



City of Elliot Lake

**WATER AND WASTEWATER
FINANCIAL PLAN**

2020 – 2029

In accordance with O.Reg. 453/07

Project No.: 21-110

Prepared by:



**Infrastructure
Solutions**

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October 28, 2021

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Daryl Halloch
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45 Hillside Drive North
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Re: 2020 Final Water and Wastewater Financial Plan, Rev. 1

Dear Daryl,

We are pleased to submit the revised version of your updated Water and Wastewater Financial Plan.

We appreciate the opportunity to be of assistance to the City of Elliot Lake with this undertaking and look forward to working again with you and your staff in the future.

Please call if you have any questions.

Yours truly,

Infrastructure Solutions (Software) Inc.



Neil Roberts
President

Infrastructure Solutions (Software) Inc.

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1 Introduction and Project Scope

1.1 Objectives

Infrastructure Solutions Inc. (ISI) was retained by the City of Elliot Lake (the City) to prepare an updated Water/Wastewater Financial Plan for the communal water system. This Financial Plan has been developed and prepared with a forward-looking approach at the financial position of the City's water and wastewater systems. The plan is not audited, and it does contain various estimates and assumptions as defined in Section 5: "Notes to the Financial Plan".

The Water Financial Plan fulfills one of the five submission requirements for the purposes of obtaining a municipal drinking water license as per the Safe Drinking Water Act 2002 (SDWA). The prescribed reporting requirements for a financial plan are defined by Ontario Regulation 453/07 (O. Reg.453/07). In general, a financial plan requires an in-depth analysis of capital and operating needs, a review of current and future demand versus supply, and consideration of available funding sources. The Financial Plan under O. Reg. 453/07 is required to cover a period of at least six (6) years, and this Plan's period is from 2020 to 2029 inclusive.

The City of Elliot Lake is a municipality with a population of approximately 10,741 according to the 2016 Canada Census, and is situated north of Lake Huron, midway between the cities of Sudbury and Sault Ste. Marie. The City's water/wastewater system serves the community with approximately 6,065 accounts, as of 2020. The vast majority of water users (5,873 Units) in Elliot Lake are not metered. In 2020, there were 192 metered accounts, mostly commercial users, as per 2020 Metered Accounts Consumption Yearly Report. The City has undertaken this Water/Wastewater Financial Plan to ensure that sufficient funds will be in place to cover the short-term water and wastewater system operating costs and full water and wastewater system life-cycle asset renewal and replacement costs over a ten -year time period.

This Water and Wastewater Financial Plan consists of the following tasks:

- Compilation of the current and projected operating costs for the 2020-2029 period
- Projections of capital renewal and replacement costs to 2029
- Revenue projections
- Debt requirements and projections
- Tangible Capital Asset projections
- Statement of Financial Position, Statement of Operations, Statement of Change in Net Financial Assets/Debt, and Statement of Cash Flow

The intent of the project is to develop a sustainable financing plan that will fully meet the current financial needs, as well as make full provision for renewing all water system financial assets. The cost of renewing financial assets has been identified for the 2020 to 2029 period. For each year, from 2020-2029, user fees have been set such that funds will be available when needed to meet future projected capital renewal and replacement needs.

The costs of the identified short-term capital renewal needs have been combined with projections of the operating costs to produce an overall projection of the system costs. Various methods have been utilized to supply the necessary financial resources to pay for the operations & maintenance (O&M) and the capital projects. These include loans, if any, user fees and reserves. User fees are the key component of the financial plan as they pay down any loan and build up reserves.

The current rate structure as per the 2020 Water By-law, combined with the rate increases as proposed in the 2020 Elliot Lake Water/Wastewater Rate Study, generates sufficient funds to fully meet the projected

needs of the financial plan. It is recommended that the rates be monitored annually to determine if revenues and expenditures are in line with this Financial Plan's projections..

1.2 Study Area

The City of Elliot Lake is a municipality with a population of approximately 10,741 according to the 2016 Canada Census, and is situated north of Lake Huron, midway between the cities of Sudbury and Sault Ste. Marie. The City is responsible for water supply, treatment and distribution within the City's site. Municipal services, including water and wastewater are supplied to approximately 6,065 accounts.

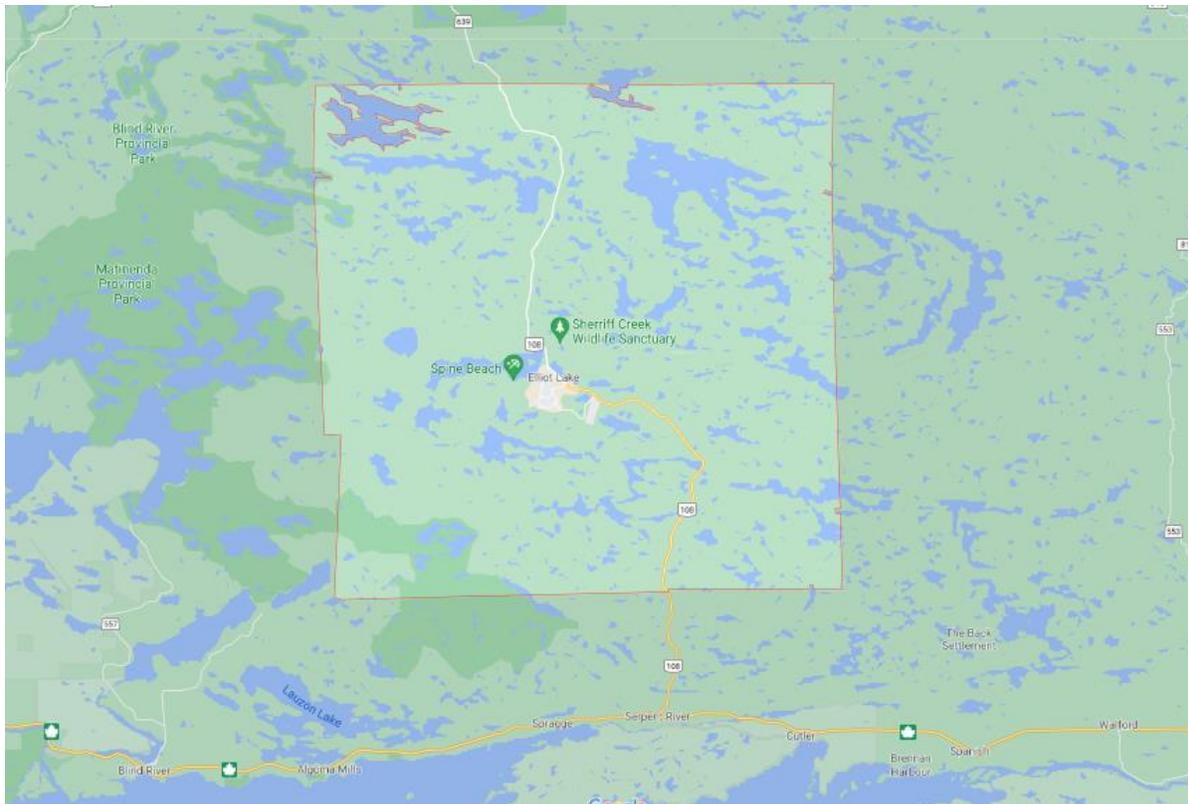


Figure 1 - Study Area (Source: Google Maps)

Elliot Lake was once known as the Uranium Mining Capital of the World. After two large periods of decline in the mining industry, an agreement with Ontario Hydro was made to purchase their uranium. By 1996, all uranium mining had stopped in Elliot Lake. In 2006, there was a resurgence of interest in becoming more investment ready. The community worked with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to determine how to support their current businesses, how they could expand them and how they could garner more attention from the private sector. Many of the successes resulting from the community's recovery plan were achieved through the Economic Diversification Strategy. Much of its success has largely been due to marketing Elliot Lake as destination for retirees rather than the traditional production-based economy. Cottage lot development helped stabilize the economy as part of this initiative. The quality of life in Elliot Lake appears to be garnering attention not only from individuals looking to relocate but from private and public developers looking at Elliot Lake as a safe and secure place for long term investment.

1.3 Water System

The City of Elliot Lake Water Treatment Plant is a direct filtration plant with coagulant feed, rapid mix, flocculation and three rapid gravity sand and anthracite filters. It was designed in 1980, with a maximum day design flow of 28,400 m³/day and a forecasted population of 28,000. Currently, it serves a population of approximately 12,000. Elliot Lake is the primary raw water source. Additionally, there is a 2,200 m³ clearwell under the treatment area. The system storage consists of twin side by side standpipes with a total capacity of 5,900 m³ in the original townsite and a 4,550 m³ in ground reservoir in the "New Townsite". However, the New Townsite tank is no longer in service.

The water treatment plant is a direct filtration plant with the following characteristics:

Intake

A 295 m long, 900 mm diameter high density polyethylene raw water intake pipe with fibreglass intake structure and crib having an intake capacity of 36,000 m³/day.

Low-Lift Pumping Station

A separate low lift pumping station having a firm capacity of 28,000 m³/day, equipped with two removable manually cleaned inlet screens, four vertical turbine low lift pumps (1 pump at 5,200 m³/day; 2 pumps, each at 18,100 m³/day; and 1 pump at 8,200 m³/day). Also, one venture tube water meter on the raw water main located in the main plant.

Mixing

Two cell rapid mix tanks with one 15 kW mixers and one 3.75kW submersible. Total residence time at design flow 5 minutes.

Flocculation Tanks

Four parallel series of three hydraulic spiral flow flocculation tanks.

Filters

Three rectangular filters with dual media (anthracite/sand) and hydraulic surface wash at a filtration rate of 10 m/hr at design flow.

