129,909</b> | <b>23,683,837</b> | <b>24,508,010</b> | <b>25,052,520</b> | <b>25,611,530</b> | <b>26,185,700</b> | <b>26,773,535</b> | <b>27,376,784</b> | <b>27,995,723</b> |
| <b>Capital-Related</b>                                                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities Related Debt          | 1,975,688         | 2,066,476         | 2,161,492         | 2,260,937         | 2,365,020         | 2,473,959         | 2,587,985         | 2,707,337         | 2,832,268         | 2,963,043         |
| Existing Debt (Interest) - Growth Related - Facilities Related Debt           | 5,941,793         | 5,851,006         | 5,755,989         | 5,656,544         | 5,552,461         | 5,443,522         | 5,329,496         | 5,210,144         | 5,085,213         | 4,954,439         |
| New Non-Growth Related Debt (Principal)                                       | -                 | 9,624             | 9,913             | 395,914           | 712,178           | 819,140           | 843,714           | 869,025           | 895,096           | 921,949           |
| New Non-Growth Related Debt (Interest)                                        | -                 | 7,758             | 7,469             | 318,092           | 551,584           | 599,219           | 574,645           | 549,334           | 523,263           | 496,410           |
| Transfer to Capital                                                           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Water Rate Stabilization Reserve Fund                             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Water Capital Reserve Fund                                        | 7,068,478         | 7,083,882         | 7,333,536         | 6,942,925         | 7,200,546         | 7,880,349         | 8,742,358         | 9,625,869         | 10,546,845        | 11,498,457        |
| <b>Sub Total Capital Related</b>                                              | <b>14,985,959</b> | <b>15,018,745</b> | <b>15,268,400</b> | <b>15,574,412</b> | <b>16,381,790</b> | <b>17,216,190</b> | <b>18,078,198</b> | <b>18,961,709</b> | <b>19,882,685</b> | <b>20,834,298</b> |
| <b>Total Expenditures</b>                                                     | <b>37,358,309</b> | <b>38,148,655</b> | <b>38,952,236</b> | <b>40,082,422</b> | <b>41,434,309</b> | <b>42,827,720</b> | <b>44,263,898</b> | <b>45,735,244</b> | <b>47,259,468</b> | <b>48,830,020</b> |
| <b>Revenues</b>                                                               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Fixed Charge                                                                  | 10,254,620        | 10,663,482        | 11,205,414        | 11,849,112        | 12,590,028        | 13,371,258        | 14,195,054        | 15,063,359        | 15,978,417        | 16,942,815        |
| 810260 - Engineering Fees                                                     | 36,977            | 37,717            | 38,471            | 39,240            | 40,000            | 40,800            | 41,600            | 42,400            | 43,200            | 44,100            |
| 810340 - Hydrant Meter Gate Valves                                            | 182,491           | 186,141           | 189,864           | 193,661           | 197,500           | 201,500           | 205,500           | 209,600           | 213,800           | 218,100           |
| 810360 - Swimming Pool Fills                                                  | 17,668            | 18,021            | 18,382            | 18,749            | 19,100            | 19,500            | 19,900            | 20,300            | 20,700            | 21,100            |
| 810370 - Water Service Calls                                                  | 18,738            | 19,113            | 19,495            | 19,885            | 20,300            | 20,700            | 21,100            | 21,500            | 21,900            | 22,300            |
| 810380 - Stop & Drain Calls                                                   | 52,270            | 53,315            | 54,382            | 55,469            | 56,600            | 57,700            | 58,900            | 60,100            | 61,300            | 62,500            |
| 810590 - Water Tapping Fees                                                   | 44,843            | 45,740            | 46,655            | 47,588            | 48,500            | 49,500            | 50,500            | 51,500            | 52,500            | 53,600            |
| 810610 - Backflow Fees                                                        | 219,000           | 221,000           | 222,000           | 223,000           | 227,500           | 232,100           | 236,700           | 241,400           | 246,200           | 251,100           |
| 810640 - Water ON/OFF Fees                                                    | 61,323            | 62,549            | 63,800            | 65,076            | 66,400            | 67,700            | 69,100            | 70,500            | 71,900            | 73,300            |
| 810820 - Sundry Revenue                                                       | 150,406           | 153,414           | 156,482           | 159,612           | 162,800           | 166,100           | 169,400           | 172,800           | 176,300           | 179,800           |
| 825000 - Interest and Penalties                                               | 80,000            | 80,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Local Improvements Revenue                                                    | 50,500            | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | -                 | -                 | -                 |
| Contributions from Development Charges Reserve Fund - Facilities Related Debt | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         |
| <b>Total Operating Revenue</b>                                                | <b>19,086,317</b> | <b>19,466,249</b> | <b>19,940,702</b> | <b>20,597,150</b> | <b>21,354,485</b> | <b>22,152,615</b> | <b>22,993,511</b> | <b>23,870,941</b> | <b>24,803,698</b> | <b>25,786,196</b> |
| <b>Water Billing Recovery - Operating</b>                                     | <b>18,271,992</b> | <b>18,682,405</b> | <b>19,011,534</b> | <b>19,485,272</b> | <b>20,079,824</b> | <b>20,675,105</b> | <b>21,270,387</b> | <b>21,864,304</b> | <b>22,455,770</b> | <b>23,043,824</b> |
| Asset Replacement Needs - Lifecycle Contribution (\$)                         |                   | 293,087           | 900,031           | 1,562,279         | 2,301,297         | 3,112,770         | 4,001,400         | 4,972,050         | 6,029,879         | 7,180,408         |
| <b>Water Billing Recovery - Total</b>                                         | <b>18,271,992</b> | <b>18,975,492</b> | <b>19,911,565</b> | <b>21,047,551</b> | <b>22,381,121</b> | <b>23,787,874</b> | <b>25,271,788</b> | <b>26,836,353</b> | <b>28,485,649</b> | <b>30,224,232</b> |



### 5.3 Wastewater Operating Expenditures

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Similar to water, the wastewater operating expenditures for 2021 to 2024 are based on the City's estimates. Forecasts for 2025 to 2030 have been adjusted over the forecast period by an annual inflationary factor of 2.0%. Operating expenditures that involve hydro and chemicals have been inflated by 5.0% annually. Additional staff members are also anticipated over the forecast period for wastewater services. The incremental salaries and benefits related to these new staff members have been incorporated into the forecast. Also included are contributions to the capital reserve and debt payments.

Similar to water, the wastewater operating budget has provided an estimate of anticipate funding required to be recovered from rates due to the new D.C. exemption for residential intensification. This expenditure is based on an anticipated estimate of 15% of new apartments dwellings being exempt under the new mandatory residential intensification exemption under the D.C.A. The loss of the wastewater component of the D.C. due to exemptions must be funded from other sources.

Further, as with water, a new expenditure related to a low-income support grant program has been included beginning in 2022 at an estimated cost of \$300,000. This amount has been inflated at 2% annually over the forecast period.

### 5.4 Wastewater Operating Revenues

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The operating revenue for the wastewater program comes mainly from the fixed charges along with volumetric revenue. A small amount of revenue is also generated from miscellaneous charges and service charges. These miscellaneous revenue sources are assumed to increase annually by 2% over the forecast period. In addition to these revenue sources, there is also a repayment of local improvements works from the benefiting landowners. This revenue is based on the repayment schedules negotiated with landowners. Table 5-2 outlines the operating budget for the Barrie wastewater systems.



**Table 5-2**  
**City of Barrie**  
**Operating Budget Forecast – Wastewater (inflated \$)**

| Description                                           | Budget<br>2021 | Forecast  |           |           |           |           |           |           |           |           |
|-------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                       |                | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| <b>Expenditures</b>                                   |                |           |           |           |           |           |           |           |           |           |
| <b>Operating Costs</b>                                |                |           |           |           |           |           |           |           |           |           |
| 400000 - Full-time Salaries                           | 3,586,124      | 3,672,137 | 3,753,526 | 3,828,300 | 3,904,900 | 3,983,000 | 4,062,700 | 4,144,000 | 4,226,900 | 4,311,400 |
| 400100 - Full-time Salaries - Casual                  | 205,546        | 208,629   | 214,678   | 230,512   | 235,100   | 239,800   | 244,600   | 249,500   | 254,500   | 259,600   |
| 400700 - Full-time Overtime                           | 96,064         | 97,985    | 99,945    | 101,944   | 104,000   | 106,100   | 108,200   | 110,400   | 112,600   | 114,900   |
| 401000 - Full-time Salary Recovery                    | (215,196)      | (219,500) | (223,890) | (228,368) | (232,900) | (237,600) | (242,400) | (247,200) | (252,100) | (257,100) |
| 401100 - Full-time Fringe Benefits                    | 975,928        | 992,990   | 1,009,144 | 1,023,980 | 1,044,500 | 1,065,400 | 1,086,700 | 1,108,400 | 1,130,600 | 1,153,200 |
| 401200 - Full-time Fringe Benefits - Casual           | 25,719         | 26,142    | 26,972    | 29,144    | 29,700    | 30,300    | 30,900    | 31,500    | 32,100    | 32,700    |
| Salaries & Benefits for Additional Staff              |                |           | 122,700   | 125,200   | 711,400   | 725,600   | 740,100   | 754,900   | 770,000   | 1,217,900 |
| 466500 - Shift Premiums                               | 8,375          | 8,543     | 8,713     | 8,888     | 9,100     | 9,300     | 9,500     | 9,700     | 9,900     | 10,100    |
| 500100 - Training Supplies                            | 74             | 80        | 81        | 83        | 100       | 100       | 100       | 100       | 100       | 100       |
| 500400 - Stationery & Office Supplies                 | 20,378         | 21,879    | 22,317    | 22,763    | 23,200    | 23,700    | 24,200    | 24,700    | 25,200    | 25,700    |
| 500500 - Preprinted Forms, Tags & Passes              | 28             | 29        | 29        | 30        | -         | -         | -         | -         | -         | -         |
| 500800 - Meetings & Meal Expenses                     | 8,329          | 8,496     | 8,665     | 8,839     | 9,000     | 9,200     | 9,400     | 9,600     | 9,800     | 10,000    |
| 501100 - Protective Clothing                          | 62,249         | 63,494    | 64,764    | 66,059    | 67,400    | 68,700    | 70,100    | 71,500    | 72,900    | 74,400    |
| 501300 - Clothing Allowance                           | 104            | 106       | 108       | 110       | 100       | 100       | 100       | 100       | 100       | 100       |
| 501500 - Protective Equipment                         | 59,896         | 61,094    | 62,316    | 63,562    | 64,800    | 66,100    | 67,400    | 68,700    | 70,100    | 71,500    |
| 510100 - Chemicals                                    | 6,366          | 6,493     | 6,623     | 6,756     | 7,100     | 7,500     | 7,900     | 8,300     | 8,700     | 9,100     |
| 510200 - Phosphorus                                   | 990,239        | 1,010,044 | 1,030,245 | 1,050,850 | 1,103,400 | 1,158,600 | 1,216,500 | 1,277,300 | 1,341,200 | 1,408,300 |
| 510300 - Chlorine                                     | 27,396         | 27,944    | 28,503    | 29,073    | 30,500    | 32,000    | 33,600    | 35,300    | 37,100    | 39,000    |
| 510400 - Citric Acid                                  | 465            | 474       | 484       | 493       | 500       | 500       | 500       | 500       | 500       | 500       |
| 510500 - Oxygen                                       | 832,197        | 848,841   | 865,818   | 883,134   | 927,300   | 973,700   | 1,022,400 | 1,073,500 | 1,127,200 | 1,183,600 |
| 510600 - Filter, Bed, Media                           | 68,465         | 69,834    | 71,231    | 72,656    | 74,100    | 75,600    | 77,100    | 78,600    | 80,200    | 81,800    |
| 510700 - Percol                                       | 107,992        | 110,152   | 112,355   | 114,602   | 116,900   | 119,200   | 121,600   | 124,000   | 126,500   | 129,000   |
| 510800 - Activated Carbon                             | 34,723         | 35,417    | 36,126    | 36,848    | 37,600    | 38,400    | 39,200    | 40,000    | 40,800    | 41,600    |
| 520000 - Gasoline                                     | 14,586         | 14,878    | 15,175    | 15,479    | 15,800    | 16,100    | 16,400    | 16,700    | 17,000    | 17,300    |
| 520100 - Hydro                                        | 1,042,119      | 1,062,961 | 1,084,221 | 1,105,905 | 1,161,200 | 1,219,300 | 1,280,300 | 1,344,300 | 1,411,500 | 1,482,100 |
| 520200 - Water & Wastewater                           | 137,576        | 140,328   | 143,134   | 145,997   | 148,900   | 151,900   | 154,900   | 158,000   | 161,200   | 164,400   |
| 520300 - Natural Gas                                  | 48,232         | 49,197    | 50,181    | 51,184    | 52,200    | 53,200    | 54,300    | 55,400    | 56,500    | 57,600    |
| 520600 - Propane Gas                                  | 12,000         | 12,240    | 12,485    | 12,734    | 13,000    | 13,300    | 13,600    | 13,900    | 14,200    | 14,500    |
| 540200 - Cleaning Supplies                            | 2,687          | 2,741     | 2,796     | 2,851     | 2,900     | 3,000     | 3,100     | 3,200     | 3,300     | 3,400     |
| 540300 - Small Parts                                  | 837,716        | 854,470   | 871,560   | 888,991   | 906,800   | 924,900   | 943,400   | 962,300   | 981,500   | 1,001,100 |
| 540900 - Field & Other Supplies                       | 100,696        | 102,710   | 104,764   | 106,860   | 109,000   | 111,200   | 113,400   | 115,700   | 118,000   | 120,400   |
| 541400 - Laboratory Supplies                          | 33,500         | 34,170    | 34,853    | 35,550    | 36,300    | 37,000    | 37,700    | 38,500    | 39,300    | 40,100    |
| 560200 - Minor Capital - General                      | 9,787          | 9,983     | 10,182    | 10,386    | 10,600    | 10,800    | 11,000    | 11,200    | 11,400    | 11,600    |
| 560300 - Minor Capital - Office Furniture & Equipment | 7,100          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| 570000 - Small Tools                                  | 79,239         | 80,824    | 82,440    | 84,089    | 85,800    | 87,500    | 89,300    | 91,100    | 92,900    | 94,800    |
| 600000 - Conferences & Trade Show Registration        | 35,103         | 37,689    | 38,443    | 39,212    | 40,000    | 40,800    | 41,600    | 42,400    | 43,200    | 44,100    |
| 600100 - Kilometer Reimbursement                      | 4,421          | 4,509     | 4,599     | 4,691     | 4,800     | 4,900     | 5,000     | 5,100     | 5,200     | 5,300     |
| 620000 - Staff Training & Development                 | 148,310        | 155,172   | 158,275   | 109,246   | 111,400   | 113,600   | 115,900   | 118,200   | 120,600   | 123,000   |
| 620200 - Memberships & Subscriptions                  | 15,086         | 16,198    | 16,522    | 16,852    | 17,200    | 17,500    | 17,900    | 18,300    | 18,700    | 19,100    |
| 620300 - Tuition Fees                                 | 462            | 471       | 481       | 490       | 500       | 500       | 500       | 500       | 500       | 500       |
| 640500 - Consultants - General                        | 130,559        | 140,179   | 142,982   | 140,474   | 143,300   | 146,200   | 149,100   | 152,100   | 155,100   | 158,200   |
| 660700 - License Services                             | 210            | 214       | 218       | 223       | 200       | 200       | 200       | 200       | 200       | 200       |
| 661400 - Cellular Telephone Services                  | 4,272          | 4,357     | 4,445     | 4,533     | 4,600     | 4,700     | 4,800     | 4,900     | 5,000     | 5,100     |
| 661800 - Telephone Services                           | 40,500         | 41,310    | 42,136    | 42,979    | 43,800    | 44,700    | 45,600    | 46,500    | 47,400    | 48,300    |



Figure 5-2 (Cont'd)

| Description                                                                   | Budget<br>2021    | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                               |                   | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| 670700 - Contracted Services - General                                        | 2,477,722         | 2,527,276         | 2,577,822         | 2,629,378         | 2,682,000         | 2,735,600         | 2,790,300         | 2,846,100         | 2,903,000         | 2,961,100         |
| 675100 - Repairs & Maintenance - Building                                     | 106,306           | 108,432           | 110,601           | 112,813           | 115,100           | 117,400           | 119,700           | 122,100           | 124,500           | 127,000           |
| 675400 - Repairs & Maintenance - Equipment                                    | 681,214           | 694,838           | 708,735           | 722,910           | 737,400           | 752,100           | 767,100           | 782,400           | 798,000           | 814,000           |
| 700000 - Equipment Rental/Lease                                               | 86,280            | 90,246            | 94,250            | 98,290            | 100,300           | 102,300           | 104,300           | 106,400           | 108,500           | 110,700           |
| 700100 - Property Rental/Lease                                                | 2,341             | 2,388             | 2,436             | 2,484             | 2,500             | 2,600             | 2,700             | 2,800             | 2,900             | 3,000             |
| 720800 - Insurance Premium                                                    | 300,326           | 306,333           | 312,459           | 318,708           | 325,100           | 331,600           | 338,200           | 345,000           | 351,900           | 358,900           |
| 730000 - Property Taxes                                                       | 6,889             | 7,027             | 7,167             | 7,311             | 7,500             | 7,700             | 7,900             | 8,100             | 8,300             | 8,500             |
| 900500 - Interdepartmental - General                                          | 601,769           | 634,189           | 745,910           | 857,631           | 874,800           | 892,300           | 910,100           | 928,300           | 946,900           | 965,800           |
| 901000 - Interdepartmental - Fleet                                            | 48,721            | 49,695            | 50,689            | 51,703            | 52,700            | 53,800            | 54,900            | 56,000            | 57,100            | 58,200            |
| 901500 - Interdepartmental - Property                                         | 35,175            | 35,546            | 35,889            | 36,210            | 36,900            | 37,600            | 38,400            | 39,200            | 40,000            | 40,800            |
| 901599 - Interdepartmental - Property (Automated)                             | 763,488           | 774,674           | 786,628           | 798,750           | 814,700           | 831,000           | 847,600           | 864,600           | 881,900           | 899,500           |
| 902000 - Interdepartmental - Corporate Support                                | 2,554,542         | 2,578,205         | 2,595,513         | 2,613,375         | 2,665,600         | 2,718,900         | 2,773,300         | 2,828,800         | 2,885,400         | 2,943,100         |
| 904000 - Interdepartmental - Wastewater Rate (Manual)                         | 3,212,184         | 3,303,235         | 3,379,904         | 3,454,355         | 3,523,400         | 3,593,900         | 3,665,800         | 3,739,100         | 3,813,900         | 3,890,200         |
| 904099 - Interdepartmental - Wastewater Rate (Automated)                      | 72,614            | 73,647            | 74,905            | 76,186            | 77,700            | 79,300            | 80,900            | 82,500            | 84,200            | 85,900            |
| Low-Income Support Grant Program                                              | -                 | 300,000           | 306,000           | 312,100           | 318,300           | 324,700           | 331,200           | 337,800           | 344,600           | 351,500           |
| Transfer to Fleet Management Reserve                                          | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           |
| Funding of DC Exemptions for Residential Intensification                      | 238,631           | 224,158           | 300,339           | 1,029,473         | 1,050,023         | 1,071,955         | 1,094,622         | 1,116,452         | 1,138,811         | 1,161,608         |
| <b>Sub Total Operating</b>                                                    | <b>21,008,824</b> | <b>21,740,792</b> | <b>22,445,592</b> | <b>23,630,860</b> | <b>24,775,123</b> | <b>25,364,355</b> | <b>25,970,422</b> | <b>26,592,552</b> | <b>27,232,511</b> | <b>28,323,308</b> |
| <b>Capital-Related</b>                                                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities                       |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Interest) - Growth Related - Facilities                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities Related Debt          | 5,375,735         | 5,614,226         | 5,863,823         | 6,125,044         | 6,398,459         | 6,684,622         | 6,984,155         | 7,297,687         | 7,625,897         | 5,001,841         |
| Existing Debt (Interest) - Growth Related - Facilities Related Debt           | 3,127,695         | 2,885,626         | 2,632,452         | 2,367,654         | 2,090,661         | 1,800,920         | 1,497,810         | 1,180,701         | 848,914           | 501,766           |
| New Growth Related Debt (Principal) - Facilities                              |                   | 68,779            | 282,690           | 455,389           | 749,276           | 1,149,568         | 1,580,750         | 2,044,720         | 2,980,777         | 3,988,657         |
| New Growth Related Debt (Interest) - Facilities                               |                   | 55,443            | 224,153           | 348,051           | 560,281           | 842,363           | 1,127,657         | 1,416,017         | 2,059,794         | 2,710,748         |
| Existing Debt (Principal) - Non-Growth Related                                | 369,988           | 383,239           | 396,965           | 411,182           | 425,909           | 441,163           | 456,963           | 473,329           | 490,281           | 507,841           |
| Existing Debt (Interest) - Non-Growth Related                                 | 199,360           | 186,109           | 172,383           | 158,166           | 143,440           | 128,186           | 112,385           | 96,019            | 79,067            | 61,507            |
| Transfer to Capital                                                           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Wastewater Rate Stabilization Reserve Fund                        | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Wastewater Capital Reserve Fund                                   | 15,947,325        | 16,090,310        | 15,262,591        | 13,892,435        | 13,275,352        | 13,732,236        | 13,690,433        | 13,490,848        | 13,630,828        | 13,962,851        |
| <b>Sub Total Capital Related</b>                                              | <b>25,020,104</b> | <b>25,283,733</b> | <b>24,835,058</b> | <b>23,757,922</b> | <b>23,643,377</b> | <b>24,779,058</b> | <b>25,450,154</b> | <b>25,999,322</b> | <b>27,715,557</b> | <b>26,735,212</b> |
| <b>Total Expenditures</b>                                                     | <b>46,028,928</b> | <b>47,024,525</b> | <b>47,280,650</b> | <b>47,388,782</b> | <b>48,418,500</b> | <b>50,143,413</b> | <b>51,420,576</b> | <b>52,591,874</b> | <b>54,948,069</b> | <b>55,058,519</b> |
| <b>Revenues</b>                                                               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Fixed Charge                                                                  | 13,741,299        | 14,567,962        | 15,457,030        | 16,504,679        | 17,708,789        | 18,992,049        | 20,359,667        | 21,816,567        | 23,368,258        | 25,020,930        |
| 810150 - Fees and Service Charges                                             | 47,363            | 48,310            | 49,276            | 50,262            | 51,300            | 52,300            | 53,300            | 54,400            | 55,500            | 56,600            |
| 810760 - Miscellaneous Charge                                                 | 3,583             | 3,655             | 3,728             | 3,802             | 3,900             | 4,000             | 4,100             | 4,200             | 4,300             | 4,400             |
| 825000 - Interest and Penalties                                               | 80,000            | 80,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Local Improvements Revenue                                                    | 50,500            | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | -                 | -                 |
| Contributions from Development Charges Reserve Fund - Facilities              | -                 | 124,222           | 506,843           | 803,440           | 1,309,557         | 1,991,931         | 2,708,407         | 3,460,737         | 5,040,570         | 6,699,405         |
| Contributions from Development Charges Reserve Fund - Facilities Related Debt | 8,503,430         | 8,499,853         | 8,496,275         | 8,492,698         | 8,489,120         | 8,485,543         | 8,481,965         | 8,478,388         | 8,474,810         | 5,503,607         |
| <b>Total Operating Revenue</b>                                                | <b>22,426,175</b> | <b>23,332,277</b> | <b>24,521,428</b> | <b>25,863,157</b> | <b>27,570,942</b> | <b>29,534,098</b> | <b>31,615,715</b> | <b>33,822,568</b> | <b>36,943,439</b> | <b>37,284,942</b> |
| <b>Wastewater Billing Recovery - Operating</b>                                | <b>23,602,753</b> | <b>23,692,248</b> | <b>22,759,222</b> | <b>21,525,624</b> | <b>20,847,557</b> | <b>20,609,315</b> | <b>19,804,861</b> | <b>18,769,305</b> | <b>18,004,630</b> | <b>17,773,578</b> |
| Asset Replacement Needs - Lifecycle Contribution (\$)                         |                   | 1,319,318         | 3,766,063         | 6,835,390         | 9,676,363         | 12,223,166        | 15,491,388        | 19,155,009        | 22,722,316        | 25,941,897        |
| <b>Wastewater Billing Recovery - Total</b>                                    | <b>23,602,753</b> | <b>25,011,565</b> | <b>26,525,285</b> | <b>28,361,015</b> | <b>30,523,921</b> | <b>32,832,480</b> | <b>35,296,250</b> | <b>37,924,315</b> | <b>40,726,946</b> | <b>43,715,475</b> |



# Chapter 6

## Pricing Structures



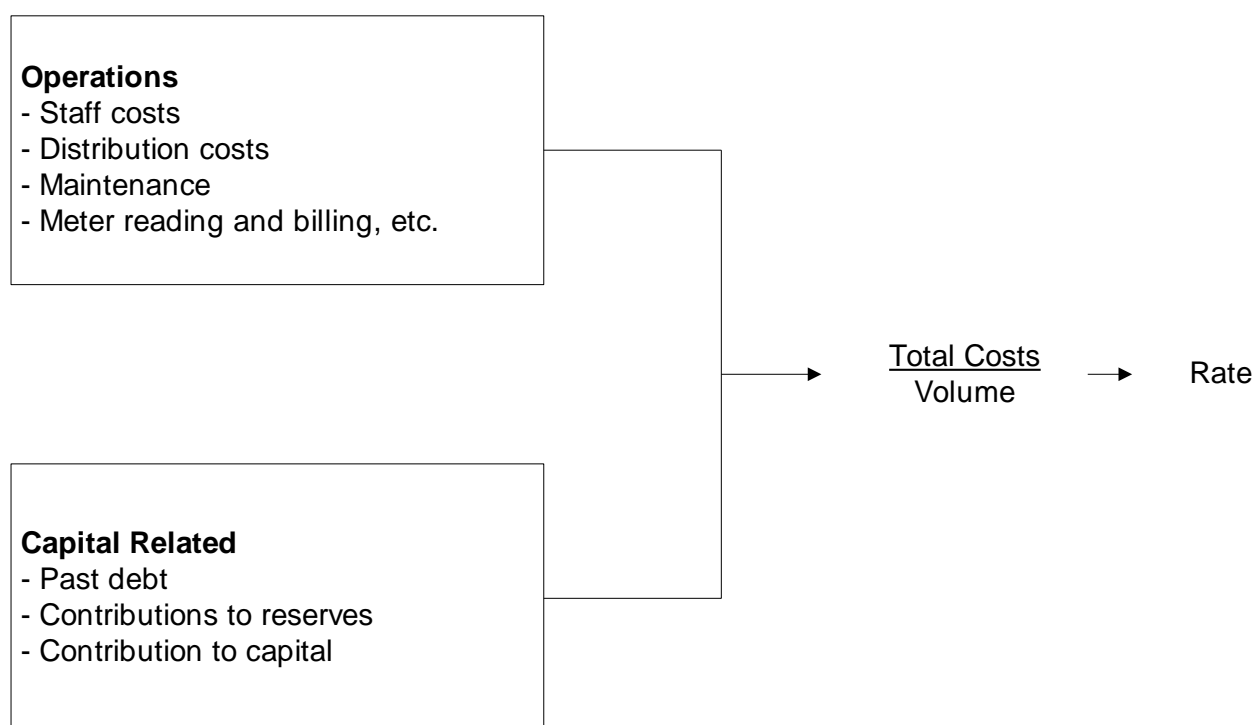
## 6. Pricing Structures

### 6.1 Introduction

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Rates, in their simplest form, can be defined as total costs to maintain the utility function divided by the total expected volume to be generated for the period. Total costs are usually a combination of operating costs (e.g. staff costs, distribution costs, maintenance, administration, etc.) and capital-related costs (e.g. past debt to finance capital projects, transfers to reserves to finance future expenditures, etc.). The schematic below provides a simplified illustration of the rate calculation for water.

#### **“Annual Costs”**



These operating and capital expenditures will vary over time. Examples of factors that will affect the expenditures over time are provided below.

#### Operations

- Inflation;



- Increased maintenance as system ages; and
- Changes to provincial legislation.

### Capital Related

- New capital will be built as areas expand;
- Replacement capital needed as system ages; and
- Financing of capital costs are a function of policy regarding reserves and direct financing from rates (pay as you go), debt and user pay methods (development charges, *Municipal Act*).

## 6.2 Alternative Pricing Structures

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

Municipalities within Ontario have two basic forms of collecting revenues for water purposes, those being through incorporation of the costs within the tax rate charged on property assessment and/or through the establishment of a specific water rate billed to the customer. Within the rate methods, there are five basic rate structures employed along with other variations:

- Flat Rate (non-metered customers);
- Constant Rate;
- Declining Block Rate;
- Increasing (or Inverted) Block Rate;
- Hump Back Block Rate; and
- Fixed Charges.

The definitions and general application of the various methods are as follows:

**Property Assessment:** This method incorporates the total costs of providing water into the general requisition or the assessment base of the municipality. This form of collection is a "wealth tax," as payment increases directly with the value of property owned and bears no necessary relationship to actual consumption. This form is easy to





administer as the costs to be recovered are incorporated in the calculation for all general services, normally collected through property taxes.

**Flat Rate:** This rate is a constant charge applicable to all customers served. The charge is calculated by dividing the total number of user households and other entities (e.g. businesses) into the costs to be recovered. This method does not recognize differences in actual consumption but provides for a uniform spreading of costs across all users. Some municipalities define users into different classes of similar consumption patterns, that is, a commercial user, residential user and industrial user, and charge a flat rate by class. Each user is then billed on a periodic basis. No meters are required to facilitate this method, but an accurate estimate of the number of users is required. This method ensures set revenue for the collection period but is not sensitive to consumption, hence may cause a shortfall or surplus of revenues collected.

**Constant Rate:** This rate is a volume-based rate, in which the consumer pays the same price per unit consumed, regardless of the volume. The price per unit is calculated by dividing the total cost of the service by the total volume used by total consumers. The bill to the consumer climbs uniformly as the consumption increases. This form of rate requires the use of meters to record the volume consumed by each user. This method closely aligns the revenue recovery with consumption. Revenue collected varies directly with the consumption volume.

**Declining Block Rates:** This rate structure charges a successively lower price for set volumes, as consumption increases through a series of "blocks." That is to say that within set volume ranges, or blocks, the charge per unit is set at one rate. Within the next volume range, the charge per unit decreases to a lower rate, and so on. Typically, the first, or first and second blocks cover residential and light commercial uses. Subsequent blocks normally are used for heavier commercial and industrial uses. This rate structure requires the use of meters to record the volume consumed by each type of user. This method requires the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over or under collect revenue from rate payers.

**Increasing or Inverted Block Rates:** The increasing block rate works essentially the same way as the declining block rate, except that the price of water in successive blocks increases rather than declines. Under this method the consumer's bill rises faster with higher volumes used. This rate structure also requires the use of meters to



record the volume consumed by each user. This method requires, as with the declining block structure, the collection and analysis of consumption patterns by user classification to establish rates at a level which does not over or under collect from rate payers.

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

## 6.3 Assessment of Alternative Pricing Structures

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

### Cost Recovery

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

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



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

### Administration

Administration is defined herein as the staffing, equipment and supplies required to support the undertaking of a particular pricing strategy. This factor not only addresses the physical tangible requirements to support the collection of the revenues, but also the intangible requirements, such as policy development.

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

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

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

The benefit derived from the installation of meters is that information on consumption patterns becomes available. This information provides benefit to administration in calculating rates which will ensure revenue recovery. Additionally, when planning what services are to be constructed in future years, the municipality or utility has documented



consumption patterns distinctive to its own situation, which can be used to project sizing of growth-related works.

### Equity

Equity is always a consideration in the establishment of pricing structures, but its definition can vary depending on a municipality's circumstances and based on the subjective interpretation of those involved. For example: is the price charged to a particular class of rate payer consistent with those of a similar class in surrounding municipalities; through the pricing structure does one class of rate payer pay more than another class; should one pay based on ability to pay, or on the basis that a unit of water costs the same to supply no matter who consumes it; etc.? There are many interpretations. Equity therefore must be viewed broadly in light of many factors as part of achieving what is best for the municipality as a whole.

### Conservation

In today's society, conservation of natural resources is increasingly being more highly valued. Controversy continuously focuses on the preservation of non-renewable resources and on the proper management of renewable resources. Conservation is also a concept which applies to a municipality facing physical limitations in the amount of water which can be supplied to an area. As well, financial constraints can encourage conservation in a municipality where the cost of providing each additional unit is increasing.

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

The Declining Block Rate provides a decreasing incentive towards conservation. By creating awareness of volumes consumed, the consumer can reduce his total costs by restricting consumption; however, the incentive lessens as more water is consumed, because the marginal cost per unit declines as the consumer enters the next block



pricing range. Similarly, those whose consumption level is at the top end of a block have less incentive to reduce consumption.

