



**TransAqua**

GREATER MONCTON  
WASTEWATER  
COMMISSION

COMMISSION  
DES EAUX USÉES  
DU GRAND MONCTON

# 2023 GMWC Business Plan



## Contents

<b>Executive Summary</b> .....	2
<b>Introduction</b> .....	3
<b>Mandate, Vision, Mission &amp; Values</b> .....	4
Mandate .....	4
Vision .....	4
Mission .....	4
Values .....	5
<b>2019-2023 GMWC Strategic Plan</b> .....	5
<b>Financial Capacity</b> .....	8
GMWC Infrastructure .....	8
GMWC Rate History .....	9
GMWC Revenue .....	9
2023 Operating Expenses .....	10
GMWC Historical Operating Expenses .....	10
GMWC Annual Operating Surplus .....	11
GMWC Capital Program .....	11
Asset Management System .....	13
Asset Replacement Plan .....	14
GMWC Infrastructure Deficit .....	15
<b>Resources Needed to Meet Goals &amp; Objectives</b> .....	16
<b>Next Steps</b> .....	16

## Executive Summary

TransAqua - the Greater Moncton Wastewater Commission (GMWC) operates in a highly regulated environment requiring an Approval to Operate Wastewater Works and a separate Approval to Operate the Composting Facility.

GMWC is deemed as a local municipality in New Brunswick legislation and follows all applicable Provincial and Federal legislation that the Cities of Moncton and Dieppe and the Town of Riverview follows.

GMWC has a Mandate, Mission, Vision and Values that guide its strategic direction.

The 2019-2023 GMWC Strategic Plan is based on the following Strategic Themes:

### STRATEGIC THEMES

- Implement and operate environmentally sustainable processes to treat wastewater in the Greater Moncton Area
- Ensure and maintain long term sustainability
- Strengthen partnerships & engage with Municipalities, Stakeholders and Ratepayers

The 2023 GMWC Business Plan impacts the four Strategic Perspectives: Providing Fiduciary Stewardship, Serve our Stakeholder, Manage Internal Processes & Promote Technology Innovations and Promote Learning / Growth. In turn, Strategic Initiatives are completed by GMWC staff to achieve the Strategic Objectives approved by the Commission Board.

GMWC has developed the 2023 GMWC Business Plan to provide current information relevant to operations and provide stakeholders an update on the financial health of the organization and any projected major capital cash outlays. The GMWC Business Plan is a living document that will be updated each year.

GMWC currently owns infrastructure with a value of approximately \$183 million with a net book value of \$125 million after depreciation as of December 31, 2022.

The 2023 rate of \$210 / Residential Unit has been the same since 2016. Institution, Commercial and Industrial Users pay a wastewater fee based on water consumption.

To ensure a fair and stable rate structure, GMWC's main focus is towards the GMWC Infrastructure Deficit that is estimated at \$41.2 million over the next 15 years. The GMWC Capital and Operating Reserve Fund and GMWC's Operating bank account has the following balances:

Fund	Account Type	Amount	Maturity Date
Operating Reserve	Redeemable GIC	\$5,394,654	June 2025
Capital Reserve	Non-Redeemable GIC	\$5,195,618	May 2027
Capital Reserve	Non-Redeemable GIC	\$16,800,000	June 2027
Operating	Operating Bank Account	\$8,347,553	Accessible
	<b>TOTAL</b>	<b>\$35,737,825</b>	

Table 1: GMWC Finances

The Asset Management System identifies all assets at the end of their life cycle that are expected to be replaced. GMWC's maintenance program has performed very well with many assets that are operating very well past their useful life. The 15-year average annual asset replacement cost is estimated to be just over \$2.7 million.

## Introduction

Established on March 3, 1983, the Greater Moncton Sewerage Commission was formed by the Government of New Brunswick.



In 2014, the Greater Moncton Wastewater Commission introduced TransAqua as its new business name. A bilingual name that conveys what the Commission does: transforming (“trans”) wastewater (“aqua”) and returning it to nature.



TransAqua owns and operates a wastewater collection system, wastewater pumping stations, a wastewater treatment facility, and a composting facility in the greater Moncton region and a compost facility in South Branch and provides wastewater treatment and composting services for the Cities of Moncton and Dieppe and the Town of Riverview.

