The Corporation of the Township of

NORTH STORMONT RESOLUTION

Date: October 27, 2020

Resolution No. 409 - 2020

MOVED BY:		**SECONDED BY:**	
Deputy Mayor F. Landry		Deputy Mayor F. Landry	
Councillor S. Densham	✓	Councillor S. Densham	
Councillor R. Douglas		Councillor R. Douglas	✓
Councillor R. Villeneuve		Councillor R. Villeneuve	

Be it resolved that Council receives this presentation/report and approves the recommendations contained therein.

☒ **CARRIED** ☐ **DEFEATED** ☐ **DEFERRED**

Mayor Jean LeSeel

Declaration of Conflict of Interest: _____

☐ **Disclosed His/Her/Their Interest**

☐ **Vacated His/Her/Their Seat**

RECORDED VOTE	
Councillor S. Densham	
Councillor R. Douglas	
Councillor R. Villeneuve	
Deputy Mayor F. Landry	
Mayor J. Wert	

BMA
Management Consulting Inc.

Water and Wastewater Long-Range Financial Plan

In Accordance with O.Reg. 453/07

Township of North Stormont

October 2020

Table of Contents

Introduction - Water and Wastewater Financial Plan

Review of Regulatory and Legislative Requirements

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

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

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

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

- The financial plan includes detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e. the components of a "Statement of Operations" as per PSAB) for each year in which the financial plans apply
- The financial plan is to be made available to the public upon request and at no charge
- If a website is maintained, financial plans are to be made available to the public through publication on the Internet at no charge
- Notice of the availability of the financial plans is to be given to the public

General Approach to Preparing the Township's LRFP

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

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

Required Statements

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

Statement of Operations

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

Statement of Cash Flows

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

Statement of Financial Position

The ***Statement of Financial Position*** reports on whether enough revenue was generated in a period to cover the expenses in the period and whether sufficient resources have been generated to support current and future activities.

The categories of financial information have been developed to ensure:

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

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

Importance of a Long Range Financial Plan

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

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

Principles of Financial Sustainability

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

- **Principle #1**: Ongoing public engagement and transparency can build support for, and confidence in, financial plans and the system(s) to which they relate.
- **Principle #2**: An integrated approach to planning among water, wastewater, and storm water systems is desirable given the inherent relationship among these services.
- **Principle #3**: Revenues collected for the provision of water and wastewater services should ultimately be used to meet the needs of those services.
- **Principle #4**: Life-cycle planning with mid-course corrections is preferable to planning over the short-term, or not planning at all.
- **Principle #5**: An asset management plan is a key input to the development of a financial plan.
- **Principle #6**: A sustainable level of revenue allows for reliable service that meets or exceeds environmental protection standards, while providing sufficient resources for future rehabilitation and replacement needs.
- **Principle #7:** Ensuring users pay for the services they are provided leads to equitable outcomes and can improve conservation. In general, metering and the use of rates can help ensure users pay for services received.
- **Principle #8**: Financial Plans are "living" documents that require continuous improvement. Comparing the accuracy of financial projections with actual results can lead to improved planning in the future.
- **Principle #9**: Financial plans benefit from the close collaboration of various groups, including engineers, accountants, auditors, utility staff, and municipal council.

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

The LRFP is Dynamic—Regular Updates Will Be Undertaken

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

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

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

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

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

Background Information Used to Prepare the Water and Wastewater Financial Plan

System Overview

Water System Overview

The Township owns water treatment plants in the villages of Crysler, Finch and Moose Creek.

- The treatment plant in Crysler was installed in 1994 and consists of two wells, a treatment plant and an elevated storage tank. The treatment plant is a two stage disinfection for a GUDI (Groundwater well Under Direct Influence of surface water). The two disinfection systems are UV and Sodium Hypochlorite.

- The Village of Finch treatment system consists of two wells, a pump house with treatment, a clearwell, and an elevated storage tank. The treatment plant has an aeration system and a sodium hypochlorite disinfection system.

- The Moose Creek treatment system includes three groundwater wells, a treatment plant and an elevated storage tank. The treatment is the addition of Sodium Hypochlorite for disinfection.

The Township owns approximately 30 km of watermains with sizes ranging in size from 100 mm to 450 mm. The majority of the watermains are PVC and are 200 mm in diameter. Approximately 80% of the watermains are PVC and 20% are ductile iron (DI).

Wastewater System Overview

The Township also owns two lagoons in the village of Crysler and Moose Creek for wastewater treatment.

- The lagoon in Crysler services both villages of Crysler and Finch. In total, the township owns six pump stations for wastewater conveyance: four located in Finch, one in Moose Creek and one at Crysler.

The Township owns approximately 25 km of sanitary sewers ranging in size from 200 mm to 450 mm. The material of most of the sanitary sewers is polyvinyl chloride (PVC). The Township also owns approximately 11 km of sanitary forcemains ranging in size from 150 mm to 300 mm.

Asset Inventory

The following provides the asset inventory replacement cost in 2020 dollars using the 2017 Asset Management Plan (AMP) report that was undertaken by the Township.

Replacement Costs (000s) - indexed to 2020	Asset Value	
Waterline	$	25,081
Treatment Plant	$	6,556
Water Reservoir	$	3,455
Total Water	**$**	**35,093**
Lagoon	$	3,455
Pumpstation	$	13,821
Sanitary Sewerline	$	36,444
Sanitary Forcemain	$	15,760
Total Wastewater	**$**	**69,480**
Grand Total	**$**	**104,573**

The AMP includes the age of the assets as well as an estimated useful life for each of the assets. This provides an indication of how much money will be required in the future for the replacement of existing assets.

Excerpts—Township's Asset Management Plan (December 2017)

Based on the estimated age of the Township's infrastructure, the assets are generally in good condition. For the Township to maintain the current level of service, a ***program to replace, rehabilitate and upgrade existing infrastructure will need to be planned and executed.***