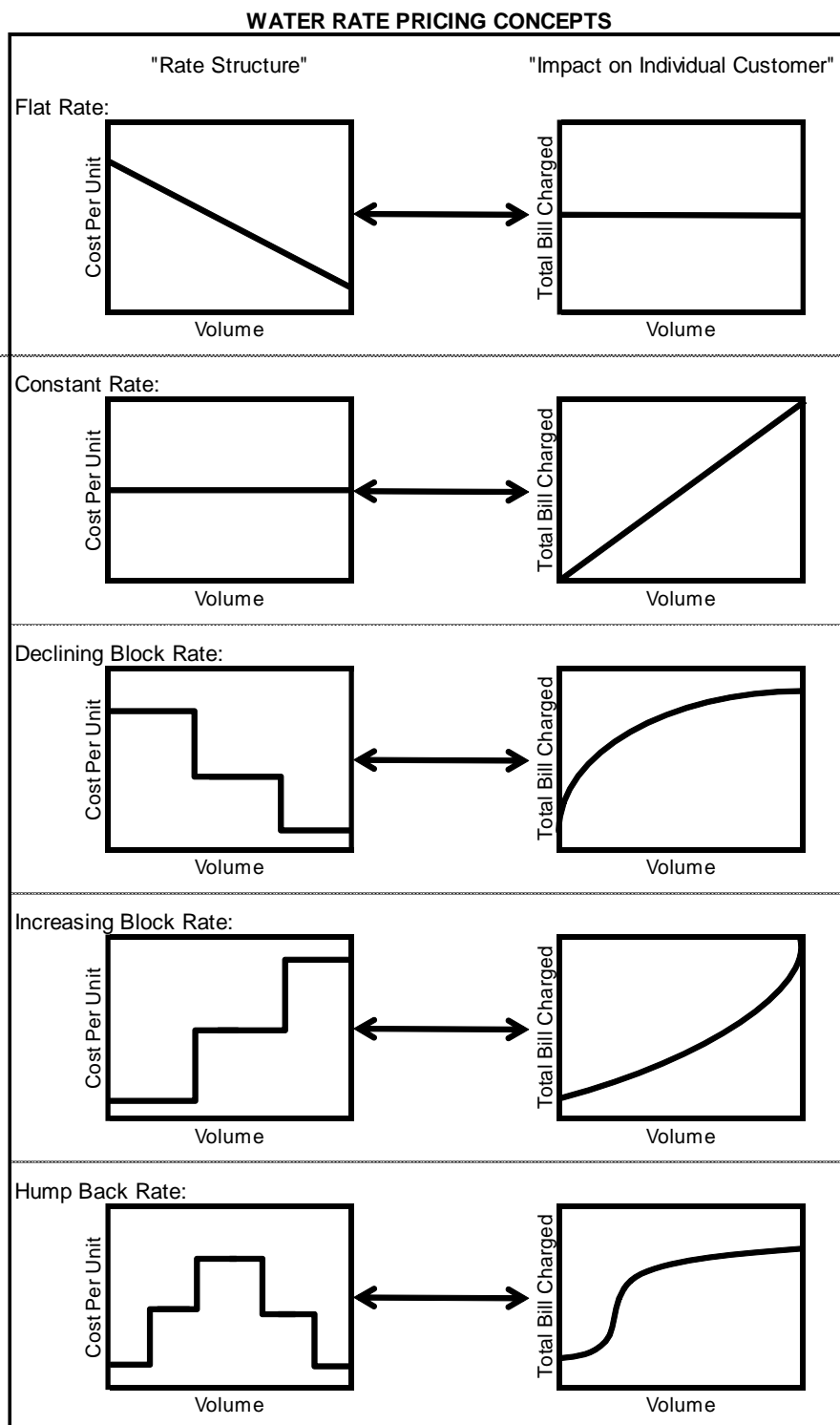
The Constant Rate structure presents the customer with a linear relationship between consumption and the cost thereof. As the consumer pays a fixed cost per unit, his bill will vary directly with the amount consumed. This method presents tangible incentive for consumers to conserve water. As metering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

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

Figure 6-1 provides a schematic representation of the various rate structures (note property tax as a basis for revenue recovery has not been presented for comparison, as the proportion of taxes paid varies in direct proportion to the market value of the property). The graphs on the left-hand side of the figure present the cost per unit for each additional amount of water consumed. The right-hand side of the figure presents the impact on the customer's bill as the volume of water increases. Following the schematic is a table summarizing each rate structure.



Figure 6-1





| RATE<br>STRUCTURE | COST PER UNIT AS<br>VOLUME CONSUMPTION<br>INCREASES                                                                     | IMPACT ON CUSTOMER<br>BILL AS VOLUME<br>CONSUMPTION<br>INCREASES                                    |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Flat Rate         | Cost per unit decreases as more volume consumed                                                                         | Bill remains the same no matter how much volume is consumed                                         |
| Constant Rate     | Cost per unit remains the same                                                                                          | Bill increases in direct proportion to consumption                                                  |
| Declining Block   | Cost per unit decreases as threshold targets are achieved                                                               | Bill increases at a slower rate as volumes increases                                                |
| Increasing Block  | Cost per unit increases as threshold targets are achieved                                                               | Bill increases at a faster rate as volumes increase                                                 |
| Hump Back Rate    | Combination of an increasing block at the lower consumption volumes and then converts to a declining block for the high | Bill increases at a faster rate at the lower consumption amounts and then slows as volumes increase |

## 6.4 Rate Structures in Ontario

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

Historically, the development of a fixed charge often reflected either the recovery of meter reading/billing/collection costs, plus administration or those costs plus certain fixed costs (such as capital contributions or reserve contributions). More recently, many municipalities have started to establish fixed charges based on ensuring a secure portion of the revenue stream which does not vary with volume consumption. Selection of the quantum of the fixed charge is a matter of policy selected by individual municipalities.



## 6.5 Recommended Rate Structures

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Based on the foregoing, it is recommended that the current rate structures for water and wastewater be continued in the future.

In order to meet the needs for water, it is recommended that the water fixed charges be increased by 3% in 2022 and 4% annually thereafter. The volume rates (as calculated in Chapter 7) are also anticipated to increase by the same percentages per year over the forecast period. The forecast fixed charges are provided in Table 6-1.

As for wastewater, it is recommended that wastewater fixed charge increase by 5% per year over the forecast period. The volume rates (calculated in Chapter 7) are also anticipated to increase by 5% annually. The forecast fixed charges are provided in Table 6-2.

Currently, the water fixed charge revenue accounts for 36% of total water revenues and the volume charge revenue accounts for 64% of water revenues. This ratio has been maintained over the forecast period.

For wastewater, the fixed charge revenue accounts for 37% of wastewater revenues and the volume charge revenue accounts for 63% of wastewater revenues. This ratio has been maintained over the forecast period to 2028, after which there is a slight shift in the ratio to 36% fixed charge/64% volume changes, similar to the water ratio.

The above increases are recommended to ensure that the City can fund the capital and operating costs while minimizing the need for debentures. The forecast fixed charges and corresponding revenue are provided in Tables 6-1 and 6-2 below.





Table 6-1  
City of Barrie  
Fixed Charge Forecast – Water

| Water                       | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Existing                    | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              | 44,958              |
| New                         | 303                 | 887                 | 1,528               | 2,571               | 3,941               | 5,311               | 6,682               | 8,053               | 9,424               | 10,796              |
| <b>Total Customers</b>      | <b>45,261</b>       | <b>45,845</b>       | <b>46,486</b>       | <b>47,529</b>       | <b>48,899</b>       | <b>50,269</b>       | <b>51,640</b>       | <b>53,011</b>       | <b>54,382</b>       | <b>55,754</b>       |
| <b>Total Annual Revenue</b> | <b>\$10,254,620</b> | <b>\$10,663,482</b> | <b>\$11,205,414</b> | <b>\$11,849,112</b> | <b>\$12,590,028</b> | <b>\$13,371,258</b> | <b>\$14,195,054</b> | <b>\$15,063,359</b> | <b>\$15,978,417</b> | <b>\$16,942,815</b> |
| <b>Residential</b>          |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Residential</b>          | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              | 42,231              |
| New                         | 303                 | 887                 | 1,528               | 2,571               | 3,941               | 5,311               | 6,682               | 8,053               | 9,424               | 10,796              |
| <b>Subtotal Customers</b>   | <b>42,534</b>       | <b>43,118</b>       | <b>43,759</b>       | <b>44,802</b>       | <b>46,172</b>       | <b>47,542</b>       | <b>48,913</b>       | <b>50,284</b>       | <b>51,655</b>       | <b>53,027</b>       |
| Monthly Fixed Charge        | \$14.02             | \$14.44             | \$15.01             | \$15.61             | \$16.24             | \$16.89             | \$17.56             | \$18.27             | \$19.00             | \$19.76             |
| Annual Fixed Charge         | \$168.18            | \$173.23            | \$180.15            | \$187.36            | \$194.86            | \$202.65            | \$210.76            | \$219.19            | \$227.95            | \$237.07            |
| <b>Total Annual Revenue</b> | <b>\$7,153,368</b>  | <b>\$7,469,193</b>  | <b>\$7,883,353</b>  | <b>\$8,394,169</b>  | <b>\$8,996,887</b>  | <b>\$9,634,392</b>  | <b>\$10,308,713</b> | <b>\$11,021,564</b> | <b>\$11,774,950</b> | <b>\$12,571,209</b> |
| <b>Non-Residential</b>      |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>13-19 mm</b>             | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 980                 | 980                 | 980                 | 980                 | 980                 | 980                 | 980                 | 980                 | 980                 | 980                 |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          | <b>980</b>          |
| Monthly Fixed Charge        | \$14.02             | \$14.44             | \$15.02             | \$15.62             | \$16.24             | \$16.89             | \$17.57             | \$18.27             | \$19.00             | \$19.76             |
| Annual Fixed Charge         | \$168.24            | \$173.29            | \$180.22            | \$187.43            | \$194.92            | \$202.72            | \$210.83            | \$219.26            | \$228.03            | \$237.16            |
| <b>Total Annual Revenue</b> | <b>\$164,875</b>    | <b>\$169,821</b>    | <b>\$176,614</b>    | <b>\$183,679</b>    | <b>\$191,026</b>    | <b>\$198,667</b>    | <b>\$206,614</b>    | <b>\$214,878</b>    | <b>\$223,473</b>    | <b>\$232,412</b>    |
| <b>25-32 mm Meter Size</b>  | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 414                 | 414                 | 414                 | 414                 | 414                 | 414                 | 414                 | 414                 | 414                 | 414                 |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          | <b>414</b>          |
| Monthly Fixed Charge        | \$35.05             | \$36.10             | \$37.55             | \$39.05             | \$40.61             | \$42.23             | \$43.92             | \$45.68             | \$47.51             | \$49.41             |
| Annual Fixed Charge         | \$420.60            | \$433.22            | \$450.55            | \$468.57            | \$487.31            | \$506.80            | \$527.08            | \$548.16            | \$570.09            | \$592.89            |
| <b>Total Annual Revenue</b> | <b>\$174,128</b>    | <b>\$179,352</b>    | <b>\$186,526</b>    | <b>\$193,987</b>    | <b>\$201,747</b>    | <b>\$209,817</b>    | <b>\$218,209</b>    | <b>\$226,938</b>    | <b>\$236,015</b>    | <b>\$245,456</b>    |
| <b>38 mm Meter Size</b>     | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 349                 | 349                 | 349                 | 349                 | 349                 | 349                 | 349                 | 349                 | 349                 | 349                 |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          | <b>349</b>          |
| Monthly Fixed Charge        | \$70.11             | \$72.21             | \$75.10             | \$78.11             | \$81.23             | \$84.48             | \$87.86             | \$91.37             | \$95.03             | \$98.83             |
| Annual Fixed Charge         | \$841.32            | \$866.56            | \$901.22            | \$937.27            | \$974.76            | \$1,013.75          | \$1,054.30          | \$1,096.47          | \$1,140.33          | \$1,185.95          |
| <b>Total Annual Revenue</b> | <b>\$293,621</b>    | <b>\$302,429</b>    | <b>\$314,526</b>    | <b>\$327,108</b>    | <b>\$340,192</b>    | <b>\$353,800</b>    | <b>\$367,951</b>    | <b>\$382,670</b>    | <b>\$397,976</b>    | <b>\$413,895</b>    |
| <b>50 mm Meter Size</b>     | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 713                 | 713                 | 713                 | 713                 | 713                 | 713                 | 713                 | 713                 | 713                 | 713                 |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          | <b>713</b>          |
| Monthly Fixed Charge        | \$112.17            | \$115.54            | \$120.16            | \$124.96            | \$129.96            | \$135.16            | \$140.57            | \$146.19            | \$152.04            | \$158.12            |
| Annual Fixed Charge         | \$1,346.04          | \$1,386.42          | \$1,441.88          | \$1,499.55          | \$1,559.54          | \$1,621.92          | \$1,686.79          | \$1,754.27          | \$1,824.44          | \$1,897.41          |
| <b>Total Annual Revenue</b> | <b>\$959,727</b>    | <b>\$988,518</b>    | <b>\$1,028,059</b>  | <b>\$1,069,181</b>  | <b>\$1,111,949</b>  | <b>\$1,156,427</b>  | <b>\$1,202,684</b>  | <b>\$1,250,791</b>  | <b>\$1,300,823</b>  | <b>\$1,352,856</b>  |
| <b>75 mm Meter Size</b>     | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 6                   | 6                   | 6                   | 6                   | 6                   | 6                   | 6                   | 6                   | 6                   | 6                   |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            | <b>6</b>            |
| Monthly Fixed Charge        | \$245.37            | \$252.73            | \$262.84            | \$273.35            | \$284.29            | \$295.66            | \$307.49            | \$319.79            | \$332.58            | \$345.88            |
| Annual Fixed Charge         | \$2,944.44          | \$3,032.77          | \$3,154.08          | \$3,280.25          | \$3,411.46          | \$3,547.92          | \$3,689.83          | \$3,837.43          | \$3,990.92          | \$4,150.56          |
| <b>Total Annual Revenue</b> | <b>\$17,667</b>     | <b>\$18,197</b>     | <b>\$18,925</b>     | <b>\$19,681</b>     | <b>\$20,469</b>     | <b>\$21,287</b>     | <b>\$22,139</b>     | <b>\$23,025</b>     | <b>\$23,946</b>     | <b>\$24,903</b>     |
| <b>100 mm Meter Size</b>    | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 238                 | 238                 | 238                 | 238                 | 238                 | 238                 | 238                 | 238                 | 238                 | 238                 |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          | <b>238</b>          |
| Monthly Fixed Charge        | \$420.66            | \$433.28            | \$450.61            | \$468.64            | \$487.38            | \$506.88            | \$527.15            | \$548.24            | \$570.17            | \$592.97            |
| Annual Fixed Charge         | \$5,047.92          | \$5,199.36          | \$5,407.33          | \$5,623.63          | \$5,848.57          | \$6,082.51          | \$6,325.81          | \$6,578.85          | \$6,842.00          | \$7,115.68          |
| <b>Total Annual Revenue</b> | <b>\$1,201,405</b>  | <b>\$1,237,447</b>  | <b>\$1,286,945</b>  | <b>\$1,338,423</b>  | <b>\$1,391,960</b>  | <b>\$1,447,638</b>  | <b>\$1,505,544</b>  | <b>\$1,565,765</b>  | <b>\$1,628,396</b>  | <b>\$1,693,532</b>  |
| <b>150 mm Meter Size</b>    | <b>2021</b>         | <b>2022</b>         | <b>2023</b>         | <b>2024</b>         | <b>2025</b>         | <b>2026</b>         | <b>2027</b>         | <b>2028</b>         | <b>2029</b>         | <b>2030</b>         |
| Existing                    | 25                  | 25                  | 25                  | 25                  | 25                  | 25                  | 25                  | 25                  | 25                  | 25                  |
| New                         |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Subtotal Customers</b>   | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           | <b>25</b>           |
| Monthly Fixed Charge        | \$876.36            | \$902.65            | \$938.76            | \$976.31            | \$1,015.36          | \$1,055.97          | \$1,098.21          | \$1,142.14          | \$1,187.83          | \$1,235.34          |
| Annual Fixed Charge         | \$10,516.32         | \$10,831.81         | \$11,265.08         | \$11,715.69         | \$12,184.31         | \$12,671.69         | \$13,178.55         | \$13,705.69         | \$14,253.92         | \$14,824.08         |
| <b>Total Annual Revenue</b> | <b>\$262,908</b>    | <b>\$270,795</b>    | <b>\$281,627</b>    | <b>\$292,892</b>    | <b>\$304,608</b>    | <b>\$316,792</b>    | <b>\$329,464</b>    | <b>\$342,642</b>    | <b>\$356,348</b>    | <b>\$370,602</b>    |



Table 6-1 (Cont'd)

| 200 mm Meter Size           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Existing                    | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               |
| New                         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>Subtotal Customers</b>   | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        |
| Monthly Fixed Charge        | \$1,121.73      | \$1,155.38      | \$1,201.60      | \$1,249.66      | \$1,299.65      | \$1,351.63      | \$1,405.70      | \$1,461.93      | \$1,520.40      | \$1,581.22      |
| Annual Fixed Charge         | \$13,460.76     | \$13,864.58     | \$14,419.17     | \$14,995.93     | \$15,595.77     | \$16,219.60     | \$16,868.38     | \$17,543.12     | \$18,244.85     | \$18,974.64     |
| <b>Total Annual Revenue</b> | <b>\$26,922</b> | <b>\$27,729</b> | <b>\$28,838</b> | <b>\$29,992</b> | <b>\$31,192</b> | <b>\$32,439</b> | <b>\$33,737</b> | <b>\$35,086</b> | <b>\$36,490</b> | <b>\$37,949</b> |

| 250 mm Meter Size           | 2021        | 2022        | 2023        | 2024        | 2025        | 2026        | 2027        | 2028        | 2029        | 2030        |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Existing                    | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           |
| New                         |             |             |             |             |             |             |             |             |             |             |
| <b>Subtotal Customers</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| Monthly Fixed Charge        | \$1,612.51  | \$1,660.89  | \$1,727.32  | \$1,796.41  | \$1,868.27  | \$1,943.00  | \$2,020.72  | \$2,101.55  | \$2,185.61  | \$2,273.04  |
| Annual Fixed Charge         | \$19,350.12 | \$19,930.62 | \$20,727.85 | \$21,556.96 | \$22,419.24 | \$23,316.01 | \$24,248.65 | \$25,218.60 | \$26,227.34 | \$27,276.43 |
| <b>Total Annual Revenue</b> | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  |

| 300mm Meter Size            | 2021        | 2022        | 2023        | 2024        | 2025        | 2026        | 2027        | 2028        | 2029        | 2030        |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Existing                    | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           |
| New                         |             |             |             |             |             |             |             |             |             |             |
| <b>Subtotal Customers</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| Monthly Fixed Charge        | \$1,612.51  | \$1,660.89  | \$1,727.32  | \$1,796.41  | \$1,868.27  | \$1,943.00  | \$2,020.72  | \$2,101.55  | \$2,185.61  | \$2,273.04  |
| Annual Fixed Charge         | \$19,350.12 | \$19,930.62 | \$20,727.85 | \$21,556.96 | \$22,419.24 | \$23,316.01 | \$24,248.65 | \$25,218.60 | \$26,227.34 | \$27,276.43 |
| <b>Total Annual Revenue</b> | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  |



Table 6-2  
City of Barrie  
Fixed Charge Forecast – Wastewater

| Wastewater                  | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Existing                    | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              | 44,480              |
| New                         | 303                 | 887                 | 1,528               | 2,571               | 3,941               | 5,311               | 6,682               | 8,053               | 9,424               | 10,796              |
| <b>Subtotal Customers</b>   | <b>44,783</b>       | <b>45,367</b>       | <b>46,008</b>       | <b>47,051</b>       | <b>48,421</b>       | <b>49,791</b>       | <b>51,162</b>       | <b>52,533</b>       | <b>53,904</b>       | <b>55,276</b>       |
| <b>Total Annual Revenue</b> | <b>\$13,741,299</b> | <b>\$14,567,962</b> | <b>\$15,457,030</b> | <b>\$16,504,679</b> | <b>\$17,708,789</b> | <b>\$18,992,049</b> | <b>\$20,359,667</b> | <b>\$21,816,567</b> | <b>\$23,368,258</b> | <b>\$25,020,930</b> |

#### Residential

| Residential                 | 2021               | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Existing                    | 41,781             | 41,781              | 41,781              | 41,781              | 41,781              | 41,781              | 41,781              | 41,781              | 41,781              | 41,781              |
| New                         | 303                | 887                 | 1,528               | 2,571               | 3,941               | 5,311               | 6,682               | 8,053               | 9,424               | 10,796              |
| <b>Subtotal Customers</b>   | <b>42,084</b>      | <b>42,668</b>       | <b>43,309</b>       | <b>44,352</b>       | <b>45,722</b>       | <b>47,092</b>       | <b>48,463</b>       | <b>49,834</b>       | <b>51,205</b>       | <b>52,577</b>       |
| Monthly Fixed Charge        | \$18.96            | \$19.91             | \$20.90             | \$21.95             | \$23.05             | \$24.20             | \$25.41             | \$26.68             | \$28.01             | \$29.41             |
| Annual Fixed Charge         | \$227.52           | \$238.90            | \$250.84            | \$263.38            | \$276.55            | \$290.38            | \$304.90            | \$320.14            | \$336.15            | \$352.96            |
| <b>Total Annual Revenue</b> | <b>\$9,574,952</b> | <b>\$10,193,297</b> | <b>\$10,863,631</b> | <b>\$11,681,611</b> | <b>\$12,644,568</b> | <b>\$13,674,616</b> | <b>\$14,776,363</b> | <b>\$15,954,098</b> | <b>\$17,212,665</b> | <b>\$18,557,557</b> |

#### Non-Residential

| 13-19 mm Meter Size         | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Existing                    | 968              | 968              | 968              | 968              | 968              | 968              | 968              | 968              | 968              | 968              |
| New                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Subtotal Customers</b>   | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       | <b>968</b>       |
| Monthly Fixed Charge        | \$18.96          | \$19.91          | \$20.90          | \$21.95          | \$23.05          | \$24.20          | \$25.41          | \$26.68          | \$28.01          | \$29.41          |
| Annual Fixed Charge         | \$227.52         | \$238.90         | \$250.84         | \$263.38         | \$276.55         | \$290.38         | \$304.90         | \$320.14         | \$336.15         | \$352.96         |
| <b>Total Annual Revenue</b> | <b>\$220,239</b> | <b>\$231,251</b> | <b>\$242,814</b> | <b>\$254,955</b> | <b>\$267,702</b> | <b>\$281,087</b> | <b>\$295,142</b> | <b>\$309,899</b> | <b>\$325,394</b> | <b>\$341,664</b> |

| 25-32 mm Meter Size         | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Existing                    | 409              | 409              | 409              | 409              | 409              | 409              | 409              | 409              | 409              | 409              |
| New                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Subtotal Customers</b>   | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       | <b>409</b>       |
| Monthly Fixed Charge        | \$47.40          | \$49.77          | \$52.26          | \$54.87          | \$57.61          | \$60.50          | \$63.52          | \$66.70          | \$70.03          | \$73.53          |
| Annual Fixed Charge         | \$568.80         | \$597.24         | \$627.10         | \$658.46         | \$691.38         | \$725.95         | \$762.25         | \$800.36         | \$840.38         | \$882.40         |
| <b>Total Annual Revenue</b> | <b>\$232,639</b> | <b>\$244,271</b> | <b>\$256,485</b> | <b>\$269,309</b> | <b>\$282,774</b> | <b>\$296,913</b> | <b>\$311,759</b> | <b>\$327,347</b> | <b>\$343,714</b> | <b>\$360,900</b> |

| 38 mm Meter Size            | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Existing                    | 345              | 345              | 345              | 345              | 345              | 345              | 345              | 345              | 345              | 345              |
| New                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Subtotal Customers</b>   | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       | <b>345</b>       |
| Monthly Fixed Charge        | \$94.81          | \$99.55          | \$104.53         | \$109.75         | \$115.24         | \$121.00         | \$127.05         | \$133.41         | \$140.08         | \$147.08         |
| Annual Fixed Charge         | \$1,137.72       | \$1,194.61       | \$1,254.34       | \$1,317.05       | \$1,382.91       | \$1,452.05       | \$1,524.65       | \$1,600.89       | \$1,680.93       | \$1,764.98       |
| <b>Total Annual Revenue</b> | <b>\$392,513</b> | <b>\$412,139</b> | <b>\$432,746</b> | <b>\$454,383</b> | <b>\$477,102</b> | <b>\$500,958</b> | <b>\$526,005</b> | <b>\$552,306</b> | <b>\$579,921</b> | <b>\$608,917</b> |

| 50 mm Meter Size            | 2021               | 2022               | 2023               | 2024               | 2025               | 2026               | 2027               | 2028               | 2029               | 2030               |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Existing                    | 707                | 707                | 707                | 707                | 707                | 707                | 707                | 707                | 707                | 707                |
| New                         |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>Subtotal Customers</b>   | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         | <b>707</b>         |
| Monthly Fixed Charge        | \$151.70           | \$159.29           | \$167.25           | \$175.61           | \$184.39           | \$193.61           | \$203.29           | \$213.46           | \$224.13           | \$235.34           |
| Annual Fixed Charge         | \$1,820.40         | \$1,911.42         | \$2,006.99         | \$2,107.34         | \$2,212.71         | \$2,323.34         | \$2,439.51         | \$2,561.49         | \$2,689.56         | \$2,824.04         |
| <b>Total Annual Revenue</b> | <b>\$1,287,023</b> | <b>\$1,351,374</b> | <b>\$1,418,943</b> | <b>\$1,489,890</b> | <b>\$1,564,384</b> | <b>\$1,642,603</b> | <b>\$1,724,734</b> | <b>\$1,810,970</b> | <b>\$1,901,519</b> | <b>\$1,996,595</b> |

| 75 mm Meter Size            | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Existing                    | 6               | 6               | 6               | 6               | 6               | 6               | 6               | 6               | 6               | 6               |
| New                         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>Subtotal Customers</b>   | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        | <b>6</b>        |
| Monthly Fixed Charge        | \$331.82        | \$348.41        | \$365.83        | \$384.12        | \$403.33        | \$423.50        | \$444.67        | \$466.90        | \$490.25        | \$514.76        |
| Annual Fixed Charge         | \$3,981.84      | \$4,180.93      | \$4,389.98      | \$4,609.48      | \$4,839.95      | \$5,081.95      | \$5,336.05      | \$5,602.85      | \$5,882.99      | \$6,177.14      |
| <b>Total Annual Revenue</b> | <b>\$23,891</b> | <b>\$25,086</b> | <b>\$26,340</b> | <b>\$27,657</b> | <b>\$29,040</b> | <b>\$30,492</b> | <b>\$32,016</b> | <b>\$33,617</b> | <b>\$35,298</b> | <b>\$37,063</b> |

| 100 mm Meter Size           | 2021               | 2022               | 2023               | 2024               | 2025               | 2026               | 2027               | 2028               | 2029               | 2030               |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Existing                    | 237                | 237                | 237                | 237                | 237                | 237                | 237                | 237                | 237                | 237                |
| New                         |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| <b>Subtotal Customers</b>   | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         | <b>237</b>         |
| Monthly Fixed Charge        | \$568.96           | \$597.41           | \$627.28           | \$658.64           | \$691.57           | \$726.15           | \$762.46           | \$800.58           | \$840.61           | \$882.64           |
| Annual Fixed Charge         | \$6,827.52         | \$7,168.90         | \$7,527.34         | \$7,903.71         | \$8,298.89         | \$8,713.84         | \$9,149.53         | \$9,607.01         | \$10,087.36        | \$10,591.72        |
| <b>Total Annual Revenue</b> | <b>\$1,618,122</b> | <b>\$1,699,028</b> | <b>\$1,783,980</b> | <b>\$1,873,179</b> | <b>\$1,966,838</b> | <b>\$2,065,180</b> | <b>\$2,168,439</b> | <b>\$2,276,860</b> | <b>\$2,390,704</b> | <b>\$2,510,239</b> |

| 150 mm Meter Size           | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Existing                    | 25               | 25               | 25               | 25               | 25               | 25               | 25               | 25               | 25               | 25               |
| New                         |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Subtotal Customers</b>   | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        | <b>25</b>        |
| Monthly Fixed Charge        | \$1,185.05       | \$1,244.30       | \$1,306.52       | \$1,371.84       | \$1,440.44       | \$1,512.46       | \$1,588.08       | \$1,667.48       | \$1,750.86       | \$1,838.40       |
| Annual Fixed Charge         | \$14,220.60      | \$14,931.63      | \$15,678.21      | \$16,462.12      | \$17,285.23      | \$18,149.49      | \$19,056.96      | \$20,009.81      | \$21,010.30      | \$22,060.82      |
| <b>Total Annual Revenue</b> | <b>\$355,515</b> | <b>\$373,291</b> | <b>\$391,955</b> | <b>\$411,553</b> | <b>\$432,131</b> | <b>\$453,737</b> | <b>\$476,424</b> | <b>\$500,245</b> | <b>\$525,258</b> | <b>\$551,520</b> |



Table 6-2 (Cont'd)

| 200 mm Meter Size           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Existing                    | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               | 2               |
| New                         |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| <b>Subtotal Customers</b>   | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        | <b>2</b>        |
| Monthly Fixed Charge        | \$1,516.86      | \$1,592.70      | \$1,672.34      | \$1,755.96      | \$1,843.75      | \$1,935.94      | \$2,032.74      | \$2,134.37      | \$2,241.09      | \$2,353.15      |
| Annual Fixed Charge         | \$18,202.32     | \$19,112.44     | \$20,068.06     | \$21,071.46     | \$22,125.03     | \$23,231.29     | \$24,392.85     | \$25,612.49     | \$26,893.12     | \$28,237.77     |
| <b>Total Annual Revenue</b> | <b>\$36,405</b> | <b>\$38,225</b> | <b>\$40,136</b> | <b>\$42,143</b> | <b>\$44,250</b> | <b>\$46,463</b> | <b>\$48,786</b> | <b>\$51,225</b> | <b>\$53,786</b> | <b>\$56,476</b> |

| 250 mm Meter Size           | 2021        | 2022        | 2023        | 2024        | 2025        | 2026        | 2027        | 2028        | 2029        | 2030        |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Existing                    | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           |
| New                         |             |             |             |             |             |             |             |             |             |             |
| <b>Subtotal Customers</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| Monthly Fixed Charge        | \$2,180.49  | \$2,289.51  | \$2,403.99  | \$2,524.19  | \$2,650.40  | \$2,782.92  | \$2,922.07  | \$3,068.17  | \$3,221.58  | \$3,382.66  |
| Annual Fixed Charge         | \$26,165.88 | \$27,474.17 | \$28,847.88 | \$30,290.28 | \$31,804.79 | \$33,395.03 | \$35,064.78 | \$36,818.02 | \$38,658.92 | \$40,591.87 |
| <b>Total Annual Revenue</b> | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  |

| 300mm Meter Size            | 2021        | 2022        | 2023        | 2024        | 2025        | 2026        | 2027        | 2028        | 2029        | 2030        |
|-----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Existing                    | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           |
| New                         |             |             |             |             |             |             |             |             |             |             |
| <b>Subtotal Customers</b>   | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |
| Monthly Fixed Charge        | \$2,180.49  | \$2,289.51  | \$2,403.99  | \$2,524.19  | \$2,650.40  | \$2,782.92  | \$2,922.07  | \$3,068.17  | \$3,221.58  | \$3,382.66  |
| Annual Fixed Charge         | \$26,165.88 | \$27,474.17 | \$28,847.88 | \$30,290.28 | \$31,804.79 | \$33,395.03 | \$35,064.78 | \$36,818.02 | \$38,658.92 | \$40,591.87 |
| <b>Total Annual Revenue</b> | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  | <b>\$0</b>  |



# Chapter 7

## Analysis of Water and Wastewater Rates and Policy Matters



## 7. Analysis of Water and Wastewater Rates and Policy Matters

### 7.1 Introduction

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To summarize the analysis undertaken thus far, Chapter 2 reviewed capital-related issues and responds to the provincial directives to maintain and upgrade infrastructure to required levels. Chapter 4 provided a review of capital financing options to which water and wastewater reserve contributions will be the predominant basis for financing future capital replacement. Chapter 5 established the 10-year operating forecast of expenditures including an annual capital reserve contribution. The minimum charge revenues are to ensure that fixed costs are recovered regardless of the amount of volume used by customers. This chapter will provide for the calculation of the volume rates over the forecast period. These calculations will be based on the net operating expenditures (the variable costs) provided in Chapter 5, divided by the water consumption forecast and wastewater volumes provided in section 1.8.

### 7.2 Water Rates

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Based on the discussion of rate structures provided in section 6.5 and the recommendation to continue with the present structures, the rates are calculated by taking the net recoverable amounts from Table 5-1 (the product of total expenditures less non-rate revenues and deduct the minimum charge amounts provided in section 6.5) and completes the calculation by dividing them by the volumes resulting in the forecasted rates. As stated earlier, the needs for water are significant throughout the forecast period. As such, the volume rates are anticipated to increase at 3% for 2022 and 4% annually over the remainder of the forecast period. The residential volume rates are presented in Table 7-1. Detailed calculations of the volume rates are provided in Appendix A. A summary of the recommended fixed charge and volume rates along with the total annual bill for an average residential user who consumes 180 cu.m. per year are shown below.



Table 7-1  
City of Barrie  
Water Rate Summary  
Annual Customer Water Bill – Based on 180 cu.m. of usage

| Description                           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Monthly Fixed Charge                  | \$14.02         | \$14.44         | \$15.01         | \$15.61         | \$16.24         | \$16.89         | \$17.56         | \$18.27         | \$19.00         | \$19.76         |
| Volume Rate:                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| Block 1 Rate (0-15 cu.m. per month)   | \$1.11          | \$1.14          | \$1.18          | \$1.23          | \$1.28          | \$1.33          | \$1.39          | \$1.44          | \$1.50          | \$1.56          |
| Block 2 Rate (16-30 cu.m. per month)  | \$2.21          | \$2.28          | \$2.37          | \$2.46          | \$2.56          | \$2.67          | \$2.77          | \$2.88          | \$3.00          | \$3.12          |
| Block 3 Rate (31-45 cu.m. per month)  | \$3.32          | \$3.42          | \$3.55          | \$3.70          | \$3.85          | \$4.00          | \$4.16          | \$4.33          | \$4.50          | \$4.68          |
| Block 4 Rate (>45 cu.m. per month)    | \$4.43          | \$4.56          | \$4.74          | \$4.93          | \$5.13          | \$5.33          | \$5.55          | \$5.77          | \$6.00          | \$6.24          |
| <b>Annual Fixed Charge Bill</b>       | <b>\$168.18</b> | <b>\$173.23</b> | <b>\$180.15</b> | <b>\$187.36</b> | <b>\$194.86</b> | <b>\$202.65</b> | <b>\$210.76</b> | <b>\$219.19</b> | <b>\$227.95</b> | <b>\$237.07</b> |
| Block 1 Volume (0-15 cu.m. per month) | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             |
| <b>Annual Volume Bill</b>             | <b>\$199.12</b> | <b>\$205.09</b> | <b>\$213.29</b> | <b>\$221.82</b> | <b>\$230.70</b> | <b>\$239.93</b> | <b>\$249.52</b> | <b>\$259.50</b> | <b>\$269.88</b> | <b>\$280.68</b> |
| <b>Total Annual Bill</b>              | <b>\$367.30</b> | <b>\$378.31</b> | <b>\$393.45</b> | <b>\$409.19</b> | <b>\$425.55</b> | <b>\$442.57</b> | <b>\$460.28</b> | <b>\$478.69</b> | <b>\$497.84</b> | <b>\$517.75</b> |
| % Increase - Fixed Charge             |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |
| % Increase - Volume Rate              |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |
| % Increase - Total Annual Bill        |                 | 3.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            | 4.0%            |

## 7.3 Wastewater Rates

Similar to water, the calculation of the wastewater rates takes the net recoverable amounts from Table 5-2 and completes the calculation by dividing them by the volumes, resulting in the forecast rates. Detailed calculations are provided in Appendix B.

Based on the needs of the wastewater system, the volume rates are anticipated to increase by 5% per year over the forecast period, similar to the fixed charge rates.

The following summarizes the recommended rates for wastewater and provides the average annual bill for a residential customer who uses 180 cu.m. per year. Note that this annual usage means that all volume would fall under the block 1 volume rate.