The Commission operates in a highly regulated environment. The New Brunswick Department of Environment and Local Government (NBDELG) issues an Approval to Operate for the operation of the Wastewater Works and the Composting Facility that outlines the Terms and Conditions under which GMWC must operate. NBDELG issued a Permit for Watercourse and Wetland Alteration that permits GMWC to repair or replace any Combined Sewer Overflow flap gates.

GMWC conducts its business with full transparency to all stakeholders. Since its inception, the Commission sets its own rates with no requirement for oversight from the New Brunswick Energy & Utilities board. The goal of this business plan is to provide the ratepayer an explanation on how the operations impact the unit rate in an easy-to-understand way. It is important that the ratepayer fully understand the revenue and expenses of the Commission and how it can impact their rates. The annual GMWC Infrastructure Report Card was introduced in March 2022 to help breakdown the details for the ratepayer in a clear and concise manner.

GMWC's financial policies establish the appropriate funding sources for capital expenditures to ensure that GMWC Capital Program remains within the limit that preserves GMWC's financial sustainability. This business plan provides the rationale and basis for ensuring a fair short-term and long-term rate structure that allows GMWC to remain financially sustainable without incurring

any debt. GMWC does not currently have any debt. Long term debt is permissible for capital funding only.

GMWC follows all applicable Provincial and Federal legislation that the municipalities follow but does not have access to all the benefits which a municipality would receive (ex. Gas Tax Revenue, pandemic relief funding and Federation of Canadian Municipalities programs). GMWC follows the Canadian Public Sector Accounting Standards (PSAS) for financial reporting.

GMWC is deemed as a local municipality in New Brunswick legislation and applies the second previous year surplus or deficit in its budget reporting.

## **Mandate, Vision, Mission & Values**

GMWC's Vision, Mission and Values are reflected in the GMWC Balanced Scorecard. They complement GMWC's mandate and support a strategic direction that is centered on GMWC's role in ensuring that its ratepayers are delivered maximum value for the services rendered in a timely, economically and environmentally sustainable manner.

### **Mandate**

The Greater Moncton Sewerage Commission (GMSC) was created through Order-in-Council No. 83-162 dated March 3, 1983 under the Clean Environment Act to "develop proper sewage collection and treatment facilities for the City of Moncton and Towns of Dieppe and Riverview." GMSC later changed its legal name to the Greater Moncton Wastewater Commission and introduced its business name, TransAqua, in 2014.

### **Vision**

GMWC is inspired by the desire to be among the best environmentally friendly wastewater treatment operations in Canada. The Commission has established the following Vision Statement:

***"To be an outstanding environmental steward supporting regional planning, economic development and quality of life for the communities of Dieppe, Moncton and Riverview."***

### **Mission**

Through commitment to quality, constant innovation and respect for the planet, GMWC aims to exceed expectations in treating wastewater and processing biosolids in the most responsible and environmentally safe ways possible.

Recognizing the world class processes and many years of experience that GMWC has developed in the wastewater treatment and composting industry, the Commission has adopted the following as our mission:

***“To collect and treat wastewater in a reliable, cost-efficient and environmentally responsible manner.***

## Values

GMWC’s journey toward a sustainable and innovative organization has allowed the Commission Board and staff to become a team who always upholds GMWC’s Values.

Teamwork	Accountability	Integrity	Achievement/Results Oriented	Effective Communication
<ul style="list-style-type: none"> <li>Working well with people is an absolute necessity. This is best accomplished with healthy debate &amp; meaningful discussion to find the best conclusion &amp; eventual decisions for forward process. Teamwork &amp; Mutual Respect for one another are essential to our success.</li> </ul>	<ul style="list-style-type: none"> <li>At the core of accountability is reliability and personal responsibility. Therefore, we value the ability of our staff and organization to work diligently and honor our commitments. We will also take responsibility for our work and promptly correct mistakes to the greatest extent possible</li> </ul>	<ul style="list-style-type: none"> <li>Integrity is the quality of being honest and having strong moral principles. Integrity comes in many forms, but the most important traits that we expect here are dependability, honesty, trustworthiness, respect, loyalty and good judgement.</li> </ul>	<ul style="list-style-type: none"> <li>The ability to focus on achieving efficient, timely, quality results by directing efforts on expected outcomes, setting challenging goals, focusing effort on the goals, and meeting or exceeding them within expected timeframes.</li> </ul>	<ul style="list-style-type: none"> <li>Openly communicating in a compelling, honest, persuasive and articulate manner, ensuring the message is clear, understood and consistent with TransAqua objectives. Exchanges ideas and willingly explores a variety of perspectives that respects unique individuals, audiences and circumstances</li> </ul>