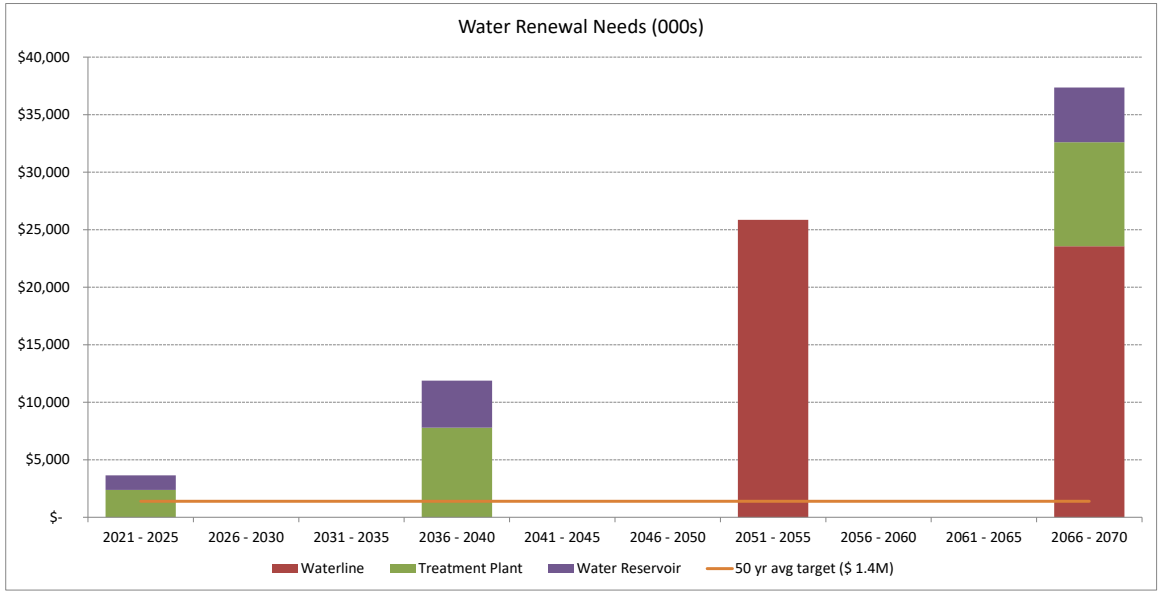
Future Funding Requirements

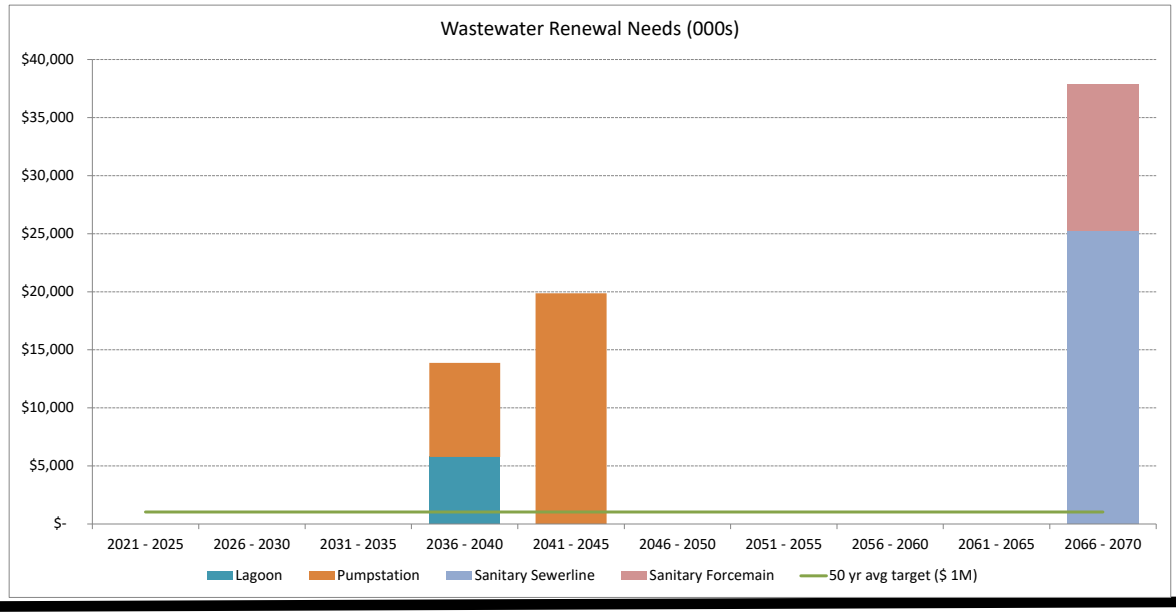
The graph on the next page provide a summary of the asset replacement requirements over the next 50 years. A long term planning horizon is required as the assets are significant and have a relatively long useful life. A long range financial time horizon is needed to avoid spike in future rates, to ensure the availability of reserves and to mitigate the need to issue debt where funding has not be set aside.

Note that these graphs does not include any growth-related capital requirements.

As shown on the graphs, over the next 50 years, there is a need to replace $70 million for water assets and $123 million in wastewater. This takes into account that asset replacement costs will be increasing annually (assumed at a rate of 3%).

Asset Renewal Needs





Annual Funding Shortfall

- A key issue that the finance planning process identified is a funding gap between the capital needs of the water and wastewater operations and the contributions that are currently being made annually to fund the capital program over a long term planning horizon.

- A recommended target is for the Township to make annual contributions to the capital program based on replacement cost requirements and capital requirements using a 50 year average. The following table reflects the extent of the challenge.

Capital Contributions (000s)	Water	WW
Current Capital Contribution for Asset Replacement	$ 245	$ 103
50 Year Annual Average Contribution	$ 1,387	$ 1,025
Estimated Annual Funding Gap (50 Year)	$ (1,142)	$ (922)

- As shown above, the 2020 annual contribution to the capital program is lower than the recommended annual target contributions.

- For example, in 2020, there was $245,000 contributions to the capital program in water and $103,000 in wastewater.

- A common financial indicator used to determine the adequacy of reserves that support infrastructure, is to compare the infrastructure reserve balances in relation to the accumulated amortization. Ideally, this ratio should be 100% or greater, meaning that the amount available in reserves at any time is equal to the amount of assets that has been depreciated or used (based on an historical cost basis).

- Using the 50 year annual funding requirements, there is a need to contribute $1.4 million and $1 million in water and wastewater respectively annually to meet future needs. As a result, there is an annual funding shortfall in the water capital program of approximately $1.14 million and, in the wastewater program, the annual shortfall is estimated to be $922,000.

- This is based on the principle that the Township should set aside funds, on a regular and planned basis, to support infrastructure renewal.

- Infrastructure Sustainability Reserve Ratio for tax supported capital programs is ***15%-19%, well below the recommended 100% ratio***. This calculation is based on the theoretical useful life of assets as reflected in the Township's PSAB policy. The actual reserve requirements should be based on asset condition assessments for every asset. However, this measure is still valuable as an estimate of the potential reserve requirements based on the existing assets.

(000's)	Reserve Balance	Accumulated Amortization Expense	Infrastructure Sustainability Ratio
Water	$ 731	$ 3,939	19%
Wastewater	$ 400	$ 2,651	15%
Total	**$ 1,131**	**$ 6,589**	**17%**

- In summary, the Township's Capital Reserves are underfunded and there is a significant annual infrastructure gap. A goal of the LRFP is to gradually close the annual funding gap by increasing capital contributions.

Ratepayer Affordability

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

- An analysis of the 2020 water and wastewater cost of service in North Stormont was undertaken against 100+ Ontario municipalities. As shown below, the cost of water/ww service for a typical residential customer consuming 200 m^3 is below the average of 100+ Ontario municipalities surveyed by approximately 15%.

2020 Water/WW Costs	Residential Customer
North Stormont	$ 967
100+ Ontario Municpalities	$ 1,141
Difference to Avg	-15%

- It should be noted that many of the above noted municipalities have identified funding and infrastructure deficits. Addressing their respective issues will impact the future cost of service.

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

- Taking into consideration ratepayer affordability, the financial plan that has been developed is to gradually phase-in increased contributions to capital program to achieve these targets over a period of 25 years. This will require increases in the annual water and wastewater rates which will be described later in the report.

Forecast Assumptions & Strategies

Water and Wastewater Financial Plan

Reserves and Revenue Stability Strategies

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

The purpose for maintaining reserves includes:

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

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

Reserve and Revenue Stability Strategies

- *The Township will maintain all infrastructure in a state of good repair by implementing life cycle costing and providing adequate annual contributions to the replacement reserves to fund the future rehabilitation/replacement of assets.*
- *Management Plan for the timely replacement of assets.*
- *Contributions to the Capital Reserves will be funded through calculated annual contributions from the Operating Budget based on capital replacement costs.*
- *A phase-in strategy has been implemented to increase reserve contributions to support financial sustainability.*

Debt Financing Strategies

Historically, the Township has not relied on borrowings as a means of funding infrastructure investments, with the Township adopting a pay-as-you go strategy for most capital expenditures. However, based on the existing reserve balances and the capital requirements in 2021 for the Water Tower Upgrade in Crysler with a cost of over $1 million will require debt funding. Based on an analysis of existing reserve balances and contributions to capital, no further debt issuances will be required over the next 10 years.

On an ongoing basis, the Township may wish to consider the use of debt for additional infrastructure investments, conditional upon one or more of the following:

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

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

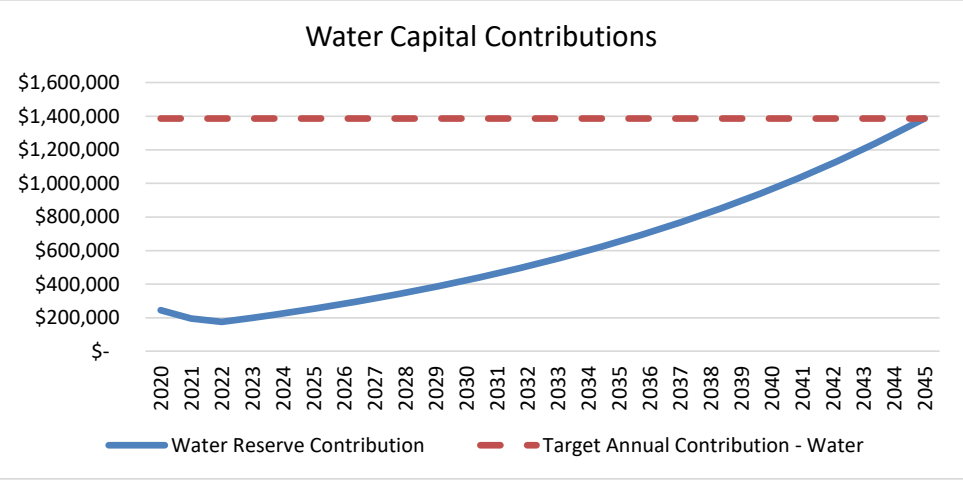
Asset Replacement Strategies—Closing the Infrastructure Gap