Table 7-2  
City of Barrie  
Wastewater Rate Summary  
Annual Customer Wastewater Bill – Based on 180 cu.m. of usage

| Description                           | 2021            | 2022            | 2023            | 2024            | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Monthly Fixed Charge                  | \$18.96         | \$19.91         | \$20.90         | \$21.95         | \$23.05         | \$24.20         | \$25.41         | \$26.68         | \$28.01         | \$29.41         |
| Volume Rate:                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| Block 1 Rate (0-15 cu.m. per month)   | \$1.60          | \$1.68          | \$1.76          | \$1.85          | \$1.94          | \$2.04          | \$2.14          | \$2.25          | \$2.36          | \$2.48          |
| Block 2 Rate (16-30 cu.m. per month)  | \$2.72          | \$2.85          | \$2.99          | \$3.14          | \$3.30          | \$3.47          | \$3.64          | \$3.82          | \$4.01          | \$4.21          |
| Block 3 Rate (31-45 cu.m. per month)  | \$2.72          | \$2.85          | \$2.99          | \$3.14          | \$3.30          | \$3.47          | \$3.64          | \$3.82          | \$4.01          | \$4.21          |
| Block 4 Rate (>45 cu.m. per month)    | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |
| <b>Annual Fixed Charge Bill</b>       | <b>\$227.52</b> | <b>\$238.90</b> | <b>\$250.84</b> | <b>\$263.38</b> | <b>\$276.55</b> | <b>\$290.38</b> | <b>\$304.90</b> | <b>\$320.14</b> | <b>\$336.15</b> | <b>\$352.96</b> |
| Block 1 Volume (0-15 cu.m. per month) | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             | 180             |
| <b>Annual Volume Bill</b>             | <b>\$287.53</b> | <b>\$301.91</b> | <b>\$317.00</b> | <b>\$332.85</b> | <b>\$349.50</b> | <b>\$366.97</b> | <b>\$385.32</b> | <b>\$404.59</b> | <b>\$424.82</b> | <b>\$446.06</b> |
| <b>Total Annual Bill</b>              | <b>\$515.05</b> | <b>\$540.80</b> | <b>\$567.84</b> | <b>\$596.24</b> | <b>\$626.05</b> | <b>\$657.35</b> | <b>\$690.22</b> | <b>\$724.73</b> | <b>\$760.97</b> | <b>\$799.01</b> |
| % Increase - Fixed Charge             |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |
| % Increase - Volume Rate              |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |
| % Increase - Total Annual Bill        |                 | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            | 5.0%            |

## 7.4 Forecast of Combined Water and Wastewater Impact for the Average Residential Customer

Based on the foregoing information, the combined impact of the water and wastewater fixed charge and volume rate charges equal to increases of 4.2% for 2022 and 4.6% per year for the remainder of the forecast period on the total annual bill for average residential customers. Table 7-3 presents the forecast combined annual bill.





Table 7-3  
City of Barrie  
Average Annual Residential Water and Wastewater Bill (Based on an annual usage of 180 cu.m.)

| Description                                | 2021            | 2022            | 2023            | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
|--------------------------------------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Water</b>                               |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |
| Monthly Fixed Charge                       | \$14.02         | \$14.44         | \$15.01         | \$15.61           | \$16.24           | \$16.89           | \$17.56           | \$18.27           | \$19.00           | \$19.76           |
| Block 1 Volume Rate (0-15 cu.m. per month) | \$1.11          | \$1.14          | \$1.18          | \$1.23            | \$1.28            | \$1.33            | \$1.39            | \$1.44            | \$1.50            | \$1.56            |
| <b>Annual Fixed Charge Bill</b>            | \$168.18        | \$173.23        | \$180.15        | \$187.36          | \$194.86          | \$202.65          | \$210.76          | \$219.19          | \$227.95          | \$237.07          |
| <b>Annual Volume Bill</b>                  | \$199.12        | \$205.09        | \$213.29        | \$221.82          | \$230.70          | \$239.93          | \$249.52          | \$259.50          | \$269.88          | \$280.68          |
| <b>Total Water Bill</b>                    | <b>\$367.30</b> | <b>\$378.31</b> | <b>\$393.45</b> | <b>\$409.19</b>   | <b>\$425.55</b>   | <b>\$442.57</b>   | <b>\$460.28</b>   | <b>\$478.69</b>   | <b>\$497.84</b>   | <b>\$517.75</b>   |
| <b>Wastewater</b>                          |                 |                 |                 |                   |                   |                   |                   |                   |                   |                   |
| Monthly Fixed Charge                       | \$18.96         | \$19.91         | \$20.90         | \$21.95           | \$23.05           | \$24.20           | \$25.41           | \$26.68           | \$28.01           | \$29.41           |
| Block 1 Volume Rate (0-15 cu.m. per month) | \$1.60          | \$1.68          | \$1.76          | \$1.85            | \$1.94            | \$2.04            | \$2.14            | \$2.25            | \$2.36            | \$2.48            |
| <b>Annual Fixed Charge Bill</b>            | \$227.52        | 239             | 251             | 263               | 277               | 290               | 305               | 320               | 336               | 353               |
| <b>Annual Volume Bill</b>                  | \$287.53        | \$301.91        | \$317.00        | \$332.85          | \$349.50          | \$366.97          | \$385.32          | \$404.59          | \$424.82          | \$446.06          |
| <b>Total Wastewater Bill</b>               | <b>\$515.05</b> | <b>\$540.80</b> | <b>\$567.84</b> | <b>\$596.24</b>   | <b>\$626.05</b>   | <b>\$657.35</b>   | <b>\$690.22</b>   | <b>\$724.73</b>   | <b>\$760.97</b>   | <b>\$799.01</b>   |
| <b>Total Water and Wastewater Bill</b>     | <b>\$882.35</b> | <b>\$919.12</b> | <b>\$961.29</b> | <b>\$1,005.42</b> | <b>\$1,051.60</b> | <b>\$1,099.93</b> | <b>\$1,150.50</b> | <b>\$1,203.42</b> | <b>\$1,258.80</b> | <b>\$1,316.76</b> |
| <b>Annual % Increase</b>                   |                 | 4.2%            | 4.6%            | 4.6%              | 4.6%              | 4.6%              | 4.6%              | 4.6%              | 4.6%              | 4.6%              |



## 7.5 Summary of Water and Wastewater Volume Rate Forecasts

Tables 7-4 and 7-5 provides a summary of the residential and non-residential water rates and wastewater rates, respectively.

Table 7-4  
Water Volume Rate Forecast

| Description                                | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Block 1 Residential (0-15 cu.m./month)     | 1.11 | 1.14 | 1.18 | 1.23 | 1.28 | 1.33 | 1.39 | 1.44 | 1.50 | 1.56 |
| Block 2 Residential (16-30 cu.m./month)    | 2.21 | 2.28 | 2.37 | 2.46 | 2.56 | 2.67 | 2.77 | 2.88 | 3.00 | 3.12 |
| Block 3 Residential (31-45 cu.m./month)    | 3.32 | 3.42 | 3.55 | 3.70 | 3.85 | 4.00 | 4.16 | 4.33 | 4.50 | 4.68 |
| Block 4 Residential (45+ cu.m./month)      | 4.43 | 4.56 | 4.74 | 4.93 | 5.13 | 5.33 | 5.55 | 5.77 | 6.00 | 6.24 |
| Block 1 Non-Residential (0-15 cu.m./month) | 1.11 | 1.14 | 1.18 | 1.23 | 1.28 | 1.33 | 1.39 | 1.44 | 1.50 | 1.56 |
| Block 2 Non-Residential (>30 cu.m./month)  | 1.66 | 1.71 | 1.78 | 1.85 | 1.92 | 2.00 | 2.08 | 2.16 | 2.25 | 2.34 |
| Annual Percentage Change                   |      | 3%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   |

Table 7-5  
Wastewater Volume Rate Forecast

| Description                                | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Block 1 Residential (0-15 cu.m./month)     | 1.60 | 1.68 | 1.76 | 1.85 | 1.94 | 2.04 | 2.14 | 2.25 | 2.36 | 2.48 |
| Block 2 Residential (16-30 cu.m./month)    | 2.72 | 2.85 | 2.99 | 3.14 | 3.30 | 3.47 | 3.64 | 3.82 | 4.01 | 4.21 |
| Block 3 Residential (31-45 cu.m./month)    | 2.72 | 2.85 | 2.99 | 3.14 | 3.30 | 3.47 | 3.64 | 3.82 | 4.01 | 4.21 |
| Block 4 Residential (45+ cu.m./month)      | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Block 1 Non-Residential (0-15 cu.m./month) | 1.52 | 1.60 | 1.68 | 1.76 | 1.85 | 1.94 | 2.04 | 2.14 | 2.25 | 2.36 |
| Block 2 Non-Residential (>30 cu.m./month)  | 2.28 | 2.40 | 2.52 | 2.64 | 2.77 | 2.91 | 3.06 | 3.21 | 3.37 | 3.54 |
| Annual Percentage Change                   |      | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |



# Chapter 8

## Recommendations

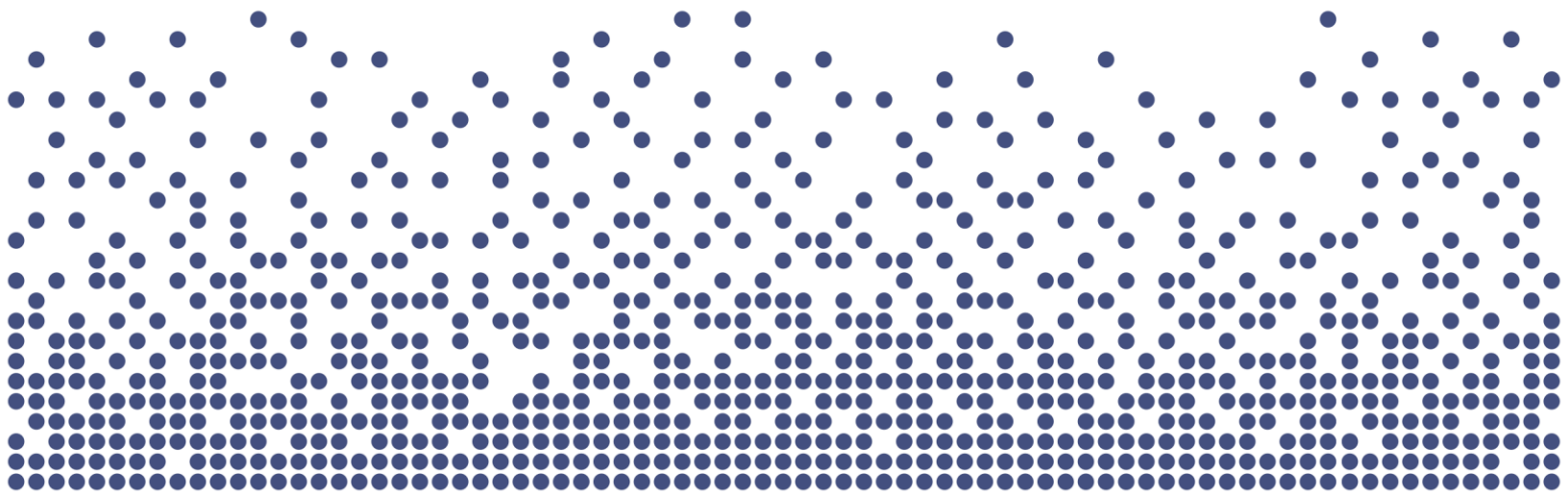


## 8. Recommendations

As presented within this report, capital and operating expenditures have been identified and forecast over a ten-year period for water and wastewater services to ensure the city continues to forecast rates in line with current legislation, ensuring safe and financial sustainability of the water and wastewater systems.

Based upon the foregoing, the following recommendations are identified for consideration by City's Council:

1. That Council provide for the recovery of all water and wastewater costs through full cost recovery rates.
2. That Council consider the Capital Plan for water and wastewater as provided in Tables 2-1 and 2-2 and the associated Capital Financing Plan as set out in Tables 4-4 and 4-5.
3. That Council consider the fixed charges provided in Table 6-1 for water and Table 6-2 for wastewater.
4. That Council consider the volume rates for water and wastewater as provided in Tables 7-1, 7-2 and 7-3 respectively.



# Appendices



# Appendix A

## Detailed Water Rate Calculations



# Appendix A: Detailed Water Rate Calculations

Table A-1  
City of Barrie  
Water Service  
Capital Budget Forecast (Uninflated \$)

| Description                                                                                    | Budget<br>2021 | Total     | Forecast  |           |         |         |         |         |         |         |         |
|------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|---------|---------|---------|---------|---------|---------|---------|
|                                                                                                |                |           | 2022      | 2023      | 2024    | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    |
| <b>Capital Expenditures</b>                                                                    |                |           |           |           |         |         |         |         |         |         |         |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    |                | 35,000    |           |           | 35,000  |         |         |         |         |         |         |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    |                | 195,000   |           |           |         |         | 175,500 | 19,500  |         |         |         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    |                | 313,900   |           |           |         |         |         |         |         |         | 313,900 |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    |                | 382,800   |           |           |         |         |         | 95,700  | 95,700  | 191,400 |         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          |                | 405,000   |           |           |         |         |         |         |         | 405,000 |         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          |                | 65,000    |           | 65,000    |         |         |         |         |         |         |         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     |                | 1,245,500 |           |           |         |         | 499,000 | 746,500 |         |         |         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     |                | 190,000   |           | 95,000    | 95,000  |         |         |         |         |         |         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      |                | 125,000   |           |           |         |         |         |         | 125,000 |         |         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      |                | 800,000   |           |           |         |         |         |         |         |         | 800,000 |
| 000203 - Surface Water Treatment Plant Facility Renewal Assessment                             |                | 240,000   |           |           | 125,000 | 75,000  |         | 40,000  |         |         |         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                        |                | 178,000   |           |           | 106,800 | 71,200  |         |         |         |         |         |
| 000725 - NRP- HNS Grove B2 Neighbourhood Reconstruction                                        |                | 98,000    |           |           |         |         |         |         |         |         | 98,000  |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                |                | 2,859,400 | 94,000    | 9,400     |         | 687,000 | 941,000 | 687,000 | 441,000 |         |         |
| 001014 - SWTP-Garage Floor Structural Rehabilitation and Prevention                            |                | 1,550,000 | 300,000   | 1,250,000 |         |         |         |         |         |         |         |
| 001016 - SWTP Control System Upgrade                                                           | 902,100        | 4,694,900 | 2,223,900 | 2,471,000 |         |         |         |         |         |         |         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                | 182,246        | 791,123   | 791,123   |           |         |         |         |         |         |         |         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster |                | 195,000   | 195,000   |           |         |         |         |         |         |         |         |



Table A-1 (Cont'd)

| Description                                                                                          | Budget<br>2021 | Total      | Forecast  |           |           |           |           |         |         |         |           |
|------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|-----------|
|                                                                                                      |                |            | 2022      | 2023      | 2024      | 2025      | 2026      | 2027    | 2028    | 2029    | 2030      |
| EN1150 - Big Bay Point Road Booster Station VFD Upgrade                                              | 75,000         | 100,000    | 100,000   |           |           |           |           |         |         |         |           |
| EN1152 - Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                    | 225,000        | 420,000    | 225,000   | 195,000   |           |           |           |         |         |         |           |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                             | 10,298         | -          |           |           |           |           |           |         |         |         |           |
| EN1169 - Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                              | 197,303        | -          |           |           |           |           |           |         |         |         |           |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                           | 218,540        | 1,966,860  | 983,430   | 983,430   |           |           |           |         |         |         |           |
| EN1178 - Interim Watermain Replacement Pilot Program                                                 | 512,985        | -          |           |           |           |           |           |         |         |         |           |
| EN1189 - Watermain Cathodic Protection Program                                                       | 1,000,000      | 3,960,000  | 1,000,000 | 1,000,000 | 1,000,000 | 960,000   |           |         |         |         |           |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                             | 29,000         | 938,120    | 29,000    | 454,560   | 454,560   |           |           |         |         |         |           |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                             | 28,202         | 1,060,200  |           |           |           |           | 530,100   | 530,100 |         |         |           |
| EN1252 - PRV Chamber Replacement Program                                                             | 813,215        | 3,333,215  | 137,215   | 1,501,422 | 1,694,578 |           |           |         |         |         |           |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement |                | 1,220,500  |           |           |           |           | 23,300    | 37,200  |         | 464,000 | 696,000   |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 40,000         | 1,157,000  | 750,000   | 407,000   |           |           |           |         |         |         |           |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                           |                | 1,940,000  |           |           |           | 640,000   | 650,000   | 650,000 |         |         |           |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                           | 43,500         | 2,616,240  | 43,500    | 43,500    | 632,310   | 632,310   | 632,310   | 632,310 |         |         |           |
| EN1294 - Watermain Renewal Program                                                                   | 1,713,000      | 3,057,000  | 290,000   | 1,767,000 | 1,000,000 |           |           |         |         |         |           |
| EN1305 - Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction          |                | 15,935,000 |           | 3,187,000 | 6,374,000 | 4,780,500 | 1,593,500 |         |         |         |           |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                            | 60,000         | 1,850,000  | 610,000   |           |           | 620,000   | 620,000   |         |         |         |           |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth      | 42,000         | 712,000    |           | 356,000   | 356,000   |           |           |         |         |         |           |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                         | -              | 2,380,000  |           |           |           |           |           | 500,000 | 940,000 | 940,000 |           |
| EN1355 - Grove Street East Watermain Replacement and Road Renewal – Duckworth to Fletcher            | 144,000        | 1,330,200  | 125,200   | 1,205,000 |           |           |           |         |         |         |           |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                          |                | 2,004,000  |           | 27,000    | 27,000    |           |           |         | 390,000 | 390,000 | 1,170,000 |





Table A-1 (Cont'd)

| Description                                                                            | Budget<br>2021 | Total      | Forecast |         |         |         |         |           |           |           |           |
|----------------------------------------------------------------------------------------|----------------|------------|----------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|
|                                                                                        |                |            | 2022     | 2023    | 2024    | 2025    | 2026    | 2027      | 2028      | 2029      | 2030      |
| EN1395 - Ferndale Drive South Watermain Replacement – Tiffin to Ardagh                 | 100,000        | -          |          |         |         |         |         |           |           |           |           |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street             | 61,000         | 708,000    |          | 354,000 | 354,000 |         |         |           |           |           |           |
| EN1435 - Alliance Boulevard Expansion - Bell Farm to Bell Farm                         |                | 167,000    |          |         |         |         |         | 17,000    |           | 150,000   |           |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                            |                | 2,536,000  |          |         | 30,400  | 45,600  |         | 492,000   | 738,000   | 738,000   | 492,000   |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon | 62,000         | 1,576,100  | 62,000   |         | 504,700 | 504,700 | 504,700 |           |           |           |           |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St            |                | 1,200,000  |          |         | 135,000 |         |         |           | 1,065,000 |           |           |
| 000472 - Technology Forecasted Needs                                                   |                | 1,223,600  | 95,000   | 114,000 | 125,400 | 125,400 | 125,400 | 136,800   | 152,000   | 167,200   | 182,400   |
| CC1000 - ERP Sustainment Program                                                       | 70,000         | 350,000    | 70,000   | 70,000  | 70,000  | 70,000  | 70,000  |           |           |           |           |
| EN1429 - Water and Transportation Asset Management Plans - Update                      | 45,000         | -          |          |         |         |         |         |           |           |           |           |
| IT1010 - Network Technology Infrastructure Program                                     | 56,000         | 168,000    | 56,000   | 56,000  | 56,000  |         |         |           |           |           |           |
| IT1012 - Server and Storage Technology Infrastructure Program                          | 30,000         | 152,000    | 30,000   | 30,000  | 32,000  | 30,000  | 30,000  |           |           |           |           |
| Additional Asset Replacement Needs                                                     |                | 24,400,000 |          |         |         |         |         | 5,000,000 | 5,000,000 | 7,000,000 | 7,400,000 |
| <b>Carryforwards:</b>                                                                  |                | -          |          |         |         |         |         |           |           |           |           |
| Watermain Renewal Program                                                              | 232,300        | 464,600    | 232,300  | 232,300 |         |         |         |           |           |           |           |
| Air Valve/Main Valve Chamber Condition Assessment and Rehabilitation Program           | 33,300         | 66,600     | 33,300   | 33,300  |         |         |         |           |           |           |           |
| Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction     | 23,700         | 47,400     | 23,700   | 23,700  |         |         |         |           |           |           |           |
| BAS Component Replacement                                                              | 11,500         | 23,000     | 11,500   | 11,500  |         |         |         |           |           |           |           |
| Bayfield Street Water Tower - Repairs and Interior Lining Replacement                  | 177,300        | 354,600    | 177,300  | 177,300 |         |         |         |           |           |           |           |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                | 181,900        | 363,800    | 181,900  | 181,900 |         |         |         |           |           |           |           |
| Big Bay Point Road Booster Station VFD Upgrade                                         | 25,000         | 50,000     | 25,000   | 25,000  |         |         |         |           |           |           |           |
| Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore            | 2,100          | 4,200      | 2,100    | 2,100   |         |         |         |           |           |           |           |
| Citizen Relationship Management (CRM) Solution                                         | 17,000         | 34,000     | 17,000   | 17,000  |         |         |         |           |           |           |           |
| City Hall Customer Contact Centre Renovation                                           | 300            | 600        | 300      | 300     |         |         |         |           |           |           |           |
| CMMS Improvement Project - Cityworks                                                   | 107,900        | 215,800    | 107,900  | 107,900 |         |         |         |           |           |           |           |
| Corealis Meters                                                                        | 4,900          | 9,800      | 4,900    | 4,900   |         |         |         |           |           |           |           |
| Corporate Audio Visual Technology Infrastructure                                       | 100            | 200        | 100      | 100     |         |         |         |           |           |           |           |
| Corporate Communications Infrastructure Program                                        | 1,700          | 3,400      | 1,700    | 1,700   |         |         |         |           |           |           |           |
| Corporate PC Infrastructure Program                                                    | 3,400          | 6,800      | 3,400    | 3,400   |         |         |         |           |           |           |           |
| Corporate Printing Infrastructure                                                      | 700            | 1,400      | 700      | 700     |         |         |         |           |           |           |           |



Table A-1 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total   | Forecast |         |      |      |      |      |      |      |      |
|------------------------------------------------------------------------------------------|----------------|---------|----------|---------|------|------|------|------|------|------|------|
|                                                                                          |                |         | 2022     | 2023    | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 65,300         | 130,600 | 65,300   | 65,300  |      |      |      |      |      |      |      |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)          | 9,500          | 19,000  | 9,500    | 9,500   |      |      |      |      |      |      |      |
| Dunlop Street West ROW Replacement - Eccles to Toronto                                   | 32,900         | 65,800  | 32,900   | 32,900  |      |      |      |      |      |      |      |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 86,600         | 173,200 | 86,600   | 86,600  |      |      |      |      |      |      |      |
| ERP Sustainment Program                                                                  | 59,900         | 119,800 | 59,900   | 59,900  |      |      |      |      |      |      |      |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 9,000          | 18,000  | 9,000    | 9,000   |      |      |      |      |      |      |      |
| Frozen Water Service Repair                                                              | 184,800        | 369,600 | 184,800  | 184,800 |      |      |      |      |      |      |      |
| Fuel Tank Repairs 2017                                                                   | 11,700         | 23,400  | 11,700   | 11,700  |      |      |      |      |      |      |      |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 7,900          | 15,800  | 7,900    | 7,900   |      |      |      |      |      |      |      |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 88,800         | 177,600 | 88,800   | 88,800  |      |      |      |      |      |      |      |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 2,000          | 4,000   | 2,000    | 2,000   |      |      |      |      |      |      |      |
| Huron and Big Bay Point Large Diameter Watermain Condition Assessment                    | 127,400        | 254,800 | 127,400  | 127,400 |      |      |      |      |      |      |      |
| Interim Watermain Replacement Pilot Program                                              | 217,800        | 435,600 | 217,800  | 217,800 |      |      |      |      |      |      |      |
| Lampman to Anne New Transmission Watermain and Lampman to Leacock ROW Rehabilitation     | 43,900         | 87,800  | 43,900   | 43,900  |      |      |      |      |      |      |      |
| Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                           | 75,000         | 150,000 | 75,000   | 75,000  |      |      |      |      |      |      |      |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                         | 900            | 1,800   | 900      | 900     |      |      |      |      |      |      |      |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                 | 6,200          | 12,400  | 6,200    | 6,200   |      |      |      |      |      |      |      |
| Microsoft Office 365 and Windows Enterprise                                              | 1,300          | 2,600   | 1,300    | 1,300   |      |      |      |      |      |      |      |
| Network Technology Infrastructure Program                                                | 19,300         | 38,600  | 19,300   | 19,300  |      |      |      |      |      |      |      |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                        | 43,700         | 87,400  | 43,700   | 43,700  |      |      |      |      |      |      |      |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                        | 15,600         | 31,200  | 15,600   | 15,600  |      |      |      |      |      |      |      |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                     | 5,200          | 10,400  | 5,200    | 5,200   |      |      |      |      |      |      |      |
| NRP- Wellington D1 Neighbourhood Reconstruction                                          | 11,400         | 22,800  | 11,400   | 11,400  |      |      |      |      |      |      |      |
| NRP- Wellington D2 Neighbourhood Reconstruction                                          | 28,700         | 57,400  | 28,700   | 28,700  |      |      |      |      |      |      |      |
| PC Replacements                                                                          | 100            | 200     | 100      | 100     |      |      |      |      |      |      |      |
| PRV Chamber Replacement Program                                                          | 161,800        | 323,600 | 161,800  | 161,800 |      |      |      |      |      |      |      |
| Public Safety Communication Program                                                      | 600            | 1,200   | 600      | 600     |      |      |      |      |      |      |      |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                        | 5,300          | 10,600  | 5,300    | 5,300   |      |      |      |      |      |      |      |



Table A-1 (Cont'd)

| Description                                                                                                  | Budget<br>2021 | Total     | Forecast |         |         |           |         |           |           |         |           |
|--------------------------------------------------------------------------------------------------------------|----------------|-----------|----------|---------|---------|-----------|---------|-----------|-----------|---------|-----------|
|                                                                                                              |                |           | 2022     | 2023    | 2024    | 2025      | 2026    | 2027      | 2028      | 2029    | 2030      |
| Rodney St-Blake to Kempenfelt                                                                                | 6,700          | 13,400    | 6,700    | 6,700   |         |           |         |           |           |         |           |
| Ross, Collier, Bayfield Intersection Realignment                                                             | 1,500          | 3,000     | 1,500    | 1,500   |         |           |         |           |           |         |           |
| Secondary Plan Area New Bulk Water Filling Station                                                           | 30,500         | 61,000    | 30,500   | 30,500  |         |           |         |           |           |         |           |
| Server and Desktop Software Program                                                                          | 100            | 200       | 100      | 100     |         |           |         |           |           |         |           |
| Server and Storage Technology Infrastructure Program                                                         | 1,700          | 3,400     | 1,700    | 1,700   |         |           |         |           |           |         |           |
| South L/fill Leachate Gal Repl                                                                               | 14,700         | 29,400    | 14,700   | 14,700  |         |           |         |           |           |         |           |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                         | 574,000        | 1,148,000 | 574,000  | 574,000 |         |           |         |           |           |         |           |
| TCE Groundwater Monitor Wells                                                                                | 27,400         | 54,800    | 27,400   | 27,400  |         |           |         |           |           |         |           |
| TCE Plume Mitigation Solution                                                                                | 24,700         | 49,400    | 24,700   | 24,700  |         |           |         |           |           |         |           |
| Tiffin Street - Ferndale to Anne Street                                                                      | 400            | 800       | 400      | 400     |         |           |         |           |           |         |           |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                              | 39,300         | 78,600    | 39,300   | 39,300  |         |           |         |           |           |         |           |
| Water Dispensing Event Trailer                                                                               | 800            | 1,600     | 800      | 800     |         |           |         |           |           |         |           |
| Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                                     | 19,900         | 39,800    | 19,900   | 19,900  |         |           |         |           |           |         |           |
| Watermain Cathodic Protection Program                                                                        | 344,700        | 689,400   | 344,700  | 344,700 |         |           |         |           |           |         |           |
| Water and Transportation Asset Management Plans - Update                                                     | 23,400         | 46,800    | 23,400   | 23,400  |         |           |         |           |           |         |           |
| Watermain Renewal Program                                                                                    | 340,000        | 680,000   | 340,000  | 340,000 |         |           |         |           |           |         |           |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 25,700         | 51,400    | 25,700   | 25,700  |         |           |         |           |           |         |           |
| Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)                | 11,800         | 23,600    | 11,800   | 11,800  |         |           |         |           |           |         |           |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                              | (118,900)      | -         |          |         |         |           |         |           |           |         |           |
| Growth Related:                                                                                              |                | -         |          |         |         |           |         |           |           |         |           |
| Facilities                                                                                                   |                | -         |          |         |         |           |         |           |           |         |           |
| 000461 - SWTP Optimization                                                                                   |                | 1,041,000 |          |         |         | 1,041,000 |         |           |           |         |           |
| Water Distribution - Salem & Hewitt's Secondary Plan Areas:                                                  |                | -         |          |         |         |           |         |           |           |         |           |
| 000293 - Huronia Road New Transmission Watermain - Mapleview to Lockhart (City)                              |                | 5,637,000 |          |         |         |           |         | 49,000    | 508,000   | 424,000 | 4,656,000 |
| 000926 - Salem Road Reservoir and Pumping Station                                                            |                | 4,024,000 |          |         |         |           | 374,000 | 1,825,000 | 1,825,000 |         |           |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer) | 491,430        | -         |          |         |         |           |         |           |           |         |           |
| EN1250 - Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                           | 2,760,773      | -         |          |         |         |           |         |           |           |         |           |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                     | (560,800)      | 647,500   |          | 35,200  | 612,300 |           |         |           |           |         |           |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                            | 72,400         | 1,173,900 | 13,800   | 91,400  |         | 534,350   | 534,350 |           |           |         |           |



Table A-1 (Cont'd)

| Description                                                                                                   | Budget<br>2021 | Total     | Forecast    |         |         |           |           |           |         |         |      |
|---------------------------------------------------------------------------------------------------------------|----------------|-----------|-------------|---------|---------|-----------|-----------|-----------|---------|---------|------|
|                                                                                                               |                |           | 2022        | 2023    | 2024    | 2025      | 2026      | 2027      | 2028    | 2029    | 2030 |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                      | 255,600        | 4,869,702 |             |         | 694,400 | 2,175,302 | 2,000,000 |           |         |         |      |
| EN1259 - Big Bay Point New Transmission Watermain and Road Expansion - Prince William to Street N (Developer) | -              | 350,844   |             | 350,844 |         |           |           |           |         |         |      |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                           | 16,600         | 436,500   |             |         |         |           | 20,700    | 166,320   | 249,480 |         |      |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)  |                | 234,963   | 234,963     |         |         |           |           |           |         |         |      |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                               |                | 3,622,601 | 66,200      | 96,600  |         | 1,153,267 | 1,153,267 | 1,153,267 |         |         |      |
| EN1272 - Salem Rd New Watermain,NewTrunk Sanitary Sewer and ROW Expansion-Veterans to Saunders (City)         |                | (508,000) | (1,067,000) |         |         |           | 56,000    | 251,500   | 251,500 |         |      |
| EN1275 - Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                | 261,000        | -         |             |         |         |           |           |           |         |         |      |
| EN1276 - Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)        | 15,000         | 226,000   | 226,000     |         |         |           |           |           |         |         |      |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                     |                | 311,800   |             |         |         |           |           | 62,360    | 124,720 | 124,720 |      |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                         |                | 266,710   |             |         |         |           | 34,710    | 232,000   |         |         |      |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South) extension to Lockhart (City)                    |                | 932,300   |             | 17,900  |         |           | 60,000    | 341,760   | 512,640 |         |      |
| Carryforwards                                                                                                 |                | -         |             |         |         |           |           |           |         |         |      |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain -Big Bay Point to Mplview (City)          | 200            | 400       | 200         | 200     |         |           |           |           |         |         |      |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)           | 58,600         | 117,200   | 58,600      | 58,600  |         |           |           |           |         |         |      |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                                     | 16,600         | 33,200    | 16,600      | 16,600  |         |           |           |           |         |         |      |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                                              | 755,000        | 1,510,000 | 755,000     | 755,000 |         |           |           |           |         |         |      |
| McKay Road New Interchange - Highway 400 (City)                                                               | 18,700         | 37,400    | 18,700      | 18,700  |         |           |           |           |         |         |      |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                        | 11,700         | 23,400    | 11,700      | 11,700  |         |           |           |           |         |         |      |
| Secondary Plan Area New Bulk Water Filling Station                                                            | 30,500         | 61,000    | 30,500      | 30,500  |         |           |           |           |         |         |      |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)           | 16,000         | 32,000    | 16,000      | 16,000  |         |           |           |           |         |         |      |
| Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                         | 721,500        | 1,443,000 | 721,500     | 721,500 |         |           |           |           |         |         |      |