Clear Well

A 2,300 m³ capacity baffled clear well with a common filter effluent chamber, and two independent storage/chlorine contact tanks each of which can be isolated for service,

High Lift Pumping Station

Four vertical turbine centrifugal pumps rated as follows: HLP1 3,900 m³/day, HLP2 8,600 m³/day, HLP3 18,600 m³/day, and HLP4 8,600 m³/day. A venture tube flow meter is installed on the discharge main from the Pump System to the distribution system.

Disinfection System

A chlorine gas disinfection system consisting of a two one-ton cylinder weight scales with vacuum regulators and three (one duty, 2 stand-by) 90 kg/d capacity chlorinators with a storage space for seven one-ton cylinder and associated equipment.

Chemical Storage and Feed Systems

Coagulant feed system consisting of one 27,000L capacity liquid PACl storage tank with a remote filling system, two chemical feed metering pumps with a flow capacity of 17.6 l/hr, and chemical feed lines to the rapid mix tank.

pH/Alkalinity Adjustment

Pre and post lime feed systems for alkalinity and pH adjustment consisting of one 30-ton silo and volumetric feeder into a slurry make-up tank; two chemical feed metering pumps with a flow capacity of 476l/hr; a stand-by hopper, volumetric feeder and feed pump.

Fluoride

A fluoride feed system consisting of a 4,500 litre hydrofluorosilicic acid bulk storage tank and one metering pump with a flow capacity of 3.3 l/hr.

Residual Management System

A filter backwash wastewater settling and disposal facility consisting of three settling/surge tanks capacity of 235 m³ each; one sludge holding/thickening tank capacity 60 m³; two sludge pumps for transfer of sludge from the settling tanks to the sludge holding tank and for pumping from the sludge tank to a truck. Supernatant is discharged to Elliot Lake. Sludge is trucked to the sewage treatment plant via Horne Lift.

Stand-By Power Facility

A 500 Diesel engine stand-by power generator set and associated equipment located in a separate room of the Plant Enclosure Building

The City of Elliot Lake has highly trained staff that specializes in operating and maintaining a water treatment plant, distribution system, a booster station and two elevated water storage tanks (standpipes). The water distribution system consists of a total approximately 130 km of cast iron, ductile iron, and PVC water main of sizes ranging from 150 mm diameter to 600 mm diameter. There are approximately 428 hydrants and two water storage tanks (standpipes) with a total storage volume of approximately 9,400 m³. A 1,527 m³ standpipe and a 7,870 m³ standpipe are both located on Roman Avenue.

Source: Summary Report - City of Elliot Lake Water Treatment Plant (2020).



Figure 2 – Water Treatment Plant (Low Lift Pumps)

1.4 Wastewater System

The Esten Lake Sewage Treatment Plant provides a secondary treatment of sewage generated by the City of Elliot Lake. Three main sewage pumping stations and one zone gravity flow form the four main sewage collection areas in the City. The sewage pumping stations include Horne Lake, Angel Lake, and Porridge Lake Pumping Stations and the gravity flow station is Neighbourhood 3C.

A variety of feeder pumping stations discharge to the main pumping stations. The City operates a total of 12 sewage pumping stations. The main pumping station Forcemains discharge into a 750 mm diameter gravity trunk sewer, which terminates at the head of the inlet works at the sewage treatment plant.

The Esten Lake Sewage Treatment Plant is designed to provide a nominal flow of 16,000 m³/day. The facility incorporates raw sewage pumping, screening, degritting, primary clarification, activated sludge aeration, secondary clarification, sludge recycle pumping, chlorination, nutrient reduction and anaerobic sludge digestion. Stabilized sludge from the anaerobic digester is trucked off-site to mine tailings sites for final disposal.

Effluent from the sewage treatment plant is discharged by gravity to the easterly end of Esten Lake via an 800 mm diameter outfall pipe. A causeway has been built to isolate the easterly end of Esten Lake, with flow through a diversion channel to Depot Lake. Nordic Lake, which is radium polluted, has also been diverted to Depot Lake through the Esten Lake diversion. This scheme protects the aquatic and recreational use of the remainder of Esten Lake, Marchland River and Lake, and Trout Lake from the polluting effect of Nordic Lake.



Source: Design and Operations Brief for Esten Lake Sewage Treatment Plant in the City of Elliot Lake (June, 1982); Marshall Macklin Monaghan.

Figure 3 - Wastewater Treatment Plant (Screw Pumps)

2 Provincial Requirements

The Safe Drinking Water Act (SDWA) was passed in December 2002 to address some of the recommendations made by the Walkerton Inquiry Part II report. One of the main requirements of the Act is the mandatory licensing of municipal water providers. Section 31 (1) specifically states,

“No person shall,

- a) establish a new municipal drinking water system or replace or carry out an alteration to a municipal drinking water system except under the authority of and in accordance with an approval under this Part or a drinking water works permit; or
- b) use or operate a municipal drinking water system that was established before or after this section comes into force except under the authority of and in accordance with an approval under this Part or municipal drinking water license.”

One of the main requirements of the SDWA is the mandatory licensing of municipal water providers, as per section 31 (1). To meet license requirements, a municipality must satisfy five key requirements as per section 44 (1):

1. Obtain a drinking water works permit.
2. Acceptance of the operational plan for the system based on the Drinking Water Quality Management Standard.
3. Accreditation of the Operating Authority.
4. Prepare and provide a financial plan.
5. Obtain a permit to take water.

The preparation of a financial plan is a key requirement for licensing and as such must be undertaken by all water providers.

2.1 Financial Plan Requirements – General

Under the SDWA, a Financial Plan is mandatory for water systems and encouraged for wastewater systems. The financial plans shall be for a period of at least six years, but longer planning horizons are encouraged. The initial financial plan was to be completed and approved by the later of July 1, 2010 and the date that was six months after the first license was issued. Once a water system is licensed, the City's Water Financial Plan is required to be updated every five (5) years, in conjunction with the application for license renewal. Financial plans may be amended, and additional information beyond what is prescribed can be included if deemed necessary.

2.2 Financial Plan Requirements – Existing System

O. Reg. 453/07 provides details with regards to s.30 (1) part b of the SDWA for existing water systems:

- Financial plans must be approved by Council resolution (or governing body).
- Financial plans must include a statement that the financial impacts have been considered and apply for a minimum six-year period (commencing when the system first serves the public, or at renewal starting with the year in which the license expires).
- Financial plans must include detail regarding proposed or projected financial operations itemized by total revenues, total expenses, annual surplus/deficit and accumulated surplus/deficit (i.e., the components of a “Statement of Operations” as per Public Sector Accounting Board (PSAB)) for each year in which the financial plans apply.

- Financial plans must present financial position itemized by total financial assets, total liabilities, net debt, non-financial assets, and tangible capital assets (i.e., the components of a “Statement of Financial Position” as per PSAB) for each year in which the financial plans apply.
- Gross cash receipts/payments itemized by operating transactions, capital transactions, investing transactions and financial transactions (i.e., the components of a “Statement of Cash Flow” as per PSAB) for each year in which the financial plans apply.
- Financial plans applicable to two or more solely owned drinking water systems can be prepared as if they are for one drinking water system.
- Financial plans are 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.
- Financial Plans are to be submitted to the Ministry of Municipal Affairs and Housing.

2.3 Sustainable Financial Planning

In general, sustainability refers to the ability to maintain a certain position over time. While the SDWA requires a declaration of the financial plan’s sustainability, it does not give a clear definition of what would be considered sustainable. Instead, 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 that 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 principles help form the framework for a sustainable financial plan. The substance of the financial plan may be derived from SWSSA (Sustainable Water and Sewage Systems Act) which will require, once in force, municipalities to assess the “full cost” of providing water and wastewater services. Full cost as defined in subsections 3(7) and 4(7), and includes:

“source protection, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public and collecting, treating or discharging waste water, and such other costs which may be specified by regulation.”

Furthermore, municipalities will be required to inventory and report their current infrastructure and how it will be maintained and managed going forward. Municipalities will then be required to report on the full cost of services and how these costs will be recovered and paid for. The principles of SWSSA ensure that a long-term plan for sustainable asset management is developed and that all costs for providing water and wastewater services are assessed so that there is sufficient funding for system needs.

Although SWSSA has not come into force, the Financial Plan has been prepared such that the City will be both SDWA and SWSSA compliant.

3 Key Considerations

This section presents the projections settled for key items over the ten (10) year period and the assumptions made in order to prepare this Financial Plan. These include:

- Customer growth
- Operations & Maintenance (O&M)
- Capital budget forecasts
- Revenue requirements
- Debt requirements and repayment
- Capital Reserves and operating reserve projections
- Tangible Capital Asset (TCA) projections

Figure 4 shows a summary of the key financial projections:

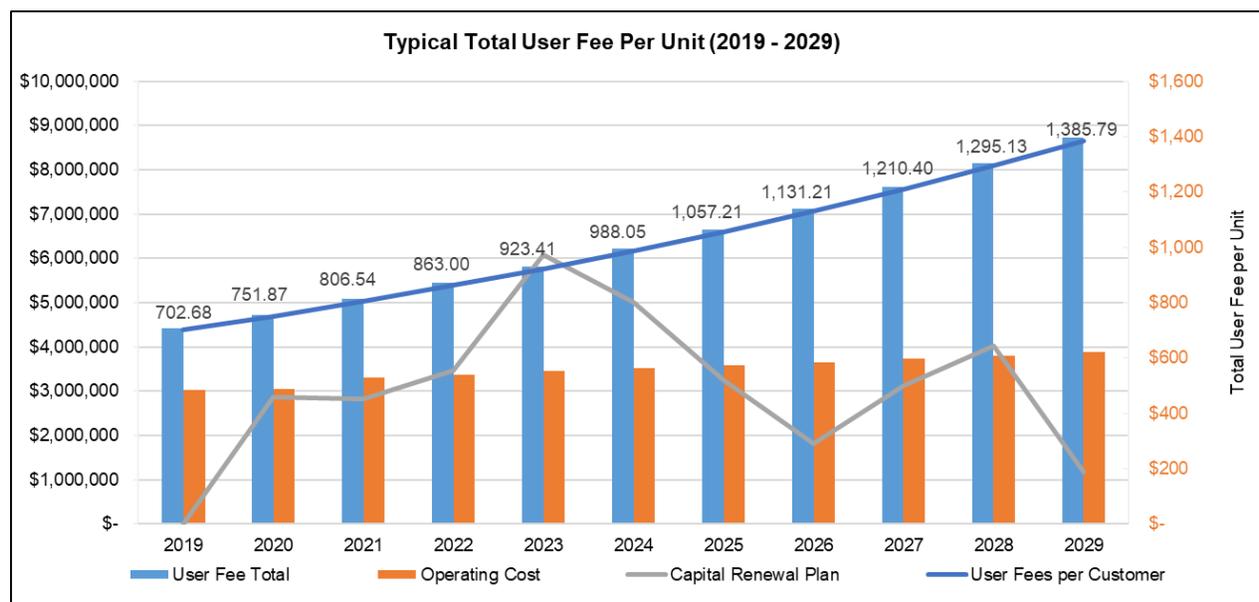


Figure 4 - Summary of Financial Projection

It should be noted that while this Financial Plan meets O. Reg. 453/7 requirements, the City's 2015 Water Rate Study fully assesses the City's water/wastewater infrastructure and considers factors such as estimated useful life, asset replacement requirements, conservation, and reserve requirements over a 50-year term to plan for sustainable long-term water and wastewater infrastructure management. The City has also commissioned an updated 50-year Water Rate Study.

3.1 Customer Growth & Consumption

The variation in the population of Elliot Lake over the past 20 years is indicative of a community in transition. The population has gone from 17,984 in 1986 to 10,741 in 2016. From 2001 to 2011, population decline had subsided, and the population slowly increased due largely to the success of the City's retirement living program. It appears that the population has remained quite steady in the last few years, but 2021 Census numbers were not available at the time of the study. For the purpose of this plan, it is assumed that the population will remain steady.

The City currently measures water consumption for 192 commercial, institutional and industrial users. Some commercial and all residential customers are charged a flat rate. All available data on water consumption volume was considered.

The total number of customers declined from 6,200 in 2012 to 6,083 in 2014. By 2015, the number went back up to 6,185. During 2017 through 2020 the number of customers has remained steady at about 6,065. It is assumed that there will be no customer growth over the next years and that the number of customers will remain steady at 6,065, as shown in Table 3-1.

Table 3-1: Customer Growth

City of Elliot Lake Projected Number of Water Connections 2020 - 2029													
Connections	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Flat Rate	5872	5873	5873	5873	5,873	5,873	5,873	5,873	5,873	5,873	5,873	5,873	5,873
Metered	189	191	192	192	192	192	192	192	192	192	192	192	192
Total Connections	6,061	6,064	6,065										

During 2017, the City produced a total of 2,036,692 m³ of treated water, representing only 20% of the City's production capacity. Since then, the treated water production has increased significantly, reaching 3,064,283 m³ in 2020 which represents a capacity utilization of about 30%. The reasons for the increase are that an earlier flushing program was restarted, auto-flushers were installed to maintain chlorine residuals in the farther parts of the distribution system, an increase in the number of watermain breaks and residents continually running water to prevent freeze-ups due to unusually cold winters.

Table 3-2 summarizes raw water production and treated water volumes.

Table 3-2: Raw Water vs. Treated Water

Water Consumption (m ³)				
	2017	2018	2019	2020
RAW WATER	n/a	n/a	3,251,943	3,222,369
TREATED WATER	2,036,692	2,626,774	3,100,337	3,064,283

3.2 Operating and Maintenance (O&M) Cost Projections

The City maintains combined revenue and expenditure records for water and wastewater

Water & Wastewater System

The City's annual operating budget for water/wastewater includes costs related to the following:

- Water/wastewater system operations and maintenance.
- Water/wastewater capital expenditures.
- Transfers to the water/wastewater capital reserve.
- Transfers to capital to undertake the annual capital improvement projects. The City primarily follows a pay-as-you-go approach to capital financing, as capital levies are funded from the user rate revenues each year.

The following assumptions were made for projecting the gross costs and revenues over the ten (10)-year period from 2020 to 2029, using 2020 as the base budget year:

- The annual operating costs for water treatment and distribution would increase by 2.0% per year
- The capital projects are on the capital budget
- Interest of 1.25% is earned by the reserve funds, which remains in the reserve fund
- Non-rate revenues are composed of service charges, hydrant rentals, penalties, Miscellaneous revenues and grants.
- The revenue was determined by calculating the net rate funding need. This was performed by adding the operating and capital expenditures
- Capital projects for the water system in the 2020-2029 period are shown in Appendix

The breakdown of the 2020 Operating and Maintenance expenses are shown in Figure 5.

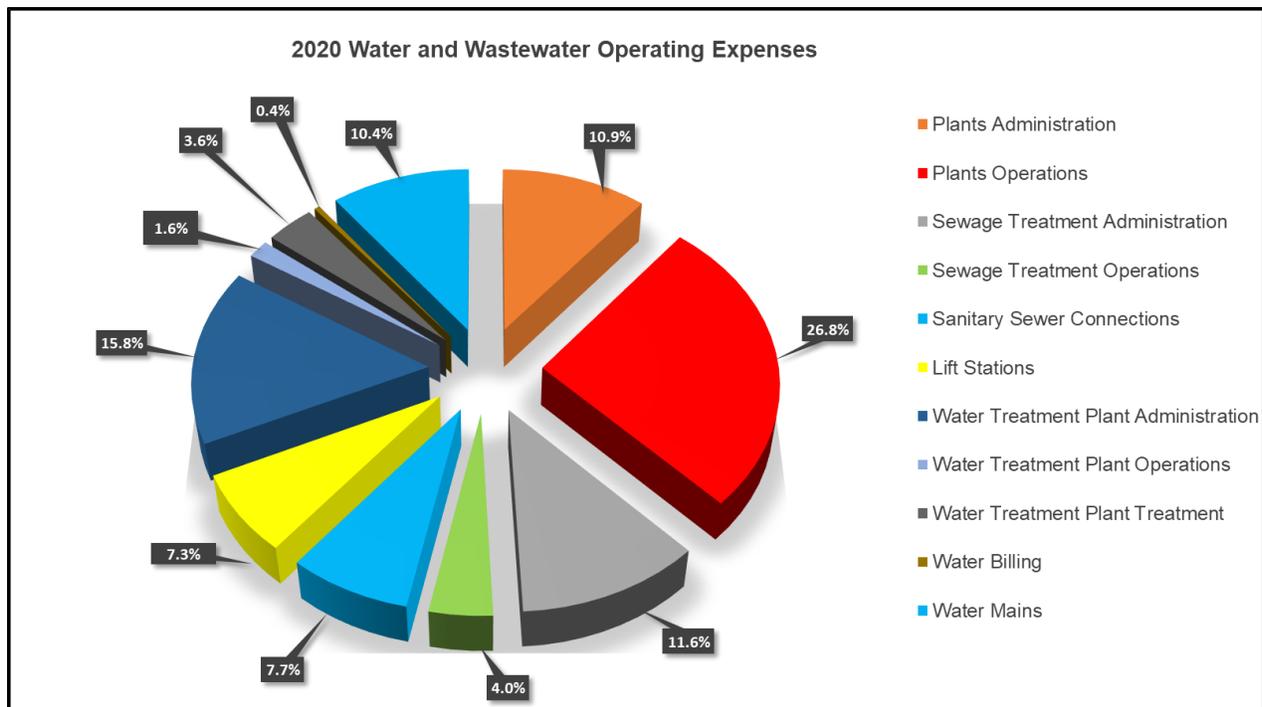


Figure 5 - Breakdown of Operating Expenses

Table 3.3 summarizes the detailed Financial Projections for the plan period, with the annual surplus going towards capital projects and reserves:

Table 3-3: Water & Wastewater Operations Financial Projection

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2016	2017	2028	2029
Revenues													
Water and Sewer Lew	3,829,170	4,098,872	4,367,099	4,651,569	5,049,001	5,402,431	5,753,589	6,098,804	6,434,239	6,755,951	7,059,968	7,342,367	7,599,350
Hydrant Rentals	143	143	143	143	145	148	151	154	157	160	163	167	170
Service Charges	8,228	7,105	6,481	5,223	8,000	8,160	8,323	8,490	8,659	8,833	9,009	9,189	9,373
Penalty on Water	28,583	32,168	32,072	32,505	30,000	30,600	31,212	31,836	32,473	33,122	33,785	34,461	35,150
Miscellaneous Revenue	4,011	78,819	13,776	20,259	-	-	-	-	-	-	-	-	-
Provincial Grant	-	-	-	19,422	-	-	-	-	-	-	-	-	-
Capital Levy	44,228	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenues	3,914,363	4,217,107	4,419,571	4,729,121	5,087,146	5,441,339	5,793,275	6,139,284	6,475,528	6,798,066	7,102,926	7,386,184	7,644,043
Expenditures													
Plants Administration	214,988	60,162	278,321	333,308	381,548	389,179	396,963	404,902	413,000	421,260	429,685	438,279	447,044
Plants Operations	734,637	753,195	821,090	819,963	897,798	915,754	934,069	952,750	971,805	991,242	1,011,066	1,031,288	1,051,913
Sewage Treatment Administration	332,446	359,668	371,520	353,528	354,388	361,476	368,705	376,079	383,601	391,273	399,098	407,080	415,222
Sewage Treatment Operations	172,894	161,828	131,039	121,257	143,500	146,370	149,297	152,283	155,329	158,436	161,604	164,836	168,133
Sanitary Sewer Connections	241,003	235,998	155,766	235,045	220,000	224,400	228,888	233,466	238,135	242,898	247,756	252,711	257,765
Lift Stations	192,239	211,529	235,594	222,305	252,486	257,536	262,686	267,940	273,299	278,765	284,340	290,027	295,828
Water Treatment Plant Administration	397,097	418,301	480,312	483,203	480,906	490,524	500,335	510,341	520,548	530,959	541,578	552,410	563,458
Water Treatment Plant Operations	37,034	45,681	54,451	49,177	58,000	59,160	60,343	61,550	62,781	64,037	65,317	66,624	67,956
Water Treatment Plant Treatment	62,901	101,391	147,261	111,343	136,500	139,230	142,015	144,855	147,752	150,707	153,721	156,796	159,932
Water Billing	10,049	9,860	14,449	12,848	12,800	13,056	13,317	13,583	13,855	14,132	14,415	14,703	14,997
Water Mains	213,188	359,838	348,559	318,276	377,500	385,050	392,751	400,606	408,618	416,791	425,126	433,629	442,301
Total Operating Expenditures	2,608,476	2,717,451	3,038,362	3,060,253	3,315,426	3,381,735	3,449,369	3,518,357	3,588,724	3,660,498	3,733,708	3,808,382	3,884,550
Capital Related													
Debenture (Principal + Interest)	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenditures	2,608,476	2,717,451	3,038,362	3,060,253	3,315,426	3,381,735	3,449,369	3,518,357	3,588,724	3,660,498	3,733,708	3,808,382	3,884,550
Revenues Less Expenses	1,305,887	1,499,656	1,381,209	1,668,868	1,771,720	2,059,604	2,343,906	2,620,928	2,886,804	3,137,568	3,369,218	3,577,801	3,759,493