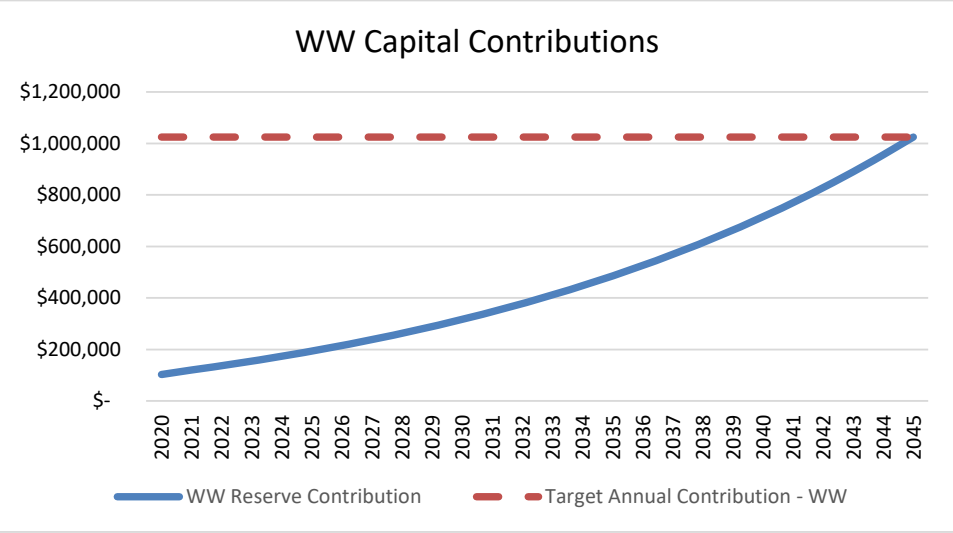
- The strategy in the Financial Plan is to gradually increase contributions to the reserves to develop a financially sustainable base upon which assets and infrastructure can be replaced on a timely basis.

- The graphs reflect the phase-in strategy for capital contributions to move toward the recommended annual replacement funding requirements based on the asset inventory and useful life of the assets from user fee revenues. The approach is to smooth the impact on rates over time to avoid spikes in rates and consider ratepayer affordability.

- As shown in the first graph, the average annual capital contributions required to finance the capital requirements in water is $1.4 million annually. The capital contributions in 2020 were $245,000. By 2045, the annual contribution will be equal to the required average annual contributions.

- As shown in the second graph, the average annual capital contributions required to finance the capital requirements in wastewater is $1 million annually. The capital contributions in 2020 were $103,000. By 2045, the annual contribution will be equal to the required average annual contributions.





Summary of Financial Environment and Assumptions

Water and Wastewater Financial Plan

Summary of Financial Environment and Assumptions

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

- ***Asset Renewal/Replacement***—Like most municipalities in Canada, North Stormont faces a continued struggle to renew and replace aging water capital assets. The Township has incorporated into its 10 year plan, a gradual increase in the contributions to support financial sustainability.

- ***Regulatory and Legislative Environment—***Municipalities across Ontario have consistently identified legislative and regulatory changes and requirements as a major factor driving the cost of service over the past 10 years and will continue to be a factor well into the future. Statutes and associated regulations that dictate service levels include:

  - Municipal Act;
  - Clean Water Act;
  - Water Opportunities Act;
  - Ontario Water Resources Act;
  - Safe Drinking Water Act (SDWA);
  - Sustainable Water and Sewage Systems Act; and
  - PSAB 3150, Tangible Capital Assets Reporting

- ***Debt Issuance***—Over the course of the 10 year forecast period, $1 million in debt is anticipated for the Crysler Water Tower Upgrade. It was assumed that this would be amortized over a period of 30 years.

- ***Reserves***—Capital Reserve opening balances for 2020 have been loaded into the forecast model. The Township maintains separate reserves by geographic location. These reserves are combined water and sewer reserves. To meet the regulatory requirements, an allocation between water and wastewater was undertaken (for accounting purposes only) using the 10 year capital budget provided by OCWA.

- ***10 Years Capital Budget***—OCWA provided a 10 year capital budget for water and wastewater operations. This budget was used in the 10 year forecast. Project costs were inflated by 3% annually.

- ***Operating Expenditures***—Operating expenditures have been increased annually by 2%.

- ***OCIP Green Stream Grant***—The 2020 Water Operating Budget included an assumed grant of $73,000. This has been excluded from the forecast.

Forecast

Water and Wastewater Financial Plan

Summary of Water Operating Budget Forecast

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

Water	Budget	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Billing Revenues	$ 490,291	$ 517,998	$ 547,270	$ 578,196	$ 610,870	$ 645,390	$ 681,861	$ 720,393	$ 761,102	$ 804,112	$ 849,552
Grants	$ 7,465	$ 7,614	$ 7,767	$ 7,922	$ 8,080	$ 8,242	$ 8,407	$ 8,575	$ 8,746	$ 8,921	$ 9,100
Interest	$ 2,380	$ 5,180	$ 5,473	$ 5,782	$ 6,109	$ 6,454	$ 6,819	$ 7,204	$ 7,611	$ 8,041	$ 8,496
Connection Fees	$ 24,000	$ 24,480	$ 24,970	$ 25,469	$ 25,978	$ 26,498	$ 27,028	$ 27,568	$ 28,120	$ 28,682	$ 29,256
ICIP Fund	$ 73,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenues	**$ 597,137**	**$ 555,272**	**$ 585,479**	**$ 617,369**	**$ 651,037**	**$ 686,584**	**$ 724,114**	**$ 763,740**	**$ 805,579**	**$ 849,756**	**$ 896,403**
EXPENSES											
Materials & Supplies	$ 5,750	$ 5,865	$ 5,982	$ 6,102	$ 6,224	$ 6,348	$ 6,475	$ 6,605	$ 6,737	$ 6,872	$ 7,009
Telephone	$ 4,510	$ 4,600	$ 4,692	$ 4,786	$ 4,882	$ 4,979	$ 5,079	$ 5,181	$ 5,284	$ 5,390	$ 5,498
Misc Expenses	$ 21,500	$ 21,930	$ 22,369	$ 22,816	$ 23,272	$ 23,738	$ 24,212	$ 24,697	$ 25,191	$ 25,694	$ 26,208
Debt Principal Payments	$ -	$ -	$ 24,650	$ 25,143	$ 25,646	$ 26,159	$ 26,682	$ 27,216	$ 27,760	$ 28,315	$ 28,881
Debt Interest Payments	$ -	$ -	$ 20,000	$ 19,507	$ 19,004	$ 18,491	$ 17,968	$ 17,434	$ 16,890	$ 16,335	$ 15,769
Insurance	$ 2,154	$ 2,197	$ 2,241	$ 2,286	$ 2,332	$ 2,378	$ 2,426	$ 2,474	$ 2,524	$ 2,574	$ 2,626
Taxes	$ 10,200	$ 10,404	$ 10,612	$ 10,824	$ 11,041	$ 11,262	$ 11,487	$ 11,717	$ 11,951	$ 12,190	$ 12,434
OCWA	$ 307,599	$ 313,751	$ 320,026	$ 326,426	$ 332,955	$ 339,614	$ 346,406	$ 353,334	$ 360,401	$ 367,609	$ 374,961
Transfer to Reserves	$ 245,424	$ 196,525	$ 174,907	$ 199,478	$ 225,682	$ 253,614	$ 283,378	$ 315,083	$ 348,842	$ 384,777	$ 423,017
Total Expenses	**$ 597,137**	**$ 555,272**	**$ 585,479**	**$ 617,369**	**$ 651,037**	**$ 686,584**	**$ 724,114**	**$ 763,740**	**$ 805,579**	**$ 849,756**	**$ 896,403**
Rate Rev. Requirements % Change		5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%

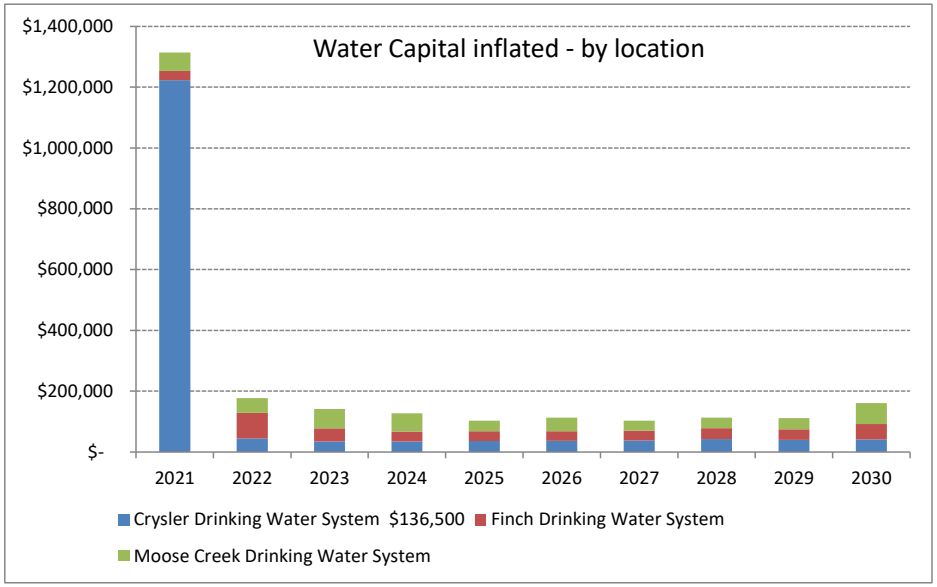
Summary of Wastewater Operating Budget Forecast