Table A-1 (Cont'd)

| Description                                                                                                    | Budget<br>2021 | Total     | Forecast  |           |           |         |         |       |         |         |         |
|----------------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|---------|---------|-------|---------|---------|---------|
|                                                                                                                |                |           | 2022      | 2023      | 2024      | 2025    | 2026    | 2027  | 2028    | 2029    | 2030    |
| Essa Road New Transmission Watermain -<br>Mapleview to Athabaska (Developer)                                   | 616,200        | 1,232,400 | 616,200   | 616,200   |           |         |         |       |         |         |         |
| Mapleview Drive E New Transmisison Watermain -<br>Yonge to Royal Jubilee (Developer)                           | 1,927,900      | 3,855,800 | 1,927,900 | 1,927,900 |           |         |         |       |         |         |         |
| McKay Road ROW Expansion - Reid Drive to West<br>of Highway 400 (Developer)                                    | 886,900        | 1,773,800 | 886,900   | 886,900   |           |         |         |       |         |         |         |
| Veterans Drive New Trunk Watermain - Salem to<br>McKay (Developer)                                             | 826,300        | 1,652,600 | 826,300   | 826,300   |           |         |         |       |         |         |         |
| Ashford Drive and Madelaine Drive New 750 mm<br>Transmission Watermain -Big Bay Point to Mplview<br>(City)     | 112,300        | 224,600   | 112,300   | 112,300   |           |         |         |       |         |         |         |
| County Road 27 New Transmission Watermain -<br>Holly PS to Former Barrie South City Limits<br>(Developer)      | 11,300         | 22,600    | 11,300    | 11,300    |           |         |         |       |         |         |         |
| Sandringham Drive New 600mm Transmission<br>Watermain - Big Bay Point to Mapleview (City)                      | 58,700         | 117,400   | 58,700    | 58,700    |           |         |         |       |         |         |         |
| <b>Former Municipal Boundary Areas:</b>                                                                        |                | -         |           |           |           |         |         |       |         |         |         |
| 000924 - Fairview Road Right of Way Expansion -<br>Big Bay Point to Little                                     |                | 10,000    |           |           |           |         |         | 5,000 | 5,000   |         |         |
| EN1013 - Sunnidale: Letitia-Wellington Transmission<br>Watermain                                               | 1,351,550      | 4,850,450 | 2,850,450 | 2,000,000 |           |         |         |       |         |         |         |
| EN1016 - Tiffin Street - Well 7 to Ferndale                                                                    | 342,000        | 6,394,000 | 2,700,000 | 3,461,000 | 233,000   |         |         |       |         |         |         |
| EN1097 - Mapleview Drive East Improvements -<br>Country Lane to Yonge (City)                                   | 434,250        | 1,013,290 | 1,013,290 |           |           |         |         |       |         |         |         |
| EN1101 - Dunlop, Poyntz and Berczy New<br>Watermain and ROW Replacement - Codrington to<br>Mulcaster           | 1,000,000      | -         |           |           |           |         |         |       |         |         |         |
| EN1166 - Duckworth Street New Transmission<br>Watermain and ROW Expansion - Bell Farm to St.<br>Vincent        |                | 1,218,800 |           | 110,800   | 1,108,000 |         |         |       |         |         |         |
| EN1168 - Dyments Creek Culvert Expansion -<br>Bradford St.                                                     |                | 424,260   |           | 163,260   | 165,000   | 96,000  |         |       |         |         |         |
| EN1170 - Essa Road ROW Expansion - Coughlin to<br>Mapleview                                                    |                | 261,000   |           |           |           |         |         |       | 104,400 | 156,600 |         |
| EN1183 - Ross, Collier, Bayfield Intersection<br>Realignment                                                   |                | 171,000   |           |           |           |         |         |       |         |         | 171,000 |
| EN1274 - Bunkers Creek Culverts and Watercourse<br>Improvements - Innisfil to Lakeshore                        |                | 183,090   |           | 73,236    | 54,927    | 54,927  |         |       |         |         |         |
| EN1277 - Bryne Drive New Road Construction -<br>Harvie to North of Caplan                                      | 48,100         | 316,200   | 63,240    | 126,480   | 126,480   |         |         |       |         |         |         |
| EN1286 - Big Bay Point Road ROW Expansion -<br>Bayview to Huronia                                              | 466,060        | 664,740   | 664,740   |           |           |         |         |       |         |         |         |
| EN1288 - Bayview Drive New Transmission<br>Watermain & Road Expansion - Little Avenue to Big<br>Bay Point Road | 122,045        | 1,134,200 | 22,600    | 54,100    | 517,473   | 432,022 | 108,005 |       |         |         |         |
| EN1333 - Huronia Road Right of Way Expansion -<br>Yonge to Herrell                                             |                | 52,000    |           |           |           |         |         |       |         |         | 52,000  |



Table A-1 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total       | Forecast   |            |            |            |            |            |            |            |            |
|------------------------------------------------------------------------------------------|----------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                                                                          |                |             | 2022       | 2023       | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                           |                | 747,000     |            |            | 25,000     | 361,000    | 361,000    |            |            |            |            |
| EN1377 - Anne Street Right of Way Expansion - Wellington to Dunlop                       |                | 452,000     |            |            | 26,000     | 26,000     |            |            | 200,000    | 200,000    |            |
| Z423 - Cundles Road East New Transmission Watermain - St Vincent to Golden Eagle         |                | 978,000     |            |            |            |            |            |            | 245,000    | 733,000    |            |
| Z436 - Huronia Road Right of Way Expansion - Herrell to Big Bay Point                    |                | 6,000       |            |            |            |            |            |            | 3,000      | 3,000      |            |
| Z438 - Lakeshore/Hurst Drive ROW Expansion - Tiffin Street to Cox Mill                   |                | 6,000       |            |            |            |            |            |            | 3,000      | 3,000      |            |
| Carryforwards                                                                            |                | -           |            |            |            |            |            |            |            |            |            |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                  | 281,700        | 563,400     | 281,700    | 281,700    |            |            |            |            |            |            |            |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 116,100        | 232,200     | 116,100    | 116,100    |            |            |            |            |            |            |            |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)          | 7,200          | 14,400      | 7,200      | 7,200      |            |            |            |            |            |            |            |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 28,500         | 57,000      | 28,500     | 28,500     |            |            |            |            |            |            |            |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 8,800          | 17,600      | 8,800      | 8,800      |            |            |            |            |            |            |            |
| Sunnidale: Letitia-Wellington Transmission Watermain                                     | 291,100        | 582,200     | 291,100    | 291,100    |            |            |            |            |            |            |            |
| Tiffin Street - Ferndale to Anne Street                                                  | 1,100          | 2,200       | 1,100      | 1,100      |            |            |            |            |            |            |            |
| Total Capital Expenditures                                                               | 24,053,397     | 155,845,308 | 25,434,551 | 32,658,032 | 16,770,328 | 15,115,578 | 11,096,842 | 13,670,317 | 12,978,440 | 12,089,920 | 16,031,300 |



Table A-2  
City of Barrie  
Water Service  
Capital Budget Forecast (Inflated \$)

| Description                                                                                    | Budget<br>2021 | Total     | Forecast  |           |           |           |           |           |         |         |           |
|------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|-----------|
|                                                                                                |                |           | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028    | 2029    | 2030      |
| <b>Capital Expenditures</b>                                                                    |                |           |           |           |           |           |           |           |         |         |           |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    | -              | 41,000    | -         | -         | 41,000    | -         | -         | -         | -       | -       | -         |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    | -              | 250,000   | -         | -         | -         | -         | 224,000   | 26,000    | -       | -       | -         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    | -              | 487,000   | -         | -         | -         | -         | -         | -         | -       | -       | 487,000   |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    | -              | 546,000   | -         | -         | -         | -         | -         | 128,000   | 135,000 | 283,000 | -         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          | -              | 598,000   | -         | -         | -         | -         | -         | -         | -       | 598,000 | -         |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          | -              | 72,000    | -         | 72,000    | -         | -         | -         | -         | -       | -       | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     | -              | 1,637,000 | -         | -         | -         | -         | 637,000   | 1,000,000 | -       | -       | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     | -              | 215,000   | -         | 105,000   | 110,000   | -         | -         | -         | -       | -       | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      | -              | 176,000   | -         | -         | -         | -         | -         | -         | 176,000 | -       | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      | -              | 1,241,000 | -         | -         | -         | -         | -         | -         | -       | -       | 1,241,000 |
| 000203 - Surface Water Treatment Plant Facility Renewal Assessment                             | -              | 290,000   | -         | -         | 145,000   | 91,000    | -         | 54,000    | -       | -       | -         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                        | -              | 211,000   | -         | -         | 124,000   | 87,000    | -         | -         | -       | -       | -         |
| 000725 - NRP- HNS Grove B2 Neighbourhood Reconstruction                                        | -              | 152,000   | -         | -         | -         | -         | -         | -         | -       | -       | 152,000   |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                | -              | 3,687,000 | 99,000    | 10,000    | -         | 835,000   | 1,201,000 | 921,000   | 621,000 | -       | -         |
| 001014 - SWTP-Garage Floor Structural Rehabilitation and Prevention                            | -              | 1,693,000 | 315,000   | 1,378,000 | -         | -         | -         | -         | -       | -       | -         |
| 001016 - SWTP Control System Upgrade                                                           | 902,100        | 5,059,000 | 2,335,000 | 2,724,000 | -         | -         | -         | -         | -       | -       | -         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                | 182,246        | 831,000   | 831,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster | -              | 205,000   | 205,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1150 - Big Bay Point Road Booster Station VFD Upgrade                                        | 75,000         | 105,000   | 105,000   | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1152 - Water Service and Backflow Prevention Upgrades for Parks and Open Spaces              | 225,000        | 451,000   | 236,000   | 215,000   | -         | -         | -         | -         | -       | -       | -         |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                       | 10,298         | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1169 - Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                        | 197,303        | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                     | 218,540        | 2,117,000 | 1,033,000 | 1,084,000 | -         | -         | -         | -         | -       | -       | -         |
| EN1178 - Interim Watermain Replacement Pilot Program                                           | 512,985        | -         | -         | -         | -         | -         | -         | -         | -       | -       | -         |
| EN1189 - Watermain Cathodic Protection Program                                                 | 1,000,000      | 4,478,000 | 1,050,000 | 1,103,000 | 1,158,000 | 1,167,000 | -         | -         | -       | -       | -         |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                       | 29,000         | 1,057,000 | 30,000    | 501,000   | 526,000   | -         | -         | -         | -       | -       | -         |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                       | 28,202         | 1,387,000 | -         | -         | -         | -         | 677,000   | 710,000   | -       | -       | -         |
| EN1252 - PRV Chamber Replacement Program                                                       | 813,215        | 3,761,000 | 144,000   | 1,655,000 | 1,962,000 | -         | -         | -         | -       | -       | -         |



Table A-2 (Cont'd)

| Description                                                                                          | Budget<br>2021 | Total      | Forecast |           |           |           |           |           |           |            |            |
|------------------------------------------------------------------------------------------------------|----------------|------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
|                                                                                                      |                |            | 2022     | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029       | 2030       |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement | -              | 1,846,000  | -        | -         | -         | -         | 30,000    | 50,000    | -         | 686,000    | 1,080,000  |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 40,000         | 1,237,000  | 788,000  | 449,000   | -         | -         | -         | -         | -         | -          | -          |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                           | -              | 2,479,000  | -        | -         | -         | 778,000   | 830,000   | 871,000   | -         | -          | -          |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                           | 43,500         | 3,249,000  | 46,000   | 48,000    | 732,000   | 769,000   | 807,000   | 847,000   | -         | -          | -          |
| EN1294 - Watermain Renewal Program                                                                   | 1,713,000      | 3,411,000  | 305,000  | 1,948,000 | 1,158,000 | -         | -         | -         | -         | -          | -          |
| EN1305 - Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction          | -              | 18,738,000 | -        | 3,514,000 | 7,379,000 | 5,811,000 | 2,034,000 | -         | -         | -          | -          |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                            | 60,000         | 2,186,000  | 641,000  | -         | -         | 754,000   | 791,000   | -         | -         | -          | -          |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth      | 42,000         | 804,000    | -        | 392,000   | 412,000   | -         | -         | -         | -         | -          | -          |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                         | -              | 3,382,000  | -        | -         | -         | -         | -         | 670,000   | 1,323,000 | 1,389,000  | -          |
| EN1355 - Grove Street East Watermain Replacement and Road Renewal – Duckworth to Fletcher            | 144,000        | 1,460,000  | 131,000  | 1,329,000 | -         | -         | -         | -         | -         | -          | -          |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                          | -              | 3,001,000  | -        | 30,000    | 31,000    | -         | -         | -         | 549,000   | 576,000    | 1,815,000  |
| EN1395 - Ferndale Drive South Watermain Replacement – Tiffin to Ardagh                               | 100,000        | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                           | 61,000         | 800,000    | -        | 390,000   | 410,000   | -         | -         | -         | -         | -          | -          |
| EN1435 - Alliance Boulevard Expansion - Bell Farm to Bell Farm                                       | -              | 245,000    | -        | -         | -         | -         | -         | 23,000    | -         | 222,000    | -          |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                          | -              | 3,640,000  | -        | -         | 35,000    | 55,000    | -         | 659,000   | 1,038,000 | 1,090,000  | 763,000    |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon               | 62,000         | 1,906,000  | 65,000   | -         | 584,000   | 613,000   | 644,000   | -         | -         | -          | -          |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                          | -              | 1,655,000  | -        | -         | 156,000   | -         | -         | -         | 1,499,000 | -          | -          |
| 000472 - Technology Forecasted Needs                                                                 | -              | 1,610,000  | 100,000  | 126,000   | 145,000   | 152,000   | 160,000   | 183,000   | 214,000   | 247,000    | 283,000    |
| CC1000 - ERP Sustainment Program                                                                     | 70,000         | 406,000    | 74,000   | 77,000    | 81,000    | 85,000    | 89,000    | -         | -         | -          | -          |
| EN1429 - Water and Transportation Asset Management Plans - Update                                    | 45,000         | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| IT1010 - Network Technology Infrastructure Program                                                   | 56,000         | 186,000    | 59,000   | 62,000    | 65,000    | -         | -         | -         | -         | -          | -          |
| IT1012 - Server and Storage Technology Infrastructure Program                                        | 30,000         | 176,000    | 32,000   | 33,000    | 37,000    | 36,000    | 38,000    | -         | -         | -          | -          |
| Additional Asset Replacement Needs                                                                   | -              | 35,558,000 | -        | -         | -         | -         | -         | 6,700,000 | 7,036,000 | 10,342,000 | 11,480,000 |
| <b>Carryforwards:</b>                                                                                | -              | -          | -        | -         | -         | -         | -         | -         | -         | -          | -          |
| Watermain Renewal Program                                                                            | 232,300        | 500,000    | 244,000  | 256,000   | -         | -         | -         | -         | -         | -          | -          |
| Air Valve/Main Valve Chamber Condition Assessment and Rehabilitation Program                         | 33,300         | 72,000     | 35,000   | 37,000    | -         | -         | -         | -         | -         | -          | -          |
| Anne Street - New 3N Booster Pump Station & 2N Booster Pump Station Reconstruction                   | 23,700         | 51,000     | 25,000   | 26,000    | -         | -         | -         | -         | -         | -          | -          |
| BAS Component Replacement                                                                            | 11,500         | 25,000     | 12,000   | 13,000    | -         | -         | -         | -         | -         | -          | -          |
| Bayfield Street Water Tower - Repairs and Interior Lining Replacement                                | 177,300        | 381,000    | 186,000  | 195,000   | -         | -         | -         | -         | -         | -          | -          |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                              | 181,900        | 392,000    | 191,000  | 201,000   | -         | -         | -         | -         | -         | -          | -          |





Table A-2 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total   | Forecast |         |      |      |      |      |      |      |      |
|------------------------------------------------------------------------------------------|----------------|---------|----------|---------|------|------|------|------|------|------|------|
|                                                                                          |                |         | 2022     | 2023    | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Big Bay Point Road Booster Station VFD Upgrade                                           | 25,000         | 54,000  | 26,000   | 28,000  | -    | -    | -    | -    | -    | -    | -    |
| Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore              | 2,100          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Citizen Relationship Management (CRM) Solution                                           | 17,000         | 37,000  | 18,000   | 19,000  | -    | -    | -    | -    | -    | -    | -    |
| City Hall Customer Contact Centre Renovation                                             | 300            | -       | -        | -       | -    | -    | -    | -    | -    | -    | -    |
| CMMS Improvement Project - Cityworks                                                     | 107,900        | 232,000 | 113,000  | 119,000 | -    | -    | -    | -    | -    | -    | -    |
| Corealis Meters                                                                          | 4,900          | 10,000  | 5,000    | 5,000   | -    | -    | -    | -    | -    | -    | -    |
| Corporate Audio Visual Technology Infrastructure                                         | 100            | -       | -        | -       | -    | -    | -    | -    | -    | -    | -    |
| Corporate Communications Infrastructure Program                                          | 1,700          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Corporate PC Infrastructure Program                                                      | 3,400          | 8,000   | 4,000    | 4,000   | -    | -    | -    | -    | -    | -    | -    |
| Corporate Printing Infrastructure                                                        | 700            | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 65,300         | 141,000 | 69,000   | 72,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)          | 9,500          | 20,000  | 10,000   | 10,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop Street West ROW Replacement - Eccles to Toronto                                   | 32,900         | 71,000  | 35,000   | 36,000  | -    | -    | -    | -    | -    | -    | -    |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 86,600         | 186,000 | 91,000   | 95,000  | -    | -    | -    | -    | -    | -    | -    |
| ERP Sustainment Program                                                                  | 59,900         | 129,000 | 63,000   | 66,000  | -    | -    | -    | -    | -    | -    | -    |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 9,000          | 19,000  | 9,000    | 10,000  | -    | -    | -    | -    | -    | -    | -    |
| Frozen Water Service Repair                                                              | 184,800        | 398,000 | 194,000  | 204,000 | -    | -    | -    | -    | -    | -    | -    |
| Fuel Tank Repairs 2017                                                                   | 11,700         | 25,000  | 12,000   | 13,000  | -    | -    | -    | -    | -    | -    | -    |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 7,900          | 17,000  | 8,000    | 9,000   | -    | -    | -    | -    | -    | -    | -    |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 88,800         | 191,000 | 93,000   | 98,000  | -    | -    | -    | -    | -    | -    | -    |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 2,000          | 4,000   | 2,000    | 2,000   | -    | -    | -    | -    | -    | -    | -    |
| Huron and Big Bay Point Large Diameter Watermain Condition Assessment                    | 127,400        | 274,000 | 134,000  | 140,000 | -    | -    | -    | -    | -    | -    | -    |
| Interim Watermain Replacement Pilot Program                                              | 217,800        | 469,000 | 229,000  | 240,000 | -    | -    | -    | -    | -    | -    | -    |
| Lampman to Anne New Transmission Watermain and Lampman to Leacock ROW Rehabilitation     | 43,900         | 94,000  | 46,000   | 48,000  | -    | -    | -    | -    | -    | -    | -    |
| Lovers Creek New Bridge - Tollendal Mill, 150m West of Coxmill                           | 75,000         | 162,000 | 79,000   | 83,000  | -    | -    | -    | -    | -    | -    | -    |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                         | 900            | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                 | 6,200          | 14,000  | 7,000    | 7,000   | -    | -    | -    | -    | -    | -    | -    |
| Microsoft Office 365 and Windows Enterprise                                              | 1,300          | 2,000   | 1,000    | 1,000   | -    | -    | -    | -    | -    | -    | -    |
| Network Technology Infrastructure Program                                                | 19,300         | 41,000  | 20,000   | 21,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                        | 43,700         | 94,000  | 46,000   | 48,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                        | 15,600         | 33,000  | 16,000   | 17,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                     | 5,200          | 11,000  | 5,000    | 6,000   | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D1 Neighbourhood Reconstruction                                          | 11,400         | 25,000  | 12,000   | 13,000  | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D2 Neighbourhood Reconstruction                                          | 28,700         | 62,000  | 30,000   | 32,000  | -    | -    | -    | -    | -    | -    | -    |



Table A-2 (Cont'd)

| Description                                                                                                   | Budget<br>2021 | Total     | Forecast |         |         |           |           |           |           |         |           |
|---------------------------------------------------------------------------------------------------------------|----------------|-----------|----------|---------|---------|-----------|-----------|-----------|-----------|---------|-----------|
|                                                                                                               |                |           | 2022     | 2023    | 2024    | 2025      | 2026      | 2027      | 2028      | 2029    | 2030      |
| PC Replacements                                                                                               | 100            | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| PRV Chamber Replacement Program                                                                               | 161,800        | 348,000   | 170,000  | 178,000 | -       | -         | -         | -         | -         | -       | -         |
| Public Safety Communication Program                                                                           | 600            | 2,000     | 1,000    | 1,000   | -       | -         | -         | -         | -         | -       | -         |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                                             | 5,300          | 12,000    | 6,000    | 6,000   | -       | -         | -         | -         | -         | -       | -         |
| Rodney St-Blake to Kempenfelt                                                                                 | 6,700          | 14,000    | 7,000    | 7,000   | -       | -         | -         | -         | -         | -       | -         |
| Ross, Collier, Bayfield Intersection Realignment                                                              | 1,500          | 4,000     | 2,000    | 2,000   | -       | -         | -         | -         | -         | -       | -         |
| Secondary Plan Area New Bulk Water Filling Station                                                            | 30,500         | 66,000    | 32,000   | 34,000  | -       | -         | -         | -         | -         | -       | -         |
| Server and Desktop Software Program                                                                           | 100            | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| Server and Storage Technology Infrastructure Program                                                          | 1,700          | 4,000     | 2,000    | 2,000   | -       | -         | -         | -         | -         | -       | -         |
| South L/ill Leachate Gal Repl                                                                                 | 14,700         | 31,000    | 15,000   | 16,000  | -       | -         | -         | -         | -         | -       | -         |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                          | 574,000        | 1,236,000 | 603,000  | 633,000 | -       | -         | -         | -         | -         | -       | -         |
| TCE Groundwater Monitor Wells                                                                                 | 27,400         | 59,000    | 29,000   | 30,000  | -       | -         | -         | -         | -         | -       | -         |
| TCE Plume Mitigation Solution                                                                                 | 24,700         | 53,000    | 26,000   | 27,000  | -       | -         | -         | -         | -         | -       | -         |
| Tiffin Street - Ferndale to Anne Street                                                                       | 400            | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                               | 39,300         | 84,000    | 41,000   | 43,000  | -       | -         | -         | -         | -         | -       | -         |
| Water Dispensing Event Trailer                                                                                | 800            | 2,000     | 1,000    | 1,000   | -       | -         | -         | -         | -         | -       | -         |
| Water Service and Backflow Prevention Upgrades for Parks and Open Spaces                                      | 19,900         | 43,000    | 21,000   | 22,000  | -       | -         | -         | -         | -         | -       | -         |
| Watermain Cathodic Protection Program                                                                         | 344,700        | 742,000   | 362,000  | 380,000 | -       | -         | -         | -         | -         | -       | -         |
| Water and Transportation Asset Management Plans - Update                                                      | 23,400         | 51,000    | 25,000   | 26,000  | -       | -         | -         | -         | -         | -       | -         |
| Watermain Renewal Program                                                                                     | 340,000        | 732,000   | 357,000  | 375,000 | -       | -         | -         | -         | -         | -       | -         |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                      | 25,700         | 55,000    | 27,000   | 28,000  | -       | -         | -         | -         | -         | -       | -         |
| Salem Road New Transmission Watermain and Road Expansion - County Road 27 to Dunn (Developer)                 | 11,800         | 25,000    | 12,000   | 13,000  | -       | -         | -         | -         | -         | -       | -         |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                               | (118,900)      | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| <b>Growth Related:</b>                                                                                        | -              | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| <b>Facilities</b>                                                                                             | -              | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| 000461 - SWTP Optimization                                                                                    | -              | 1,265,000 | -        | -       | -       | 1,265,000 | -         | -         | -         | -       | -         |
| <b>Water Distribution - Salem &amp; Hewitt's Secondary Plan Areas:</b>                                        | -              | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| 000293 - Huronia Road New Transmission Watermain - Mapleview to Lockhart (City)                               | -              | 8,630,000 | -        | -       | -       | -         | -         | 66,000    | 715,000   | 626,000 | 7,223,000 |
| 000926 - Salem Road Reservoir and Pumping Station                                                             | -              | 5,491,000 | -        | -       | -       | -         | 477,000   | 2,446,000 | 2,568,000 | -       | -         |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)  | 491,430        | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1250 - Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                            | 2,760,773      | -         | -        | -       | -       | -         | -         | -         | -         | -       | -         |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                      | (560,800)      | 748,000   | -        | 39,000  | 709,000 | -         | -         | -         | -         | -       | -         |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                             | 72,400         | 1,447,000 | 14,000   | 101,000 | -       | 650,000   | 682,000   | -         | -         | -       | -         |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                      | 255,600        | 6,001,000 | -        | -       | 804,000 | 2,644,000 | 2,553,000 | -         | -         | -       | -         |
| EN1259 - Big Bay Point New Transmission Watermain and Road Expansion - Prince William to Street N (Developer) | -              | 387,000   | -        | 387,000 | -       | -         | -         | -         | -         | -       | -         |



Table A-2 (Cont'd)

| Description                                                                                                  | Budget<br>2021 | Total     | Forecast    |           |      |           |           |           |         |         |      |
|--------------------------------------------------------------------------------------------------------------|----------------|-----------|-------------|-----------|------|-----------|-----------|-----------|---------|---------|------|
|                                                                                                              |                |           | 2022        | 2023      | 2024 | 2025      | 2026      | 2027      | 2028    | 2029    | 2030 |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madelaine (City)                                          | 16,600         | 600,000   | -           | -         | -    | -         | 26,000    | 223,000   | 351,000 | -       | -    |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer) | -              | 247,000   | 247,000     | -         | -    | -         | -         | -         | -       | -       | -    |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                              | -              | 4,596,000 | 70,000      | 107,000   | -    | 1,402,000 | 1,472,000 | 1,545,000 | -       | -       | -    |
| EN1272 - Salem Rd New Watermain, New Trunk Sanitary Sewer and ROW Expansion - Veterans to Saunders (City)    | -              | (358,000) | (1,120,000) | -         | -    | -         | 71,000    | 337,000   | 354,000 | -       | -    |
| EN1275 - Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                               | 261,000        | -         | -           | -         | -    | -         | -         | -         | -       | -       | -    |
| EN1276 - Salem Road New Transmission Watermain and Road Expansion County Road 27 to Dunn (Developer)         | 15,000         | 237,000   | 237,000     | -         | -    | -         | -         | -         | -       | -       | -    |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                    | -              | 443,000   | -           | -         | -    | -         | -         | 84,000    | 175,000 | 184,000 | -    |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                        | -              | 355,000   | -           | -         | -    | -         | 44,000    | 311,000   | -       | -       | -    |
| EN1339 - Yonge Street ROW Expansion - Madelaine Drive (South) extension to Lockhart (City)                   | -              | 1,276,000 | -           | 20,000    | -    | -         | 77,000    | 458,000   | 721,000 | -       | -    |
| <b>Carryforwards</b>                                                                                         | -              | -         | -           | -         | -    | -         | -         | -         | -       | -       | -    |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain - Big Bay Point to Mapleview (City)      | 200            | -         | -           | -         | -    | -         | -         | -         | -       | -       | -    |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)          | 58,600         | 127,000   | 62,000      | 65,000    | -    | -         | -         | -         | -       | -       | -    |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                                    | 16,600         | 35,000    | 17,000      | 18,000    | -    | -         | -         | -         | -       | -       | -    |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                                             | 755,000        | 1,625,000 | 793,000     | 832,000   | -    | -         | -         | -         | -       | -       | -    |
| McKay Road New Interchange - Highway 400 (City)                                                              | 18,700         | 41,000    | 20,000      | 21,000    | -    | -         | -         | -         | -       | -       | -    |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                       | 11,700         | 25,000    | 12,000      | 13,000    | -    | -         | -         | -         | -       | -       | -    |
| Secondary Plan Area New Bulk Water Filling Station                                                           | 30,500         | 66,000    | 32,000      | 34,000    | -    | -         | -         | -         | -       | -       | -    |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)          | 16,000         | 35,000    | 17,000      | 18,000    | -    | -         | -         | -         | -       | -       | -    |
| Essa Road New Transmission Watermain - Athabaska to Salem (Developer)                                        | 721,500        | 1,553,000 | 758,000     | 795,000   | -    | -         | -         | -         | -       | -       | -    |
| Essa Road New Transmission Watermain - Mapleview to Athabaska (Developer)                                    | 616,200        | 1,326,000 | 647,000     | 679,000   | -    | -         | -         | -         | -       | -       | -    |
| Mapleview Drive E New Transmission Watermain - Yonge to Royal Jubilee (Developer)                            | 1,927,900      | 4,150,000 | 2,024,000   | 2,126,000 | -    | -         | -         | -         | -       | -       | -    |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 886,900        | 1,909,000 | 931,000     | 978,000   | -    | -         | -         | -         | -       | -       | -    |
| Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                              | 826,300        | 1,779,000 | 868,000     | 911,000   | -    | -         | -         | -         | -       | -       | -    |
| Ashford Drive and Madelaine Drive New 750 mm Transmission Watermain - Big Bay Point to Mapleview (City)      | 112,300        | 242,000   | 118,000     | 124,000   | -    | -         | -         | -         | -       | -       | -    |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)          | 11,300         | 24,000    | 12,000      | 12,000    | -    | -         | -         | -         | -       | -       | -    |
| Sandringham Drive New 600mm Transmission Watermain - Big Bay Point to Mapleview (City)                       | 58,700         | 127,000   | 62,000      | 65,000    | -    | -         | -         | -         | -       | -       | -    |



Table A-2 (Cont'd)

| Description                                                                                              | Budget<br>2021    | Total              | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|----------------------------------------------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                                          |                   |                    | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| <b>Former Municipal Boundary Areas:</b>                                                                  | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| 000924 - Fairview Road Right of Way Expansion - Big Bay Point to Little                                  | -                 | 14,000             | -                 | -                 | -                 | -                 | -                 | 7,000             | 7,000             | -                 | -                 |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                            | 1,351,550         | 5,198,000          | 2,993,000         | 2,205,000         | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1016 - Tiffin Street - Well 7 to Ferndale                                                              | 342,000           | 6,921,000          | 2,835,000         | 3,816,000         | 270,000           | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                                | 434,250           | 1,064,000          | 1,064,000         | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster           | 1,000,000         | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        | -                 | 1,405,000          | -                 | 122,000           | 1,283,000         | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1168 - Dyments Creek Culvert Expansion - Bradford St.                                                  | -                 | 488,000            | -                 | 180,000           | 191,000           | 117,000           | -                 | -                 | -                 | -                 | -                 |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                                 | -                 | 378,000            | -                 | -                 | -                 | -                 | -                 | -                 | 147,000           | 231,000           | -                 |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                | -                 | 265,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | 265,000           |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | -                 | 212,000            | -                 | 81,000            | 64,000            | 67,000            | -                 | -                 | -                 | -                 | -                 |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 48,100            | 351,000            | 66,000            | 139,000           | 146,000           | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 466,060           | 698,000            | 698,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 122,045           | 1,346,000          | 24,000            | 60,000            | 599,000           | 525,000           | 138,000           | -                 | -                 | -                 | -                 |
| EN1333 - Huronia Road Right of Way Expansion - Yonge to Herrell                                          | -                 | 81,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | 81,000            |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | -                 | 929,000            | -                 | -                 | 29,000            | 439,000           | 461,000           | -                 | -                 | -                 | -                 |
| EN1377 - Anne Street Right of Way Expansion - Wellington to Dunlop                                       | -                 | 638,000            | -                 | -                 | 30,000            | 32,000            | -                 | -                 | 281,000           | 295,000           | -                 |
| Z423 - Cundles Road East New Transmission Watermain - St Vincent to Golden Eagle                         | -                 | 1,428,000          | -                 | -                 | -                 | -                 | -                 | -                 | 345,000           | 1,083,000         | -                 |
| Z436 - Huronia Road Right of Way Expansion - Herrell to Big Bay Point                                    | -                 | 8,000              | -                 | -                 | -                 | -                 | -                 | -                 | 4,000             | 4,000             | -                 |
| Z438 - Lakeshore/Hurst Drive ROW Expansion - Tiffin Street to Cox Mill                                   | -                 | 8,000              | -                 | -                 | -                 | -                 | -                 | -                 | 4,000             | 4,000             | -                 |
| <b>Carryforwards</b>                                                                                     | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 281,700           | 607,000            | 296,000           | 311,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent                 | 116,100           | 250,000            | 122,000           | 128,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Dunlop Street Right of Way Expansion - Sarjeant to Anne (outside of CAH limits)                          | 7,200             | 16,000             | 8,000             | 8,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster                    | 28,500            | 61,000             | 30,000            | 31,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                                            | 8,800             | 19,000             | 9,000             | 10,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Sunnidale: Letitia-Wellington Transmission Watermain                                                     | 291,100           | 627,000            | 306,000           | 321,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Tiffin Street - Ferndale to Anne Street                                                                  | 1,100             | 2,000              | 1,000             | 1,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>Total Capital Expenditures</b>                                                                        | <b>24,053,397</b> | <b>193,984,000</b> | <b>26,712,000</b> | <b>36,007,000</b> | <b>19,416,000</b> | <b>18,374,000</b> | <b>14,163,000</b> | <b>18,319,000</b> | <b>18,263,000</b> | <b>17,860,000</b> | <b>24,870,000</b> |



Table A-2 (Cont'd)

| Description                                                                     | Budget<br>2021    | Total              | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|---------------------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                 |                   |                    | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| <b>Capital Financing</b>                                                        |                   |                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Provincial/Federal Grants                                                       | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Facilities                                   | -                 | 1,265,000          | -                 | -                 | -                 | 1,265,000         | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Facilities Related Debt                      | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Distribution Systems - Former Barrie         | 2,550,495         | 12,131,270         | 4,872,060         | 3,730,140         | 1,220,640         | 612,360           | 358,990           | 4,550             | 403,960           | 761,970           | 166,600           |
| Development Charges Reserve Fund - Distribution Systems - Salem & Hewitt's      | 9,377,913         | 43,074,000         | 5,821,000         | 7,345,000         | 1,513,000         | 4,696,000         | 5,398,100         | 5,436,550         | 4,831,350         | 810,000           | 7,223,000         |
| Non-Growth Related Debenture Requirements                                       | 258,600           | 20,843,000         | -                 | 10,364,000        | 8,179,000         | 2,300,000         | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Facilities                              | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Facilities Related Debt                 | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Distribution Systems - Former Barrie    | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Distribution Systems - Salem & Hewitt's | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Operating Contributions                                                         | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Water Rate Stabilization Reserve Fund                                           | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Water Rate Capital Reserve Fund                                                 | 11,866,388        | 116,670,730        | 16,018,940        | 14,567,860        | 8,503,360         | 9,500,640         | 8,405,910         | 12,877,900        | 13,027,690        | 16,288,030        | 17,480,400        |
| <b>Total Capital Financing</b>                                                  | <b>24,053,397</b> | <b>193,984,000</b> | <b>26,712,000</b> | <b>36,007,000</b> | <b>19,416,000</b> | <b>18,374,000</b> | <b>14,163,000</b> | <b>18,319,000</b> | <b>18,263,000</b> | <b>17,860,000</b> | <b>24,870,000</b> |

Table A-3  
City of Barrie  
Water Service  
Schedule of Non-Growth Related Debenture Repayments (Inflated \$)

| Debenture<br>Year                | 2021     | Principal<br>(Inflated) | Forecast      |               |                |                  |                  |                  |                  |                  |                  |
|----------------------------------|----------|-------------------------|---------------|---------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                  |          |                         | 2022          | 2023          | 2024           | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
| 2021                             |          | 258,600                 | 17,382        | 17,382        | 17,382         | 17,382           | 17,382           | 17,382           | 17,382           | 17,382           | 17,382           |
| 2022                             |          | -                       | -             | -             | -              | -                | -                | -                | -                | -                | -                |
| 2023                             |          | 10,364,000              |               |               | 696,624        | 696,624          | 696,624          | 696,624          | 696,624          | 696,624          | 696,624          |
| 2024                             |          | 8,179,000               |               |               |                | 549,757          | 549,757          | 549,757          | 549,757          | 549,757          | 549,757          |
| 2025                             |          | 2,300,000               |               |               |                |                  | 154,596          | 154,596          | 154,596          | 154,596          | 154,596          |
| 2026                             |          | -                       |               |               |                |                  |                  | -                | -                | -                | -                |
| 2027                             |          | -                       |               |               |                |                  |                  |                  | -                | -                | -                |
| 2028                             |          | -                       |               |               |                |                  |                  |                  |                  | -                | -                |
| 2029                             |          | -                       |               |               |                |                  |                  |                  |                  |                  | -                |
| 2030                             |          | -                       |               |               |                |                  |                  |                  |                  |                  |                  |
| <b>Total Annual Debt Charges</b> | <b>-</b> | <b>21,101,600</b>       | <b>17,382</b> | <b>17,382</b> | <b>714,006</b> | <b>1,263,763</b> | <b>1,418,359</b> | <b>1,418,359</b> | <b>1,418,359</b> | <b>1,418,359</b> | <b>1,418,359</b> |