3.3 Capital Forecast

The capital program includes amounts required for life cycle asset replacement or renewal. For the 2020-2029 period the capital renewal projects have been incorporated into the capital improvement plan. The capital needs have been inflated at an annual rate of 2.0%. The 2020 value represents the existing backlog based on Service Life assumptions. The capital projects in 2022 and 2027 are for Water Treatment Plant equipment that is reaching the end of its Expected Service Life. The capital renewal expenditures are summarized in Figure 6.

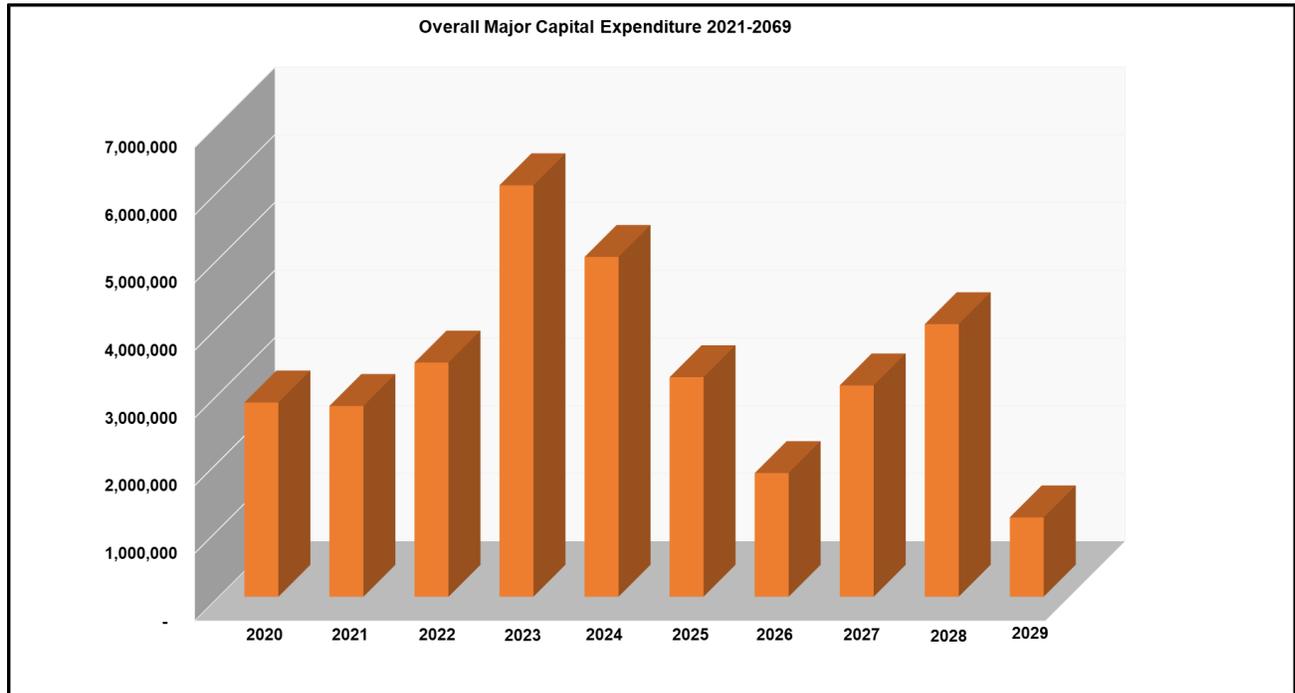


Figure 6 - Overall Capital Expenditures

The detailed Water and Wastewater Capital Projects are shown in (Appendix F).

3.4 Revenue Projections

The City uses a combination of flat rate charges for residential, religious institutions, and small commercial customers, and an increasing block structure for larger industrial, commercial and institutional customers (ICI) based on actual water consumption in m³.

The rates for 2020 to 2029 follow the recommendations of the 2015 Water & Wastewater Rate Study which is currently being updated. Each year, the City amends its fees and charges to customers. The 2021 Rates By-law is shown in Appendix E.

The 2020-2029 projected Water Rates for Flat Rates customers are set out in Table 3-4.

Table 3-4 Projected Water/Wastewater Rates and Revenues

Rates and Revenues	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
User Fee Total	3,914,363	4,217,107	4,419,571	4,729,121	5,087,146	5,441,339	5,820,287	6,225,723	6,659,500	7,123,600	7,620,147	8,151,409	8,719,817
User Fees per Customer	613.75	656.71	702.68	751.87	806.54	863.00	923.41	988.05	1,057.21	1,131.21	1,210.40	1,295.13	1,385.79
Percentage Increase		7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%

3.5 Debentures

The City currently does not have debentures related to their Water and Wastewater Systems, and based on the projections will not be in need of debt financing during the study period.

3.6 Water & Wastewater Reserve

The annual operating surplus is transferred to the water & wastewater reserve fund at year-end, and consequentially any shortfall is returned to the operating budget in subsequent years as needed. The 2020 opening balance of the reserves will be the ending balance in 2019, in the amount of \$5,334,874. The Reserve Balance was taken from the FIR 2019, the most recent one available. These reserves will be used to fund non-growth-related future water and wastewater capital renewal projects. The projected transfers to and from the water/wastewater reserve are shown in Table 3-5. The interest earned on the water reserves is assumed to be 1.25% per annum and is added to the reserves.

Table 3-5 Projected Reserves

City of Elliot Lake Projected Water & Wastewater Reserves 2020-2029											
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Opening Balance	-	5,334,874	4,201,130	3,206,585	1,846,733	(1,839,386)	(4,176,354)	(4,401,579)	(2,819,907)	(2,090,217)	(1,800,428)
Transfer from Operating	-	1,668,868	1,771,720	2,059,604	2,370,918	2,707,367	3,070,776	3,463,102	3,886,438	4,343,027	4,835,267
Transfer to Capital	-	2,869,298	2,818,780	3,459,538	6,080,122	5,021,341	3,243,797	1,826,410	3,121,499	4,027,110	1,171,465
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Close Balane	5,334,874	4,134,444	3,154,070	1,806,651	(1,862,471)	(4,153,361)	(4,349,375)	(2,764,887)	(2,054,968)	(1,774,300)	1,863,374
Interest	-	66,686	52,514	40,082	23,084	(22,992)	(52,204)	(55,020)	(35,249)	(26,128)	(22,505)

The City is following an ambitious 10-year infrastructure renewal program, exceeding \$30 million in total during the plan period. The projected capital costs are considered conservative, resulting in a reserve deficit that peaks at \$4.4 million by the end of 2025. The City is confident that the projects will be completed well below the budgeted costs, and that consequentially the reserves will be sufficient. The City is also actively pursuing any available funding opportunities. As a last resort, renewal projects will be delayed until funding levels are sufficient.

3.7 Tangible Capital Asset (TCA) Analysis

The City's PSAB 3150 TCA data was used to develop the financial material related to the water assets which includes the following:

- Water Treatment Plant assets include the land, buildings and equipment. A breakdown of the Water Treatment Plant components is necessary to determine the appropriate depreciation rates and expenses.
- Also, linear assets such as watermains, valves, hydrants and service connections were taken into consideration. Likewise, for wastewater, sewer covers, sewer linear assets, pumping stations were considered as well.
- The useful life of the assets was taken from the TCA policy and corroborated with engineering experience.
- TCA policy was followed for the amortization of new assets, and straight-line depreciation was used at the beginning of the year of acquisition.
- Fully depreciated assets are being used with no asset removals.
- New assets and asset replacements are projected for 2020-2029 period.

The 2019 ending net book value of the Water assets is approximately \$1,431,788, increasing to approximately \$11,948,348 by 2029 due to projected Capital Renewal Investments. The water system will be 57% depreciated by 2029. This suggests that on average the assets are about in the middle of their useful life expectancies.