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

Wastewater	Budget	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenues											
Billing Revenues	$ 359,509	$ 379,973	$ 401,602	$ 424,463	$ 448,624	$ 474,161	$ 501,152	$ 529,679	$ 559,830	$ 591,698	$ 625,379
Interest	$ 1,820	$ 3,800	$ 4,016	$ 4,245	$ 4,486	$ 4,742	$ 5,012	$ 5,297	$ 5,598	$ 5,917	$ 6,254
Connection Fees	$ 24,000	$ 24,480	$ 24,970	$ 25,469	$ 25,978	$ 26,498	$ 27,028	$ 27,568	$ 28,120	$ 28,682	$ 29,256
Total Revenues	**$ 385,328**	**$ 408,253**	**$ 430,588**	**$ 454,176**	**$ 479,089**	**$ 505,401**	**$ 533,192**	**$ 562,545**	**$ 593,548**	**$ 626,297**	**$ 660,888**
EXPENSES											
Materials & Supplies	$ 4,500	$ 4,590	$ 4,682	$ 4,775	$ 4,871	$ 4,968	$ 5,068	$ 5,169	$ 5,272	$ 5,378	$ 5,485
Telephone	$ 1,820	$ 1,856	$ 1,894	$ 1,931	$ 1,970	$ 2,009	$ 2,050	$ 2,091	$ 2,132	$ 2,175	$ 2,219
Misc Expenses	$ 21,000	$ 21,420	$ 21,848	$ 22,285	$ 22,731	$ 23,186	$ 23,649	$ 24,122	$ 24,605	$ 25,097	$ 25,599
Debt Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Insurance	$ 2,154	$ 2,197	$ 2,241	$ 2,286	$ 2,332	$ 2,378	$ 2,426	$ 2,474	$ 2,524	$ 2,574	$ 2,626
Taxes	$ 1,350	$ 1,377	$ 1,405	$ 1,433	$ 1,461	$ 1,491	$ 1,520	$ 1,551	$ 1,582	$ 1,613	$ 1,646
OCWA	$ 251,678	$ 256,712	$ 261,846	$ 267,083	$ 272,425	$ 277,873	$ 283,431	$ 289,099	$ 294,881	$ 300,779	$ 306,794
Transfer to Reserves	$ 102,826	$ 120,100	$ 136,672	$ 154,383	$ 173,299	$ 193,496	$ 215,048	$ 238,038	$ 262,552	$ 288,680	$ 316,520
Total Expenses	**$ 385,328**	**$ 408,253**	**$ 430,588**	**$ 454,176**	**$ 479,089**	**$ 505,401**	**$ 533,192**	**$ 562,545**	**$ 593,548**	**$ 626,297**	**$ 660,888**
Rate Revenue Requirements % Change		5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%

Summary of Water Capital Budget Forecast

The following table summarizes the Capital Budget forecast for the next 10 years by geographic location.



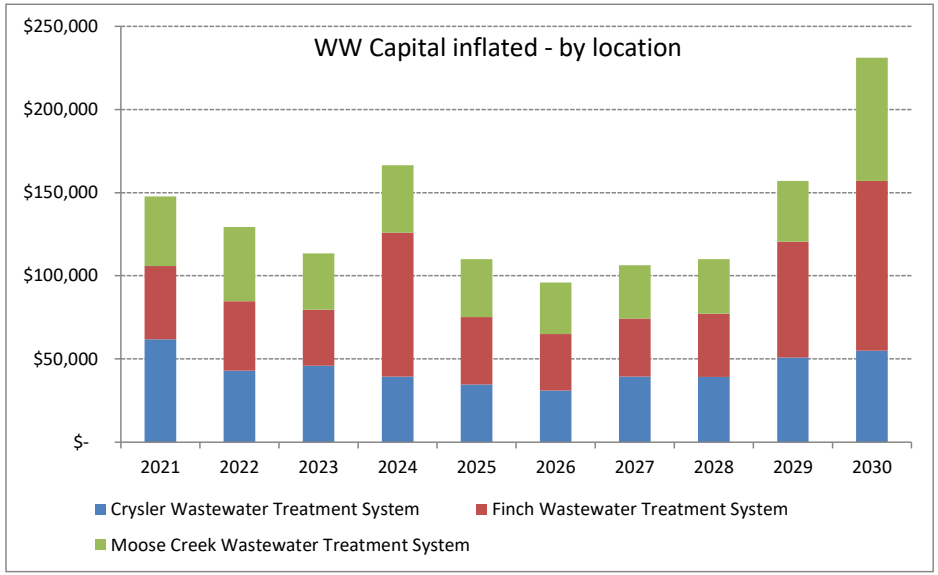
The capital plan, from 2021-2030 of $2.464 million includes:

- Crysler capital requirements of $1.569 million
- Finch capital requirements of $0.408 million
- Moose Creek capital requirements of $0.486 million

Appendix A provides the details for the Water Capital Budget.

Summary of Wastewater Capital Budget Forecast

The following table summarizes the Capital Budget forecast for the next 10 years by geographic location.



The capital plan, from 2021-2030 of $1.367 million includes:

- Crysler capital requirements of $0.44 million
- Finch capital requirements of $0.525 million
- Moose Creek capital requirements of $0.402 million

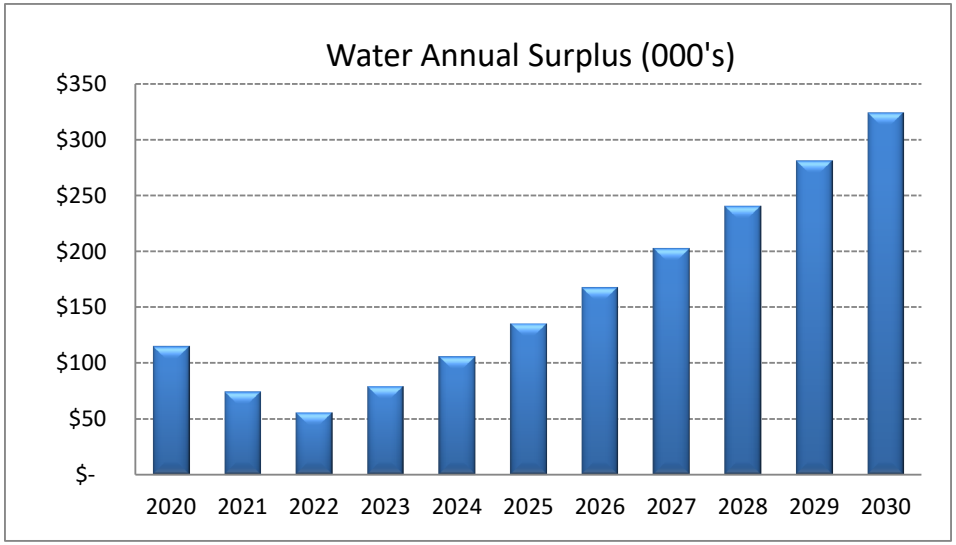
Appendix B provides the details for the Wastewater Capital Budget.