Table A-4  
City of Barrie  
Water Service  
Schedule of Growth-Related Debenture Repayments – Water Facilities (Inflated \$)

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |
|----------------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|
|                                  |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 2022                             |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    |
| 2023                             |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    |
| 2024                             |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    |
| 2025                             |      | -                       |          |      |      |      | -    | -    | -    | -    | -    |
| 2026                             |      | -                       |          |      |      |      |      | -    | -    | -    | -    |
| 2027                             |      | -                       |          |      |      |      |      |      | -    | -    | -    |
| 2028                             |      | -                       |          |      |      |      |      |      |      | -    | -    |
| 2029                             |      | -                       |          |      |      |      |      |      |      |      | -    |
| 2030                             |      | -                       |          |      |      |      |      |      |      |      |      |
| <b>Total Annual Debt Charges</b> | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    |

Table A-5  
City of Barrie  
Water Service  
Schedule of Growth-Related Debenture Repayments – Water Facilities Related Debt (Inflated \$)

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |
|----------------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|
|                                  |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 2022                             |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    |
| 2023                             |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    |
| 2024                             |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    |
| 2025                             |      | -                       |          |      |      |      | -    | -    | -    | -    | -    |
| 2026                             |      | -                       |          |      |      |      |      | -    | -    | -    | -    |
| 2027                             |      | -                       |          |      |      |      |      |      | -    | -    | -    |
| 2028                             |      | -                       |          |      |      |      |      |      |      | -    | -    |
| 2029                             |      | -                       |          |      |      |      |      |      |      |      | -    |
| 2030                             |      | -                       |          |      |      |      |      |      |      |      |      |
| <b>Total Annual Debt Charges</b> | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    |



Table A-6  
City of Barrie  
Water Service  
Schedule of Growth-Related Debenture Repayments – Distribution Systems – Former Municipal Boundary Areas  
(Inflated \$)

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |   |
|----------------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|---|
|                                  |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |   |
| 2022                             |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    | - |
| 2023                             |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    | - |
| 2024                             |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    | - |
| 2025                             |      | -                       |          |      |      |      | -    | -    | -    | -    | -    | - |
| 2026                             |      | -                       |          |      |      |      |      | -    | -    | -    | -    | - |
| 2027                             |      | -                       |          |      |      |      |      |      | -    | -    | -    | - |
| 2028                             |      | -                       |          |      |      |      |      |      |      | -    | -    | - |
| 2029                             |      | -                       |          |      |      |      |      |      |      |      | -    | - |
| 2030                             |      | -                       |          |      |      |      |      |      |      |      |      | - |
| <b>Total Annual Debt Charges</b> | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    | - |

Table A-7  
City of Barrie  
Water Service  
Schedule of Growth-Related Debenture Repayments – Distribution Systems – Salem & Hewitt's Secondary Plan Areas

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |   |
|----------------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|---|
|                                  |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |   |
| 2022                             |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    | - |
| 2023                             |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    | - |
| 2024                             |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    | - |
| 2025                             |      | -                       |          |      |      |      | -    | -    | -    | -    | -    | - |
| 2026                             |      | -                       |          |      |      |      |      | -    | -    | -    | -    | - |
| 2027                             |      | -                       |          |      |      |      |      |      | -    | -    | -    | - |
| 2028                             |      | -                       |          |      |      |      |      |      |      | -    | -    | - |
| 2029                             |      | -                       |          |      |      |      |      |      |      |      | -    | - |
| 2030                             |      | -                       |          |      |      |      |      |      |      |      |      | - |
| <b>Total Annual Debt Charges</b> | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    | - |



Table A-8  
City of Barrie  
Water Service  
Water Capital Reserve Fund Continuity (Inflated \$)

| Description             | 2021              | 2022             | 2023          | 2024          | 2025          | 2026             | 2027             | 2028             | 2029             | 2030             |
|-------------------------|-------------------|------------------|---------------|---------------|---------------|------------------|------------------|------------------|------------------|------------------|
| Opening Balance         | 19,399,469        | 14,893,589       | 6,376,651     | 43,205        | 45,950        | 48,096           | 2,688,011        | 2,604,947        | 4,258,679        | 4,638,320        |
| Transfer from Operating | 7,068,478         | 7,376,969        | 8,233,567     | 8,505,204     | 9,501,843     | 10,993,119       | 12,743,758       | 14,597,919       | 16,576,724       | 18,678,865       |
| Transfer to Capital     | 11,866,388        | 16,018,940       | 14,567,860    | 8,503,360     | 9,500,640     | 8,405,910        | 12,877,900       | 13,027,690       | 16,288,030       | 17,480,400       |
| Transfer to Operating   | -                 | -                | -             | -             | -             | -                | -                | -                | -                | -                |
| <b>Closing Balance</b>  | <b>14,601,558</b> | <b>6,251,619</b> | <b>42,358</b> | <b>45,049</b> | <b>47,153</b> | <b>2,635,305</b> | <b>2,553,869</b> | <b>4,175,175</b> | <b>4,547,373</b> | <b>5,836,786</b> |
| Interest                | 292,031           | 125,032          | 847           | 901           | 943           | 52,706           | 51,077           | 83,504           | 90,947           | 116,736          |

Table A-9  
City of Barrie  
Water Service  
Water Rate Stabilization Reserve Fund Continuity (Inflated \$)

| Description             | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Opening Balance         | 3,127,216        | 3,189,760        | 3,253,555        | 3,318,627        | 3,384,999        | 3,452,699        | 3,521,753        | 3,592,188        | 3,664,032        | 3,737,312        |
| Transfer from Operating | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Transfer to Capital     | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Transfer to Operating   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Closing Balance</b>  | <b>3,127,216</b> | <b>3,189,760</b> | <b>3,253,555</b> | <b>3,318,627</b> | <b>3,384,999</b> | <b>3,452,699</b> | <b>3,521,753</b> | <b>3,592,188</b> | <b>3,664,032</b> | <b>3,737,312</b> |
| Interest                | 62,544           | 63,795           | 65,071           | 66,373           | 67,700           | 69,054           | 70,435           | 71,844           | 73,281           | 74,746           |

Table A-10  
City of Barrie  
Water Service  
Water Development Charges Reserve Fund Continuity – Water Facilities (Inflated \$)

| Description                       | 2021           | 2022           | 2023           | 2024           | 2025             | 2026             | 2027          | 2028           | 2029           | 2030           |
|-----------------------------------|----------------|----------------|----------------|----------------|------------------|------------------|---------------|----------------|----------------|----------------|
| Opening Balance                   | 118,481        | 229,299        | 340,719        | 471,366        | 689,976          | (373,036)        | (162,607)     | 56,365         | 284,029        | 520,681        |
| Development Charge Proceeds       | 106,321        | 104,740        | 121,404        | 205,081        | 209,303          | 213,617          | 217,868       | 222,095        | 226,442        | 230,719        |
| Transfer to Capital               | -              | -              | -              | -              | 1,265,000        | -                | -             | -              | -              | -              |
| Transfer to Operating             | -              | -              | -              | -              | -                | -                | -             | -              | -              | -              |
| <b>Closing Balance</b>            | <b>224,803</b> | <b>334,039</b> | <b>462,123</b> | <b>676,447</b> | <b>(365,722)</b> | <b>(159,419)</b> | <b>55,260</b> | <b>278,460</b> | <b>510,472</b> | <b>751,400</b> |
| Interest                          | 4,496          | 6,681          | 9,242          | 13,529         | (7,314)          | (3,188)          | 1,105         | 5,569          | 10,209         | 15,028         |
| Required from Development Charges | -              | -              | -              | -              | 1,265,000        | -                | -             | -              | -              | -              |





Table A-11  
City of Barrie  
Water Service  
Water Development Charges Reserve Fund Continuity – Water Facilities Related Debt (Inflated \$)

| Description                       | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028               | 2029               | 2030             |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|------------------|
| Opening Balance                   | (31,675,579)        | (33,332,387)        | (35,134,525)        | (35,884,711)        | (31,125,406)        | (25,994,745)        | (20,476,323)        | (14,562,647)       | (8,242,646)        | (1,495,891)      |
| Development Charge Proceeds       | 6,914,250           | 6,804,255           | 7,870,917           | 13,287,088          | 13,557,844          | 13,837,400          | 14,116,700          | 14,399,102         | 14,693,567         | 14,987,408       |
| Transfer to Capital               | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                  | -                  | -                |
| Transfer to Operating             | 7,917,481           | 7,917,481           | 7,917,481           | 7,917,481           | 7,917,481           | 7,917,481           | 7,917,481           | 7,917,481          | 7,917,481          | 7,917,481        |
| <b>Closing Balance</b>            | <b>(32,678,811)</b> | <b>(34,445,613)</b> | <b>(35,181,089)</b> | <b>(30,515,104)</b> | <b>(25,485,044)</b> | <b>(20,074,827)</b> | <b>(14,277,105)</b> | <b>(8,081,025)</b> | <b>(1,466,560)</b> | <b>5,574,035</b> |
| Interest                          | (653,576)           | (688,912)           | (703,622)           | (610,302)           | (509,701)           | (401,497)           | (285,542)           | (161,621)          | (29,331)           | 111,481          |
| Required from Development Charges |                     |                     |                     |                     |                     |                     |                     |                    |                    |                  |

Table A-12  
City of Barrie  
Water Service  
Water Development Charges Reserve Fund Continuity – Distribution System – Former Municipal Boundary Areas  
(Inflated \$)

| Description                       | 2021               | 2022               | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Opening Balance                   | (2,110,447)        | (4,379,170)        | (9,053,393)         | (12,648,302)        | (13,553,984)        | (13,845,316)        | (13,871,187)        | (13,523,829)        | (13,564,003)        | (13,957,125)        |
| Development Charge Proceeds       | 367,637            | 375,355            | 383,237             | 580,723             | 592,504             | 605,103             | 617,081             | 629,747             | 642,516             | 655,393             |
| Transfer to Capital               | 2,550,495          | 4,872,060          | 3,730,140           | 1,220,640           | 612,360             | 358,990             | 4,550               | 403,960             | 761,970             | 166,600             |
| Transfer to Operating             | -                  | -                  | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   |
| <b>Closing Balance</b>            | <b>(4,293,304)</b> | <b>(8,875,875)</b> | <b>(12,400,296)</b> | <b>(13,288,219)</b> | <b>(13,573,839)</b> | <b>(13,599,203)</b> | <b>(13,258,656)</b> | <b>(13,298,042)</b> | <b>(13,683,456)</b> | <b>(13,468,333)</b> |
| Interest                          | (85,866)           | (177,518)          | (248,006)           | (265,764)           | (271,477)           | (271,984)           | (265,173)           | (265,961)           | (273,669)           | (269,367)           |
| Required from Development Charges | 2,550,495          | 4,872,060          | 3,730,140           | 1,220,640           | 612,360             | 358,990             | 4,550               | 403,960             | 761,970             | 166,600             |



Table A-13  
City of Barrie  
Water Service  
Water Development Charges Reserve Fund Continuity – Distribution System – Salem & Hewitt's Secondary Plan Areas  
(Inflated \$)

| Description                       | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028               | 2029           | 2030             |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|----------------|------------------|
| Opening Balance                   | (12,381,102)        | (18,528,575)        | (21,377,513)        | (24,740,904)        | (18,780,957)        | (15,788,810)        | (13,289,598)        | (10,609,981)       | (7,089,501)    | 783,047          |
| Development Charge Proceeds       | 3,593,746           | 3,391,229           | 4,466,725           | 7,841,201           | 7,997,732           | 8,157,892           | 8,324,206           | 8,490,840          | 8,667,194      | 8,840,576        |
| Transfer to/(from) Capital        | 9,377,913           | 5,821,000           | 7,345,000           | 1,513,000           | 4,696,000           | 5,398,100           | 5,436,550           | 4,831,350          | 810,000        | 7,223,000        |
| Transfer to Operating             | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                  | -              | -                |
| <b>Closing Balance</b>            | <b>(18,165,269)</b> | <b>(20,958,346)</b> | <b>(24,255,788)</b> | <b>(18,412,703)</b> | <b>(15,479,225)</b> | <b>(13,029,017)</b> | <b>(10,401,942)</b> | <b>(6,950,491)</b> | <b>767,693</b> | <b>2,400,623</b> |
| Interest                          | (363,305)           | (419,167)           | (485,116)           | (368,254)           | (309,585)           | (260,580)           | (208,039)           | (139,010)          | 15,354         | 48,012           |
| Required from Development Charges | 9,377,913           | 5,821,000           | 7,345,000           | 1,513,000           | 4,696,000           | 5,398,100           | 5,436,550           | 4,831,350          | 810,000        | 7,223,000        |



**Table A-14**  
**City of Barrie**  
**Water Services**  
**Operating Budget Forecast (Inflated \$)**

| Description                                    | Budget<br>2021 | Forecast  |           |           |           |           |           |           |           |           |
|------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                |                | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| <b>Expenditures</b>                            |                |           |           |           |           |           |           |           |           |           |
| <u>Operating Costs</u>                         |                |           |           |           |           |           |           |           |           |           |
| 400000 - Full-time Salaries                    | 6,051,907      | 6,206,281 | 6,346,102 | 6,463,396 | 6,592,700 | 6,724,600 | 6,859,100 | 6,996,300 | 7,136,200 | 7,278,900 |
| 400100 - Full-time Salaries - Casual           | 290,979        | 373,346   | 279,633   | 221,111   | 225,500   | 230,000   | 234,600   | 239,300   | 244,100   | 249,000   |
| 400700 - Full-time Overtime                    | 162,590        | 165,856   | 169,173   | 172,556   | 176,000   | 179,500   | 183,100   | 186,800   | 190,500   | 194,300   |
| 401000 - Full-time Salary Recovery             | (123,846)      | (214,322) | (90,731)  | -         | -         | -         | -         | -         | -         | -         |
| 401100 - Full-time Fringe Benefits             | 1,642,068      | 1,672,108 | 1,699,210 | 1,721,943 | 1,756,400 | 1,791,500 | 1,827,300 | 1,863,800 | 1,901,100 | 1,939,100 |
| 401200 - Full-time Fringe Benefits - Casual    | 37,440         | 44,443    | 35,883    | 28,236    | 28,800    | 29,400    | 30,000    | 30,600    | 31,200    | 31,800    |
| 433100 - Part-time Salaries - Casual           | 117,487        | 123,093   | 129,314   | 135,432   | 138,100   | 140,900   | 143,700   | 146,600   | 149,500   | 152,500   |
| 433500 - Part-time Fringe Benefits - Casual    | 15,548         | 16,336    | 17,210    | 18,069    | 18,400    | 18,800    | 19,200    | 19,600    | 20,000    | 20,400    |
| Salaries & Benefits for Additional Staff       |                | 86,200    | 87,900    | 89,700    | 91,500    | 93,300    | 95,200    | 97,100    | 99,000    | 101,000   |
| 500400 - Stationery & Office Supplies          | 47,643         | 52,151    | 53,194    | 54,257    | 55,300    | 56,400    | 57,500    | 58,700    | 59,900    | 61,100    |
| 500500 - Preprinted Forms, Tags & Passes       | 4,735          | 3,589     | 3,661     | 3,734     | 3,800     | 3,900     | 4,000     | 4,100     | 4,200     | 4,300     |
| 500800 - Meetings & Meal Expenses              | 10,127         | 10,476    | 10,686    | 10,899    | 11,100    | 11,300    | 11,500    | 11,700    | 11,900    | 12,100    |
| 501000 - Award & Ceremony Expenses             | 1,875          | 1,950     | 1,989     | 2,029     | 2,100     | 2,100     | 2,100     | 2,100     | 2,100     | 2,100     |
| 501100 - Protective Clothing                   | 24,290         | 25,494    | 26,004    | 26,524    | 27,100    | 27,600    | 28,200    | 28,800    | 29,400    | 30,000    |
| 501300 - Clothing Allowance                    | 6,710          | 6,947     | 7,086     | 7,228     | 7,400     | 7,500     | 7,700     | 7,900     | 8,100     | 8,300     |
| 501500 - Protective Equipment                  | 27,970         | 28,867    | 29,444    | 30,033    | 30,600    | 31,200    | 31,800    | 32,400    | 33,000    | 33,700    |
| 510100 - Chemicals                             | 171,606        | 172,428   | 173,267   | 174,122   | 182,800   | 191,900   | 201,500   | 211,600   | 222,200   | 233,300   |
| 520000 - Gasoline                              | 3,798          | 3,874     | 3,951     | 4,030     | 4,200     | 4,400     | 4,600     | 4,800     | 5,000     | 5,300     |
| 520100 - Hydro                                 | 1,761,153      | 1,796,376 | 1,832,304 | 1,868,950 | 1,962,400 | 2,060,500 | 2,163,500 | 2,271,700 | 2,385,300 | 2,504,600 |
| 520200 - Water & Wastewater                    | 96,068         | 97,989    | 99,949    | 101,948   | 104,000   | 106,100   | 108,200   | 110,400   | 112,600   | 114,900   |
| 520300 - Natural Gas                           | 125,007        | 127,507   | 130,057   | 132,658   | 135,300   | 138,000   | 140,800   | 143,600   | 146,500   | 149,400   |
| 540300 - Small Parts                           | 93,083         | 96,248    | 98,051    | 99,891    | 101,900   | 103,900   | 106,000   | 108,100   | 110,300   | 112,500   |
| 540500 - Asphalt                               | 48,000         | 49,915    | 50,913    | 51,931    | 53,000    | 54,100    | 55,200    | 56,300    | 57,400    | 58,500    |
| 540900 - Field & Other Supplies                | 474,227        | 486,096   | 494,228   | 502,502   | 512,600   | 522,900   | 533,400   | 544,100   | 555,000   | 566,100   |
| 541400 - Laboratory Supplies                   | 15,240         | 15,550    | 15,861    | 16,178    | 16,500    | 16,800    | 17,100    | 17,400    | 17,700    | 18,100    |
| 541600 - Purchases for Resale                  | 102,170        | 104,213   | 106,298   | 108,424   | 110,600   | 112,800   | 115,100   | 117,400   | 119,700   | 122,100   |
| 560200 - Minor Capital - General               | 424,446        | 437,466   | 444,714   | 452,107   | 461,100   | 470,300   | 479,700   | 489,300   | 499,100   | 509,100   |
| 570000 - Small Tools                           | 25,447         | 26,398    | 26,926    | 27,464    | 28,000    | 28,600    | 29,200    | 29,800    | 30,400    | 31,000    |
| 600000 - Conferences & Trade Show Registration | 32,377         | 35,353    | 36,060    | 36,781    | 37,500    | 38,300    | 39,100    | 39,900    | 40,700    | 41,500    |
| 600100 - Kilometer Reimbursement               | 9,359          | 9,722     | 9,916     | 10,114    | 10,300    | 10,500    | 10,700    | 10,900    | 11,100    | 11,300    |
| 620000 - Staff Training & Development          | 132,030        | 144,128   | 147,011   | 149,951   | 152,900   | 156,000   | 159,100   | 162,300   | 165,500   | 168,800   |
| 620200 - Memberships & Subscriptions           | 148,816        | 160,453   | 163,652   | 166,915   | 170,300   | 173,700   | 177,200   | 180,700   | 184,300   | 188,000   |
| 640500 - Consultants - General                 | 1,436          | 1,542     | 1,573     | 1,605     | 1,600     | 1,600     | 1,600     | 1,600     | 1,600     | 1,600     |
| 660400 - Examination Services                  | 250            | 255       | 260       | 265       | 300       | 300       | 300       | 300       | 300       | 300       |
| 661100 - Advertising Services                  | 2,360          | 2,454     | 2,503     | 2,553     | 2,600     | 2,700     | 2,800     | 2,900     | 3,000     | 3,100     |
| 661200 - Application & Permit Services         | 3,784          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| 661400 - Cellular Telephone Services           | 44,785         | 45,788    | 46,353    | 46,929    | 47,900    | 48,900    | 49,900    | 50,900    | 51,900    | 52,900    |
| 661800 - Telephone Services                    | 29,910         | 30,225    | 30,390    | 30,558    | 31,200    | 31,800    | 32,400    | 33,000    | 33,700    | 34,400    |
| 670700 - Contracted Services - General         | 904,635        | 915,040   | 926,415   | 940,018   | 958,800   | 978,000   | 997,600   | 1,017,600 | 1,038,000 | 1,058,800 |
| 671900 - Contracted Services - Snow Clearing   | 118,280        | 122,998   | 125,458   | 127,967   | 130,500   | 133,100   | 135,800   | 138,500   | 141,300   | 144,100   |
| 672200 - Contracted Services - Water           | 9,050          | 9,411     | 9,599     | 9,791     | 10,000    | 10,200    | 10,400    | 10,600    | 10,800    | 11,000    |



Table A-14 (Cont'd)

| Description                                                                   | 2021              | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
|-------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 672600 - Contracted Services - Painting                                       | 57,000            | 58,140            | 59,303            | 60,489            | 61,700            | 62,900            | 64,200            | 65,500            | 66,800            | 68,100            |
| 675100 - Repairs & Maintenance - Building                                     | 5,820             | 6,053             | 6,174             | 6,297             | 6,400             | 6,500             | 6,600             | 6,700             | 6,800             | 6,900             |
| 675400 - Repairs & Maintenance - Equipment                                    | 232,239           | 234,604           | 236,224           | 237,877           | 242,600           | 247,500           | 252,500           | 257,600           | 262,800           | 268,100           |
| 676100 - Repairs & Maintenance - Hydrants                                     | 101,966           | 104,005           | 106,085           | 108,207           | 110,400           | 112,600           | 114,900           | 117,200           | 119,500           | 121,900           |
| 676400 - Repairs & Maintenance - Parking                                      | 32,219            | 32,606            | 33,001            | 33,403            | 34,100            | 34,800            | 35,500            | 36,200            | 36,900            | 37,600            |
| 700000 - Equipment Rental/Lease                                               | 84,633            | 23,103            | 25,258            | 27,056            | 27,600            | 28,200            | 28,800            | 29,400            | 30,000            | 30,600            |
| 720400 - Debit & Credit Card Fees                                             | 1,315             | 1,341             | 1,368             | 1,395             | 1,400             | 1,400             | 1,400             | 1,400             | 1,400             | 1,400             |
| 720800 - Insurance Premium                                                    | 219,043           | 223,424           | 227,892           | 232,450           | 237,100           | 241,800           | 246,600           | 251,500           | 256,500           | 261,600           |
| 721100 - Insurance Settlement                                                 | 29,260            | 29,845            | 30,442            | 31,051            | 31,700            | 32,300            | 32,900            | 33,600            | 34,300            | 35,000            |
| 900500 - Interdepartmental - General                                          | 100,000           | 100,000           | 132,118           | 166,236           | 169,600           | 173,000           | 176,500           | 180,000           | 183,600           | 187,300           |
| 901000 - Interdepartmental - Fleet                                            | 298,690           | 304,664           | 310,757           | 316,972           | 323,300           | 329,800           | 336,400           | 343,100           | 350,000           | 357,000           |
| 901599 - Interdepartmental - Property (Automated)                             | 946,770           | 961,145           | 976,297           | 991,654           | 1,011,500         | 1,031,700         | 1,052,300         | 1,073,300         | 1,094,800         | 1,116,700         |
| 902000 - Interdepartmental - Corporate Support                                | 5,898,416         | 5,994,070         | 6,091,577         | 6,183,636         | 6,307,300         | 6,433,400         | 6,562,100         | 6,693,300         | 6,827,200         | 6,963,700         |
| 903000 - Interdepartmental - Water Rates (Manual)                             | 694,973           | 697,178           | 738,592           | 741,881           | 756,700           | 771,800           | 787,200           | 802,900           | 819,000           | 835,400           |
| 903099 - Interdepartmental - Water Rates (Automated)                          | 77,728            | 78,834            | 80,400            | 82,000            | 83,600            | 85,300            | 87,000            | 88,700            | 90,500            | 92,300            |
| Low-Income Support Grant Program                                              |                   | 300,000           | 306,000           | 312,100           | 318,300           | 324,700           | 331,200           | 337,800           | 344,600           | 351,500           |
| Transfer to Fleet Management Reserve                                          | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           | 345,000           |
| Funding of DC Exemptions for Residential Intensification                      | 152,439           | 141,653           | 195,881           | 581,505           | 593,120           | 605,430           | 618,400           | 630,835           | 643,484           | 656,323           |
| <b>Sub Total Operating</b>                                                    | <b>22,372,350</b> | <b>23,129,909</b> | <b>23,683,837</b> | <b>24,508,010</b> | <b>25,052,520</b> | <b>25,611,530</b> | <b>26,185,700</b> | <b>26,773,535</b> | <b>27,376,784</b> | <b>27,995,723</b> |
| <b>Capital-Related</b>                                                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities Related Debt          | 1,975,688         | 2,066,476         | 2,161,492         | 2,260,937         | 2,365,020         | 2,473,959         | 2,587,985         | 2,707,337         | 2,832,268         | 2,963,043         |
| Existing Debt (Interest) - Growth Related - Facilities Related Debt           | 5,941,793         | 5,851,006         | 5,755,989         | 5,656,544         | 5,552,461         | 5,443,522         | 5,329,496         | 5,210,144         | 5,085,213         | 4,954,439         |
| New Non-Growth Related Debt (Principal)                                       | -                 | 9,624             | 9,913             | 395,914           | 712,178           | 819,140           | 843,714           | 869,025           | 895,096           | 921,949           |
| New Non-Growth Related Debt (Interest)                                        | -                 | 7,758             | 7,469             | 318,092           | 551,584           | 599,219           | 574,645           | 549,334           | 523,263           | 496,410           |
| Transfer to Capital                                                           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Water Rate Stabilization Reserve Fund                             | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Water Capital Reserve Fund                                        | 7,068,478         | 7,083,882         | 7,333,536         | 6,942,925         | 7,200,546         | 7,880,349         | 8,742,358         | 9,625,869         | 10,546,845        | 11,498,457        |
| <b>Sub Total Capital Related</b>                                              | <b>14,985,959</b> | <b>15,018,745</b> | <b>15,268,400</b> | <b>15,574,412</b> | <b>16,381,790</b> | <b>17,216,190</b> | <b>18,078,198</b> | <b>18,961,709</b> | <b>19,882,685</b> | <b>20,834,298</b> |
| <b>Total Expenditures</b>                                                     | <b>37,358,309</b> | <b>38,148,655</b> | <b>38,952,236</b> | <b>40,082,422</b> | <b>41,434,309</b> | <b>42,827,720</b> | <b>44,263,898</b> | <b>45,735,244</b> | <b>47,259,468</b> | <b>48,830,020</b> |
| <b>Revenues</b>                                                               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Fixed Charge                                                                  | 10,254,620        | 10,663,482        | 11,205,414        | 11,849,112        | 12,590,028        | 13,371,258        | 14,195,054        | 15,063,359        | 15,978,417        | 16,942,815        |
| 810260 - Engineering Fees                                                     | 36,977            | 37,717            | 38,471            | 39,240            | 40,000            | 40,800            | 41,600            | 42,400            | 43,200            | 44,100            |
| 810340 - Hydrant Meter Gate Valves                                            | 182,491           | 186,141           | 189,864           | 193,661           | 197,500           | 201,500           | 205,500           | 209,600           | 213,800           | 218,100           |
| 810360 - Swimming Pool Fills                                                  | 17,668            | 18,021            | 18,382            | 18,749            | 19,100            | 19,500            | 19,900            | 20,300            | 20,700            | 21,100            |
| 810370 - Water Service Calls                                                  | 18,738            | 19,113            | 19,495            | 19,885            | 20,300            | 20,700            | 21,100            | 21,500            | 21,900            | 22,300            |
| 810380 - Stop & Drain Calls                                                   | 52,270            | 53,315            | 54,382            | 55,469            | 56,600            | 57,700            | 58,900            | 60,100            | 61,300            | 62,500            |
| 810590 - Water Tapping Fees                                                   | 44,843            | 45,740            | 46,655            | 47,588            | 48,500            | 49,500            | 50,500            | 51,500            | 52,500            | 53,600            |
| 810610 - Backflow Fees                                                        | 219,000           | 221,000           | 222,000           | 223,000           | 227,500           | 232,100           | 236,700           | 241,400           | 246,200           | 251,100           |
| 810640 - Water ON/OFF Fees                                                    | 61,323            | 62,549            | 63,800            | 65,076            | 66,400            | 67,700            | 69,100            | 70,500            | 71,900            | 73,300            |
| 810820 - Sundry Revenue                                                       | 150,406           | 153,414           | 156,482           | 159,612           | 162,800           | 166,100           | 169,400           | 172,800           | 176,300           | 179,800           |
| 825000 - Interest and Penalties                                               | 80,000            | 80,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Local Improvements Revenue                                                    | 50,500            | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | -                 | -                 | -                 |
| Contributions from Development Charges Reserve Fund - Facilities Related Debt | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         | 7,917,481         |
| <b>Total Operating Revenue</b>                                                | <b>19,086,317</b> | <b>19,466,249</b> | <b>19,940,702</b> | <b>20,597,150</b> | <b>21,354,485</b> | <b>22,152,615</b> | <b>22,993,511</b> | <b>23,870,941</b> | <b>24,803,698</b> | <b>25,786,196</b> |
| <b>Water Billing Recovery - Operating</b>                                     | <b>18,271,992</b> | <b>18,682,405</b> | <b>19,011,534</b> | <b>19,485,272</b> | <b>20,079,824</b> | <b>20,675,105</b> | <b>21,270,387</b> | <b>21,864,304</b> | <b>22,455,770</b> | <b>23,043,824</b> |
| Asset Replacement Needs - Lifecycle Contribution (\$)                         |                   | 293,087           | 900,031           | 1,562,279         | 2,301,297         | 3,112,770         | 4,001,400         | 4,972,050         | 6,029,879         | 7,180,408         |
| <b>Water Billing Recovery - Total</b>                                         | <b>18,271,992</b> | <b>18,975,492</b> | <b>19,911,565</b> | <b>21,047,551</b> | <b>22,381,121</b> | <b>23,787,874</b> | <b>25,271,788</b> | <b>26,836,353</b> | <b>28,485,649</b> | <b>30,224,232</b> |



Table A-15  
City of Barrie  
Water Services  
Water Rate Forecast (Inflated \$)

| Description                                         | 2021              | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
|-----------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total Water Billing Recovery                        | 18,271,992        | 18,975,492        | 19,911,565        | 21,047,551        | 22,381,121        | 23,787,874        | 25,271,788        | 26,836,353        | 28,485,649        | 30,224,232        |
| <b>Increasing Block Structure - Residential</b>     |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Volume Forecast By Block (m3)                       |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Block 1 Residential (0-15 cu.m./month)              | 6,123,590         | 6,259,927         | 6,409,343         | 6,684,850         | 7,068,470         | 7,452,220         | 7,836,280         | 8,220,340         | 8,604,400         | 8,988,640         |
| Block 2 Residential (16-30 cu.m./month)             | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         | 1,498,380         |
| Block 3 Residential (31-45 cu.m./month)             | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           | 251,940           |
| Block 4 Residential (45+ cu.m./month)               | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            | 96,900            |
| <b>Increasing Block Structure - Non-Residential</b> |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Block 1 Non-Residential (0-15 cu.m./month)          | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           | 351,000           |
| Block 2 Non-Residential (>30 cu.m./month)           | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         | 3,935,000         |
| <b>Check Total Volume</b>                           | <b>12,256,810</b> | <b>12,393,147</b> | <b>12,542,563</b> | <b>12,818,070</b> | <b>13,201,690</b> | <b>13,585,440</b> | <b>13,969,500</b> | <b>14,353,560</b> | <b>14,737,620</b> | <b>15,121,860</b> |
| <b>Increasing Block Rates (\$/m<sup>3</sup>)</b>    |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Block 1 Residential (0-15 cu.m./month)              | 1.11              | 1.14              | 1.18              | 1.23              | 1.28              | 1.33              | 1.39              | 1.44              | 1.50              | 1.56              |
| Block 2 Residential (16-30 cu.m./month)             | 2.21              | 2.28              | 2.37              | 2.46              | 2.56              | 2.67              | 2.77              | 2.88              | 3.00              | 3.12              |
| Block 3 Residential (31-45 cu.m./month)             | 3.32              | 3.42              | 3.55              | 3.70              | 3.85              | 4.00              | 4.16              | 4.33              | 4.50              | 4.68              |
| Block 4 Residential (45+ cu.m./month)               | 4.43              | 4.56              | 4.74              | 4.93              | 5.13              | 5.33              | 5.55              | 5.77              | 6.00              | 6.24              |
| Block 1 Non-Residential (0-15 cu.m./month)          | 1.11              | 1.14              | 1.18              | 1.23              | 1.28              | 1.33              | 1.39              | 1.44              | 1.50              | 1.56              |
| Block 2 Non-Residential (>30 cu.m./month)           | 1.66              | 1.71              | 1.78              | 1.85              | 1.92              | 2.00              | 2.08              | 2.16              | 2.25              | 2.34              |
| <b>Annual Percentage Change</b>                     |                   | 3%                | 4%                | 4%                | 4%                | 4%                | 4%                | 4%                | 4%                | 4%                |