GMWC and the Cities of Moncton and Dieppe and the Town of Riverview work collaboratively to maintain the Sewer Use Bylaws and property easements for underground infrastructure.

GMWC and the Cities of Moncton and Dieppe and the Town of Riverview have ratified several Agreements beginning in 2016:

- Cost Sharing Agreement for the Babineau Creek Trunk Sewer in Dieppe – November 2016.
- Agreement for the Construction, Operation and Maintenance of Forcemain from the Fox Creek Pumping Station to the new Babineau Creek Trunk Sewer in Dieppe (“the Bourque Road Forcemain Project”) – November 2016.
- Agreement for the Relocation of the GMWC Collector Sewer at Johnathan Creek – December 2016.
- Combined Sewer Overflow Reporting Sub-Agreement with the City of Moncton – June 2018.
- Service Agreement – June 2018; and
- Agreement for the Cost Recovery of the Commission’s Expenses – May 2021.

## 2019-2023 GMWC Strategic Plan

Historically, planning processes have focused on a 5-year Strategic Plan, an annual budget that included a 3-year budget projection and a 15-year capital budget projection. The 2019-2023

GMWC Strategic Plan guided GMWC's capital investments for both existing assets and new assets over 15 years. The Business Plan's purpose is to:

1. Improve long-term management.
2. Provide a long-term framework to inform the 15-year capital plan and the 1-year budget process.
3. Highlight projects that could be ready to advance should funding be available; and
4. Guide the selection of public amenities which are generated through systematic growth and municipal requirements.

GMWC has 3 components to capital planning:

1. Annual GMWC Capital Budget – (combines 1-year budget and 14-year budget forecast).
2. Regional Wastewater and Combined Sewer Overflow Strategy – providing future required projects within the Greater Moncton Region.
3. Balanced Scorecard (5-year outlook, high level, strategic direction of GMWC).

The GMWC Infrastructure Report Card was created as an assessment of the organization's fiscal capacity.

Financial capacity is reflected from the Commission's ability to generate revenue from the rate payer and ability to take on debt. The projected financial needs currently meet the financial capacity at the current Residential Unit and Institution, Commercial and Industrial (ICI) rate.

As part of the annual budget process, capital requirements are going to be evaluated based on value, risk, assessment of infrastructure, strategic priority and overarching principles which include:

1. Need to proactively maintain existing assets.
2. Need to extend the useful life of GMWC's assets where possible.
3. Consider energy management within the total life cycle cost of any new asset or an asset requiring replacement.
4. A requirement to embed financial sustainability in GMWC's capital assets.
5. Evidence of the need for new or expanded assets to maintain a high level of service.
6. Prioritization of multi-use strategic assets to achieve both operational and capital economies of scale and efficiency (Ex. Working directly with the City of Dieppe to construct the Bourque Road Forcemain while they construct new infrastructure in the roadway at the same time).
7. Fostering stakeholder relationships based on mutual benefit.

Given how the interdependencies between the 2019-2023 GMWC Strategic Plan and the 15-year GMWC Capital Program are directly related to the annual budget, the 2023 GMWC Business Plan will be updated annually as it is a living document.

The 2019-2023 GMWC Strategic Plan represents a significant cultural and operational shift that supports optimal decision making based on improved data and transparency of priorities. The challenges faced in this process is including a balance between recapitalization and the funding of new or significantly expanded assets, the impact of choices regarding Capital Projects on the GMWC Operating Budget and the realities of GMWC's fiscal capacity.