Reporting Requirements
O. Reg 453/07

Water Financial Plan—O.Reg. 453/07

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

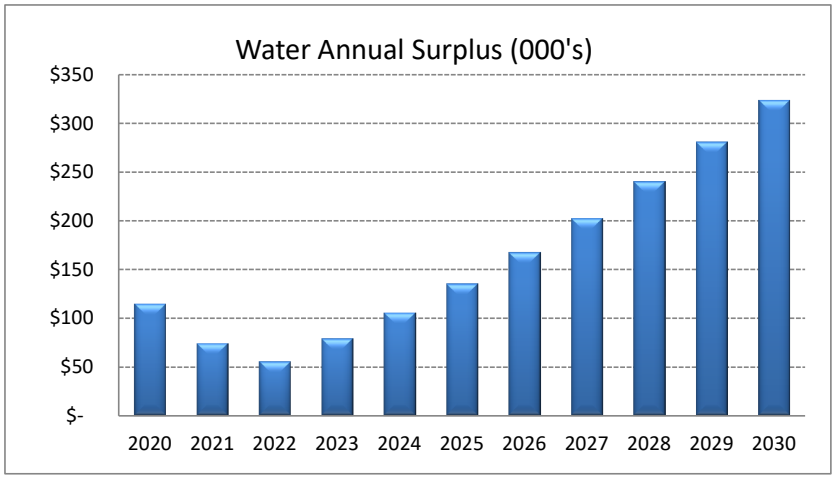
- ***Statement of Financial Operations—***This statement summarizes the revenues and expenditures. The expenditures include ongoing operating costs plus asset amortization. This statement indicates that the system and its asset base are projected to be maintained with funds being available each year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



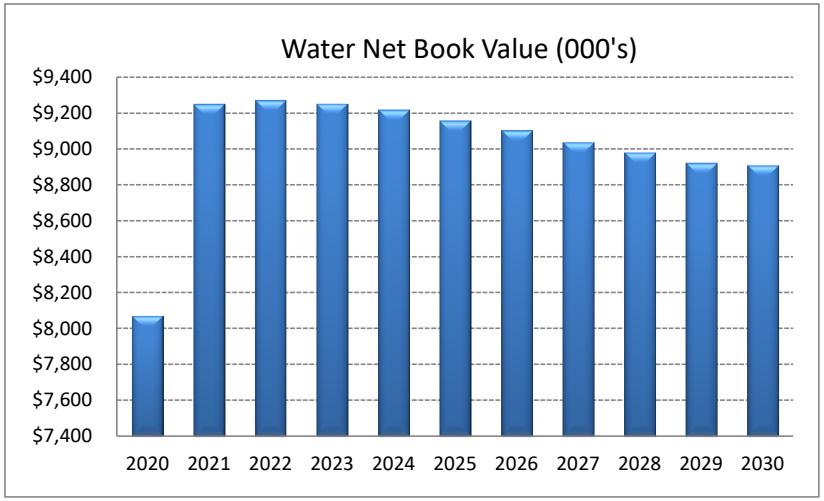
- ***Cash Receipts or Gross Cash Payments (Cash Flows) —***The cash flow statement summarizes how the water system is expected to generate and utilize cash resources. The transactions that generate and use cash include the projection of cash to be received from revenues, cash to be used for operating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

- ***Net Financial Assets***—An important feature of a water system is its net financial assets. A positive number indicates that the system has the resources to deal with future capital and other needs. A negative number indicates that past capital and other investments must be financed from future revenues. Water net financial assets are in a positive position throughout the forecast. It is anticipated that $1 million in debt will be issued in 2021.

- ***Accumulated Surplus***—Another financial indicator that is reflected in the financial position statement is the accumulated surplus. This indicator represents cash on hand plus the net book value of tangible capital assets less debt. The accumulated surplus is forecast to increase from 2020 to 2030, as shown below and in the Statement of Financial Position.



- ***Tangible Capital Assets (Net Book Value)*** - Water systems have a great deal of resources tied up in tangible capital assets and managing these assets is critical to maintaining current and future levels of service. An increase in net book value of tangible capital assets is an indication that assets have been renewed faster than they were used. A decrease in net book value indicates that assets are being used, or amortized, faster than they are renewed. The net book value is projected to increase for water, from $8.1 million in 2020 to $8.9 million in 2030.



Statement of Financial Operations—Water

Statement of Financial Operations - Water	Budget	Projected									
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water Total Revenues											
Billing Revenues	$ 490	$ 518	$ 547	$ 578	$ 611	$ 645	$ 682	$ 720	$ 761	$ 804	$ 850
Grants	$ 7	$ 8	$ 8	$ 8	$ 8	$ 8	$ 8	$ 9	$ 9	$ 9	$ 9
Interest	$ 2	$ 5	$ 5	$ 6	$ 6	$ 6	$ 7	$ 7	$ 8	$ 8	$ 8
Interest on Reserves	$ -	$ 12	$ 12	$ 14	$ 16	$ 19	$ 23	$ 28	$ 33	$ 39	$ 45
Connection Fees	$ 24	$ 24	$ 25	$ 25	$ 26	$ 26	$ 27	$ 28	$ 28	$ 29	$ 29
ICIP Fund	$ 73	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenues	$ 597	$ 568	$ 598	$ 631	$ 667	$ 706	$ 747	$ 792	$ 839	$ 889	$ 942
Water Total Expenses											
Materials & Supplies	$ 6	$ 6	$ 6	$ 6	$ 6	$ 6	$ 6	$ 7	$ 7	$ 7	$ 7
Telephone	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Misc Expenses	$ 22	$ 22	$ 22	$ 23	$ 23	$ 24	$ 24	$ 25	$ 25	$ 26	$ 26
Insurance	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 3	$ 3	$ 3
Taxes	$ 10	$ 10	$ 11	$ 11	$ 11	$ 11	$ 11	$ 12	$ 12	$ 12	$ 12
OCWA	$ 308	$ 314	$ 320	$ 326	$ 333	$ 340	$ 346	$ 353	$ 360	$ 368	$ 375
Capital Expenditure	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	$ 352	$ 359	$ 366	$ 373	$ 381	$ 388	$ 396	$ 404	$ 412	$ 420	$ 429
Debt Charges											
Debt Charges - Interest Payments Rates	$ -	$ -	$ 20	$ 20	$ 19	$ 18	$ 18	$ 17	$ 17	$ 16	$ 16
Amortization Expense											
Water Assets	$ 131	$ 135	$ 157	$ 160	$ 162	$ 164	$ 166	$ 168	$ 170	$ 171	$ 173
Total Expenses	$ 483	$ 494	$ 543	$ 553	$ 562	$ 571	$ 580	$ 589	$ 599	$ 608	$ 618
Annual Surplus/(Deficit)	$ 114	$ 74	$ 55	$ 79	$ 105	$ 135	$ 167	$ 202	$ 240	$ 281	$ 324

Statement of Cash Flow/Cash Receipts—Water

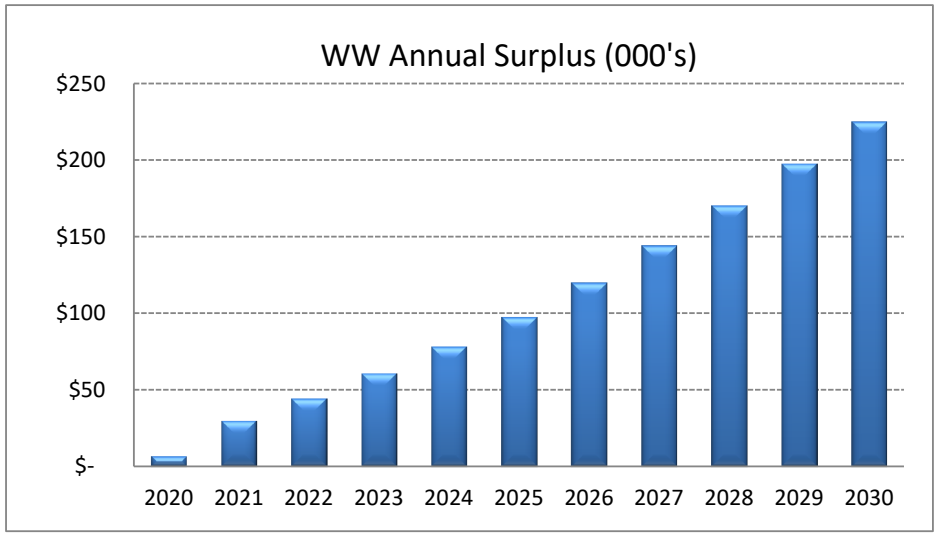
Statement of Cash Flow - Water	Budget	Projected									
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Revenues	$ 597	$ 568	$ 598	$ 631	$ 667	$ 706	$ 747	$ 792	$ 839	$ 889	$ 942
Cash Paid For											
Operating Costs	$ 352	$ 359	$ 366	$ 373	$ 381	$ 388	$ 396	$ 404	$ 412	$ 420	$ 429
Debt Repayment - Debt Interest	$ -	$ -	$ 20	$ 20	$ 19	$ 18	$ 18	$ 17	$ 17	$ 16	$ 16
Cash Provided From Operating Transactions	$ 245	$ 209	$ 212	$ 238	$ 267	$ 299	$ 333	$ 370	$ 410	$ 452	$ 497
Capital Transactions											
Acquisition of TCA	$ 236	$ 1,314	$ 178	$ 142	$ 127	$ 103	$ 113	$ 103	$ 113	$ 112	$ 161
Finance Transactions											
Proceeds from DC Debt	$ -	$ 1,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Debt Repayment - Principal Rates	$ -	$ -	$ 25	$ 25	$ 26	$ 26	$ 27	$ 27	$ 28	$ 28	$ 29
Increase/(Decrease) in Cash Equivalents	$ 9	$ (105)	$ 10	$ 72	$ 115	$ 170	$ 194	$ 240	$ 269	$ 313	$ 307
Cash and Cash Equivalents at Beginning Balance	$ 722	$ 731	$ 626	$ 635	$ 707	$ 822	$ 992	$ 1,186	$ 1,427	$ 1,696	$ 2,009
Cash and Cash Equivalents at Ending Balance	$ 731	$ 626	$ 635	$ 707	$ 822	$ 992	$ 1,186	$ 1,427	$ 1,696	$ 2,009	$ 2,316