Table 3-6 TCA Consolidated for Water

TCA	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Historical Cost	12,096,661	13,167,836	13,607,071	15,262,556	18,655,981	21,198,423	23,057,040	24,021,936	26,206,108	27,819,131
Acquisitions	1,071,175	439,235	1,655,484	3,393,425	2,542,442	1,858,617	964,896	2,184,172	1,613,023	1,048,635
Disposals										
Closing TCA Balance (HC)	13,167,836	13,607,071	15,262,556	18,655,981	21,198,423	23,057,040	24,021,936	26,206,108	27,819,131	28,867,766
Accumulated Amortization (Beginning)	10,664,873	10,917,090	11,225,375	11,557,832	11,972,745	12,558,736	13,270,525	14,073,893	14,924,127	15,882,164
Amortization Expense	252,217	308,285	332,457	414,913	585,991	711,789	803,368	850,234	958,037	1,037,254
Amortization on Disposal										
Accumulated Amortization (Ending)	10,917,090	11,225,375	11,557,832	11,972,745	12,558,736	13,270,525	14,073,893	14,924,127	15,882,164	16,919,418
Net Book Value	2,250,746	2,381,697	3,704,724	6,683,236	8,639,687	9,786,515	9,948,043	11,281,981	11,936,967	11,948,348

The 2019 ending net book value of the Wastewater assets is \$3,128,043, increasing to \$15,171,891 by 2029 due to the planned capital renewal projects. The Wastewater system would be 56% depreciated by 2029. This suggests that on average the assets are about in the middle of their useful life expectancies.

Table 3-7 TCA Consolidated for Wastewater

TCA	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Historical Cost	17,513,623	19,311,745	21,691,290	23,495,344	26,182,041	28,660,940	30,046,120	30,907,634	31,844,962	34,259,049
Acquisitions	1,798,122	2,379,545	1,804,054	2,686,697	2,478,899	1,385,180	861,514	937,328	2,414,087	122,830
Disposals										
Closing TCA Balance (HC)	19,311,745	21,691,290	23,495,344	26,182,041	28,660,940	30,046,120	30,907,634	31,844,962	34,259,049	34,381,878
Accumulated Amortization (Beginning)	14,385,580	14,673,757	14,997,885	15,364,929	15,769,116	16,253,516	16,820,182	17,411,061	18,001,939	18,592,817
Amortization Expense	288,177	324,128	367,044	404,187	484,400	566,666	590,878	590,878	590,878	617,170
Amortization on Disposal										
Accumulated Amortization (Ending)	14,673,757	14,997,885	15,364,929	15,769,116	16,253,516	16,820,182	17,411,061	18,001,939	18,592,817	19,209,988
Net Book Value	4,637,988	6,693,405	8,130,414	10,412,925	12,407,424	13,225,938	13,496,574	13,843,023	15,666,231	15,171,891

3.8 Lead Pipe Replacement

The City water supply system has no lead pipes. The water system is constantly tested for lead and other impurities, and tests results show no lead contamination exists in the system. However, if test results indicate lead levels in a customer's water, water service connections will be replaced at the earliest convenience with other water related repairs. Therefore, there are no noteworthy financial costs linked to lead pipe replacement.

3.9 Water/Wastewater Bill Comparison

The 2021 water/wastewater bill for Elliot Lake are compared with those of a number of other Northern Ontario cities. The bill comparisons are set out in Table 3-8.

Table 3-8 Water/Wastewater Bill Comparison

Bill Comparisons with Northern Ontario Cities	
Utility (Residential)	Water/Wastewater Bill
Elliot Lake	\$ 806.54
Sault Ste. Marie	\$ 927.54
North Bay *2)	\$ 1,102.95
Timmins *1)	\$ 1,247.96
Sudbury *2)	\$ 1,403.10
Thunder Bay	\$ 2,426.30
*1) 5-room dwelling	
*2) 3/4" service	
<i>Based on 2021 Utility Rate By-Laws, Annual, 200 m³ consumption/yr</i>	

The data show water bills based on 2021 rates with different rate systems. It is possible that those with relatively low 2021 rates listed above will experience rate increases in the near future. Elliot Lake's rates are the least expensive in the table. Reserves need to be built for the projected large water and wastewater capital renewal projects. Therefore, the City of Elliot Lake is in a good position to continue with the proposed rate increases to meet future capital needs.

4 Water/Wastewater Financial Plan

The financial plan guidelines were used to select the method for preparing the City of Elliot Lake's Drinking Water/Wastewater System Financial Plan. These steps include the determination of the current period expenses and forecasting the future period expenses, the determination and forecasting of capital expenditure needs, the identification of all current revenue sources and forecasting revenues, and the preparation of the financial statements.

For the current expenses, three categories were included for the purpose of this financial plan: operating costs, interest, and amortization. The current period operating expenses were determined from the City's 2020 unofficial budget, which also included actual expense details for the years 2017, 2018 and 2019. Further information relating to the assumed rates of increase for future operating expenses can be found in the Notes to the Financial Plan.

The annual amortization expenses were calculated using the straight-line method and were based on PSAB information provided by the City, as well as the estimated useful lives and historic costs of the assets. The capital expenditures and the useful lives of all the assets included in the projections were provided by the City.

4.1 Statement of Financial Position

The Statement of Financial Position shows the assets, liabilities, and the accumulated surplus of the City's Water and Wastewater systems. The net financial assets/debt is defined as the difference between financial assets and liabilities; this amount provides an indication of the system's future revenue requirements.

Appendix A shows that from 2020 to 2029, the net financial asset position of the City's water and wastewater systems is expected to decrease from \$6,098,023 in 2019 to a net financial assets position of \$2,635,750

in 2029. In addition to this, due to the large infrastructure renewal spending the total change in net financial asset has a negative position of (\$8,289,393). A net financial positive position means that the financial assets are more than liabilities, and it implies that enough resources exist in the system to finance future operations

The tangible capital asset balance is another important indicator. Generally, an increase in the tangible capital asset balance indicates the acquisition of assets either through purchase by the municipality or contribution/donation by a third party. A decrease in the tangible capital asset balance can indicate a disposal, write down, or use of assets. A use of assets usually results in an increase in accumulated amortization where annual amortization expenses arise as a result of allocating the cost of the asset to operations over the asset's useful life. As shown in Appendix A, tangible capital assets are expected to increase by \$15,946,886 over the 10-year forecast period

4.2 Statement of Operations

The Statement of Operations is a summary of the revenues and expenses generated by the water/wastewater systems for a given period. The annual surplus/deficit determines whether the revenues generated were enough to meet the expenses incurred and in turn, whether net financial assets have been maintained or depleted. The Statement of Operations (Appendix B) of the Water system shows an annual surplus in 2019 of \$840,815 increasing to an annual surplus of \$3,180,842 in 2029. For the 2020-2029 period the accumulated surplus of \$10.7 million in 2019 increases to \$29.8 million in 2029.

An annual surplus provides sufficient funding to manage non-expense costs such as tangible capital asset acquisitions, reserve/reserve fund transfers and debt principal payments. The accumulated surplus/deficit is a significant indicator of whether the available net resources are sufficient to finance future water services. An accumulated deficit means that resources are insufficient to provide for such services. As a result, borrowing or rate increases are needed to finance annual deficits. This accumulated surplus, as indicated in Appendix B, primarily comprises reserve and reserve fund balances as well as historic investments in tangible capital assets.

4.3 Statement of Change in Net Financial Assets/Debt

The Statement of Change in Net Financial Assets/Debt indicates whether the revenue generated was sufficient to provide for operating and non-financial asset costs such as prepaid expenses, inventory supplies, tangible capital assets, etc. This Statement explains the variance between the annual surplus/deficit and the change in net financial assets/debt for the period. The Statement of Change in Net Financial Position (Appendix C) indicates that due to significant infrastructure investments in several of the projected years (2020 to 2025) the forecasted annual surplus falls short of the forecasted tangible capital asset acquisitions (net of amortization) for the year. As noted in the Statement of Change in Net Financial Assets, the total change in net financial asset has a net surplus position of \$2,635,750 in 2029. This implies that sufficient resources exist in the system to finance future operations through an accumulated surplus such as revenues or reserve funds.

4.4 Statement of Cash Flow

The Statement of Cash Flow is a summary of the way in which the water and wastewater systems are projected to generate and use cash resources during the planning period. The transactions that provide/use cash are categorized as operating, capital, investing and financing activities, as shown in Appendix D. Since this statement focuses on the cash aspect of these transactions, it is the linkage between cash and accrual-based reporting.

Appendix E illustrates that on average cash from operations will fund capital transactions (i.e. tangible capital asset acquisitions), pay down any debt, and build enough reserve funds over the plan period. If

required, the City will delay projects to maintain a positive cash position throughout the plan period. The financial plan projects the cash position of the City's Water/Wastewater system to decrease from a surplus balance of approximately \$6,069,670 at the beginning of 2020, to a surplus of \$2,601,187 by the end of 2029.

5 Notes To Financial Plan

The financial plan format above approximates the full accrual format, however the financial plan is not an audited document and contains various estimates. To show a balanced financial plan in full accrual format for the City of Elliot Lake, some items have been estimated. The assumptions used have been documented below.

5.1 Cash, Receivables and Payables

Historical water account receivables and payables were identified from information provided by the City, which were used to project system cash, receivable and payable balances throughout the forecast period. The Accounts Receivable at the end of 2019 were projected to be \$28,353.

Historical Accounts Receivable balances as a percentage of Revenues were used to project annual Accounts Receivable balances for the water and wastewater systems.

The opening cash balance at the beginning of the year 2020 was \$6,069,670.

5.2 Debt

The City has no outstanding water and wastewater-related debt.

5.3 Deferred Revenue

Deferred revenue is made up of gas tax reserve and water development charge reserve fund balances which are considered liabilities for financial reporting purposes until the funds are used on the projects for which they have been collected. Gas tax revenue allocated in 2018 was used in the same year for capital projects in the Wastewater system. Therefore, there are no liabilities for financial reporting purposes in the statement of financial position.

5.4 Tangible Capital Assets (TCA)

The amortization of existing assets is a non-cash annual cost that mirrors the annual use of assets until the end of their respective useful lives. It should be noted that depreciation is based on the historical cost at the time the asset was placed in service, and therefore it does not account for inflation since the year of installation. Therefore, replacement cost estimates based on indexing historical costs to the replacement year are used for projecting future asset replacement costs.