# GMWC STRATEGIC PLAN 2019-2023



**STRATEGIC THEMES**

- Implement and operate environmentally sustainable processes to treat wastewater in the Greater Moncton Area
- Ensure and maintain long term sustainability
- Strengthen partnerships & engage with Municipalities, Stakeholders and Ratepayers

PERSPECTIVES	STRATEGIC OBJECTIVES	STRATEGIC MEASURES	TARGETS	INITIATIVES
PROVIDE FIDUCIARY STEWARDSHIP	Explore New Revenue Growth Opportunities (Ex: Selling Lab Services)	Revenue from new customers or more from existing		<ul style="list-style-type: none"> <li>• Lab Accreditation</li> <li>• Do feasibility analysis to provide lab services externally</li> <li>• Develop business plan based on feasibility report</li> <li>• Develop business plan based on feasibility report</li> <li>• Develop &amp; Implement Business Plan</li> <li>• Explore other revenue generating opportunities</li> <li>• Sell bulk non-potable water for sewer flushing, etc.</li> </ul>
	Financial Sustainability	Asset Deficit	Identify by 2021	<ul style="list-style-type: none"> <li>• Develop &amp; Communicate infrastructure scorecard</li> </ul>
		Cost per customer \$703	Identify by 2021	<ul style="list-style-type: none"> <li>• Complete 15 year user fee analysis based on needs of Cap Ex Reserve</li> </ul>
		Maximize cashflow	1 purchasing contract / year	<ul style="list-style-type: none"> <li>• Centralization of purchasing contracts with other government partnerships</li> </ul>
Receive revenue within 90 days of invoicing	90%		<ul style="list-style-type: none"> <li>• 1 Six Sigma Project per year</li> </ul>	
SERVE OUR STAKEHOLDER	Governance Leadership	Governance Education Government Interactions	1 Session / year	<ul style="list-style-type: none"> <li>• Create and education program to inform stakeholders</li> <li>• Communication Strategy (Web, regular, e-newsletter, news releases, community updates, ratepayer cost updates)</li> <li>• GMWC role review as it relates to legislation with Municipalities</li> </ul>
		Attendance at meetings and Open Houses	80% attendance and attend one Open House	<ul style="list-style-type: none"> <li>• Update Commission orientation package (Policies, by-laws, talking points, background, signing authority)</li> <li>• Continuous Board Development (Skills)</li> <li>• Pro-actively develop a skill matrix/equity guide for the recruitment of board members</li> </ul>
	Attract New Strategic Partners	Create Economies of Scale with strategic partners	1 new partnership with agreement	<ul style="list-style-type: none"> <li>• Meet with Municipalities to discuss partnership (PPE, Stationary, IT, other)</li> <li>• Meet with other WWTP/Province to discuss Partnerships (Chemicals, Fuel, other)</li> </ul>
	Stakeholder Engagement	Enhance Communication Plan	10 speaking engagements / year	<ul style="list-style-type: none"> <li>• Speak at Local Universities and High Schools</li> <li>• Speak at GMCC and conferences</li> <li>• Create Events on Site - Tailgate Event with Public</li> <li>• Community Garden on Property</li> </ul>
MANAGE INTERNAL PROCESSES & PROMOTE TECHNOLOGY INNOVATIONS	Meet the 2020 Requirements & Outperform Expectations	TSS# days meet regulations	100% complete on budget	<ul style="list-style-type: none"> <li>• Completion of projects: 2019 - Phase 1 &amp; 2 completion 2019 - 2020 Phase 3A, B, C Phase 4 and 5</li> </ul>
		BOD# days meet regulations	Meeting the 25 mg/liter TSS and BOD targets prior to 2021	
		Fecal coliform in the effluent	70% coliform removal	
		LC50 Toxicity	70% success rate	
	Increase Compost Site Throughout	File Testing Approval	80% Category A success rate	<ul style="list-style-type: none"> <li>• Generate more sludge via NR process leading to 25% increase in compost production</li> <li>• Analyzing the possibility of using sludge from other producers</li> <li>• EMS/Bio-solids Management Policy - Compliance &amp; Updating</li> <li>• Move the bark pile closer to the operation</li> <li>• Increase compost advertising</li> <li>• Increase compost accessibility to the public</li> </ul>
		Process Efficiency	1 Efficiency / year	
		Manufactured topsoil	Increase by 5% each year	
	Explore new Innovated processes that support resource recovery	Reduce TransAqua Environmental Footprint by reducing electrical demand	1 new initiative / year	<ul style="list-style-type: none"> <li>• Heat Recovery</li> <li>• Process turbine feasibility</li> <li>• Solar Power</li> <li>• Rooftop gardens</li> <li>• Gas powered generators</li> </ul>
		Energy consumption	Reduce by 1% / year beginning in 2021	
	Infrastructure Sustainability	Preventative Maintenance versus Reactive Maintenance	Achieve 20% Reactive Maintenance Rate by 2021	<ul style="list-style-type: none"> <li>• Collector Plan</li> <li>• 2nd Tunnel</li> <li>• Facility Bypass strategy</li> <li>• Risk mitigation plan - develop, implement, test</li> <li>• Asset Management System (develop long term capital replacement and upgrading plan)</li> </ul>
		Equipment Inspection Frequency	90% of schedule maintenance completed on time	
		All sewer pipes flushed and inspected every 5 years		
Asset Investment Rate		10 year average investment rate = 1.5%		
% of sewer pipe in poor / very poor condition		15%		
PROMOTE LEARNING / GROWTH	Operational Sustainability	Reactive Maintenance completed on Overtime	Reduce by 2%	<ul style="list-style-type: none"> <li>• Succession Plan</li> <li>• Successful negotiation of collective agreement</li> <li>• Review Org Structure</li> <li>• All Required to go through Six Sigma training</li> <li>• Employee Engagement and Education</li> <li>• Records Management</li> <li>• Risk mitigation (Cyber Security)</li> <li>• Risk Management Strategy</li> </ul>
		Safety issues resolved	Increase by 3% / year	
		Monthly Safety Talks	1 / month	
		Employee Industry Education / Training	Minimum of 40 hours / year = 10 CEU's	