Statement of Financial Position—Water

Statement of Financial Position - Water	Budget	Projected								
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets											
Cash	$ 731	$ 626	$ 635	$ 707	$ 822	$ 992	$ 1,186	$ 1,427	$ 1,696	$ 2,009	$ 2,316
Liabilities											
Debt - Principal Outstanding DC	$ -	$ 1,000	$ 975	$ 950	$ 925	$ 898	$ 872	$ 845	$ 817	$ 788	$ 760
Debt - Principal Outstanding Rates	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Financial Assets	$ 731	$ (374)	$ (340)	$ (243)	$ (103)	$ 94	$ 315	$ 582	$ 879	$ 1,220	$ 1,556
Non-Financial Assets											
Tangible Capital Assets	$ 11,903	$ 12,139	$ 13,453	$ 13,630	$ 13,772	$ 13,899	$ 14,002	$ 14,115	$ 14,217	$ 14,330	$ 14,442
Additions to Tangible Capital Assets	$ 236	$ 1,314	$ 178	$ 142	$ 127	$ 103	$ 113	$ 103	$ 113	$ 112	$ 161
Accumulated Amortization	$ 4,070	$ 4,205	$ 4,361	$ 4,521	$ 4,683	$ 4,848	$ 5,014	$ 5,181	$ 5,351	$ 5,522	$ 5,696
Total Non-Financial Assets	$ 8,069	$ 9,248	$ 9,269	$ 9,251	$ 9,216	$ 9,154	$ 9,101	$ 9,036	$ 8,979	$ 8,919	$ 8,907
Accumulated Surplus	$ 8,800	$ 8,874	$ 8,929	$ 9,008	$ 9,113	$ 9,248	$ 9,416	$ 9,618	$ 9,858	$ 10,139	$ 10,463
Cash as a % of Net Fixed Assets	9.1%	6.8%	6.9%	7.6%	8.9%	10.8%	13.0%	15.8%	18.9%	22.5%	26.0%

Wastewater Financial Plan—O.Reg. 453/07

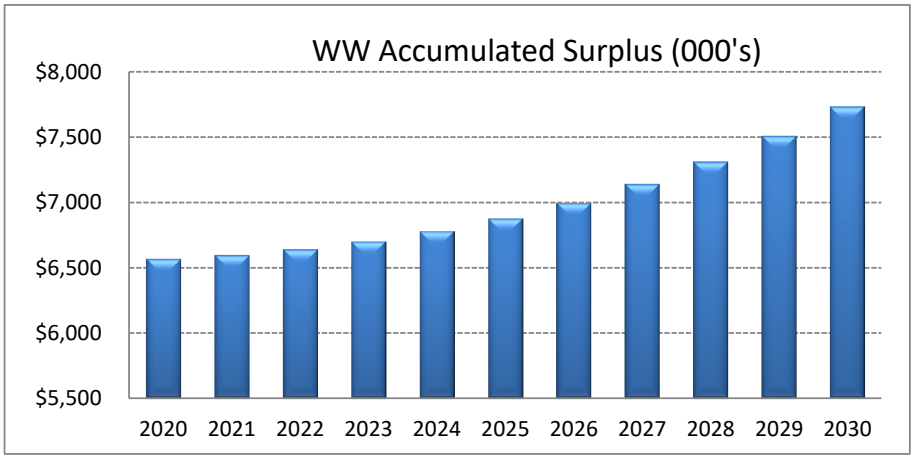
- ***Statement of Financial Operations—***This statement summarizes the revenues and expenditures. The expenditures include ongoing operating costs plus asset amortization. This statement indicates that the system and its asset base are projected to be maintained with funds being available each year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



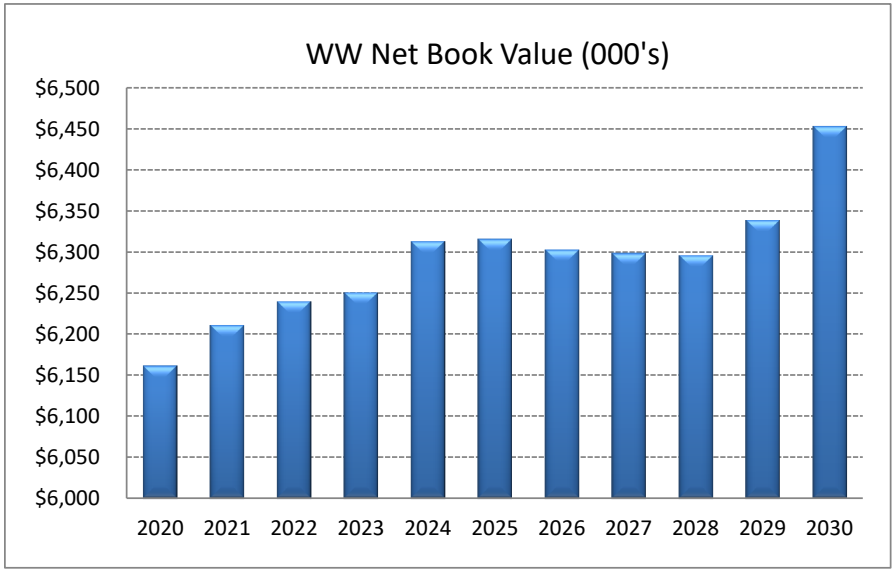
- ***Cash Receipts or Gross Cash Payments (Cash Flows) —***The cash flow statement summarizes how the wastewater system is expected to generate and utilize cash resources. The transactions that generate and use cash include the projection of cash to be received from revenues, cash to be used for operating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

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

- ***Accumulated Surplus***—Another financial indicator that is reflected in the financial position statement is the accumulated surplus. This indicator represents cash on hand plus the net book value of tangible capital assets less debt. The accumulated surplus is forecast to increase from 2020 to 2030, as shown below and in the Statement of Financial Position.



- ***Tangible Capital Assets (Net Book Value)*** - Wastewater systems have a great deal of resources tied up in tangible capital assets and managing these assets is critical to maintaining current and future levels of service. An increase in net book value of tangible capital assets is an indication that assets have been renewed faster than they were used. A decrease in net book value indicates that assets are being used, or amortized, faster than they are renewed. The net book value is projected to increase for wastewater, from $6.2 million in 2020 to $6.5 million in 2030.



Statement of Financial Operations—Wastewater

Statement of Financial Operations - WW	Budget	Projected									
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
WW Total Revenues											
Billing Revenues	$ 360	$ 380	$ 402	$ 424	$ 449	$ 474	$ 501	$ 530	$ 560	$ 592	$ 625
Interest	$ 2	$ 4	$ 4	$ 4	$ 4	$ 5	$ 5	$ 5	$ 6	$ 6	$ 6
Interest on Reserves	$ -	$ 7	$ 8	$ 9	$ 9	$ 11	$ 13	$ 16	$ 20	$ 23	$ 25
Connection Fees	$ 24	$ 24	$ 25	$ 25	$ 26	$ 26	$ 27	$ 28	$ 28	$ 29	$ 29
Waste Haulage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Revenues	$ 385	$ 416	$ 438	$ 463	$ 488	$ 516	$ 547	$ 579	$ 613	$ 649	$ 686
WW Total Expenses											
Materials & Supplies	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Telephone	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2
Misc Expenses	$ 21	$ 21	$ 22	$ 22	$ 23	$ 23	$ 24	$ 24	$ 25	$ 25	$ 26
Insurance	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 2	$ 3	$ 3	$ 3
Taxes	$ 1	$ 1	$ 1	$ 1	$ 1	$ 1	$ 2	$ 2	$ 2	$ 2	$ 2
OCWA	$ 252	$ 257	$ 262	$ 267	$ 272	$ 278	$ 283	$ 289	$ 295	$ 301	$ 307
Capital Expenditure	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Operating Expenses	$ 283	$ 288	$ 294	$ 300	$ 306	$ 312	$ 318	$ 325	$ 331	$ 338	$ 344
Debt Charges											
Debt Charges - Interest Payments Rates	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Amortization Expense											
WW Assets	$ 96	$ 98	$ 100	$ 103	$ 104	$ 107	$ 109	$ 111	$ 112	$ 114	$ 117
Total Expenses	$ 379	$ 386	$ 394	$ 402	$ 410	$ 419	$ 427	$ 435	$ 443	$ 452	$ 461
Annual Surplus/(Deficit)	$ 6	$ 30	$ 44	$ 61	$ 78	$ 97	$ 120	$ 144	$ 170	$ 197	$ 225