The City's PSAB 3150 TCA data was used to develop the financial information and asset replacement forecasts related to the water system. The TCA projections are based on the following:

- Amortization is calculated based on using the straight-line approach with no amortization in the year of acquisition or construction.
- The City staff provided the useful life on acquisitions.
- Write-offs are assumed to equal \$0 for each year in the forecast period.
- Tangible capital assets are shown on a net basis. It is assumed that disposal occurs when the asset is being replaced.

- Gains/losses on disposal are assumed to be \$0.
- Residual value is assumed to be \$0 for all assets contained within the forecast period.
- Contributed Assets are deemed to be insignificant or unknown during the forecast period and are therefore assumed to be \$0.
- The summary of the balance of tangible capital assets is presented in Tables 3-16 and 3-17 respectively.

5.5 Interest Earned

Interest earned represents the interest earned on the City's bank account.

5.6 Operating Expenses

Capital expenditures not meeting the definition of tangible capital assets are classified as operating expenses and are expensed in the year in which they occur.

6 Process For Approval And Submission

The requirement to prepare the Financial Plan is provided in Section 32 (5) 2 ii of the SDWA. Proof of the preparation of a financial plan is one of the submission requirements for municipal drinking water licensing, and upon completion must be submitted to the Ministry of the Environment. As part of O. Reg. 453/07. The process established for approval of the plan, public circulation, and filing is provided as follows:

1. The financial plan must be approved by resolution of the municipality who owns the drinking water system, or the governing body of the owner (O. Reg. 453/07, Section 3 (1) 1).
2. The owner of the drinking water system must provide a notice advertising the availability of the financial plan. The plan must be made available to the public upon request and free of charge. The plan must also be made available to the public on the municipality's website (O. Reg. 453/07, Section 3 (1) 5).
3. The owner of the drinking water system must provide a copy of the financial plan to the Director of Policy Branch, Ministry of Municipal Affairs and Housing (O. Reg. 453/07, Section 3 (1) 6).
4. The Council Resolution approving the financial plan shall be submitted to the Ministry of the Environment as part of the application for a municipal drinking water license (SDWA, Section 32 (5) 2 ii).

All of which is respectfully submitted,

Infrastructure Solutions (Software) Inc. Per:



Neil Roberts
President
Infrastructure Solutions Inc.

Appendix A: Statement of Financial Position

City of Elliot Lake
Statement of Financial Position (Water & Wastewater)
UNAUDITED: FOR FINANCIAL PLANNING PURPOSES ONLY
Projected 2020 - 2029

	Notes	Forecast										
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Financial Assets												
Cash		6,069,670	4,868,673	3,821,035	2,420,511	(1,289,294)	(3,603,883)	(3,777,530)	(2,141,477)	(1,377,189)	(1,061,937)	2,601,187
Accounts Receivable		28,353	28,920	29,498	30,088	30,690	31,304	31,930	32,569	33,220	33,884	34,562
Due from Federal Government - GST		-	-	-	-	-	-	-	-	-	-	-
Due from Township		-	-	-	-	-	-	-	-	-	-	-
Investments		-	-	-	-	-	-	-	-	-	-	-
Inventory for resale		-	-	-	-	-	-	-	-	-	-	-
Total Financial Assets		6,098,023	4,897,593	3,850,534	2,450,600	(1,258,604)	(3,572,579)	(3,745,600)	(2,108,908)	(1,343,969)	(1,028,053)	2,635,750
Liabilities												
Accounts Payable		-	-	-	-	-	-	-	-	-	-	-
Long-Term Liabilities (principal only)		-	-	-	-	-	-	-	-	-	-	-
Deferred revenue - obligatory reserves		-	-	-	-	-	-	-	-	-	-	-
Deferred revenue - other		-	-	-	-	-	-	-	-	-	-	-
Other (Development Charge Reserves-Deferred Revenue)		-	-	-	-	-	-	-	-	-	-	-
Total Financial Liabilities		-	-	-	-	-	-	-	-	-	-	-
Net Financial Assets/(Net Debt)		6,098,023	4,897,593	3,850,534	2,450,600	(1,258,604)	(3,572,579)	(3,745,600)	(2,108,908)	(1,343,969)	(1,028,053)	2,635,750
Non-Financial Assets												
Tangible Capital Assets		29,610,284	32,479,582	35,298,361	38,757,900	44,838,022	49,859,363	53,103,160	54,929,570	58,051,069	62,078,180	63,249,644
Accumulated Amortization		(25,050,453)	(25,590,847)	(26,223,259)	(26,922,761)	(27,741,861)	(28,812,252)	(30,090,707)	(31,484,953)	(32,926,066)	(34,474,981)	(36,129,406)
Total Non-Financial Assets		4,559,831	6,888,735	9,075,102	11,835,138	17,096,161	21,047,111	23,012,453	23,444,617	25,125,003	27,603,198	27,120,238
Accumulated Surplus / (Deficit)		10,657,854	11,786,328	12,925,636	14,285,738	15,837,557	17,474,532	19,266,853	21,335,709	23,781,034	26,575,146	29,755,988
Financial Indicators	Total Change	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1) Increase/(Decrease) in Net Financial Assets	(8,289,393)	1,381,209	(1,200,430)	(1,047,060)	(1,399,934)	(3,709,204)	(2,313,975)	(173,021)	1,636,692	764,939	315,916	3,663,802
2) Increase/(Decrease) in Tangible Capital Assets	15,946,886	(540,394)	2,328,904	2,186,367	2,760,036	5,261,022	3,950,950	1,965,343	432,164	1,680,386	2,478,195	(482,960)
3) Increase/(Decrease) in Accumulated Surplus	7,657,493	840,815	1,128,474	1,139,308	1,360,103	1,551,818	1,636,975	1,792,322	2,068,856	2,445,326	2,794,111	3,180,842

Appendix B: Statement of Operations

City of Elliot Lake
Statement of Operations (Water & Wastewater)
UNAUDITED: FOR FINANCIAL PLANNING PURPOSES ONLY
Projected 2020 - 2029

	Notes	Actual	Forecast									
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue												
Base Charge Revenue		4,367,099	4,651,569	5,049,001	5,402,431	5,780,601	6,185,243	6,618,210	7,081,485	7,577,189	8,107,592	8,675,124
Rate Base Revenue		-	-	-	-	-	-	-	-	-	-	-
Earned Deferred Revenue		-	-	-	-	-	-	-	-	-	-	-
Other Revenue		52,472	77,552	38,145	38,908	39,686	40,480	41,289	42,115	42,957	43,817	44,693
Total Revenues		4,419,571	4,729,121	5,087,146	5,441,339	5,820,287	6,225,723	6,659,500	7,123,600	7,620,147	8,151,409	8,719,817
Expenses												
Operating Expenses		3,038,362	3,060,253	3,315,426	3,381,735	3,449,369	3,518,357	3,588,724	3,660,498	3,733,708	3,808,382	3,884,550
Interest on Debt		-	-	-	-	-	-	-	-	-	-	-
Amortization		540,394	540,394	632,412	699,502	819,100	1,070,391	1,278,455	1,394,246	1,441,113	1,548,915	1,654,425
Loss on Sale of Tangible Capital Assets		-	-	-	-	-	-	-	-	-	-	-
Other		-	-	-	-	-	-	-	-	-	-	-
Total Expenses		3,578,756	3,600,647	3,947,838	4,081,236	4,268,469	4,588,748	4,867,178	5,054,745	5,174,821	5,357,298	5,538,975
Annual Surplus / (Deficit)		840,815	1,128,474	1,139,308	1,360,103	1,551,818	1,636,975	1,792,322	2,068,856	2,445,326	2,794,111	3,180,842
Accumulated Surplus / (Deficit), beginning of year		9,817,039	10,657,854	11,786,328	12,925,636	14,285,738	15,837,557	17,474,532	19,266,853	21,335,709	23,781,034	26,575,146
Accumulated Surplus / (Deficit), end of year		10,657,854	11,786,328	12,925,636	14,285,738	15,837,557	17,474,532	19,266,853	21,335,709	23,781,034	26,575,146	29,755,988
Financial Indicator												
	Total Change	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Increase/(decrease) in Accumulated Surplus	19,938,949	840,815	1,128,474	1,139,308	1,360,103	1,551,818	1,636,975	1,792,322	2,068,856	2,445,326	2,794,111	3,180,842

Appendix C: Statement of Change in Net Financial Assets

City of Elliot Lake
Statement of Changes in Net Financial Assets/(Debt) (Water & Wastewater)
UNAUDITED: FOR FINANCIAL PLANNING PURPOSES ONLY
Projected 2020 - 2029

	Forecast										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Annual Surplus/(Deficit)	840,815	1,128,474	1,139,308	1,360,103	1,551,818	1,636,975	1,792,322	2,068,856	2,445,326	2,794,111	3,180,842
Less: Acquisition of Tangible Capital Assets	-	(2,869,298)	(2,818,780)	(3,459,538)	(6,080,122)	(5,021,341)	(3,243,797)	(1,826,410)	(3,121,499)	(4,027,110)	(1,171,465)
Add: Amortization of Tangible Capital Assets	540,394	540,394	632,412	699,502	819,100	1,070,391	1,278,455	1,394,246	1,441,113	1,548,915	1,654,425
(Gain)/Loss on disposal of Tangible Capital Assets	-	-	-	-	-	-	-	-	-	-	-
Add: Proceeds on sale of Tangible Capital Assets	-	-	-	-	-	-	-	-	-	-	-
Add: Write-downs of Tangible Capital Assets	-	-	-	-	-	-	-	-	-	-	-
Subtotal	1,381,209	(1,200,430)	(1,047,060)	(1,399,934)	(3,709,204)	(2,313,975)	(173,021)	1,636,692	764,939	315,916	3,663,802
Less: Acquisition of supplies inventory	-	-	-	-	-	-	-	-	-	-	-
Less: Acquisition of prepaid expenses	-	-	-	-	-	-	-	-	-	-	-
Add: Consumption of supplies inventory	-	-	-	-	-	-	-	-	-	-	-
Add: Use of prepaid expenses	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Increase/(Decrease) in Net Financial Assets/(Net Debt)	1,381,209	(1,200,430)	(1,047,060)	(1,399,934)	(3,709,204)	(2,313,975)	(173,021)	1,636,692	764,939	315,916	3,663,802
Net Financial Assets/(Net Debt), beginning of year	4,716,814	6,098,023	4,897,593	3,850,534	2,450,600	(1,258,604)	(3,572,579)	(3,745,600)	(2,108,908)	(1,343,969)	(1,028,053)
Net Financial Assets/(Net Debt), end of year	6,098,023	4,897,593	3,850,534	2,450,600	(1,258,604)	(3,572,579)	(3,745,600)	(2,108,908)	(1,343,969)	(1,028,053)	2,635,750