## Financial Capacity

This section will outline the amount of infrastructure GMWC is responsible for operating, maintaining, and replacing at the end of its life cycle. Annual revenue, expenses, operating surplus and the GMWC Capital Program (including the Asset Replacement Program) all play a role in GMWC's financial sustainability while ensuring a fair and stable Residential Unit and Institution, Commercial and Industrial rate structure (ICI).

### GMWC Infrastructure

TransAqua - The Greater Moncton Wastewater Commission owns and operates wastewater collection, conveyance and treatment and compost infrastructure along with several operational assets such as trucks, heavy equipment, laboratory, land, compost toilets along the Riverfront Trail, etc. The collector and trunk sewers intercept 80 untreated sewer outfalls from flowing into the Petitcodiac River. GMWC currently owns infrastructure with a value of approximately \$183 million with a net book value of \$125 million after depreciation as of December 31, 2022.

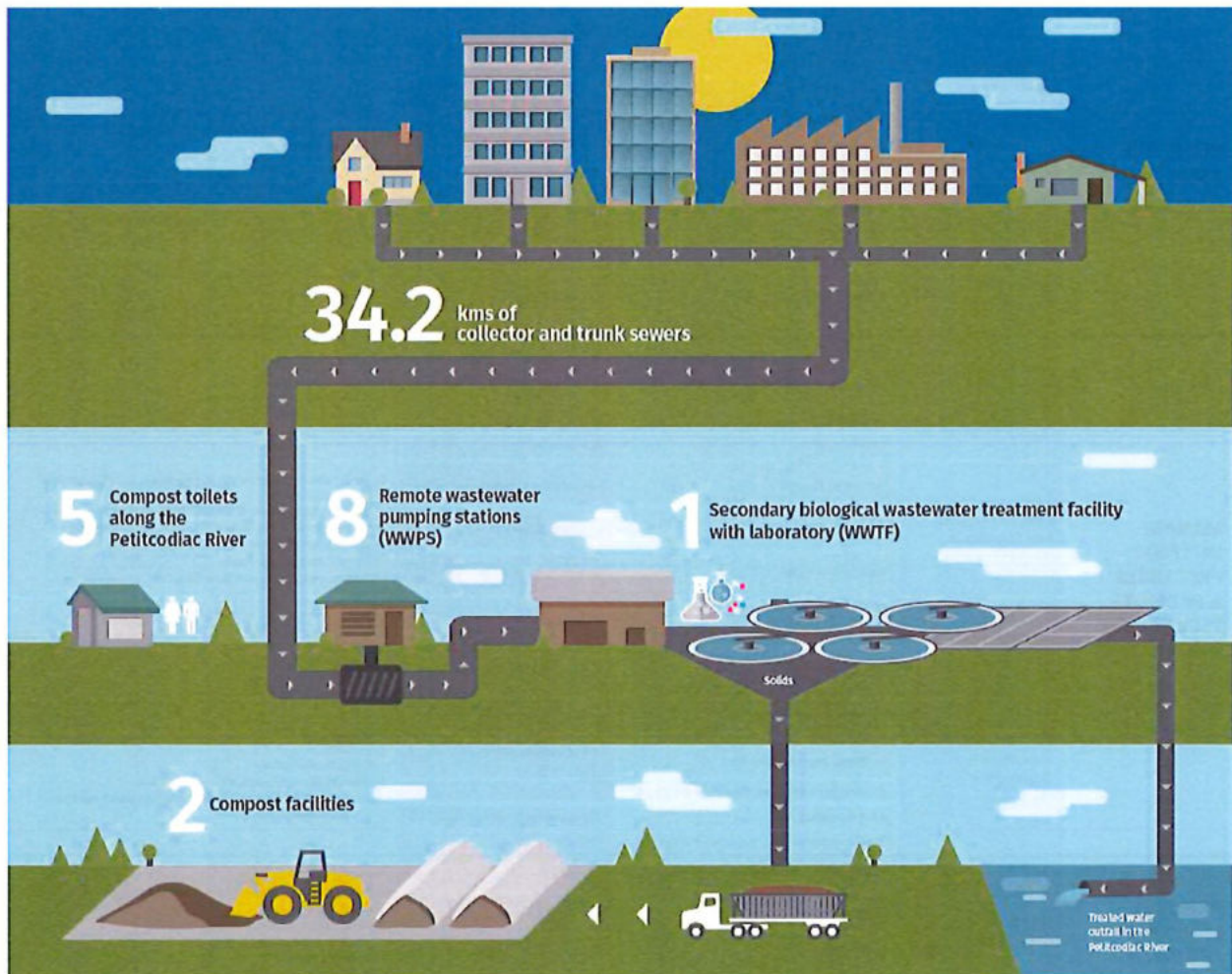


Figure 1: GMWC Infrastructure

**GMWC Rate History**

The 2023 rate of \$210 / Residential Unit has been the same since 2016. The number of Meter Equivalent Units for billing purposes by the Commission is to be determined by each Municipality by calculating the total annual volume of water consumption by Institution, Commercial and Industrial Users divided by the Meter Equivalent Unit conversion factor which is set at 240 cubic metres per year.

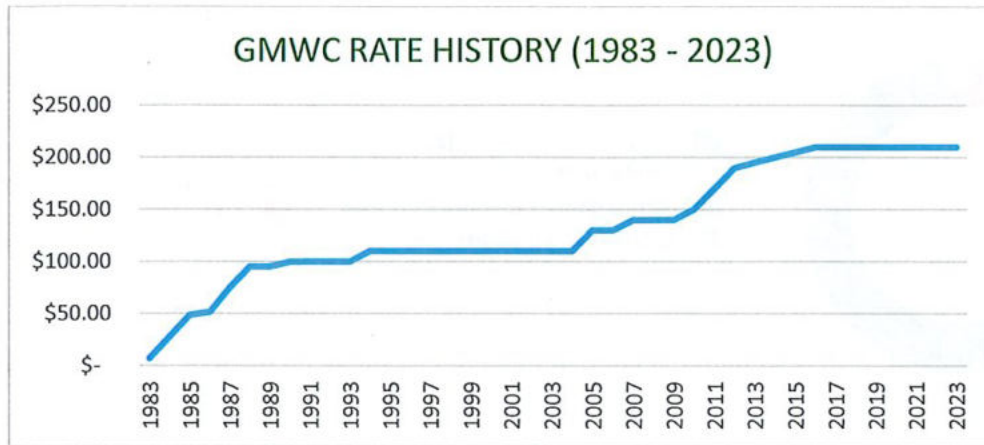


Figure 2: GMWC Rate History

**GMWC Revenue**

GMWC’s main funding sources in 2023 include:

**Revenue Breakdown**

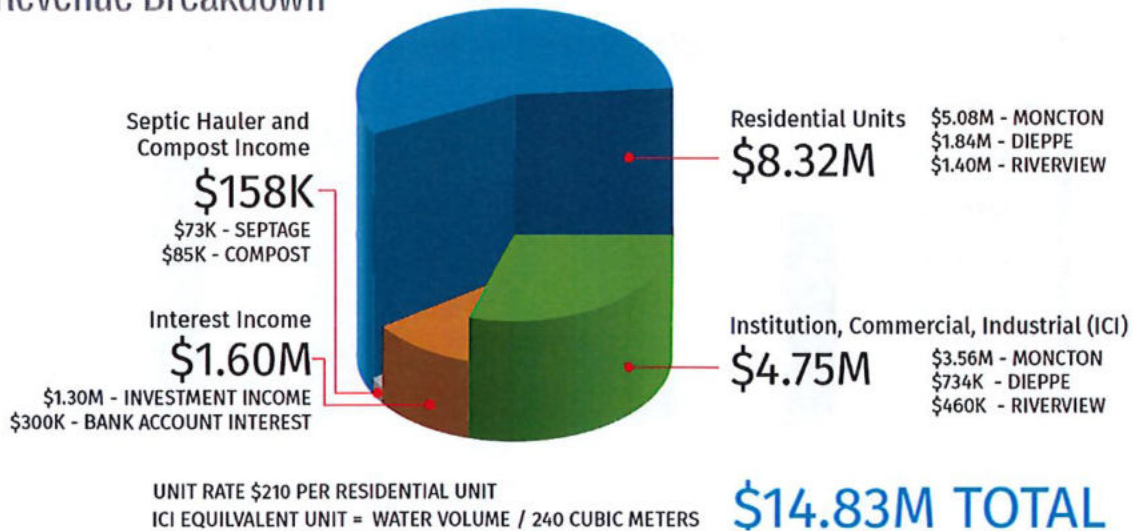


Figure 3: 2023 GMWC Revenue Breakdown

**2023 GMWC Operating Expenses**

GMWC’s Operating Budget for 2023 is \$10,556,282. Following is the estimated breakdown of expenses within specified categories.

Operating Expenses



Figure 4: 2023 GMWC Operating Expenses

**GMWC Historical Operating Expenses**

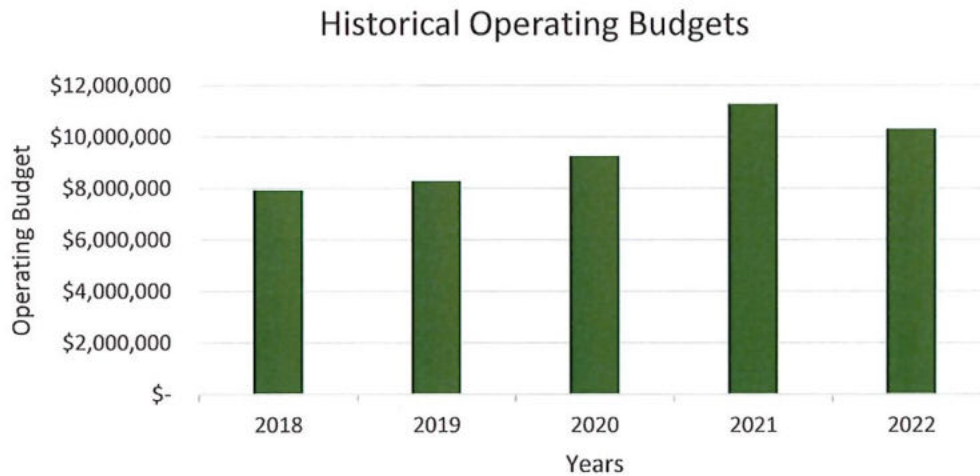


Figure 5: 5-year historical GMWC Operating Expenses

### **GMWC Annual Operating Surplus**

Any Operating Surplus is allocated to the GMWC Capital Reserve Fund at the end of each year through approval by the Commission Board. These funds are used to construct new infrastructure and replace existing assets at the end of their life cycle.