Statement of Cash Flow/Cash Receipts—Wastewater

Statement of Cash Flow - WW	Budget	Projected									
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Revenues	$ 385	$ 416	$ 438	$ 463	$ 488	$ 516	$ 547	$ 579	$ 613	$ 649	$ 686
Cash Paid For											
Operating Costs	$ 283	$ 288	$ 294	$ 300	$ 306	$ 312	$ 318	$ 325	$ 331	$ 338	$ 344
Debt Repayment - Debt Interest	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cash Provided From Operating Transactions	$ 103	$ 128	$ 144	$ 163	$ 182	$ 204	$ 229	$ 254	$ 282	$ 311	$ 341
Capital Transactions											
Acquisition of TCA	$ 93	$ 148	$ 129	$ 113	$ 166	$ 110	$ 96	$ 106	$ 110	$ 157	$ 231
Finance Transactions											
Proceeds from DC Debt											
Debt Repayment - Principal Rates	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Increase/(Decrease) in Cash Equivalents	$ 9	$ (20)	$ 15	$ 50	$ 16	$ 94	$ 133	$ 148	$ 172	$ 154	$ 110
Cash and Cash Equivalents at Beginning	$ 390	$ 400	$ 380	$ 395	$ 445	$ 460	$ 555	$ 687	$ 835	$ 1,008	$ 1,162
Balance	$ 400	$ 380	$ 395	$ 445	$ 460	$ 555	$ 687	$ 835	$ 1,008	$ 1,162	$ 1,272

Statement of Financial Position—Wastewater

Statement of Financial Position - WW	Budget	Projected								
(000's)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Financial Assets											
Cash	$ 400	$ 380	$ 395	$ 445	$ 460	$ 555	$ 687	$ 835	$ 1,008	$ 1,162	$ 1,272
Liabilities											
Debt - Principal Outstanding DC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Debt - Principal Outstanding Rates	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Financial Assets	$ 400	$ 380	$ 395	$ 445	$ 460	$ 555	$ 687	$ 835	$ 1,008	$ 1,162	$ 1,272
Non-Financial Assets											
Tangible Capital Assets	$ 8,815	$ 8,908	$ 9,056	$ 9,185	$ 9,299	$ 9,465	$ 9,575	$ 9,671	$ 9,777	$ 9,887	$ 10,044
Additions to Tangible Capital Assets	$ 93	$ 148	$ 129	$ 113	$ 166	$ 110	$ 96	$ 106	$ 110	$ 157	$ 231
Accumulated Amortization	$ 2,747	$ 2,845	$ 2,945	$ 3,048	$ 3,152	$ 3,259	$ 3,368	$ 3,479	$ 3,591	$ 3,705	$ 3,822
Total Non-Financial Assets	$ 6,161	$ 6,211	$ 6,240	$ 6,251	$ 6,313	$ 6,316	$ 6,303	$ 6,298	$ 6,296	$ 6,339	$ 6,453
Accumulated Surplus	$ 6,561	$ 6,591	$ 6,635	$ 6,695	$ 6,773	$ 6,870	$ 6,990	$ 7,134	$ 7,304	$ 7,501	$ 7,726
Cash as a % of Net Fixed Assets	6.5%	6.1%	6.3%	7.1%	7.3%	8.8%	10.9%	13.3%	16.0%	18.3%	19.7%

Appendix A—Water 10 Year Capital Forecast

Appendix A—Water 10 Year Capital Forecast

Water Capital Project	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total Cost
Crysler Drinking Water System	$ 1,223,383	$ 44,558	$ 34,421	$ 34,328	$ 35,937	$ 36,419	$ 37,511	$ 41,803	$ 39,796	$ 40,989	$ 1,569,145
Engineering & tendering for Tower upgrade (ICIP funding TBD)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Tower Upgrade	$ 1,008,473	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,008,473
Mixer system & accessories in Tower	$ 136,115	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 136,115
Back-up water supply during tower construction	$ 25,750	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,750
Distribution Maintenance Hydrants, valves, etc.	$ 12,360	$ 12,731	$ 13,113	$ 13,506	$ 13,911	$ 14,329	$ 14,758	$ 15,201	$ 15,657	$ 16,127	$ 141,694
Check Valves - WTP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Chlorine Pump - Spare Part Kit	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 1,159	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 1,344	$ 11,808
Operating Authority Audit	$ 515	$ 1,061	$ 546	$ 563	$ 1,159	$ 597	$ 615	$ 1,267	$ 652	$ 672	$ 7,647
Operating System SCADA	$ -	$ 12,731	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,731
Particle Counter	$ 7,210	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,210
Purchase victaulic butterfly valves 4"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Unit Heater	$ -	$ -	$ 2,185	$ -	$ -	$ -	$ -	$ 2,534	$ -	$ -	$ 4,719
UV Appurtenances	$ 6,180	$ 6,365	$ 6,556	$ 7,879	$ 8,115	$ 8,358	$ 8,609	$ 8,867	$ 9,133	$ 9,407	$ 79,471
Water Tower - Clean & Inspect	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Camera/Inspection Well #1 (well & pump performance test)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Camera / Inspection Well 2 (well & pump performance test)	$ 15,450	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,450
Electrical and Instrumentation Upgrade	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Contingency Repairs & Maintenance	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Operating System SCADA	$ -	$ 12,731	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,731
Finch Drinking Water System	$ 30,385	$ 83,811	$ 43,163	$ 32,640	$ 32,460	$ 31,642	$ 32,592	$ 36,736	$ 34,576	$ 50,397	$ 408,402
Water Tower	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Distribution Maintanence Hydrants (4), valves, manhloes, etc.	$ 12,360	$ 12,731	$ 13,113	$ 16,883	$ 17,389	$ 17,911	$ 18,448	$ 19,002	$ 19,572	$ 20,159	$ 167,566
Aeration Stack Fan - Replace	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aeration Tower - Inspect/Upgrade and Clean	$ 4,120	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,120
Backflow Preventer - Replace	$ -	$ -	$ -	$ 1,688	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,688
Backwash Basin Discharge Piping - Modify	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Bridge - Paint Brackets & recap water main	$ -	$ 42,436	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 42,436
Backwash Tank - Inspection/Clean-out	$ -	$ -	$ -	$ 1,126	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,126
Chlorine Analyzers Replace 1	$ -	$ -	$ 8,742	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,439	$ 22,181
Chlorine Pump - Spare Parts Kits	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 1,159	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 1,344	$ 11,808
Unit Heater for WTP	$ 2,060	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,534	$ -	$ -	$ 4,594
Unit Heater for Tower	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clearwell - Clean & Inspect	$ -	$ -	$ -	$ -	$ 1,159	$ -	$ -	$ -	$ -	$ 1,344	$ 2,503
Water Tower - Clean & Inspect	$ -	$ -	$ 8,742	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,742
Camera/Inspection Well #1 (well & pump performance test)	$ -	$ 15,914	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,914
Camera/Inspection Well #2 (well & pump performanve test)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Recoating floor in Chlorine room (epoxy)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Authority Audit	$ 515	$ 1,061	$ 546	$ 563	$ 1,159	$ 597	$ 615	$ 1,267	$ 652	$ 672	$ 7,647
Electrical & Instrumentation	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Contingency Repairs & Maintenance	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039