# Appendix B

## Detailed Wastewater Rate Calculations



# Appendix B: Detailed Wastewater Rate Calculations

Table B-1  
City of Barrie  
Wastewater Service  
Capital Budget Forecast (Uninflated \$)

| Description                                                                                    | Budget 2021 | Total     | Forecast  |           |           |           |           |         |         |         |         |
|------------------------------------------------------------------------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|---------|
|                                                                                                |             |           | 2022      | 2023      | 2024      | 2025      | 2026      | 2027    | 2028    | 2029    | 2030    |
| <b>Capital Expenditures</b>                                                                    |             |           |           |           |           |           |           |         |         |         |         |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                    |             | 274,000   |           |           | 49,000    |           | 202,500   | 22,500  |         |         |         |
| 000061 - Johnson Street wastewater pump station valve chamber, back up pump and flow meter     | 225,000     | -         |           |           |           |           |           |         |         |         |         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                    |             | 765,300   |           |           |           |           |           | 105,600 | 105,600 | 211,300 | 342,800 |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                          |             | 505,000   |           | 70,000    |           |           |           |         |         | 435,000 |         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                     |             | 1,623,000 |           | 107,500   | 107,500   |           | 563,000   | 845,000 |         |         |         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                      |             | 955,000   |           |           |           |           |           |         | 125,000 |         | 830,000 |
| 000208 - Waste Water Maintenance Facility Renewal Assessment                                   |             | 64,000    |           |           |           |           |           |         | 32,000  | 32,000  |         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                        |             | 379,200   |           |           | 124,600   | 83,100    |           |         |         |         | 171,500 |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                |             | 2,315,000 | 96,000    | 96,000    |           |           | 850,000   | 653,000 | 620,000 |         |         |
| 000952 - Mobile Response Technology Replacement                                                |             | 40,000    | 20,000    | 20,000    |           |           |           |         |         |         |         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                | 227,948     | 1,155,974 | 1,155,974 |           |           |           |           |         |         |         |         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster |             | 195,000   | 195,000   |           |           |           |           |         |         |         |         |
| EN1127 - WwTF Biosolids Storage Tank Mixers                                                    | (2,599,400) | 9,329,600 |           | 1,582,400 | 2,582,400 | 2,582,400 | 2,582,400 |         |         |         |         |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                       | 2,080       | -         |           |           |           |           |           |         |         |         |         |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                     | 218,540     | 1,966,860 | 983,430   | 983,430   |           |           |           |         |         |         |         |
| EN1184 - Sewer Rehabilitation Program                                                          | 320,000     | 2,540,000 | 320,000   | 320,000   | 320,000   | 320,000   | 320,000   | 320,000 | 320,000 | 300,000 |         |
| EN1237 - WwTF Sludge Thickening System Process - Polymer System Replacement                    | 91,000      | 2,982,000 | 100,000   | 593,800   | 2,288,200 |           |           |         |         |         |         |



Table B-1 (Cont'd)

| Description                                                                                          | Budget<br>2021 | Total      | Forecast |           |         |           |           |           |           |           |           |
|------------------------------------------------------------------------------------------------------|----------------|------------|----------|-----------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                                                                      |                |            | 2022     | 2023      | 2024    | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                             | 38,750         | 1,250,910  | 38,750   | 606,080   | 606,080 |           |           |           |           |           |           |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                             | 37,603         | 1,413,600  |          |           |         |           | 706,800   | 706,800   |           |           |           |
| EN1243 - WwTF Cogeneration Building Ventilation Upgrades                                             | 300,000        | -          |          |           |         |           |           |           |           |           |           |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement |                | 1,900,900  |          |           |         |           | 46,600    | 74,300    |           | 712,000   | 1,068,000 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                        | 35,000         | 1,075,000  | 800,000  | 275,000   |         |           |           |           |           |           |           |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                           |                | 1,940,000  |          |           |         | 640,000   | 650,000   | 650,000   |           |           |           |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                           | 57,500         | 3,487,320  | 57,500   | 57,500    | 843,080 | 843,080   | 843,080   | 843,080   |           |           |           |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                            | 54,731         | 1,645,000  | 505,000  |           |         | 570,000   | 570,000   |           |           |           |           |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth      | 45,000         | 948,000    |          | 474,000   | 474,000 |           |           |           |           |           |           |
| EN1328 - WwTF Septage/Supernating Dosing Tank Pre-Treatment Upgrade                                  |                | 250,000    | 100,000  | 150,000   |         |           |           |           |           |           |           |
| EN1330 - WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition           | 100,000        | 2,300,000  |          | 1,380,000 | 920,000 |           |           |           |           |           |           |
| EN1335 - WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                              | 100,000        | -          |          |           |         |           |           |           |           |           |           |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                                         | -              | 2,400,000  |          |           |         |           |           | 500,000   | 950,000   | 950,000   |           |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                                          |                | 2,030,000  |          | 27,000    | 27,000  |           |           |           | 395,200   | 395,200   | 1,185,600 |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                           | 65,000         | 944,000    |          | 472,000   | 472,000 |           |           |           |           |           |           |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                                          |                | 3,563,000  |          |           | 30,000  | 45,000    | -         | 697,600   | 1,046,400 | 1,046,400 | 697,600   |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon               | 62,000         | 980,000    | 62,000   |           | 306,000 | 306,000   | 306,000   |           |           |           |           |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St                          |                | 710,000    |          |           | 80,000  |           |           |           | 630,000   |           |           |
| Additional Asset Replacement Needs                                                                   |                | 15,750,000 | 250,000  | 500,000   | 750,000 | 1,000,000 | 1,500,000 | 2,000,000 | 2,500,000 | 3,250,000 | 4,000,000 |
| Carryforwards:                                                                                       |                | -          |          |           |         |           |           |           |           |           |           |
| Automatic Transfer Switch                                                                            | 133,300        | 266,600    | 133,300  | 133,300   |         |           |           |           |           |           |           |
| BCSC Elec Surge Protect Upgrad                                                                       | 57,900         | 115,800    | 57,900   | 57,900    |         |           |           |           |           |           |           |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                              | 43,700         | 87,400     | 43,700   | 43,700    |         |           |           |           |           |           |           |
| Biosolids Electrical Protect                                                                         | 16,400         | 32,800     | 16,400   | 16,400    |         |           |           |           |           |           |           |





Table B-1 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total   | Forecast |         |      |      |      |      |      |      |      |
|------------------------------------------------------------------------------------------|----------------|---------|----------|---------|------|------|------|------|------|------|------|
|                                                                                          |                |         | 2022     | 2023    | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Biosolids Facility Roof Coating Rehabilitation                                           | 8,300          | 16,600  | 8,300    | 8,300   |      |      |      |      |      |      |      |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                      | 12,700         | 25,400  | 12,700   | 12,700  |      |      |      |      |      |      |      |
| Capital Purchase - New Vehicles from Intake Forms                                        | 45,000         | 90,000  | 45,000   | 45,000  |      |      |      |      |      |      |      |
| Citizen Relationship Management (CRM) Solution                                           | 17,000         | 34,000  | 17,000   | 17,000  |      |      |      |      |      |      |      |
| City Hall Customer Contact Centre Renovation                                             | 300            | 600     | 300      | 300     |      |      |      |      |      |      |      |
| CMMS Improvement Project - Cityworks                                                     | 16,300         | 32,600  | 16,300   | 16,300  |      |      |      |      |      |      |      |
| Corporate Audio Visual Technology Infrastructure                                         | 100            | 200     | 100      | 100     |      |      |      |      |      |      |      |
| Corporate Communications Infrastructure Program                                          | 1,100          | 2,200   | 1,100    | 1,100   |      |      |      |      |      |      |      |
| Corporate PC Infrastructure Program                                                      | 3,500          | 7,000   | 3,500    | 3,500   |      |      |      |      |      |      |      |
| Corporate Printing Infrastructure                                                        | 500            | 1,000   | 500      | 500     |      |      |      |      |      |      |      |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 95,600         | 191,200 | 95,600   | 95,600  |      |      |      |      |      |      |      |
| Dunlop Street East Corridor Improvements - Toronto to Mulcaster                          | 1,800          | 3,600   | 1,800    | 1,800   |      |      |      |      |      |      |      |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                    | 68,400         | 136,800 | 68,400   | 68,400  |      |      |      |      |      |      |      |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 258,100        | 516,200 | 258,100  | 258,100 |      |      |      |      |      |      |      |
| ERP Sustainment Program                                                                  | 59,900         | 119,800 | 59,900   | 59,900  |      |      |      |      |      |      |      |
| eTendering Platform New System                                                           | 4,000          | 8,000   | 4,000    | 4,000   |      |      |      |      |      |      |      |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 6,700          | 13,400  | 6,700    | 6,700   |      |      |      |      |      |      |      |
| Grove Street Pumping Station New Sewage Pump                                             | 14,900         | 29,800  | 14,900   | 14,900  |      |      |      |      |      |      |      |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 9,300          | 18,600  | 9,300    | 9,300   |      |      |      |      |      |      |      |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 20,700         | 41,400  | 20,700   | 20,700  |      |      |      |      |      |      |      |
| Harvie Road ROW Expansion - Essa to Bryne                                                | 135,000        | 270,000 | 135,000  | 135,000 |      |      |      |      |      |      |      |
| Hewitt's Creek New Trunk Sanitary Sewer - Maplevue to Lockhart (Developer)               | 206,200        | 412,400 | 206,200  | 206,200 |      |      |      |      |      |      |      |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 229,100        | 458,200 | 229,100  | 229,100 |      |      |      |      |      |      |      |
| Huron Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)      | 15,000         | 30,000  | 15,000   | 15,000  |      |      |      |      |      |      |      |



Table B-1 (Cont'd)

| Description                                                              | Budget<br>2021 | Total   | Forecast |         |      |      |      |      |      |      |      |
|--------------------------------------------------------------------------|----------------|---------|----------|---------|------|------|------|------|------|------|------|
|                                                                          |                |         | 2022     | 2023    | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Inlet Wks Screen Install                                                 | 6,700          | 13,400  | 6,700    | 6,700   |      |      |      |      |      |      |      |
| Little Lk Sew Pump Station Upg                                           | 17,500         | 35,000  | 17,500   | 17,500  |      |      |      |      |      |      |      |
| Lockhart Rd Trunk San Sew/Pump (City)                                    | 7,100          | 14,200  | 7,100    | 7,100   |      |      |      |      |      |      |      |
| Mapleview Dr E Sewer Watermain                                           | 5,000          | 10,000  | 5,000    | 5,000   |      |      |      |      |      |      |      |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)         | 181,400        | 362,800 | 181,400  | 181,400 |      |      |      |      |      |      |      |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer) | 39,400         | 78,800  | 39,400   | 39,400  |      |      |      |      |      |      |      |
| Microsoft Office 365 and Windows Enterprise                              | 700            | 1,400   | 700      | 700     |      |      |      |      |      |      |      |
| Mobility Technology Program                                              | 47             | 94      | 47       | 47      |      |      |      |      |      |      |      |
| Network Technology Infrastructure Program                                | 10,400         | 20,800  | 10,400   | 10,400  |      |      |      |      |      |      |      |
| NRP- HNS Allandale A Neighbourhood Reconstruction                        | 43,400         | 86,800  | 43,400   | 43,400  |      |      |      |      |      |      |      |
| NRP- HNS Allandale B Neighbourhood Reconstruction                        | 14,400         | 28,800  | 14,400   | 14,400  |      |      |      |      |      |      |      |
| NRP- HNS Brock Park Neighbourhood Reconstruction                         | 37,000         | 74,000  | 37,000   | 37,000  |      |      |      |      |      |      |      |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                     | 4,900          | 9,800   | 4,900    | 4,900   |      |      |      |      |      |      |      |
| NRP- Wellington D1 Neighbourhood Reconstruction                          | 11,600         | 23,200  | 11,600   | 11,600  |      |      |      |      |      |      |      |
| NRP- Wellington D2 Neighbourhood Reconstruction                          | 32,000         | 64,000  | 32,000   | 32,000  |      |      |      |      |      |      |      |
| PC Replacements                                                          | 100            | 200     | 100      | 100     |      |      |      |      |      |      |      |
| Process Instrumentation                                                  | 8,300          | 16,600  | 8,300    | 8,300   |      |      |      |      |      |      |      |
| Public Safety Communication Program                                      | 600            | 1,200   | 600      | 600     |      |      |      |      |      |      |      |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street        | 16,300         | 32,600  | 16,300   | 16,300  |      |      |      |      |      |      |      |
| Ross, Collier, Bayfield Intersection Realignment                         | 2,800          | 5,600   | 2,800    | 2,800   |      |      |      |      |      |      |      |
| Server and Desktop Software Program                                      | 200            | 400     | 200      | 200     |      |      |      |      |      |      |      |
| Server and Storage Technology Infrastructure Program                     | 900            | 1,800   | 900      | 900     |      |      |      |      |      |      |      |
| Sewer Rehabilitation Program                                             | 122,300        | 244,600 | 122,300  | 122,300 |      |      |      |      |      |      |      |
| Sophia Creek Culvert Expansion - Grove, 130m East of Davidson            | 300            | 600     | 300      | 300     |      |      |      |      |      |      |      |



Table B-1 (Cont'd)

| Description                                                                                         | Budget<br>2021 | Total     | Forecast  |           |      |      |      |      |      |      |      |
|-----------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|------|------|------|------|------|------|------|
|                                                                                                     |                |           | 2022      | 2023      | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| South L/fill Leachate Gal Repl                                                                      | 14,700         | 29,400    | 14,700    | 14,700    |      |      |      |      |      |      |      |
| Sunnidale Road Hwy 400 Crossing Reconstruction<br>(within CAH limits)                               | 218,700        | 437,400   | 218,700   | 218,700   |      |      |      |      |      |      |      |
| Utilization of Wastewater Collection System as Active<br>Storage                                    | 23,200         | 46,400    | 23,200    | 23,200    |      |      |      |      |      |      |      |
| Waste Water Treatment Facility Administrative Office<br>Fit-Up                                      | 11,200         | 22,400    | 11,200    | 11,200    |      |      |      |      |      |      |      |
| Wastewat- Auto ValvesFlowmeter                                                                      | 44,200         | 88,400    | 44,200    | 44,200    |      |      |      |      |      |      |      |
| Wastewater Asset Management Plan                                                                    | 31,900         | 63,800    | 31,900    | 31,900    |      |      |      |      |      |      |      |
| Wastewater Peak Flow Attenuation Facility                                                           | 158,500        | 317,000   | 158,500   | 158,500   |      |      |      |      |      |      |      |
| Well Installations for Biosolids Storage Facility<br>Groundwater Monitoring Program                 | 18,900         | 37,800    | 18,900    | 18,900    |      |      |      |      |      |      |      |
| WwTF 96 MLD Expansion Program, Comprehensive<br>Site Strategy Plan & ESR                            | 109,500        | 219,000   | 109,500   | 109,500   |      |      |      |      |      |      |      |
| WwTF Administration Building Retrofit of Laboratory<br>Fume Hood Ventilation Unit - Laboratory Room | 8,300          | 16,600    | 8,300     | 8,300     |      |      |      |      |      |      |      |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                    | 293,400        | 586,800   | 293,400   | 293,400   |      |      |      |      |      |      |      |
| WwTF Biosolids Storage Tank Mixers                                                                  | 1,135,800      | 2,271,600 | 1,135,800 | 1,135,800 |      |      |      |      |      |      |      |
| WwTF Chemical Building Upgrade                                                                      | 8,400          | 16,800    | 8,400     | 8,400     |      |      |      |      |      |      |      |
| WwTF Cleaning and Rehab of Primary Digester 3<br>Overflow Box and Interior Condition Assessment     | 100,000        | 200,000   | 100,000   | 100,000   |      |      |      |      |      |      |      |
| WwTF Cogenerat Engine #2 Rehab                                                                      | 37,500         | 75,000    | 37,500    | 37,500    |      |      |      |      |      |      |      |
| WwTF Cogeneration Building Ventilation Upgrades                                                     | 29,300         | 58,600    | 29,300    | 29,300    |      |      |      |      |      |      |      |
| WwTF Electrical Substation and Transformer<br>Upgrade                                               | 285,600        | 571,200   | 285,600   | 285,600   |      |      |      |      |      |      |      |
| WwTF Feasibility Study - Reuse of Final Effluent                                                    | (50,900)       | -         |           |           |      |      |      |      |      |      |      |
| WwTF Filter Beds 1 and 2 Diffuser Upgrade                                                           | 13,000         | 26,000    | 13,000    | 13,000    |      |      |      |      |      |      |      |
| WWTF Innovation Center                                                                              | 11,700         | 23,400    | 11,700    | 11,700    |      |      |      |      |      |      |      |
| WwTF New Advanced Nutrient Removal                                                                  | 723,100        | 1,446,200 | 723,100   | 723,100   |      |      |      |      |      |      |      |
| WwTF New Heat Exchanger - Primary Digester 3                                                        | 17,400         | 34,800    | 17,400    | 17,400    |      |      |      |      |      |      |      |
| WwTF Redundant Power Feed to Secondary Effluent<br>Pumps                                            | 50,000         | 100,000   | 50,000    | 50,000    |      |      |      |      |      |      |      |
| WwTF Sand Filter Controls & Instrumentation<br>Replacement                                          | 55,000         | 110,000   | 55,000    | 55,000    |      |      |      |      |      |      |      |



Table B-1 (Cont'd)

| Description                                                                                                  | Budget 2021 | Total      | Forecast |           |           |            |            |           |         |         |           |
|--------------------------------------------------------------------------------------------------------------|-------------|------------|----------|-----------|-----------|------------|------------|-----------|---------|---------|-----------|
|                                                                                                              |             |            | 2022     | 2023      | 2024      | 2025       | 2026       | 2027      | 2028    | 2029    | 2030      |
| WWTF Secondary Digester Facade Replacement                                                                   | 33,900      | 67,800     | 33,900   | 33,900    |           |            |            |           |         |         |           |
| WwTF Selector Tank Mixer Upgrade                                                                             | 200         | 400        | 200      | 200       |           |            |            |           |         |         |           |
| WwTF Sludge Thickening System Process - Polymer System Replacement                                           | 73,200      | 146,400    | 73,200   | 73,200    |           |            |            |           |         |         |           |
| WwTF Splitter Gallery Concrete and Expansion Joint Repairs                                                   | 116,700     | 233,400    | 116,700  | 116,700   |           |            |            |           |         |         |           |
| WwTF Travelling Bridge Frame Renewal - Filters 1 - 4                                                         | 46,500      | 93,000     | 46,500   | 46,500    |           |            |            |           |         |         |           |
| WwTF Underground Sludge Transfer Pipe Replacement - Admin Building                                           | 339,000     | 678,000    | 339,000  | 339,000   |           |            |            |           |         |         |           |
| WwTF Unox Tank Isolation Gate Replacement                                                                    | 33,300      | 66,600     | 33,300   | 33,300    |           |            |            |           |         |         |           |
| WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                                               | 36,600      | 73,200     | 36,600   | 36,600    |           |            |            |           |         |         |           |
| WwTF Feasibility Study - Reuse of Final Effluent                                                             | 18,400      | 36,800     | 18,400   | 18,400    |           |            |            |           |         |         |           |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 30,900      | 61,800     | 30,900   | 30,900    |           |            |            |           |         |         |           |
| WwTF Biosolids Storage Tank Mixers                                                                           | 800,000     | 1,600,000  | 800,000  | 800,000   |           |            |            |           |         |         |           |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 459,500     | 919,000    | 459,500  | 459,500   |           |            |            |           |         |         |           |
| Co-generation & Biogas Trmt                                                                                  | (2,500)     | -          |          |           |           |            |            |           |         |         |           |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | (200,400)   | -          |          |           |           |            |            |           |         |         |           |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 14,900      | 29,800     | 14,900   | 14,900    |           |            |            |           |         |         |           |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 5,000       | 10,000     | 5,000    | 5,000     |           |            |            |           |         |         |           |
| <b>Growth Related:</b>                                                                                       |             | -          |          |           |           |            |            |           |         |         |           |
| <b>Salem &amp; Hewitt's Secondary Plan Areas</b>                                                             |             | -          |          |           |           |            |            |           |         |         |           |
| 000332 - McKay Pump Station (City)                                                                           |             | 3,975,000  |          |           |           |            |            | 88,000    | 634,000 | 834,000 | 2,419,000 |
| 000458 - Hewitts Pump Station (City)                                                                         |             | 959,000    |          |           |           |            |            |           |         | 91,000  | 868,000   |
| EN1137 - Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                         |             | 5,413,750  |          |           | 2,704,750 |            | 2,709,000  |           |         |         |           |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer) | 830,800     | -          |          |           |           |            |            |           |         |         |           |
| EN1255 - Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)               | (1,321,400) | 13,178,100 |          |           | 2,635,620 | 3,953,430  | 3,953,430  | 2,635,620 |         |         |           |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                     | (8,000,000) | 31,722,300 |          | 1,723,000 | 5,999,860 | 11,999,720 | 11,999,720 |           |         |         |           |



Table B-1 (Cont'd)

| Description                                                                                                 | Budget<br>2021 | Total     | Forecast  |           |         |           |           |           |         |         |      |
|-------------------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|---------|-----------|-----------|-----------|---------|---------|------|
|                                                                                                             |                |           | 2022      | 2023      | 2024    | 2025      | 2026      | 2027      | 2028    | 2029    | 2030 |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                           | 1,398,200      | 5,794,336 | 4,029,136 | 1,765,200 |         |           |           |           |         |         |      |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                    | 135,800        | 2,323,900 |           |           | 219,300 | 1,104,600 | 1,000,000 |           |         |         |      |
| EN1261 - Yonge Street ROW Expansion - Maplevue to Madeline (City)                                           | 16,600         | 436,500   |           |           |         |           | 20,700    | 166,320   | 249,480 |         |      |
| EN1270 - Maplevue Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer) | 75,795         | -         |           |           |         |           |           |           |         |         |      |
| EN1271 - Maplevue Dr E Road Expansion - East of Yonge to Prince William (City)                              |                | 3,622,601 | 66,200    | 96,600    |         | 1,153,267 | 1,153,267 | 1,153,267 |         |         |      |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                   |                | 311,800   |           |           |         |           |           | 62,360    | 124,720 | 124,720 |      |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                       |                | 116,000   |           |           |         | 12,000    | 52,000    | 52,000    |         |         |      |
| EN1339 - Yonge Street ROW Expansion - Madeline Drive (South) extension to Lockhart (City)                   |                | 1,450,200 |           | 27,800    |         |           | 93,300    | 531,640   | 797,460 |         |      |
| <b>Carryforwards:</b>                                                                                       |                | -         |           |           |         |           |           |           |         |         |      |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                       | 84,800         | 169,600   | 84,800    | 84,800    |         |           |           |           |         |         |      |
| Maplevue Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 559,700        | 1,119,400 | 559,700   | 559,700   |         |           |           |           |         |         |      |
| County Rd 27 Sanitary Sewer - Holly SPS to Loughheed                                                        | 116,700        | 233,400   | 116,700   | 116,700   |         |           |           |           |         |         |      |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits                     | 16,000         | 32,000    | 16,000    | 16,000    |         |           |           |           |         |         |      |
| Hewitt's Creek New Trunk Sanitary Sewer - Maplevue to Lockhart (Developer)                                  | 285,000        | 570,000   | 285,000   | 285,000   |         |           |           |           |         |         |      |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Maplevue (Developer)                                  | 1,083,400      | 2,166,800 | 1,083,400 | 1,083,400 |         |           |           |           |         |         |      |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                       | 453,300        | 906,600   | 453,300   | 453,300   |         |           |           |           |         |         |      |
| Maplevue Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary                      | 1,271,700      | 2,543,400 | 1,271,700 | 1,271,700 |         |           |           |           |         |         |      |
| McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                             | 2,853,600      | 5,707,200 | 2,853,600 | 2,853,600 |         |           |           |           |         |         |      |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                    | 2,365,100      | 4,730,200 | 2,365,100 | 2,365,100 |         |           |           |           |         |         |      |
| Hewitt's Creek New Trunk Sanitary Sewer - Maplevue to Lockhart (Developer)                                  | 154,300        | 308,600   | 154,300   | 154,300   |         |           |           |           |         |         |      |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Maplevue (Developer)                                  | 63,300         | 126,600   | 63,300    | 63,300    |         |           |           |           |         |         |      |
| Lockhart Rd Trunk San Sew/Pump (City)                                                                       | 64,600         | 129,200   | 64,600    | 64,600    |         |           |           |           |         |         |      |
| Maplevue Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 145,900        | 291,800   | 145,900   | 145,900   |         |           |           |           |         |         |      |
| Sanitary Pump Station 3 Decommissioning (City)                                                              | 31,200         | 62,400    | 31,200    | 31,200    |         |           |           |           |         |         |      |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                | 26,200         | 52,400    | 26,200    | 26,200    |         |           |           |           |         |         |      |



Table B-1 (Cont'd)

| Description                                                                                              | Budget 2021 | Total       | Forecast  |           |            |            |            |            |            |            |            |
|----------------------------------------------------------------------------------------------------------|-------------|-------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
|                                                                                                          |             |             | 2022      | 2023      | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       |
| <b>Former Municipal Boundary Areas</b>                                                                   |             | -           |           |           |            |            |            |            |            |            |            |
| 000931 - Wastewater Inflow/Infiltration Reduction Action Plan                                            | 200,000     | 4,500,000   | 500,000   | 500,000   | 500,000    | 500,000    | 500,000    | 500,000    | 500,000    | 500,000    | 500,000    |
| 001018 - Dunlop Street Bridge Sanitary - Sarjeant Drive to Anne Street                                   | 1,208,069   | 31,900,694  | 1,000,000 | 1,000,000 |            | 2,846,316  | 9,018,126  | 9,018,126  | 9,018,126  |            |            |
| EN1013 - Sunnidale: Letitia-Wellington Transmission Watermain                                            | 448,000     | -           |           |           |            |            |            |            |            |            |            |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                                | 56,250      | 31,305      | 31,305    |           |            |            |            |            |            |            |            |
| EN1122 - Little Lk Sew Pump Station Upg                                                                  |             | 5,502,000   | 502,000   | 2,000,000 | 3,000,000  |            |            |            |            |            |            |
| EN1132 - Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                             | 167,500     | 3,130,500   | 676,500   | 1,227,000 | 1,227,000  |            |            |            |            |            |            |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        |             | 1,750,000   |           | 875,000   | 875,000    |            |            |            |            |            |            |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                                 | 35,700      | 564,700     |           |           |            |            |            | 564,700    |            |            |            |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                |             | 25,000      |           |           |            |            |            |            |            |            | 25,000     |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     |             | 366,180     |           | 146,472   | 109,854    | 109,854    |            |            |            |            |            |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 48,100      | 316,200     | 63,240    | 126,480   | 126,480    |            |            |            |            |            |            |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 125,800     | -           |           |           |            |            |            |            |            |            |            |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 107,400     | 1,443,500   | 28,800    | 68,800    | 658,597    | 549,842    | 137,461    |            |            |            |            |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           |             | 985,000     |           |           | 21,000     | 482,000    | 482,000    |            |            |            |            |
| <b>Carryforwards:</b>                                                                                    |             | -           |           |           |            |            |            |            |            |            |            |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 32,500      | 65,000      | 32,500    | 32,500    |            |            |            |            |            |            |            |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                                      | 1,400       | 2,800       | 1,400     | 1,400     |            |            |            |            |            |            |            |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                                    | 51,600      | 103,200     | 51,600    | 51,600    |            |            |            |            |            |            |            |
| Wastewater Asset Management Plan                                                                         | 60,100      | 120,200     | 60,100    | 60,100    |            |            |            |            |            |            |            |
| <b>Facilities</b>                                                                                        |             | -           |           |           |            |            |            |            |            |            |            |
| EN1091 - WwTF New Advanced Nutrient Removal                                                              | 2,500,000   | 146,444,150 | 7,024,200 | 4,682,800 | 10,730,650 | 13,778,500 | 13,778,500 | 13,778,500 | 27,557,000 | 27,557,000 | 27,557,000 |
| EN1245 - WwTF Chemical Building Upgrade                                                                  | 364,000     | 876,000     | 876,000   |           |            |            |            |            |            |            |            |
| EN1297 - WwTF Electrical Substation and Transformer Upgrade                                              | 570,000     | 15,074,000  | 600,000   | 2,966,800 | 3,708,500  | 4,450,200  | 3,348,500  |            |            |            |            |
| EN1390 - Wastewater Peak Flow Attenuation Facility                                                       | 473,200     | 24,709,800  | 1,346,400 | 1,009,400 | 200,000    |            | 2,215,400  | 8,861,600  | 8,861,600  | 2,215,400  |            |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                           | 600,000     | 657,400     | 657,400   |           |            |            |            |            |            |            |            |



Table B-1 (Cont'd)

| Description                                                                    | Budget<br>2021    | Total              | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|--------------------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                |                   |                    | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR |                   | 12,988,600         |                   | 3,001,400         | 3,745,200         | 3,745,200         | 2,496,800         |                   |                   |                   |                   |
| EN1438 - WwTF Digester Capacity Expansion                                      | 500,000           | 30,225,000         | 1,110,000         | 732,500           | 632,500           | 2,775,000         | 8,325,000         | 8,325,000         | 5,550,000         | 2,775,000         |                   |
| FC1215 - WWTF Innovation Center                                                | 1,000,000         | 14,000,000         | 6,000,000         | 6,000,000         | 2,000,000         |                   |                   |                   |                   |                   |                   |
| Z162 - WwTF New Cogeneration and Biogas Treatment System                       | 80,000            | 420,000            | 220,000           | 200,000           |                   |                   |                   |                   |                   |                   |                   |
| <b>Carryforwards:</b>                                                          |                   | -                  |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Wastewater Peak Flow Attenuation Facility                                      | 62,000            | 124,000            | 62,000            | 62,000            |                   |                   |                   |                   |                   |                   |                   |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR          | 194,600           | 389,200            | 194,600           | 194,600           |                   |                   |                   |                   |                   |                   |                   |
| WwTF Alum System Upgrade at Secondary Clarifiers                               | 158,000           | 316,000            | 158,000           | 158,000           |                   |                   |                   |                   |                   |                   |                   |
| WwTF Digester Capacity Expansion                                               | 259,200           | 518,400            | 259,200           | 259,200           |                   |                   |                   |                   |                   |                   |                   |
| WwTF Electrical Substation and Transformer Upgrade                             | 225,000           | 450,000            | 225,000           | 225,000           |                   |                   |                   |                   |                   |                   |                   |
| WWTF Innovation Center                                                         | 11,700            | 23,400             | 11,700            | 11,700            |                   |                   |                   |                   |                   |                   |                   |
| WwTF New Heat Exchanger - Primary Digester 3                                   | 156,600           | 313,200            | 156,600           | 156,600           |                   |                   |                   |                   |                   |                   |                   |
| WwTF Selector Tank Mixer Upgrade                                               | 1,700             | 3,400              | 1,700             | 1,700             |                   |                   |                   |                   |                   |                   |                   |
| WwTF Biosolids Storage Tank Mixers                                             | 116,000           | 232,000            | 116,000           | 116,000           |                   |                   |                   |                   |                   |                   |                   |
| WwTF New Advanced Nutrient Removal                                             | 216,700           | 433,400            | 216,700           | 216,700           |                   |                   |                   |                   |                   |                   |                   |
| <b>Total Capital Expenditures</b>                                              | <b>19,320,213</b> | <b>470,038,074</b> | <b>47,988,282</b> | <b>54,437,409</b> | <b>49,074,171</b> | <b>53,849,509</b> | <b>70,423,584</b> | <b>53,155,013</b> | <b>60,016,586</b> | <b>41,429,020</b> | <b>39,664,500</b> |



Table B-2  
City of Barrie  
Wastewater Service  
Capital Budget Forecast (Inflated \$)

| Description                                                                                           | Budget<br>2021 | Total      | Forecast  |           |           |           |           |           |         |           |           |
|-------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|-----------|
|                                                                                                       |                |            | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028    | 2029      | 2030      |
| <b>Capital Expenditures</b>                                                                           |                |            |           |           |           |           |           |           |         |           |           |
| 000030 - Orchard Drive ROW Replacement - St. Vincent to End                                           | -              | 345,000    | -         | -         | 57,000    | -         | 258,000   | 30,000    | -       | -         | -         |
| 000061 - Johnson Street wastewater pump station valve chamber, back up pump and flow meter            | 225,000        | -          | -         | -         | -         | -         | -         | -         | -       | -         | -         |
| 000088 - NRP- HNS The Grove A2 Neighbourhood Reconstruction                                           | -              | 1,135,000  | -         | -         | -         | -         | -         | 142,000   | 149,000 | 312,000   | 532,000   |
| 000106 - Mary Street ROW Replacement - Ross to Dunlop                                                 | -              | 720,000    | -         | 77,000    | -         | -         | -         | -         | -       | 643,000   | -         |
| 000111 - Puget Street ROW Replacement and Drainage Upgrades - Steel to End                            | -              | 2,094,000  | -         | 119,000   | 124,000   | -         | 719,000   | 1,132,000 | -       | -         | -         |
| 000141 - Jean and Tyndale Sanitary Servicing Installation                                             | -              | 1,464,000  | -         | -         | -         | -         | -         | -         | 176,000 | -         | 1,288,000 |
| 000208 - Waste Water Maintenance Facility Renewal Assessment                                          | -              | 92,000     | -         | -         | -         | -         | -         | -         | 45,000  | 47,000    | -         |
| 000724 - NRP- HNS Grove B1 Neighbourhood Reconstruction                                               | -              | 511,000    | -         | -         | 144,000   | 101,000   | -         | -         | -       | -         | 266,000   |
| 000798 - Sophia Trunk Storm Sewers - Clapperton, Owen & Sophia (Dunlop to Peel)                       | -              | 3,039,000  | 101,000   | 106,000   | -         | -         | 1,085,000 | 875,000   | 872,000 | -         | -         |
| 000952 - Mobile Response Technology Replacement                                                       | -              | 43,000     | 21,000    | 22,000    | -         | -         | -         | -         | -       | -         | -         |
| EN1071 - Dunlop Street West ROW Replacement - Eccles to Toronto                                       | 227,948        | 1,214,000  | 1,214,000 | -         | -         | -         | -         | -         | -       | -         | -         |
| EN1101 - Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster        | -              | 205,000    | 205,000   | -         | -         | -         | -         | -         | -       | -         | -         |
| EN1127 - WwTF Biosolids Storage Tank Mixers                                                           | (2,599,400)    | 11,169,000 | -         | 1,745,000 | 2,989,000 | 3,139,000 | 3,296,000 | -         | -       | -         | -         |
| EN1167 - Dunlop Street East Corridor Improvements - Toronto to Mulcaster                              | 2,080          | -          | -         | -         | -         | -         | -         | -         | -       | -         | -         |
| EN1172 - Gunn Street ROW Replacement - Peel to St. Vincent                                            | 218,540        | 2,117,000  | 1,033,000 | 1,084,000 | -         | -         | -         | -         | -       | -         | -         |
| EN1184 - Sewer Rehabilitation Program                                                                 | 320,000        | 3,178,000  | 336,000   | 353,000   | 370,000   | 389,000   | 408,000   | 429,000   | 450,000 | 443,000   | -         |
| EN1237 - WwTF Sludge Thickening System Process - Polymer System Replacement                           | 91,000         | 3,409,000  | 105,000   | 655,000   | 2,649,000 | -         | -         | -         | -       | -         | -         |
| EN1238 - NRP- Wellington D1 Neighbourhood Reconstruction                                              | 38,750         | 1,411,000  | 41,000    | 668,000   | 702,000   | -         | -         | -         | -       | -         | -         |
| EN1240 - NRP- Wellington D2 Neighbourhood Reconstruction                                              | 37,603         | 1,849,000  | -         | -         | -         | -         | 902,000   | 947,000   | -       | -         | -         |
| EN1243 - WwTF Cogeneration Building Ventilation Upgrades                                              | 300,000        | -          | -         | -         | -         | -         | -         | -         | -       | -         | -         |
| EN1254 - Foster, Merrett, Garson, MacLaren and Yeates New Sanitary and Watermain and ROW Replacement  | -              | 2,868,000  | -         | -         | -         | -         | 59,000    | 100,000   | -       | 1,052,000 | 1,657,000 |
| EN1280 - NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                         | 35,000         | 1,143,000  | 840,000   | 303,000   | -         | -         | -         | -         | -       | -         | -         |
| EN1281 - NRP- HNS Allandale B Neighbourhood Reconstruction                                            | -              | 2,479,000  | -         | -         | -         | 778,000   | 830,000   | 871,000   | -       | -         | -         |
| EN1282 - NRP- HNS Allandale A Neighbourhood Reconstruction                                            | 57,500         | 4,330,000  | 60,000    | 63,000    | 976,000   | 1,025,000 | 1,076,000 | 1,130,000 | -       | -         | -         |
| EN1318 - NRP- HNS Brock Park Neighbourhood Reconstruction                                             | 54,731         | 1,950,000  | 530,000   | -         | -         | 693,000   | 727,000   | -         | -       | -         | -         |
| EN1319 - Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth       | 45,000         | 1,072,000  | -         | 523,000   | 549,000   | -         | -         | -         | -       | -         | -         |
| EN1328 - WwTF Septage/Supernating Dosing Tank Pre-Treatment Upgrade                                   | -              | 270,000    | 105,000   | 165,000   | -         | -         | -         | -         | -       | -         | -         |
| EN1330 - WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment | 100,000        | 2,586,000  | -         | 1,521,000 | 1,065,000 | -         | -         | -         | -       | -         | -         |