Appendix D: Statement of Cash Flow

City of Elliot Lake
Statement of Cash Flow (Water and Wastewater)
UNAUDITED: FOR FINANCIAL PLANNING PURPOSES ONLY
Projected 2020 - 2029

	Actual		Forecast									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
Cash provided by:												
Operating Activities												
Annual Surplus/Deficit	840,815	1,128,474	1,139,308	1,360,103	1,551,818	1,636,975	1,792,322	2,068,856	2,445,326	2,794,111	3,180,842	
Non-Cash Items												
Add: Amortization of TCA's	540,394	540,394	632,412	699,502	819,100	1,070,391	1,278,455	1,394,246	1,441,113	1,548,915	1,654,425	
Change in A/R (Increase)/Decrease	-	(567)	(578)	(590)	(602)	(614)	(626)	(639)	(651)	(664)	(678)	
Less: Interest Proceeds												
Net Change in Cash Provided by Operating Activities	1,381,209	1,668,301	1,771,142	2,059,014	2,370,316	2,706,753	3,070,150	3,462,463	3,885,787	4,342,362	4,834,589	
Capital Activities												
Proceeds on sale of Tangible Capital Assets												
Less: Cash used to acquire Tangible Capital Assets	(646,413)	(2,869,298)	(2,818,780)	(3,459,538)	(6,080,122)	(5,021,341)	(3,243,797)	(1,826,410)	(3,121,499)	(4,027,110)	(1,171,465)	
Net Change in Cash Used in Capital Activities	(646,413)	(2,869,298)	(2,818,780)	(3,459,538)	(6,080,122)	(5,021,341)	(3,243,797)	(1,826,410)	(3,121,499)	(4,027,110)	(1,171,465)	
Investing Activities												
Proceeds from investments												
Less: Cash used to acquire investments												
Net Change in Cash Used in Investing Activities												
Financing Activities												
Proceeds from Debt Issue	-	-	-	-	-	-	-	-	-	-	-	
Less: Debt Repayment (principal only)	-	-	-	-	-	-	-	-	-	-	-	
Net Change in Cash Used in Financing Activities	-	-	-	-	-	-	-	-	-	-	-	
Net Change in Cash and Cash Equivalents	734,796	(1,200,997)	(1,047,638)	(1,400,524)	(3,709,806)	(2,314,589)	(173,647)	1,636,053	764,288	315,252	3,663,125	
Cash and Cash Equivalents, beginning of year	5,334,874	6,069,670	4,868,673	3,821,035	2,420,511	(1,289,294)	(3,603,883)	(3,777,530)	(2,141,477)	(1,377,189)	(1,061,937)	
Cash and Cash Equivalents, end of year	6,069,670	4,868,673	3,821,035	2,420,511	(1,289,294)	(3,603,883)	(3,777,530)	(2,141,477)	(1,377,189)	(1,061,937)	2,601,187	

Appendix E: 2021 Water/Wastewater Rates By-Law

City of Elliot Lake
By-law # 20-90
Schedule "A"

2021 WATER / SEWER SCHEDULE AND SERVICE RATES

		Effective January 1, 2021
Flat Water / Sewer Rates		
Semi-Annual Billings		
Each Commercial User Per Unit - Annual		\$806.54
Each Residential Dwelling Unit - Annual		\$806.54
Religious Institutions - Annual		\$403.28
Multiple Dwellings, 7 Units or More		
Quarterly Billings		
Each Dwelling Unit - Quarterly		\$201.64
Meter Rates Per Quarter		per m³
first 100 m ³		\$0.94
next 250 m ³		\$1.73
next 1,200 m ³		\$1.25
Balance		\$0.76
Minimum Charge per quarter		\$201.64
Additional Service Fees		
Service Disconnection		\$50.00
Service Connection		\$50.00
Thawing Frozen Water	Time & Materials (min \$225)	\$225.00
First Time Connection	Time & Materials (min \$225)	\$225.00
Meter Sealing	Time & Materials (min \$84)	\$84.00
Refusal to Install Water Meter	Flat Rate Monthly Fee	\$500.00
Meter Tampering / By-Pass Meter	Per identified occurrence	\$1,000.00

Appendix F: Capital Projects (2020–2029)

Capital Projects for Water Systems

Water Treatment Plant

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
WD0002	Water Tower #1	Water Tower #1 (Stand pipe) - Roman Ave	-	-	250,000	1,000,000	1,000,000	-	-	-	-	-
WD0003	Water Tower #2	Water Tower #2 (Stand Pipe) - Roman Ave	-	-	350,000	-	-	725,000	-	-	-	-
164	Water Well	Well Beside Hanger #1-Municipal Airport	-	-	-	15,000	-	-	-	-	-	-
165	Water Well	Well In Front of Bravo Hanger-Municipal Airport	-	-	-	15,000	-	-	-	-	-	-
2	Low Lift Pumping Station	Low Lift Pumps (two duty, one stand by)	-	-	-	-	100,000	-	-	-	-	-
	Low Lift Pumping Station	Manually Cleaned Inlet Screens (2)	-	-	-	-	-	32,226	-	-	-	-
4	Mixing	Two cell rapid mix tanks with two 15kW mixers	-	-	-	-	-	-	-	24,170	-	-
TP0002	WTP Filter Complex	Filter Complex - Spine Road WTP	-	-	-	50,000	60,000	-	-	-	-	-
56	Flocculation Tanks/Filters	Four parallel series of three hydraulic spiral flow flocculation tanks/Filters	-	-	-	-	-	-	-	1,000,000	-	-
TP0013	Flowmeters	Flowmeter in the water treatment plant	-	-	-	-	30,768	-	-	-	-	-
TP0011	SCADA Control System	One SCADA Control System	-	-	-	-	-	-	-	-	-	60,246
	Water Maintenance Management	Maintenance Management System	26,753	-	-	-	-	-	-	-	-	-
	High Lift Pumping Station	Venturi tube flow meter	-	-	-	50,000	-	-	-	-	-	-
12	Desinfection System	Cylinder weight scales with vacuum generators	8,057	-	-	-	-	-	-	-	-	-
13	Primary Coagulant	Coagulant feed system (27,000 L storage tank)	-	-	-	-	-	42,968	-	-	-	-
	Primary Coagulant	Two chemical feed metering pumps (17.6L/hr)	-	-	-	-	-	10,205	-	-	-	-
14	pH/Alkalinity	Lime feed system of 30Ton Silo and volumetric feeder	-	-	-	-	200,000	-	-	-	-	-
	pH/Alkalinity	Standby hopper, volumetric and feed pump	-	-	-	-	45,000	-	-	-	-	-
	pH/Alkalinity	Two chemical feed metering pumps (476L/hr)	-	-	-	-	27,000	-	-	-	-	-
15	Fluoride	Hydrofluosilicic acid bulk storage tank and day-tank	-	-	-	65,000	-	-	-	-	-	-
	Rotork Valves	Rotork Valves	43,258	-	-	-	-	-	-	-	-	-
TP0005	Stand-By Power Facility	550 kW Diesel engine stand-by power generator	-	-	-	-	-	-	-	-	509,706	-
TP0015	Miscellaneous Equipment	WTP Equipment	-	-	-	-	-	-	50,000	-	-	-
Total WTP, Reservoirs & Wells (2019 Cost)			78,068	-	600,000	1,195,000	1,462,768	810,399	50,000	1,024,170	509,706	60,246
Total WTP, Reservoirs & Wells (Inflated)			79,629	-	636,725	1,293,506	1,615,014	912,641	57,434	1,199,978	609,146	73,439

Watermain

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
22	Watermain	1988 Asphalt Road-Hillside Drive N 1000 m	-	-	-	600,000	-	-	-	-	-	-
27	Watermain	1995 Asphalt Road-Ontario Avenue 971 Metres	-	-	-	250,000	-	-	-	-	-	-
36	Watermain	1996 Asphalt Road-Lakeview Road 588 Metres	-	-	-	-	-	-	750,000	-	-	-
95	Watermain	1982 Asphalt Road-Hergott Avenue 850 Metres	-	-	-	-	-	-	-	-	-	800,000
114	Watermain	1978 Asphalt Road-Pine Road 173 Metres (Renewal 2020)	94,144	108,212	-	-	-	-	-	-	-	-
115	Watermain	1980 Asphalt Road-Poplar Road 434 Metres (Renewal 2020)	236,177	271,467	-	-	-	-	-	-	-	-
117	Watermain	1965 Asphalt Road-Roman Avenue 937 Metres	-	-	-	-	564,883	564,883	-	-	-	-
120	Watermain	1978 Asphalt Road-Spine Road 2154 Metres	-	-	550,000	1,000,000	-	-	-	-	-	-
127	Watermain	1958 Asphalt Road-Valley Crescent 374 Metres (renewal 2019/2020)	592,592	-	-	-	-	-	-	-	-	-
131	Watermain	1978 Asphalt Road-Willoughby Road 390 Metres	-	-	-	-	235,117	235,117	-	-	-	-
133	Watermain	Watermain under the lake from Timber Road to Lakeview	-	-	400,000	-	-	-	-	-	-	-
	Watermain	Maple Road								400,000	400,000	
	Watermain	Oak Hill Road								400,000	400,000	
Waterline Main (2019 Cost)			922,913	379,679	950,000	1,850,000	800,000	800,000	750,000	800,000	800,000	800,000
Waterline Main (Inflated)			941,372	395,018	1,008,148	2,002,499	883,265	900,930	861,514	937,328	956,074	975,196