Appendix A—Water 10 Year Capital Forecast

Water Capital Project	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total Cost
Moose Creek Drinking Water System	$ 60,255	$ 49,332	$ 63,925	$ 60,215	$ 34,199	$ 44,777	$ 32,592	$ 34,203	$ 37,186	$ 69,884	$ 486,566
Distribution Maintenance Hydrants, valves, etc.	$ 12,360	$ 12,731	$ 13,113	$ 13,506	$ 17,389	$ 17,911	$ 18,448	$ 19,002	$ 19,572	$ 20,159	$ 164,190
Chlorine Pump - Spare Parts Kits	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 1,159	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 1,344	$ 11,808
Clear Well - Clean & Inspect	$ -	$ -	$ -	$ -	$ 2,898	$ -	$ -	$ -	$ -	$ 3,360	$ 6,258
High Lift Pump	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,751	$ 10,751
Roadway Restoration to Pump house and wells	$ -	$ 5,305	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,305
Trim Treets at Tower Site & WTP	$ 5,150	$ -	$ -	$ -	$ -	$ 3,582	$ -	$ -	$ -	$ -	$ 8,732
Unit Heater Tower - Replace	$ -	$ 2,122	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,610	$ -	$ 4,731
Recoat Corroded Areas - Interior of Elevated Tank	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Engineering & Tendering for Tower Upgrades	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Tower Upgrade	$ 30,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,900
Water Tower Clean & Inspect	$ -	$ -	$ -	$ -	$ -	$ 9,552	$ -	$ -	$ -	$ -	$ 9,552
Camera/Inspection Well #1 (well & pump performance test)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,159	$ 20,159
Camera/Inspection Well #2 (well & pump performance test)	$ -	$ 15,914	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,914
Well #3 (drill new well near existing site)	$ -	$ -	$ 38,245	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 38,245
Dehumidifier - Replace	$ -	$ 530	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 530
Operating Authority Audit	$ 515	$ 1,061	$ 546	$ 563	$ 1,159	$ 597	$ 615	$ 1,267	$ 652	$ 672	$ 7,647
Electrical & Instrumentation	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Contingency Repairs & Maintenance	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Upgrade MCC panel	$ -	$ -	$ -	$ 33,765	$ -	$ -	$ -	$ -	$ -	$ -	$ 33,765
TOTAL	$ 1,314,023	$ 177,701	$ 141,508	$ 127,182	$ 102,596	$ 112,838	$ 102,694	$ 112,743	$ 111,558	$ 161,270	$ 2,464,113

Appendix B—Wastewater 10 Year Capital Forecast

Appendix B—Wastewater 10 Year Capital Forecast

Wastewater Capital Project	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total Cost
Crysler Wastewater Treatment System	$ 26,000	$ 61,800	$ 42,966	$ 45,895	$ 39,393	$ 34,778	$ 31,045	$ 39,356	$ 39,270	$ 50,886	$ 55,101	$ 440,490
Generator Maintenance	$ 1,000	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 5,796	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 6,720	$ 21,821
Collection System (flushing, sealing, upgrading, camera)	$ 10,000	$ 15,450	$ 15,914	$ 16,391	$ 16,883	$ 17,389	$ 17,911	$ 18,448	$ 19,002	$ 19,572	$ 20,159	$ 177,117
Alum Tank Clean & Inspect	$ -	$ -	$ 2,652	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,652
Cut Trees at Lagoon	$ 5,000	$ -	$ -	$ 5,464	$ -	$ -	$ -	$ -	$ 6,334	$ -	$ -	$ 11,797
Lagoon - Rodent Control	$ -	$ -	$ 1,061	$ -	$ -	$ -	$ -	$ 1,230	$ -	$ -	$ -	$ 2,291
Lagoon cell clean-out	$ -	$ 30,900	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,900
Pump Submersible #1 - Rebuild	$ -	$ -	$ 11,670	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,353	$ -	$ 26,022
Pump Submersible #2 - Rebuild	$ -	$ -	$ -	$ 12,020	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,783	$ 26,803
Swab Sewermain to Lagoon	$ -	$ 4,120	$ -	$ -	$ -	$ -	$ -	$ 6,149	$ -	$ -	$ -	$ 10,269
Unit Heater - Replace	$ -	$ -	$ -	$ -	$ 2,251	$ -	$ -	$ -	$ -	$ 2,610	$ -	$ 4,861
Blower inspection/rebuild	$ -	$ -	$ -	$ -	$ 7,879	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,879
Electrical and Instrumentation Upgrade	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Contingency Repairs and Maintenance	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Finch Wastewater Treatment System	$ 41,400	$ 44,084	$ 41,799	$ 33,656	$ 86,552	$ 40,459	$ 33,911	$ 34,928	$ 37,876	$ 69,675	$ 102,003	$ 524,944
Collection System (flushing, sealing, upgrading, camera)	$ 15,000	$ 15,450	$ 15,914	$ 16,391	$ 16,883	$ 17,389	$ 17,911	$ 18,448	$ 19,002	$ 19,572	$ 20,159	$ 177,117
Ferrous Chloride Tank Clean and Inspect	$ -	$ -	$ -	$ -	$ 1,688	$ -	$ -	$ -	$ 1,900	$ -	$ -	$ 3,588
Power Flush Gravity Sewer Main between Finch & Crysler	$ -	$ -	$ -	$ -	$ 6,753	$ -	$ -	$ -	$ -	$ 7,829	$ -	$ 14,582
Swab Forcemain to Transition Box in Berwick	$ 2,000	$ -	$ -	$ -	$ -	$ 2,898	$ -	$ -	$ -	$ -	$ 3,360	$ 6,258
Ferrous Chloride Pump	$ -	$ -	$ 5,305	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,524	$ -	$ 11,828
Replace One Sewage Pump at SPS #1	$ -	$ -	$ -	$ -	$ 39,393	$ -	$ -	$ -	$ -	$ -	$ 47,037	$ 86,430
Rebuild One Sewage Pump at SPS #1	$ -	$ 8,240	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,438	$ -	$ 18,678
Rebuild One Sewage Pump at SPS #2	$ 5,000	$ -	$ 6,365	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,063	$ 14,429
Sewage Pump Replacement SPS #3	$ -	$ -	$ -	$ -	$ 3,377	$ -	$ -	$ -	$ -	$ 3,914	$ -	$ 7,291
Sewage Pump Rebuild Kits SPS #3	$ 1,000	$ 1,236	$ 1,273	$ 1,311	$ 1,351	$ 1,391	$ 1,433	$ 1,476	$ 1,520	$ 1,566	$ 1,613	$ 14,169
Sewage Pump Replacement at SPS #4	$ -	$ -	$ -	$ -	$ 3,377	$ -	$ -	$ -	$ -	$ 3,914	$ -	$ 7,291
Sewage Pump Rebuild Kits SPS #4	$ 1,000	$ 1,236	$ 1,273	$ 1,311	$ 1,351	$ 1,391	$ 1,433	$ 1,476	$ 1,520	$ 1,566	$ 1,613	$ 14,169
Replace Outpost panel t SPS #4	$ -	$ 4,120	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,120
Water Pilot Transducers SPS #3 & #4	$ 2,400	$ 2,472	$ -	$ 2,623	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,095
Replace check valves, two at SPS #3 & two at SPS #4	$ 4,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Electrical and Instrumentation Upgrade	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Generator Maintenance	$ 1,000	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 5,796	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 6,720	$ 21,821
Contingency Repairs and Maintenance	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039

Appendix B—Wastewater 10 Year Capital Forecast

Wastewater Capital Project	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total Cost
Moose Creek Wastewater Treatment System	$ 26,000	$ 41,715	$ 44,558	$ 33,875	$ 40,518	$ 34,778	$ 31,045	$ 31,977	$ 32,936	$ 36,534	$ 73,915	$ 401,851
Torpedo swab force main - SPS to lagoon	$ -	$ 5,150	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,150
Collection System (flushing, sealing, upgrading, camera)	$ 15,000	$ 15,450	$ 15,914	$ 16,391	$ 16,883	$ 17,389	$ 17,911	$ 18,448	$ 19,002	$ 19,572	$ 20,159	$ 177,117
Alum Pump - Replace	$ -	$ -	$ -	$ 5,464	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,464
Blower #1 - Rebuild	$ -	$ -	$ -	$ -	$ 11,255	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,255
Blower #2 - Rebuild	$ -	$ 7,210	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,210
Generator Maintenance	$ 1,000	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 5,796	$ 1,194	$ 1,230	$ 1,267	$ 1,305	$ 6,720	$ 21,821
Lagoon Cells - Safety Rope & Anchors	$ -	$ -	$ 1,061	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,061
Sewage Pump - Rebuild	$ -	$ -	$ 8,487	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 33,598	$ 42,085
Shingles SPS - Replace	$ -	$ 2,575	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,575
Trees - Cut around Fence Line	$ -	$ -	$ 5,305	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,305
Electrical & Instrumentation	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Contingency Repairs & Maintenance	$ 5,000	$ 5,150	$ 5,305	$ 5,464	$ 5,628	$ 5,796	$ 5,970	$ 6,149	$ 6,334	$ 6,524	$ 6,720	$ 59,039
Unit Heater - Replace	$ -	$ -	$ 2,122	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,610	$ -	$ 4,731
TOTAL	$ 93,400	$ 147,599	$ 129,324	$ 113,425	$ 166,463	$ 110,015	$ 96,002	$ 106,261	$ 110,082	$ 157,095	$ 231,019	$ 1,367,285