Table B-2 (Cont'd)

| Description                                                                              | Budget<br>2021 | Total      | Forecast |         |         |           |           |           |           |           |           |
|------------------------------------------------------------------------------------------|----------------|------------|----------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                                                          |                |            | 2022     | 2023    | 2024    | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| EN1335 - WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                  | 100,000        | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| EN1336 - NRP- HNS Queens Park B Neighbourhood Reconstruction                             | -              | 3,411,000  | -        | -       | -       | -         | -         | 670,000   | 1,337,000 | 1,404,000 | -         |
| EN1357 - NRP- HNS The Grove A1 Neighbourhood Reconstruction                              | -              | 3,040,000  | -        | 30,000  | 31,000  | -         | -         | -         | 556,000   | 584,000   | 1,839,000 |
| EN1398 - Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street               | 65,000         | 1,066,000  | -        | 520,000 | 546,000 | -         | -         | -         | -         | -         | -         |
| EN1437 - NRP- HNS Brock Park B Neighbourhood Reconstruction                              | -              | 5,125,000  | -        | -       | 35,000  | 55,000    | -         | 935,000   | 1,472,000 | 1,546,000 | 1,082,000 |
| EN1453 - Codrington Street and Lakeview Crescent ROW Replacement - Duckworth to Weldon   | 62,000         | 1,182,000  | 65,000   | -       | 354,000 | 372,000   | 391,000   | -         | -         | -         | -         |
| Z301 - Sanford Street & Short Street Reconstruction - Brock St to Tiffin St              | -              | 979,000    | -        | -       | 93,000  | -         | -         | -         | 886,000   | -         | -         |
| <b>Additional Asset Replacement Needs</b>                                                | -              | 22,017,000 | 263,000  | 551,000 | 868,000 | 1,216,000 | 1,914,000 | 2,680,000 | 3,518,000 | 4,802,000 | 6,205,000 |
| <b>Carryforwards:</b>                                                                    | -              | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| Automatic Transfer Switch                                                                | 133,300        | 287,000    | 140,000  | 147,000 | -       | -         | -         | -         | -         | -         | -         |
| BCSC Elec Surge Protect Upgrad                                                           | 57,900         | 125,000    | 61,000   | 64,000  | -       | -         | -         | -         | -         | -         | -         |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                  | 43,700         | 94,000     | 46,000   | 48,000  | -       | -         | -         | -         | -         | -         | -         |
| Biosolids Electrical Protect                                                             | 16,400         | 35,000     | 17,000   | 18,000  | -       | -         | -         | -         | -         | -         | -         |
| Biosolids Facility Roof Coating Rehabilitation                                           | 8,300          | 18,000     | 9,000    | 9,000   | -       | -         | -         | -         | -         | -         | -         |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                      | 12,700         | 27,000     | 13,000   | 14,000  | -       | -         | -         | -         | -         | -         | -         |
| Capital Purchase - New Vehicles from Intake Forms                                        | 45,000         | 97,000     | 47,000   | 50,000  | -       | -         | -         | -         | -         | -         | -         |
| Citizen Relationship Management (CRM) Solution                                           | 17,000         | 37,000     | 18,000   | 19,000  | -       | -         | -         | -         | -         | -         | -         |
| City Hall Customer Contact Centre Renovation                                             | 300            | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| CMMS Improvement Project - Cityworks                                                     | 16,300         | 35,000     | 17,000   | 18,000  | -       | -         | -         | -         | -         | -         | -         |
| Corporate Audio Visual Technology Infrastructure                                         | 100            | -          | -        | -       | -       | -         | -         | -         | -         | -         | -         |
| Corporate Communications Infrastructure Program                                          | 1,100          | 2,000      | 1,000    | 1,000   | -       | -         | -         | -         | -         | -         | -         |
| Corporate PC Infrastructure Program                                                      | 3,500          | 8,000      | 4,000    | 4,000   | -       | -         | -         | -         | -         | -         | -         |
| Corporate Printing Infrastructure                                                        | 500            | 2,000      | 1,000    | 1,000   | -       | -         | -         | -         | -         | -         | -         |
| Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent | 95,600         | 205,000    | 100,000  | 105,000 | -       | -         | -         | -         | -         | -         | -         |
| Dunlop Street East Corridor Improvements - Toronto to Mulcaster                          | 1,800          | 4,000      | 2,000    | 2,000   | -       | -         | -         | -         | -         | -         | -         |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                    | 68,400         | 147,000    | 72,000   | 75,000  | -       | -         | -         | -         | -         | -         | -         |
| Dunlop, Poyntz and Berczy New Watermain and ROW Replacement - Codrington to Mulcaster    | 258,100        | 556,000    | 271,000  | 285,000 | -       | -         | -         | -         | -         | -         | -         |
| ERP Sustainment Program                                                                  | 59,900         | 129,000    | 63,000   | 66,000  | -       | -         | -         | -         | -         | -         | -         |
| eTendering Platform New System                                                           | 4,000          | 8,000      | 4,000    | 4,000   | -       | -         | -         | -         | -         | -         | -         |
| Eugenia Street ROW Reconstruction and New Transmission Watermain - Berczy to Duckworth   | 6,700          | 14,000     | 7,000    | 7,000   | -       | -         | -         | -         | -         | -         | -         |
| Grove Street Pumping Station New Sewage Pump                                             | 14,900         | 32,000     | 16,000   | 16,000  | -       | -         | -         | -         | -         | -         | -         |
| Gunn Street ROW Replacement - Peel to St. Vincent                                        | 9,300          | 20,000     | 10,000   | 10,000  | -       | -         | -         | -         | -         | -         | -         |
| Harvie Road and Big Bay Point Road New Crossing - Highway 400                            | 20,700         | 45,000     | 22,000   | 23,000  | -       | -         | -         | -         | -         | -         | -         |
| Harvie Road ROW Expansion - Essa to Bryne                                                | 135,000        | 291,000    | 142,000  | 149,000 | -       | -         | -         | -         | -         | -         | -         |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)              | 206,200        | 444,000    | 217,000  | 227,000 | -       | -         | -         | -         | -         | -         | -         |
| Hotchkiss Creek Culvert Expansion - Innisfil, 125m North of Tiffin                       | 229,100        | 494,000    | 241,000  | 253,000 | -       | -         | -         | -         | -         | -         | -         |
| Huron Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)      | 15,000         | 33,000     | 16,000   | 17,000  | -       | -         | -         | -         | -         | -         | -         |



Table B-2 (Cont'd)

| Description                                                                                      | Budget<br>2021 | Total     | Forecast  |           |      |      |      |      |      |      |      |
|--------------------------------------------------------------------------------------------------|----------------|-----------|-----------|-----------|------|------|------|------|------|------|------|
|                                                                                                  |                |           | 2022      | 2023      | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| Inlet Wks Screen Install                                                                         | 6,700          | 14,000    | 7,000     | 7,000     | -    | -    | -    | -    | -    | -    | -    |
| Little Lk Sew Pump Station Upg                                                                   | 17,500         | 37,000    | 18,000    | 19,000    | -    | -    | -    | -    | -    | -    | -    |
| Lockhart Rd Trunk San Sew/Pump (City)                                                            | 7,100          | 15,000    | 7,000     | 8,000     | -    | -    | -    | -    | -    | -    | -    |
| Mapleview Dr E Sewer Watermain                                                                   | 5,000          | 11,000    | 5,000     | 6,000     | -    | -    | -    | -    | -    | -    | -    |
| Mapleview Drive East Improvements - Country Lane to Yonge (City)                                 | 181,400        | 390,000   | 190,000   | 200,000   | -    | -    | -    | -    | -    | -    | -    |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                         | 39,400         | 84,000    | 41,000    | 43,000    | -    | -    | -    | -    | -    | -    | -    |
| Microsoft Office 365 and Windows Enterprise                                                      | 700            | 2,000     | 1,000     | 1,000     | -    | -    | -    | -    | -    | -    | -    |
| Mobility Technology Program                                                                      | 47             | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Network Technology Infrastructure Program                                                        | 10,400         | 22,000    | 11,000    | 11,000    | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale A Neighbourhood Reconstruction                                                | 43,400         | 94,000    | 46,000    | 48,000    | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Allandale B Neighbourhood Reconstruction                                                | 14,400         | 31,000    | 15,000    | 16,000    | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Brock Park Neighbourhood Reconstruction                                                 | 37,000         | 80,000    | 39,000    | 41,000    | -    | -    | -    | -    | -    | -    | -    |
| NRP- HNS Queens Park A1 Neighbourhood Reconstruction                                             | 4,900          | 10,000    | 5,000     | 5,000     | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D1 Neighbourhood Reconstruction                                                  | 11,600         | 25,000    | 12,000    | 13,000    | -    | -    | -    | -    | -    | -    | -    |
| NRP- Wellington D2 Neighbourhood Reconstruction                                                  | 32,000         | 69,000    | 34,000    | 35,000    | -    | -    | -    | -    | -    | -    | -    |
| PC Replacements                                                                                  | 100            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Process Instrumentation                                                                          | 8,300          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| Public Safety Communication Program                                                              | 600            | 2,000     | 1,000     | 1,000     | -    | -    | -    | -    | -    | -    | -    |
| Queen St. ROW Reconstruction- St. Vincent Street to Berczy Street                                | 16,300         | 35,000    | 17,000    | 18,000    | -    | -    | -    | -    | -    | -    | -    |
| Ross, Collier, Bayfield Intersection Realignment                                                 | 2,800          | 6,000     | 3,000     | 3,000     | -    | -    | -    | -    | -    | -    | -    |
| Server and Desktop Software Program                                                              | 200            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| Server and Storage Technology Infrastructure Program                                             | 900            | 2,000     | 1,000     | 1,000     | -    | -    | -    | -    | -    | -    | -    |
| Sewer Rehabilitation Program                                                                     | 122,300        | 263,000   | 128,000   | 135,000   | -    | -    | -    | -    | -    | -    | -    |
| Sophia Creek Culvert Expansion - Grove, 130m East of Davidson                                    | 300            | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| South L/fill Leachate Gal Repl                                                                   | 14,700         | 31,000    | 15,000    | 16,000    | -    | -    | -    | -    | -    | -    | -    |
| Sunnidale Road Hwy 400 Crossing Reconstruction (within CAH limits)                               | 218,700        | 471,000   | 230,000   | 241,000   | -    | -    | -    | -    | -    | -    | -    |
| Utilization of Wastewater Collection System as Active Storage                                    | 23,200         | 50,000    | 24,000    | 26,000    | -    | -    | -    | -    | -    | -    | -    |
| Waste Water Treatment Facility Administrative Office Fit-Up                                      | 11,200         | 24,000    | 12,000    | 12,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewat- Auto Valves/Flowmeter                                                                  | 44,200         | 95,000    | 46,000    | 49,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewater Asset Management Plan                                                                 | 31,900         | 68,000    | 33,000    | 35,000    | -    | -    | -    | -    | -    | -    | -    |
| Wastewater Peak Flow Attenuation Facility                                                        | 158,500        | 341,000   | 166,000   | 175,000   | -    | -    | -    | -    | -    | -    | -    |
| Well Installations for Biosolids Storage Facility Groundwater Monitoring Program                 | 18,900         | 41,000    | 20,000    | 21,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                            | 109,500        | 236,000   | 115,000   | 121,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Administration Building Retrofit of Laboratory Fume Hood Ventilation Unit - Laboratory Room | 8,300          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                 | 293,400        | 631,000   | 308,000   | 323,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Biosolids Storage Tank Mixers                                                               | 1,135,800      | 2,445,000 | 1,193,000 | 1,252,000 | -    | -    | -    | -    | -    | -    | -    |
| WwTF Chemical Building Upgrade                                                                   | 8,400          | 18,000    | 9,000     | 9,000     | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cleaning and Rehab of Primary Digester 3 Overflow Box and Interior Condition Assessment     | 100,000        | 215,000   | 105,000   | 110,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cogenerat Engine #2 Rehab                                                                   | 37,500         | 80,000    | 39,000    | 41,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Cogeneration Building Ventilation Upgrades                                                  | 29,300         | 63,000    | 31,000    | 32,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF Electrical Substation and Transformer Upgrade                                               | 285,600        | 615,000   | 300,000   | 315,000   | -    | -    | -    | -    | -    | -    | -    |
| WwTF Feasibility Study - Reuse of Final Effluent                                                 | (50,900)       | -         | -         | -         | -    | -    | -    | -    | -    | -    | -    |
| WwTF Filter Beds 1 and 2 Diffuser Upgrade                                                        | 13,000         | 28,000    | 14,000    | 14,000    | -    | -    | -    | -    | -    | -    | -    |
| WWTF Innovation Center                                                                           | 11,700         | 25,000    | 12,000    | 13,000    | -    | -    | -    | -    | -    | -    | -    |
| WwTF New Advanced Nutrient Removal                                                               | 723,100        | 1,556,000 | 759,000   | 797,000   | -    | -    | -    | -    | -    | -    | -    |



Table B-2 (Cont'd)

| Description                                                                                                  | Budget<br>2021 | Total      | Forecast  |           |           |            |            |           |           |           |           |
|--------------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|
|                                                                                                              |                |            | 2022      | 2023      | 2024      | 2025       | 2026       | 2027      | 2028      | 2029      | 2030      |
| WwTF New Heat Exchanger - Primary Digester 3                                                                 | 17,400         | 37,000     | 18,000    | 19,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Redundant Power Feed to Secondary Effluent Pumps                                                        | 50,000         | 108,000    | 53,000    | 55,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Sand Filter Controls & Instrumentation Replacement                                                      | 55,000         | 119,000    | 58,000    | 61,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Secondary Digester Facade Replacement                                                                   | 33,900         | 73,000     | 36,000    | 37,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Selector Tank Mixer Upgrade                                                                             | 200            | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| WwTF Sludge Thickening System Process - Polymer System Replacement                                           | 73,200         | 158,000    | 77,000    | 81,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Splitter Gallery Concrete and Expansion Joint Repairs                                                   | 116,700        | 252,000    | 123,000   | 129,000   | -         | -          | -          | -         | -         | -         | -         |
| WwTF Travelling Bridge Frame Renewal - Filters 1 - 4                                                         | 46,500         | 100,000    | 49,000    | 51,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Underground Sludge Transfer Pipe Replacement - Admin Building                                           | 339,000        | 730,000    | 356,000   | 374,000   | -         | -          | -          | -         | -         | -         | -         |
| WwTF Unox Tank Isolation Gate Replacement                                                                    | 33,300         | 72,000     | 35,000    | 37,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Ventilation Upgrades at Ultraviolet Disinfection Building                                               | 36,600         | 78,000     | 38,000    | 40,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Feasibility Study - Reuse of Final Effluent                                                             | 18,400         | 39,000     | 19,000    | 20,000    | -         | -          | -          | -         | -         | -         | -         |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                     | 30,900         | 66,000     | 32,000    | 34,000    | -         | -          | -          | -         | -         | -         | -         |
| WwTF Biosolids Storage Tank Mixers                                                                           | 800,000        | 1,722,000  | 840,000   | 882,000   | -         | -          | -          | -         | -         | -         | -         |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 459,500        | 989,000    | 482,000   | 507,000   | -         | -          | -          | -         | -         | -         | -         |
| Co-generation & Biogas Trmt                                                                                  | (2,500)        | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | (200,400)      | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                                 | 14,900         | 32,000     | 16,000    | 16,000    | -         | -          | -          | -         | -         | -         | -         |
| Mapleview Drive West Sanitary Forcemain Twinning and Pumping Station 5 Upgrades & Expansion (City)           | 5,000          | 11,000     | 5,000     | 6,000     | -         | -          | -          | -         | -         | -         | -         |
| <b>Growth Related:</b>                                                                                       | -              | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| Salem & Hewitt's Secondary Plan Areas                                                                        | -              | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| 000332 - McKay Pump Station (City)                                                                           | -              | 5,995,000  | -         | -         | -         | -          | -          | 118,000   | 892,000   | 1,232,000 | 3,753,000 |
| 000458 - Hewitt's Pump Station (City)                                                                        | -              | 1,481,000  | -         | -         | -         | -          | -          | -         | -         | 134,000   | 1,347,000 |
| EN1137 - Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                         | -              | 6,588,000  | -         | -         | 3,131,000 | -          | 3,457,000  | -         | -         | -         | -         |
| EN1144 - County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer) | 830,800        | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| EN1255 - Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)               | (1,321,400)    | 16,434,000 | -         | -         | 3,051,000 | 4,805,000  | 5,046,000  | 3,532,000 | -         | -         | -         |
| EN1256 - McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                     | (8,000,000)    | 38,747,000 | -         | 1,900,000 | 6,946,000 | 14,586,000 | 15,315,000 | -         | -         | -         | -         |
| EN1257 - McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                            | 1,398,200      | 6,177,000  | 4,231,000 | 1,946,000 | -         | -          | -          | -         | -         | -         | -         |
| EN1258 - Veterans Drive New Trunk Watermain - Salem to McKay (Developer)                                     | 135,800        | 2,873,000  | -         | -         | 254,000   | 1,343,000  | 1,276,000  | -         | -         | -         | -         |
| EN1261 - Yonge Street ROW Expansion - Mapleview to Madeline (City)                                           | 16,600         | 600,000    | -         | -         | -         | -          | 26,000     | 223,000   | 351,000   | -         | -         |
| EN1270 - Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer) | 75,795         | -          | -         | -         | -         | -          | -          | -         | -         | -         | -         |
| EN1271 - Mapleview Dr E Road Expansion - East of Yonge to Prince William (City)                              | -              | 4,596,000  | 70,000    | 107,000   | -         | 1,402,000  | 1,472,000  | 1,545,000 | -         | -         | -         |
| EN1278 - Bryne Drive (North) New Road Construction - Harvie Rd to Essa Rd                                    | -              | 443,000    | -         | -         | -         | -          | -          | 84,000    | 175,000   | 184,000   | -         |
| EN1334 - Lockhart Road ROW Expansion and Trunk Watermain - Saunders to Huronia (City)                        | -              | 151,000    | -         | -         | -         | 15,000     | 66,000     | 70,000    | -         | -         | -         |
| EN1339 - Yonge Street ROW Expansion - Madeline Drive (South) extension to Lockhart (City)                    | -              | 1,984,000  | -         | 31,000    | -         | -          | 119,000    | 712,000   | 1,122,000 | -         | -         |



Table B-2 (Cont'd)

| Description                                                                                              | Budget<br>2021 | Total      | Forecast  |           |           |           |            |            |            |         |         |
|----------------------------------------------------------------------------------------------------------|----------------|------------|-----------|-----------|-----------|-----------|------------|------------|------------|---------|---------|
|                                                                                                          |                |            | 2022      | 2023      | 2024      | 2025      | 2026       | 2027       | 2028       | 2029    | 2030    |
| <b>Carryforwards:</b>                                                                                    | -              | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                    | 84,800         | 182,000    | 89,000    | 93,000    | -         | -         | -          | -          | -          | -       | -       |
| Mapleview Drive West Sanitary Forcmain Twinning and Pumping Station 5 Upgrades & Expansion (City)        | 559,700        | 1,205,000  | 588,000   | 617,000   | -         | -         | -          | -          | -          | -       | -       |
| County Rd 27 Sanitary Sewer - Holly SPS to Lougheed                                                      | 116,700        | 252,000    | 123,000   | 129,000   | -         | -         | -          | -          | -          | -       | -       |
| County Road 27 New Transmission Watermain - Holly PS to Former Barrie South City Limits (Developer)      | 16,000         | 35,000     | 17,000    | 18,000    | -         | -         | -          | -          | -          | -       | -       |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                              | 285,000        | 613,000    | 299,000   | 314,000   | -         | -         | -          | -          | -          | -       | -       |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview (Developer)                              | 1,083,400      | 2,332,000  | 1,138,000 | 1,194,000 | -         | -         | -          | -          | -          | -       | -       |
| Huronia Road New Trunk Sanitary Sewer and Road Replacement - Lockhart to McKay (City)                    | 453,300        | 976,000    | 476,000   | 500,000   | -         | -         | -          | -          | -          | -       | -       |
| Mapleview Dr E New Sanitary Sewer & Road Expansion - Prince William to Phase 1 Boundary (Developer)      | 1,271,700      | 2,737,000  | 1,335,000 | 1,402,000 | -         | -         | -          | -          | -          | -       | -       |
| McKay Road New Trunk Sanitary Sewer - Hwy 400 to Huronia (City)                                          | 2,853,600      | 6,142,000  | 2,996,000 | 3,146,000 | -         | -         | -          | -          | -          | -       | -       |
| McKay Road ROW Expansion - Reid Drive to West of Highway 400 (Developer)                                 | 2,365,100      | 5,091,000  | 2,483,000 | 2,608,000 | -         | -         | -          | -          | -          | -       | -       |
| Hewitt's Creek New Trunk Sanitary Sewer - Mapleview to Lockhart (Developer)                              | 154,300        | 332,000    | 162,000   | 170,000   | -         | -         | -          | -          | -          | -       | -       |
| Hewitt's Creek New Trunk Sanitary Sewer - Sun King to Mapleview (Developer)                              | 63,300         | 136,000    | 66,000    | 70,000    | -         | -         | -          | -          | -          | -       | -       |
| Lockhart Rd Trunk San Sew/Pump (City)                                                                    | 64,600         | 139,000    | 68,000    | 71,000    | -         | -         | -          | -          | -          | -       | -       |
| Mapleview Drive West Sanitary Forcmain Twinning and Pumping Station 5 Upgrades & Expansion (City)        | 145,900        | 314,000    | 153,000   | 161,000   | -         | -         | -          | -          | -          | -       | -       |
| Sanitary Pump Station 3 Decommissioning (City)                                                           | 31,200         | 67,000     | 33,000    | 34,000    | -         | -         | -          | -          | -          | -       | -       |
| Sanitary Servicing - Royal Oak, Bay, Cottage                                                             | 26,200         | 57,000     | 28,000    | 29,000    | -         | -         | -          | -          | -          | -       | -       |
| 0                                                                                                        | -              | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| <b>Former Municipal Boundary Areas</b>                                                                   | -              | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| 000931 - Wastewater Inflow/Infiltration Reduction Action Plan                                            | 200,000        | 5,790,000  | 525,000   | 551,000   | 579,000   | 608,000   | 638,000    | 670,000    | 704,000    | 739,000 | 776,000 |
| 001018 - Dunlop Street Bridge Sanitary - Sarjeant Drive to Anne Street                                   | 1,208,069      | 41,897,000 | 1,050,000 | 1,103,000 | -         | 3,460,000 | 11,510,000 | 12,085,000 | 12,689,000 | -       | -       |
| EN1013 - Sunnisdale: Letitia-Wellington Transmission Watermain                                           | 448,000        | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| EN1097 - Mapleview Drive East Improvements - Country Lane to Yonge (City)                                | 56,250         | 33,000     | 33,000    | -         | -         | -         | -          | -          | -          | -       | -       |
| EN1122 - Little Lk Sew Pump Station Upg                                                                  | -              | 6,205,000  | 527,000   | 2,205,000 | 3,473,000 | -         | -          | -          | -          | -       | -       |
| EN1132 - Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                             | 167,500        | 3,483,000  | 710,000   | 1,353,000 | 1,420,000 | -         | -          | -          | -          | -       | -       |
| EN1166 - Duckworth Street New Transmission Watermain and ROW Expansion - Bell Farm to St. Vincent        | -              | 1,978,000  | -         | 965,000   | 1,013,000 | -         | -          | -          | -          | -       | -       |
| EN1170 - Essa Road ROW Expansion - Coughlin to Mapleview                                                 | 35,700         | 757,000    | -         | -         | -         | -         | -          | 757,000    | -          | -       | -       |
| EN1183 - Ross, Collier, Bayfield Intersection Realignment                                                | -              | 39,000     | -         | -         | -         | -         | -          | -          | -          | -       | 39,000  |
| EN1274 - Bunkers Creek Culverts and Watercourse Improvements - Innisfil to Lakeshore                     | -              | 422,000    | -         | 161,000   | 127,000   | 134,000   | -          | -          | -          | -       | -       |
| EN1277 - Bryne Drive New Road Construction - Harvie to North of Caplan                                   | 48,100         | 351,000    | 66,000    | 139,000   | 146,000   | -         | -          | -          | -          | -       | -       |
| EN1286 - Big Bay Point Road ROW Expansion - Bayview to Huronia                                           | 125,800        | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| EN1288 - Bayview Drive New Transmission Watermain & Road Expansion - Little Avenue to Big Bay Point Road | 107,400        | 1,711,000  | 30,000    | 76,000    | 762,000   | 668,000   | 175,000    | -          | -          | -       | -       |
| EN1353 - Essa Road and Anne Street Intersection Reconstruction                                           | -              | 1,225,000  | -         | -         | 24,000    | 586,000   | 615,000    | -          | -          | -       | -       |
| <b>Carryforwards:</b>                                                                                    | -              | -          | -         | -         | -         | -         | -          | -          | -          | -       | -       |
| Bell Farm Road ROW Expansion - St. Vincent to Duckworth                                                  | 32,500         | 70,000     | 34,000    | 36,000    | -         | -         | -          | -          | -          | -       | -       |



Table B-2 (Cont'd)

| Description                                                                                           | Budget<br>2021    | Total              | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------------------------------------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                                       |                   |                    | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| Bishop Drive Trunk Sanitary Sewer Expansion - Ferndale to Patterson                                   | 1,400             | 3,000              | 1,000             | 2,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Dunlop Street Interchange Replacement - Sarjeant Drive to Anne Street                                 | 51,600            | 111,000            | 54,000            | 57,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Asset Management Plan                                                                      | 60,100            | 129,000            | 63,000            | 66,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>Facilities</b>                                                                                     | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1091 - WwTF New Advanced Nutrient Removal                                                           | 2,500,000         | 199,997,000        | 7,375,000         | 5,163,000         | 12,422,000        | 16,748,000        | 17,585,000        | 18,465,000        | 38,775,000        | 40,714,000        | 42,750,000        |
| EN1245 - WwTF Chemical Building Upgrade                                                               | 364,000           | 920,000            | 920,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1297 - WwTF Electrical Substation and Transformer Upgrade                                           | 570,000           | 17,877,000         | 630,000           | 3,271,000         | 4,293,000         | 5,409,000         | 4,274,000         | -                 | -                 | -                 | -                 |
| EN1390 - Wastewater Peak Flow Attenuation Facility                                                    | 473,200           | 33,203,000         | 1,414,000         | 1,113,000         | 232,000           | -                 | 2,827,000         | 11,875,000        | 12,469,000        | 3,273,000         | -                 |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                        | 600,000           | 690,000            | 690,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| EN1431 - WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                        | -                 | 15,384,000         | -                 | 3,309,000         | 4,336,000         | 4,552,000         | 3,187,000         | -                 | -                 | -                 | -                 |
| EN1438 - WwTF Digester Capacity Expansion                                                             | 500,000           | 39,769,000         | 1,166,000         | 808,000           | 732,000           | 3,373,000         | 10,625,000        | 11,156,000        | 7,809,000         | 4,100,000         | -                 |
| FC1215 - WWTF Innovation Center                                                                       | 1,000,000         | 15,230,000         | 6,300,000         | 6,615,000         | 2,315,000         | -                 | -                 | -                 | -                 | -                 | -                 |
| Z162 - WwTF New Cogeneration and Biogas Treatment System                                              | 80,000            | 452,000            | 231,000           | 221,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>Carryforwards:</b>                                                                                 | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Peak Flow Attenuation Facility                                                             | 62,000            | 133,000            | 65,000            | 68,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF 96 MLD Expansion Program, Comprehensive Site Strategy Plan & ESR                                 | 194,600           | 419,000            | 204,000           | 215,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Alum System Upgrade at Secondary Clarifiers                                                      | 158,000           | 340,000            | 166,000           | 174,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Digester Capacity Expansion                                                                      | 259,200           | 558,000            | 272,000           | 286,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Electrical Substation and Transformer Upgrade                                                    | 225,000           | 484,000            | 236,000           | 248,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WWTF Innovation Center                                                                                | 11,700            | 25,000             | 12,000            | 13,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF New Heat Exchanger - Primary Digester 3                                                          | 156,600           | 337,000            | 164,000           | 173,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Selector Tank Mixer Upgrade                                                                      | 1,700             | 4,000              | 2,000             | 2,000             | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF Biosolids Storage Tank Mixers                                                                    | 116,000           | 250,000            | 122,000           | 128,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| WwTF New Advanced Nutrient Removal                                                                    | 216,700           | 467,000            | 228,000           | 239,000           | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| <b>Total Capital Expenditures</b>                                                                     | <b>19,320,213</b> | <b>600,971,000</b> | <b>50,388,000</b> | <b>60,017,000</b> | <b>56,808,000</b> | <b>65,457,000</b> | <b>89,878,000</b> | <b>71,233,000</b> | <b>84,447,000</b> | <b>61,209,000</b> | <b>61,534,000</b> |
| <b>Capital Financing</b>                                                                              |                   |                    |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Provincial/Federal Grants                                                                             | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Facilities                                                         | 3,549,167         | 98,716,646         | 7,940,897         | 11,559,077        | 9,812,578         | 11,953,482        | 18,301,475        | 16,649,572        | 14,233,366        | 6,819,618         | 1,446,582         |
| Development Charges Reserve Fund - Facilities Related Debt                                            | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Development Charges Reserve Fund - Wastewater Collection - Former Municipal Boundary Areas            | 1,529,163         | 37,500,290         | 1,704,060         | 3,303,900         | 3,334,960         | 3,238,880         | 8,230,840         | 8,468,860         | 8,550,570         | 317,770           | 350,450           |
| Development Charges Reserve Fund - Wastewater Collection - Salem & Hewitt's Secondary Plan Areas      | 2,696,485         | 106,169,000        | 14,355,000        | 14,540,000        | 13,382,000        | 22,151,000        | 26,754,900        | 6,094,450         | 2,241,650         | 1,550,000         | 5,100,000         |
| Non-Growth Related Debenture Requirements                                                             | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Facilities                                                    | 1,848,105         | 123,735,544        | 5,692,443         | 4,412,613         | 7,529,742         | 10,151,998        | 10,659,355        | 11,192,778        | 23,503,924        | 24,679,272        | 25,913,418        |
| Growth Related Debenture Requirements - Facilities Related Debt                                       | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Wastewater Collection - Former Municipal Boundary Areas       | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Growth Related Debenture Requirements - Wastewater Collection - Salem & Hewitt's Secondary Plan Areas | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Operating Contributions                                                                               | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Rate Stabilization Reserve Fund                                                            | -                 | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Wastewater Rate Capital Reserve Fund                                                                  | 9,697,293         | 234,849,520        | 20,695,600        | 26,201,410        | 22,748,720        | 17,961,640        | 25,931,430        | 28,827,340        | 35,917,490        | 27,842,340        | 28,723,550        |
| <b>Total Capital Financing</b>                                                                        | <b>19,320,213</b> | <b>600,971,000</b> | <b>50,388,000</b> | <b>60,017,000</b> | <b>56,808,000</b> | <b>65,457,000</b> | <b>89,878,000</b> | <b>71,233,000</b> | <b>84,447,000</b> | <b>61,209,000</b> | <b>61,534,000</b> |



Table B-3  
City of Barrie  
Wastewater Services  
Schedule of Non-Growth-Related Debenture Repayments (Inflated \$)

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |
|----------------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|
|                                  |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
| 2022                             |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    |
| 2023                             |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    |
| 2024                             |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    |
| 2025                             |      | -                       |          |      |      |      | -    | -    | -    | -    | -    |
| 2026                             |      | -                       |          |      |      |      |      | -    | -    | -    | -    |
| 2027                             |      | -                       |          |      |      |      |      |      | -    | -    | -    |
| 2028                             |      | -                       |          |      |      |      |      |      |      | -    | -    |
| 2029                             |      | -                       |          |      |      |      |      |      |      |      | -    |
| 2030                             |      | -                       |          |      |      |      |      |      |      |      |      |
| <b>Total Annual Debt Charges</b> |      |                         | -        | -    | -    | -    | -    | -    | -    | -    | -    |