Water Hydrants

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
154	Hydrant	1969 & Prior (Pooled) Fire Hydrants	-	-	10,000	10,000	10,000	10,000	10,000	10,000	10,000	-
Total Hydrants (2019 Cost)			-	-	10,000	-						
Total Hydrants (Inflated)			-	-	10,612	10,824	11,041	11,262	11,487	11,717	11,951	-

Valves & Meters

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
138	Water Valves Main	Water Valves Main (Pooled)	-	-	-	10,000	10,000	10,000	10,000	10,000	10,000	-
144	Distribution Valves	Distribution Valves (Pooled)	-	-	-	10,000	10,000	10,000	10,000	10,000	10,000	-
150	Water Valve Chambers	Water Valves Chamber (Pooled)	-	-	-	10,000	10,000	10,000	10,000	10,000	10,000	-
Valves and Meters (2019 Cost)			-	-	-	30,000	30,000	30,000	30,000	30,000	30,000	-
Valves and Meters (Inflated)			-	-	-	32,473	33,122	33,785	34,461	35,150	35,853	-

Vehicles - Water

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
TP0009	Vehicles	Ford Pick-up Truck	-	42,500	-	-	-	-	-	-	-	-
TP0010	Vehicles	3/4 Ton CHEV Cargo Van	-	-	-	50,000	-	-	-	-	-	-
	Vehicles/Equipment	Valve Maintenance Trailer	49,191	-	-	-	-	-	-	-	-	-
Total Vehicles - Water (2019 Cost)			49,191	42,500	-	50,000	-	-	-	-	-	-
Total Vehicles - Water (Inflated)			50,175	44,217	-	54,122	-	-	-	-	-	-

Capital Projects for Wastewater System

Wastewater Treatment Plant

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
3	Degritting equipment,air diffusers, compressors and air lift pump	Grit Removal: 300 l/s per unit. Each tank 3.5m x4.3m x3.0m	-	-	-	-	50,000	-	-	-	-	-
3A	Grit raking and cleansing mechanism	Grit raking and cleansing mechanism	-	-	-	-	100,000	-	-	-	-	-
4	Primary Clarifier Sludge	Three tanks with associated sludge and scum collection	-	400,000	400,000	400,000	-	-	-	-	-	-
4A	Raw sludge and scum pumps	Raw sludge and scum pumps	-	-	-	85,000	-	-	-	-	-	-
WW1701	Primary Sludge Control Valve	Primary Sludge Control Valve	-	-	-	50,000	-	-	-	-	-	-
5	Mechanical aerators	2 tanks with 4 mechanical surface aerators	-	-	-	-	500,000	-	-	-	-	-
6	Secondary Clarifier Sludge	2 tanks each with associated sludge collection mechanisms	-	-	-	500,000	-	-	-	-	-	-
8	Chlorination Equipment	1 chlorine metering system	-	-	-	-	-	50,000	-	-	-	-
9	Plant Effluent Pumps	Effluent pumps and automatic control system	-	-	-	47,093	-	-	-	-	-	-
11	Primary Digester Fixed Cover	Anaerobic Sludge Digestion	-	-	-	-	263,548	-	-	-	-	-
12	Secondary Digester Fixed Cover	Anaerobic Sludge Digestion	-	-	-	200,000	-	-	-	-	-	-
13	Digested Sludge Pumps	Anaerobic Sludge Digestion	-	-	-	-	27,822	-	-	-	-	-
14	Digested Sludge Transfer Pumps	Anaerobic Sludge Digestion	-	-	-	-	27,822	-	-	-	-	-
15	Primary Digested Sludge Heat Exchanger	Anaerobic Sludge Digestion	-	-	-	-	45,086	-	-	-	-	-
16	Primary Digester Contents mix. Equipm.	Anaerobic Sludge Digestion	-	-	-	-	85,938	-	-	-	-	-
17	Plant Influent Screw Pumps	Anaerobic Sludge Digestion	-	-	-	-	-	-	-	-	250,000	-
WW0021	Delta to Wye Switchover	Delta to Wye Switchover	-	-	-	200,000	-	-	-	-	-	-
18	Standby Generator	Diesel generator set	-	-	-	-	-	-	-	-	150,000	-
	SCADA System Wastewater											
WW0010A	WWTP - Bldg #1000 - Roof Replacement	#1000 BLDG. Digesters-SCOTT RD - Roof Replacement	-	-	-	-	-	25,000	-	-	-	-
WW0003A	WWTP - Bldg # 300 - Roof Replacement	#300 BLDG-SCOTT RD-Work Roof Replacement	-	65,000	-	-	-	-	-	-	-	-
Total WW Treatment Plant (2019 Cost)			-	465,000	400,000	1,482,093	1,100,216	75,000	-	-	400,000	-
Total WW Treatment Plant (Inflated)			-	483,786	424,483	1,604,265	1,214,727	84,462	-	-	478,037	-

Sewage Pumping Station

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Sewage Pumping Station	Spruce Avenue Lift Station	-	300,000	-	-	-	-	-	-	-	-
	Sewage Pumping Station	Spruce Beach Pump Station - Pump Replacement	26,434	-	-	-	-	-	-	-	-	-
	Sewage Pumping Station	North Industrial Lift Station, Timber Road	-	-	-	-	300,000	-	-	-	-	-
	Sewage Pumping Station	Dunn Road Lift Station, Dunn Road	-	-	-	-	-	300,000	-	-	-	-
	Sewage Pumping Station	Lakeview Avenue Lift Station	-	-	300,000	-	-	-	-	-	-	-
32	Sewage Pumping Station	Generators (4) Horne Lake, Angel Lake, Porridge Lake and Neighborhood	219,304	-	-	-	-	-	-	-	-	-
33	Sewage Pumping Station	Propane Generators (8) for small pump station systems (5HP)	8,019	-	-	-	-	-	-	-	-	-
34	Sewage Pumping Station	Two (2) Pumps per Sewage Pump Station (one on duty, one standby)	451,164	60,000	-	-	-	-	-	-	-	-
	Sewage Pumping Station	Transfer switches at Washington Porridge Angel and Lakeview LS						55,000				
Total Sewage Pumping Stations (2019 Cost)			704,921	360,000	300,000	-	300,000	355,000	-	-	-	-
Total Sewage Pumping Stations (Inflated)			719,020	374,544	318,362	-	331,224	399,788	-	-	-	-

Sewer Mains

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
57	Sewerline WW	Road-Hemlock Place 200 Meters 1979 (Lining/Renewal 2019/20)	245,383	-	-	-	-	-	-	-	-	-
58	Sewerline WW	Road-Hergott Avenue 850 Metres	-	-	-	-	-	-	-	-	800,000	-
77	Sewerline WW	Road-Pine Road 173 Metres 1978 (Renewal 2020)	100,806	160,216	-	-	-	-	-	-	-	-
78	Sewerline WW	Road-Poplar Road 434 Metres 1980 (Renewal 2020)	252,890	401,928	-	-	-	-	-	-	-	-
80	Sewerline WW	Road-Roman Avenue 937 Metres	-	-	-	-	564,883	564,883	-	-	-	-
83	Sewerline WW	Road-Spine Road 2154 Metres	-	550,000	1,000,000	-	-	-	-	-	-	-
90	Sewerline WW	Road-Valley Crescent 374 Metres 1958 (Lining/Renewal 2019/20)	458,865	-	-	-	-	-	-	-	-	-
94	Sewerline WW	Road-Willoughby Road 390 Metres	-	-	-	-	235,117	235,117	-	-	-	-
97	Sewerline WW	Sanitary Sewer - from Balsam P.S. To Hillside N. And Ontario	-	-	-	1,000,000	-	-	-	-	-	-
98	Sewerline WW	Sanitary Sewer - along Lakeshore from Pine to Westview	-	350,000	-	-	-	-	-	-	-	-
	Sewerline WW	Sanitary Sewer - Lakeview							750,000			
	Sewerline WW	Sanitary Sewer - Maple Road								400,000	400,000	
	Sewerline WW	Sanitary Sewer - Oak Hill Road								400,000	400,000	
			1,057,944	1,462,144	1,000,000	1,000,000	800,000	800,000	750,000	800,000	1,600,000	-
			1,079,103	1,521,215	1,061,208	1,082,432	883,265	900,930	861,514	937,328	1,912,148	-

Vehicles – WW

Asset ID	Asset Name	Location/Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
WW0011	Vehicle STP	Tractor-Lawn & Garden	-	-	-	-	-	-	-	-	20,000	-
WW0017	Vehicle STP	2013 FORD F-150 PICK UP TRUCK - 1FTNF1CF1DKE53824	-	-	-	-	45,000	-	-	-	-	-
WW0024	Vehicle STP	2019 Dodge Ram 3500 VIN3C63R3CJ9KG680589•	-	-	-	-	-	-	-	-	-	60,349
WW0025	Vehicle STP	2020 Ford F150 VIN1FTFW1E58LFA02616	-	-	-	-	-	-	-	-	-	40,414
Total Vehicles - WW (2019 Cost)			-	-	-	-	45,000	-	-	-	20,000	100,763
Total Vehicles - WW (Inflated)			-	-	-	-	49,684	-	-	-	23,902	122,830