Table B-4  
City of Barrie  
Wastewater Services  
Schedule of Growth-Related Debenture Repayments – Facilities (Inflated \$)

| Debenture<br>Year                | 2021 | Principal<br>(Inflated) | Forecast |             |         |         |         |           |           |           |           |
|----------------------------------|------|-------------------------|----------|-------------|---------|---------|---------|-----------|-----------|-----------|-----------|
|                                  |      |                         | 2022     | 2023        | 2024    | 2025    | 2026    | 2027      | 2028      | 2029      | 2030      |
| 2021                             |      | 1,848,105               | 124,222  | 124,222     | 124,222 | 124,222 | 124,222 | 124,222   | 124,222   | 124,222   | 124,222   |
| 2022                             |      | 5,692,443               |          | 382,622     | 382,622 | 382,622 | 382,622 | 382,622   | 382,622   | 382,622   | 382,622   |
| 2023                             |      | 4,412,613               |          |             | 296,597 | 296,597 | 296,597 | 296,597   | 296,597   | 296,597   | 296,597   |
| 2024                             |      | 7,529,742               |          |             |         | 506,117 | 506,117 | 506,117   | 506,117   | 506,117   | 506,117   |
| 2025                             |      | 10,151,998              |          |             |         |         | 682,374 | 682,374   | 682,374   | 682,374   | 682,374   |
| 2026                             |      | 10,659,355              |          |             |         |         |         | 716,476   | 716,476   | 716,476   | 716,476   |
| 2027                             |      | 11,192,778              |          |             |         |         |         |           | 752,330   | 752,330   | 752,330   |
| 2028                             |      | 23,503,924              |          |             |         |         |         |           |           | 1,579,833 | 1,579,833 |
| 2029                             |      | 24,679,272              |          |             |         |         |         |           |           |           | 1,658,835 |
| 2030                             |      | 25,913,418              |          |             |         |         |         |           |           |           |           |
| <b>Total Annual Debt Charges</b> |      |                         | -        | 125,583,649 | 124,222 | 506,843 | 803,440 | 1,309,557 | 1,991,931 | 2,708,407 | 3,460,737 |



Table B-5  
City of Barrie  
Wastewater Services  
Schedule of Growth-Related Debenture Repayments – Facilities Related Debt (Inflated \$)

| Debenture<br>Year         | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |   |
|---------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|---|
|                           |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |   |
| 2022                      |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    | - |
| 2023                      |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    | - |
| 2024                      |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    | - |
| 2025                      |      | -                       |          |      |      |      | -    | -    | -    | -    | -    | - |
| 2026                      |      | -                       |          |      |      |      |      | -    | -    | -    | -    | - |
| 2027                      |      | -                       |          |      |      |      |      |      | -    | -    | -    | - |
| 2028                      |      | -                       |          |      |      |      |      |      |      | -    | -    | - |
| 2029                      |      | -                       |          |      |      |      |      |      |      |      | -    | - |
| 2030                      |      | -                       |          |      |      |      |      |      |      |      |      | - |
| Total Annual Debt Charges | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    | - |

Table B-6  
City of Barrie  
Wastewater Services  
Schedule of Growth-Related Debenture Repayments – Wastewater Collection – Former Municipal Boundary Areas  
(Inflated \$)

| Debenture<br>Year         | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |   |
|---------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|---|
|                           |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |   |
| 2022                      |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    | - |
| 2023                      |      | -                       |          |      | -    | -    | -    | -    | -    | -    | -    | - |
| 2024                      |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    | - |
| 2025                      |      | -                       |          |      |      |      | -    | -    | -    | -    | -    | - |
| 2026                      |      | -                       |          |      |      |      |      | -    | -    | -    | -    | - |
| 2027                      |      | -                       |          |      |      |      |      |      | -    | -    | -    | - |
| 2028                      |      | -                       |          |      |      |      |      |      |      | -    | -    | - |
| 2029                      |      | -                       |          |      |      |      |      |      |      |      | -    | - |
| 2030                      |      | -                       |          |      |      |      |      |      |      |      |      | - |
| Total Annual Debt Charges | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    | - |



Table B-7  
City of Barrie  
Wastewater Services  
Schedule of Growth-Related Debenture Repayments – Wastewater Collection – Salem & Hewitt's Secondary Plan Areas  
(Inflated \$)

| Debenture<br>Year         | 2021 | Principal<br>(Inflated) | Forecast |      |      |      |      |      |      |      |      |  |
|---------------------------|------|-------------------------|----------|------|------|------|------|------|------|------|------|--|
|                           |      |                         | 2022     | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |  |
| 2022                      |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    |  |
| 2023                      |      | -                       |          | -    | -    | -    | -    | -    | -    | -    | -    |  |
| 2024                      |      | -                       |          |      |      | -    | -    | -    | -    | -    | -    |  |
| 2025                      |      | -                       |          |      |      |      | -    | -    | -    | -    | -    |  |
| 2026                      |      | -                       |          |      |      |      |      | -    | -    | -    | -    |  |
| 2027                      |      | -                       |          |      |      |      |      |      | -    | -    | -    |  |
| 2028                      |      | -                       |          |      |      |      |      |      |      | -    | -    |  |
| 2029                      |      | -                       |          |      |      |      |      |      |      |      | -    |  |
| 2030                      |      | -                       |          |      |      |      |      |      |      |      |      |  |
| Total Annual Debt Charges | -    | -                       | -        | -    | -    | -    | -    | -    | -    | -    | -    |  |

Table B-8  
City of Barrie  
Wastewater Services  
Wastewater Capital Reserve Fund Continuity (Inflated \$)

| Description             | 2021              | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Opening Balance         | 55,582,924        | 63,069,615        | 60,979,316        | 54,882,692        | 53,919,033        | 60,087,290        | 61,313,487        | 62,901,328        | 60,822,290        | 70,719,756        |
| Transfer from Operating | 15,947,325        | 17,409,628        | 19,028,655        | 20,727,825        | 22,951,715        | 25,955,402        | 29,181,822        | 32,645,858        | 36,353,144        | 39,904,748        |
| Transfer to Capital     | 9,697,293         | 20,695,600        | 26,201,410        | 22,748,720        | 17,961,640        | 25,931,430        | 28,827,340        | 35,917,490        | 27,842,340        | 28,723,550        |
| Transfer to Operating   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| <b>Closing Balance</b>  | <b>61,832,956</b> | <b>59,783,643</b> | <b>53,806,560</b> | <b>52,861,797</b> | <b>58,909,108</b> | <b>60,111,262</b> | <b>61,667,969</b> | <b>59,629,696</b> | <b>69,333,094</b> | <b>81,900,954</b> |
| Interest                | 1,236,659         | 1,195,673         | 1,076,131         | 1,057,236         | 1,178,182         | 1,202,225         | 1,233,359         | 1,192,594         | 1,386,662         | 1,638,019         |





Table B-9  
City of Barrie  
Wastewater Services  
Wastewater Rate Stabilization Reserve Fund Continuity (Inflated \$)

| Description             | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030             |
|-------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Opening Balance         | 2,530,674        | 2,581,288        | 2,632,914        | 2,685,572        | 2,739,283        | 2,794,069        | 2,849,950        | 2,906,949        | 2,965,088        | 3,024,390        |
| Transfer from Operating | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Transfer to Capital     | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| Transfer to Operating   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                |
| <b>Closing Balance</b>  | <b>2,530,674</b> | <b>2,581,288</b> | <b>2,632,914</b> | <b>2,685,572</b> | <b>2,739,283</b> | <b>2,794,069</b> | <b>2,849,950</b> | <b>2,906,949</b> | <b>2,965,088</b> | <b>3,024,390</b> |
| Interest                | 50,613           | 51,626           | 52,658           | 53,711           | 54,786           | 55,881           | 56,999           | 58,139           | 59,302           | 60,488           |

Table B-10  
City of Barrie  
Wastewater Services  
Wastewater Development Charges Reserve Fund Continuity – Facilities (Inflated \$)

| Description                       | 2021              | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Opening Balance                   | 21,305,493        | 26,594,538        | 27,248,254        | 25,142,838        | 31,117,461        | 34,842,506        | 31,814,283        | 30,021,737        | 30,236,867        | 36,768,226        |
| Development Charge Proceeds       | 8,316,751         | 8,184,554         | 9,467,507         | 15,980,495        | 16,304,898        | 16,641,373        | 16,976,771        | 17,316,354        | 17,670,602        | 18,023,963        |
| Transfer to Capital               | 3,549,167         | 7,940,897         | 11,559,077        | 9,812,578         | 11,953,482        | 18,301,475        | 16,649,572        | 14,233,366        | 6,819,618         | 1,446,582         |
| Transfer to Operating             | -                 | 124,222           | 506,843           | 803,440           | 1,309,557         | 1,991,931         | 2,708,407         | 3,460,737         | 5,040,570         | 6,699,405         |
| <b>Closing Balance</b>            | <b>26,073,077</b> | <b>26,713,974</b> | <b>24,649,841</b> | <b>30,507,315</b> | <b>34,159,320</b> | <b>31,190,474</b> | <b>29,433,075</b> | <b>29,643,987</b> | <b>36,047,281</b> | <b>46,646,201</b> |
| Interest                          | 521,462           | 534,279           | 492,997           | 610,146           | 683,186           | 623,809           | 588,662           | 592,880           | 720,946           | 932,924           |
| Required from Development Charges | 5,397,272         | 13,633,340        | 15,971,690        | 17,342,320        | 22,105,480        | 28,960,830        | 27,842,350        | 37,737,290        | 31,498,890        | 27,360,000        |

Table B-11  
City of Barrie  
Wastewater Services  
Wastewater Development Charges Reserve Fund Continuity – Facilities Related Debt (Inflated \$)

| Description                       | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Opening Balance                   | (41,529,132)        | (45,960,060)        | (50,556,567)        | (54,458,853)        | (54,461,592)        | (54,261,869)        | (53,849,699)        | (53,219,931)        | (52,367,115)        | (51,278,070)        |
| Development Charge Proceeds       | 4,973,679           | 4,894,651           | 5,661,810           | 9,557,833           | 9,752,801           | 9,953,590           | 10,155,261          | 10,358,010          | 10,569,307          | 10,781,224          |
| Transfer to Capital               | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   |
| Transfer to Operating             | 8,503,430           | 8,499,853           | 8,496,275           | 8,492,698           | 8,489,120           | 8,485,543           | 8,481,965           | 8,478,388           | 8,474,810           | 5,503,607           |
| <b>Closing Balance</b>            | <b>(45,058,883)</b> | <b>(49,565,262)</b> | <b>(53,391,032)</b> | <b>(53,393,717)</b> | <b>(53,197,911)</b> | <b>(52,793,822)</b> | <b>(52,176,403)</b> | <b>(51,340,308)</b> | <b>(50,272,617)</b> | <b>(46,000,453)</b> |
| Interest                          | (901,178)           | (991,305)           | (1,067,821)         | (1,067,874)         | (1,063,958)         | (1,055,876)         | (1,043,528)         | (1,026,806)         | (1,005,452)         | (920,009)           |
| Required from Development Charges | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   |



Table B-12  
City of Barrie  
Wastewater Services  
Wastewater Development Charges Reserve Fund Continuity – Wastewater Collection – Former Municipal Boundary  
Areas (Inflated \$)

| Description                       | 2021               | 2022               | 2023               | 2024               | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Opening Balance                   | (3,476,726)        | (4,085,549)        | (4,863,593)        | (7,267,271)        | (9,203,530)         | (11,047,474)        | (17,984,817)        | (25,270,127)        | (32,750,339)        | (31,947,901)        |
| Development Charge Proceeds       | 1,000,448          | 1,021,381          | 1,042,718          | 1,579,162          | 1,611,553           | 1,646,141           | 1,679,043           | 1,712,521           | 1,746,638           | 1,781,629           |
| Transfer to Capital               | 1,529,163          | 1,704,060          | 3,303,900          | 3,334,960          | 3,238,880           | 8,230,840           | 8,468,860           | 8,550,570           | 317,770             | 350,450             |
| Transfer to Operating             | -                  | -                  | -                  | -                  | -                   | -                   | -                   | -                   | -                   | -                   |
| <b>Closing Balance</b>            | <b>(4,005,440)</b> | <b>(4,768,228)</b> | <b>(7,124,775)</b> | <b>(9,023,069)</b> | <b>(10,830,857)</b> | <b>(17,632,174)</b> | <b>(24,774,634)</b> | <b>(32,108,176)</b> | <b>(31,321,472)</b> | <b>(30,516,722)</b> |
| Interest                          | (80,109)           | (95,365)           | (142,496)          | (180,461)          | (216,617)           | (352,643)           | (495,493)           | (642,164)           | (626,429)           | (610,334)           |
| Required from Development Charges | 1,529,163          | 1,704,060          | 3,303,900          | 3,334,960          | 3,238,880           | 8,230,840           | 8,468,860           | 8,550,570           | 317,770             | 350,450             |

Table B-13  
City of Barrie  
Wastewater Services  
Wastewater Development Charges Reserve Fund Continuity – Wastewater Collection – Salem & Hewitt's Secondary Plan  
Areas (Inflated \$)

| Description                       | 2021                | 2022                | 2023                | 2024                | 2025                | 2026                | 2027                | 2028                | 2029                | 2030                |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Opening Balance                   | (11,738,164)        | (11,318,506)        | (22,974,104)        | (34,032,854)        | (40,935,080)        | (56,771,072)        | (77,468,201)        | (77,348,061)        | (73,137,598)        | (67,969,999)        |
| Development Charge Proceeds       | 3,338,075           | 3,149,874           | 4,148,561           | 7,282,423           | 7,428,166           | 7,576,755           | 7,731,219           | 7,886,183           | 8,050,345           | 8,211,360           |
| Transfer to Capital               | 2,696,485           | 14,355,000          | 14,540,000          | 13,382,000          | 22,151,000          | 26,754,900          | 6,094,450           | 2,241,650           | 1,550,000           | 5,100,000           |
| Transfer to Operating             | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   | -                   |
| <b>Closing Balance</b>            | <b>(11,096,574)</b> | <b>(22,523,632)</b> | <b>(33,365,543)</b> | <b>(40,132,431)</b> | <b>(55,657,913)</b> | <b>(75,949,217)</b> | <b>(75,831,432)</b> | <b>(71,703,528)</b> | <b>(66,637,254)</b> | <b>(64,858,639)</b> |
| Interest                          | (221,931)           | (450,473)           | (667,311)           | (802,649)           | (1,113,158)         | (1,518,984)         | (1,516,629)         | (1,434,071)         | (1,332,745)         | (1,297,173)         |
| Required from Development Charges | 2,696,485           | 14,355,000          | 14,540,000          | 13,382,000          | 22,151,000          | 26,754,900          | 6,094,450           | 2,241,650           | 1,550,000           | 5,100,000           |



**Table B-14**  
**City of Barrie**  
**Wastewater Services**  
**Operating Budget Forecast (Inflated \$)**

| Description                                           | Budget<br>2021 | Forecast  |           |           |           |           |           |           |           |           |
|-------------------------------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                       |                | 2022      | 2023      | 2024      | 2025      | 2026      | 2027      | 2028      | 2029      | 2030      |
| <b>Expenditures</b>                                   |                |           |           |           |           |           |           |           |           |           |
| <b>Operating Costs</b>                                |                |           |           |           |           |           |           |           |           |           |
| 400000 - Full-time Salaries                           | 3,586,124      | 3,672,137 | 3,753,526 | 3,828,300 | 3,904,900 | 3,983,000 | 4,062,700 | 4,144,000 | 4,226,900 | 4,311,400 |
| 400100 - Full-time Salaries - Casual                  | 205,546        | 208,629   | 214,678   | 230,512   | 235,100   | 239,800   | 244,600   | 249,500   | 254,500   | 259,600   |
| 400700 - Full-time Overtime                           | 96,064         | 97,985    | 99,945    | 101,944   | 104,000   | 106,100   | 108,200   | 110,400   | 112,600   | 114,900   |
| 401000 - Full-time Salary Recovery                    | (215,196)      | (219,500) | (223,890) | (228,368) | (232,900) | (237,600) | (242,400) | (247,200) | (252,100) | (257,100) |
| 401100 - Full-time Fringe Benefits                    | 975,928        | 992,990   | 1,009,144 | 1,023,980 | 1,044,500 | 1,065,400 | 1,086,700 | 1,108,400 | 1,130,600 | 1,153,200 |
| 401200 - Full-time Fringe Benefits - Casual           | 25,719         | 26,142    | 26,972    | 29,144    | 29,700    | 30,300    | 30,900    | 31,500    | 32,100    | 32,700    |
| Salaries & Benefits for Additional Staff              |                |           | 122,700   | 125,200   | 711,400   | 725,600   | 740,100   | 754,900   | 770,000   | 1,217,900 |
| 466500 - Shift Premiums                               | 8,375          | 8,543     | 8,713     | 8,888     | 9,100     | 9,300     | 9,500     | 9,700     | 9,900     | 10,100    |
| 500100 - Training Supplies                            | 74             | 80        | 81        | 83        | 100       | 100       | 100       | 100       | 100       | 100       |
| 500400 - Stationery & Office Supplies                 | 20,378         | 21,879    | 22,317    | 22,763    | 23,200    | 23,700    | 24,200    | 24,700    | 25,200    | 25,700    |
| 500500 - Preprinted Forms, Tags & Passes              | 28             | 29        | 29        | 30        | -         | -         | -         | -         | -         | -         |
| 500800 - Meetings & Meal Expenses                     | 8,329          | 8,496     | 8,665     | 8,839     | 9,000     | 9,200     | 9,400     | 9,600     | 9,800     | 10,000    |
| 501100 - Protective Clothing                          | 62,249         | 63,494    | 64,764    | 66,059    | 67,400    | 68,700    | 70,100    | 71,500    | 72,900    | 74,400    |
| 501300 - Clothing Allowance                           | 104            | 106       | 108       | 110       | 100       | 100       | 100       | 100       | 100       | 100       |
| 501500 - Protective Equipment                         | 59,896         | 61,094    | 62,316    | 63,562    | 64,800    | 66,100    | 67,400    | 68,700    | 70,100    | 71,500    |
| 510100 - Chemicals                                    | 6,366          | 6,493     | 6,623     | 6,756     | 7,100     | 7,500     | 7,900     | 8,300     | 8,700     | 9,100     |
| 510200 - Phosphorus                                   | 990,239        | 1,010,044 | 1,030,245 | 1,050,850 | 1,103,400 | 1,158,600 | 1,216,500 | 1,277,300 | 1,341,200 | 1,408,300 |
| 510300 - Chlorine                                     | 27,396         | 27,944    | 28,503    | 29,073    | 30,500    | 32,000    | 33,600    | 35,300    | 37,100    | 39,000    |
| 510400 - Citric Acid                                  | 465            | 474       | 484       | 493       | 500       | 500       | 500       | 500       | 500       | 500       |
| 510500 - Oxygen                                       | 832,197        | 848,841   | 865,818   | 883,134   | 927,300   | 973,700   | 1,022,400 | 1,073,500 | 1,127,200 | 1,183,600 |
| 510600 - Filter, Bed, Media                           | 68,465         | 69,834    | 71,231    | 72,656    | 74,100    | 75,600    | 77,100    | 78,600    | 80,200    | 81,800    |
| 510700 - Percol                                       | 107,992        | 110,152   | 112,355   | 114,602   | 116,900   | 119,200   | 121,600   | 124,000   | 126,500   | 129,000   |
| 510800 - Activated Carbon                             | 34,723         | 35,417    | 36,126    | 36,848    | 37,600    | 38,400    | 39,200    | 40,000    | 40,800    | 41,600    |
| 520000 - Gasoline                                     | 14,586         | 14,878    | 15,175    | 15,479    | 15,800    | 16,100    | 16,400    | 16,700    | 17,000    | 17,300    |
| 520100 - Hydro                                        | 1,042,119      | 1,062,961 | 1,084,221 | 1,105,905 | 1,161,200 | 1,219,300 | 1,280,300 | 1,344,300 | 1,411,500 | 1,482,100 |
| 520200 - Water & Wastewater                           | 137,576        | 140,328   | 143,134   | 145,997   | 148,900   | 151,900   | 154,900   | 158,000   | 161,200   | 164,400   |
| 520300 - Natural Gas                                  | 48,232         | 49,197    | 50,181    | 51,184    | 52,200    | 53,200    | 54,300    | 55,400    | 56,500    | 57,600    |
| 520600 - Propane Gas                                  | 12,000         | 12,240    | 12,485    | 12,734    | 13,000    | 13,300    | 13,600    | 13,900    | 14,200    | 14,500    |
| 540200 - Cleaning Supplies                            | 2,687          | 2,741     | 2,796     | 2,851     | 2,900     | 3,000     | 3,100     | 3,200     | 3,300     | 3,400     |
| 540300 - Small Parts                                  | 837,716        | 854,470   | 871,560   | 888,991   | 906,800   | 924,900   | 943,400   | 962,300   | 981,500   | 1,001,100 |
| 540900 - Field & Other Supplies                       | 100,696        | 102,710   | 104,764   | 106,860   | 109,000   | 111,200   | 113,400   | 115,700   | 118,000   | 120,400   |
| 541400 - Laboratory Supplies                          | 33,500         | 34,170    | 34,853    | 35,550    | 36,300    | 37,000    | 37,700    | 38,500    | 39,300    | 40,100    |
| 560200 - Minor Capital - General                      | 9,787          | 9,983     | 10,182    | 10,386    | 10,600    | 10,800    | 11,000    | 11,200    | 11,400    | 11,600    |
| 560300 - Minor Capital - Office Furniture & Equipment | 7,100          | -         | -         | -         | -         | -         | -         | -         | -         | -         |
| 570000 - Small Tools                                  | 79,239         | 80,824    | 82,440    | 84,089    | 85,800    | 87,500    | 89,300    | 91,100    | 92,900    | 94,800    |
| 600000 - Conferences & Trade Show Registration        | 35,103         | 37,689    | 38,443    | 39,212    | 40,000    | 40,800    | 41,600    | 42,400    | 43,200    | 44,100    |
| 600100 - Kilometer Reimbursement                      | 4,421          | 4,509     | 4,599     | 4,691     | 4,800     | 4,900     | 5,000     | 5,100     | 5,200     | 5,300     |
| 620000 - Staff Training & Development                 | 148,310        | 155,172   | 158,275   | 109,246   | 111,400   | 113,600   | 115,900   | 118,200   | 120,600   | 123,000   |
| 620200 - Memberships & Subscriptions                  | 15,086         | 16,198    | 16,522    | 16,852    | 17,200    | 17,500    | 17,900    | 18,300    | 18,700    | 19,100    |
| 620300 - Tuition Fees                                 | 462            | 471       | 481       | 490       | 500       | 500       | 500       | 500       | 500       | 500       |
| 640500 - Consultants - General                        | 130,559        | 140,179   | 142,982   | 140,474   | 143,300   | 146,200   | 149,100   | 152,100   | 155,100   | 158,200   |



Table B-14 (Cont'd)

| Description                                                                   | Budget<br>2021    | Forecast          |                   |                   |                   |                   |                   |                   |                   |                   |
|-------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                               |                   | 2022              | 2023              | 2024              | 2025              | 2026              | 2027              | 2028              | 2029              | 2030              |
| 660700 - License Services                                                     | 210               | 214               | 218               | 223               | 200               | 200               | 200               | 200               | 200               | 200               |
| 661400 - Cellular Telephone Services                                          | 4,272             | 4,357             | 4,445             | 4,533             | 4,600             | 4,700             | 4,800             | 4,900             | 5,000             | 5,100             |
| 661800 - Telephone Services                                                   | 40,500            | 41,310            | 42,136            | 42,979            | 43,800            | 44,700            | 45,600            | 46,500            | 47,400            | 48,300            |
| 670700 - Contracted Services - General                                        | 2,477,722         | 2,527,276         | 2,577,822         | 2,629,378         | 2,682,000         | 2,735,600         | 2,790,300         | 2,846,100         | 2,903,000         | 2,961,100         |
| 675100 - Repairs & Maintenance - Building                                     | 106,306           | 108,432           | 110,601           | 112,813           | 115,100           | 117,400           | 119,700           | 122,100           | 124,500           | 127,000           |
| 675400 - Repairs & Maintenance - Equipment                                    | 681,214           | 694,838           | 708,735           | 722,910           | 737,400           | 752,100           | 767,100           | 782,400           | 798,000           | 814,000           |
| 700000 - Equipment Rental/Lease                                               | 86,280            | 90,246            | 94,250            | 98,290            | 100,300           | 102,300           | 104,300           | 106,400           | 108,500           | 110,700           |
| 700100 - Property Rental/Lease                                                | 2,341             | 2,388             | 2,436             | 2,484             | 2,500             | 2,600             | 2,700             | 2,800             | 2,900             | 3,000             |
| 720800 - Insurance Premium                                                    | 300,326           | 306,333           | 312,459           | 318,708           | 325,100           | 331,600           | 338,200           | 345,000           | 351,900           | 358,900           |
| 730000 - Property Taxes                                                       | 6,889             | 7,027             | 7,167             | 7,311             | 7,500             | 7,700             | 7,900             | 8,100             | 8,300             | 8,500             |
| 900500 - Interdepartmental - General                                          | 601,769           | 634,189           | 745,910           | 857,631           | 874,800           | 892,300           | 910,100           | 928,300           | 946,900           | 965,800           |
| 901000 - Interdepartmental - Fleet                                            | 48,721            | 49,695            | 50,689            | 51,703            | 52,700            | 53,800            | 54,900            | 56,000            | 57,100            | 58,200            |
| 901500 - Interdepartmental - Property                                         | 35,175            | 35,546            | 35,889            | 36,210            | 36,900            | 37,600            | 38,400            | 39,200            | 40,000            | 40,800            |
| 901599 - Interdepartmental - Property (Automated)                             | 763,488           | 774,674           | 786,628           | 798,750           | 814,700           | 831,000           | 847,600           | 864,600           | 881,900           | 899,500           |
| 902000 - Interdepartmental - Corporate Support                                | 2,554,542         | 2,578,205         | 2,595,513         | 2,613,375         | 2,665,600         | 2,718,900         | 2,773,300         | 2,828,800         | 2,885,400         | 2,943,100         |
| 904000 - Interdepartmental - Wastewater Rate (Manual)                         | 3,212,184         | 3,303,235         | 3,379,904         | 3,454,355         | 3,523,400         | 3,593,900         | 3,665,800         | 3,739,100         | 3,813,900         | 3,890,200         |
| 904099 - Interdepartmental - Wastewater Rate (Automated)                      | 72,614            | 73,647            | 74,905            | 76,186            | 77,700            | 79,300            | 80,900            | 82,500            | 84,200            | 85,900            |
| Low-Income Support Grant Program                                              | -                 | 300,000           | 306,000           | 312,100           | 318,300           | 324,700           | 331,200           | 337,800           | 344,600           | 351,500           |
| Transfer to Fleet Management Reserve                                          | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           | 215,000           |
| Funding of DC Exemptions for Residential Intensification                      | 238,631           | 224,158           | 300,339           | 1,029,473         | 1,050,023         | 1,071,955         | 1,094,622         | 1,116,452         | 1,138,811         | 1,161,608         |
| <b>Sub Total Operating</b>                                                    | <b>21,008,824</b> | <b>21,740,792</b> | <b>22,445,592</b> | <b>23,630,860</b> | <b>24,775,123</b> | <b>25,364,355</b> | <b>25,970,422</b> | <b>26,592,552</b> | <b>27,232,511</b> | <b>28,323,308</b> |
| <b>Capital-Related</b>                                                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities                       |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Interest) - Growth Related - Facilities                        |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Existing Debt (Principal) - Growth Related - Facilities Related Debt          | 5,375,735         | 5,614,226         | 5,863,823         | 6,125,044         | 6,398,459         | 6,684,622         | 6,984,155         | 7,297,687         | 7,625,897         | 5,001,841         |
| Existing Debt (Interest) - Growth Related - Facilities Related Debt           | 3,127,695         | 2,885,626         | 2,632,452         | 2,367,654         | 2,090,661         | 1,800,920         | 1,497,810         | 1,180,701         | 848,914           | 501,766           |
| New Growth Related Debt (Principal) - Facilities                              |                   | 68,779            | 282,690           | 455,389           | 749,276           | 1,149,568         | 1,580,750         | 2,044,720         | 2,980,777         | 3,988,657         |
| New Growth Related Debt (Interest) - Facilities                               |                   | 55,443            | 224,153           | 348,051           | 560,281           | 842,363           | 1,127,657         | 1,416,017         | 2,059,794         | 2,710,748         |
| Existing Debt (Principal) - Non-Growth Related                                | 369,988           | 383,239           | 396,965           | 411,182           | 425,909           | 441,163           | 456,963           | 473,329           | 490,281           | 507,841           |
| Existing Debt (Interest) - Non-Growth Related                                 | 199,360           | 186,109           | 172,383           | 158,166           | 143,440           | 128,186           | 112,385           | 96,019            | 79,067            | 61,507            |
| Transfer to Capital                                                           | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Wastewater Rate Stabilization Reserve Fund                        | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Transfer to Wastewater Capital Reserve Fund                                   | 15,947,325        | 16,090,310        | 15,262,591        | 13,892,435        | 13,275,352        | 13,732,236        | 13,690,433        | 13,490,848        | 13,630,828        | 13,962,851        |
| <b>Sub Total Capital Related</b>                                              | <b>25,020,104</b> | <b>25,283,733</b> | <b>24,835,058</b> | <b>23,757,922</b> | <b>23,643,377</b> | <b>24,779,058</b> | <b>25,450,154</b> | <b>25,999,322</b> | <b>27,715,557</b> | <b>26,735,212</b> |
| <b>Total Expenditures</b>                                                     | <b>46,028,928</b> | <b>47,024,525</b> | <b>47,280,650</b> | <b>47,388,782</b> | <b>48,418,500</b> | <b>50,143,413</b> | <b>51,420,576</b> | <b>52,591,874</b> | <b>54,948,069</b> | <b>55,058,519</b> |
| <b>Revenues</b>                                                               |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| Fixed Charge                                                                  | 13,741,299        | 14,567,962        | 15,457,030        | 16,504,679        | 17,708,789        | 18,992,049        | 20,359,667        | 21,816,567        | 23,368,258        | 25,020,930        |
| 810150 - Fees and Service Charges                                             | 47,363            | 48,310            | 49,276            | 50,262            | 51,300            | 52,300            | 53,300            | 54,400            | 55,500            | 56,600            |
| 810760 - Miscellaneous Charge                                                 | 3,583             | 3,655             | 3,728             | 3,802             | 3,900             | 4,000             | 4,100             | 4,200             | 4,300             | 4,400             |
| 825000 - Interest and Penalties                                               | 80,000            | 80,000            | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| Local Improvements Revenue                                                    | 50,500            | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | 8,276             | -                 | -                 |
| Contributions from Development Charges Reserve Fund - Facilities              | -                 | 124,222           | 506,843           | 803,440           | 1,309,557         | 1,991,931         | 2,708,407         | 3,460,737         | 5,040,570         | 6,699,405         |
| Contributions from Development Charges Reserve Fund - Facilities Related Debt | 8,503,430         | 8,499,853         | 8,496,275         | 8,492,698         | 8,489,120         | 8,485,543         | 8,481,965         | 8,478,388         | 8,474,810         | 5,503,607         |
| <b>Total Operating Revenue</b>                                                | <b>22,426,175</b> | <b>23,332,277</b> | <b>24,521,428</b> | <b>25,863,157</b> | <b>27,570,942</b> | <b>29,534,098</b> | <b>31,615,715</b> | <b>33,822,568</b> | <b>36,943,439</b> | <b>37,284,942</b> |
| <b>Wastewater Billing Recovery - Operating</b>                                | <b>23,602,753</b> | <b>23,692,248</b> | <b>22,759,222</b> | <b>21,525,624</b> | <b>20,847,557</b> | <b>20,609,315</b> | <b>19,804,861</b> | <b>18,769,305</b> | <b>18,004,630</b> | <b>17,773,578</b> |
| Asset Replacement Needs - Lifecycle Contribution (\$)                         |                   | 1,319,318         | 3,766,063         | 6,835,390         | 9,676,363         | 12,223,166        | 15,491,388        | 19,155,009        | 22,722,316        | 25,941,897        |
| <b>Wastewater Billing Recovery - Total</b>                                    | <b>23,602,753</b> | <b>25,011,565</b> | <b>26,525,285</b> | <b>28,361,015</b> | <b>30,523,921</b> | <b>32,832,480</b> | <b>35,296,250</b> | <b>37,924,315</b> | <b>40,726,946</b> | <b>43,715,475</b> |



Table B-15  
City of Barrie  
Wastewater Services  
Wastewater Rate Forecast – Inflated \$

| Description                                             | 2021             | 2022             | 2023             | 2024             | 2025             | 2026             | 2027             | 2028             | 2029             | 2030              |
|---------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| Total Wastewater Billing Recovery                       | 23,602,753       | 25,011,565       | 26,525,285       | 28,361,015       | 30,523,921       | 32,832,480       | 35,296,250       | 37,924,315       | 40,726,946       | 43,715,475        |
| <b><i>Increasing Block Structure - Residential</i></b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |
| <i>Volume Forecast By Block (m3)</i>                    |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |
| Block 1 Residential (0-15 cu.m./month)                  | 6,032,865        | 6,169,202        | 6,318,618        | 6,594,125        | 6,977,745        | 7,361,495        | 7,745,555        | 8,129,615        | 8,513,675        | 8,897,915         |
| Block 2 Residential (16-30 cu.m./month)                 | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271        | 1,474,271         |
| Block 3 Residential (31-45 cu.m./month)                 | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139          | 245,139           |
| Block 4 Residential (45+ cu.m./month)                   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                 |
| <b><i>Increasing Block Structure - Residential</i></b>  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |
| Block 1 Non-Residential (0-15 cu.m./month)              | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230          | 351,230           |
| Block 2 Non-Residential (>30 cu.m./month)               | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409        | 3,839,409         |
| <b>Check Total Volume</b>                               | <b>7,507,136</b> | <b>7,643,473</b> | <b>7,792,889</b> | <b>8,068,396</b> | <b>8,452,016</b> | <b>8,835,766</b> | <b>9,219,826</b> | <b>9,603,886</b> | <b>9,987,946</b> | <b>10,372,186</b> |
| <b><i>Increasing Block Rates (\$/m<sup>3</sup>)</i></b> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |
| Block 1 Residential (0-15 cu.m./month)                  | 1.60             | 1.68             | 1.76             | 1.85             | 1.94             | 2.04             | 2.14             | 2.25             | 2.36             | 2.48              |
| Block 2 Residential (16-30 cu.m./month)                 | 2.72             | 2.85             | 2.99             | 3.14             | 3.30             | 3.47             | 3.64             | 3.82             | 4.01             | 4.21              |
| Block 3 Residential (31-45 cu.m./month)                 | 2.72             | 2.85             | 2.99             | 3.14             | 3.30             | 3.47             | 3.64             | 3.82             | 4.01             | 4.21              |
| Block 4 Residential (45+ cu.m./month)                   | -                | -                | -                | -                | -                | -                | -                | -                | -                | -                 |
| Block 1 Non-Residential (0-15 cu.m./month)              | 1.52             | 1.60             | 1.68             | 1.76             | 1.85             | 1.94             | 2.04             | 2.14             | 2.25             | 2.36              |
| Block 2 Non-Residential (>30 cu.m./month)               | 2.28             | 2.40             | 2.52             | 2.64             | 2.77             | 2.91             | 3.06             | 3.21             | 3.37             | 3.54              |
| <b>Annual Percentage Change</b>                         |                  | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%             | 5.0%              |