The 8-year average annual Operating Surplus (2015 – 2022) is \$4,828,005.



Figure 6: GMWC Annual Operating Surplus

### **GMWC Capital Program**

GMWC offers wastewater treatment and composting services to the tri-community. GMWC adheres to the 2019-2023 GMWC Strategic Plan's Perspective to provide fiduciary stewardship with prudent financial planning that balances short-term operating needs with long-term public amenity and infrastructure requirements. To ensure that appropriate capital investments are made to advance GMWC and ratepayer priorities in a fiscally prudent and financially sustainable manner while considering external economic conditions that could have an impact on ratepayers, GMWC's capital planning process is guided by a set of financial sustainability guiding principles and financial health targets.

#### **1. Financial Sustainability Guiding Principles**

##### **Fiscal Prudence**

- Live within our means.
- Consider long-term implications in all decisions.
- Maintain a stable and predictable revenue stream.
- Preferably continue to operate with no debt.
- Build in flexibility and contingencies for emerging priorities and opportunities.

##### **Affordability and Cost Effectiveness**

- Deliver the wastewater and composting services that continue to be relevant and that result in desired public outcomes.
- Ensure value for money through productivity and innovation.
- Keep the rates affordable, consistent, and predictable.

---

## Asset Management

- Maintain assets in an appropriate state of repair.
- Optimize capital investments to meet public and economic needs while achieving value for investment.

## 2. Funding Strategy for Capital Investments

GMWC takes a comprehensive approach to assessing the short and long-term economic indicators to inform the development of the 15-year Capital Plan. GMWC funds capital investments from the annual operating surplus that is transferred annually to the GMWC Capital Reserve Fund that acts like a savings account. These funds are invested according to GMWC By-law #6 and the GMWC Investment Policy. The GMWC Capital Reserve Fund has the following investments:

- \$5,394,354 invested in a 3-year Redeemable GIC that matures in June 2025
- \$5,195,617.67 invested in a 5-year Non-Redeemable GIC that matures in May 2027
- \$16,800,000 invested in a 5-year Non-redeemable GIC that matures in June 2027

GMWC researches federal and provincial funding opportunities and makes application to those programs that are applicable to capital projects.

## 3. Long-term Financial Plan

When developing its long-term financial plan, GMWC maintains a commitment to strong financial discipline to ensure that capital investments will not unduly burden the GMWC Operating Budget through operating costs and asset lifecycle costs. GMWC's Operating bank account is projected to have a balance of \$6,086,008 at the end of 2023.

GMWC ensures that its facilities are right sized to deliver the wastewater treatment and composting services and will continue to advance on operational efficiency. Any new capital investment will ensure facilities are designed with flexible, adaptable, and expandable spaces to accommodate increased population and future growth.

Maintaining core infrastructure assets in an appropriate state of repair is critical to GMWC's long-term financial health and resilience and helps ensure asset management obligations are not deferred and infrastructure deficits do not accumulate to unacceptable levels.

Each year a cashflow and future cashflow based on budget surplus projections is completed. The current cashflow model demonstrated that the current Residential Unit rate of \$210 will allow GMWC to remain financially sustainable. If a net new project is required to be designed, constructed, and commissioned before 2037 that is not listed within the GMWC Capital Budget, the estimated cost will be placed into the cashflow model to determine the impact to the unit rate. This will allow for an informed decision to approve any new project that may result in raising the unit rate or decline the new project to allow the unit rate to remain at \$210.

## **Asset Management System**

The GMWC Board approved the GMWC Asset Management Policy in October 2018. The purpose of this Policy is to establish effective management control over GMWC infrastructure assets that is aligned with ISO55000 principles. It is necessary to select the optimal infrastructure investment option that will achieve the lowest whole life cost of asset ownership while ensuring the highest level of service delivery to the ratepayers. A sustainable approach will be taken to ensure that the asset portfolio is not increased or modified without considering the impact on service delivery and the associated ability of ratepayers to fund future asset replacement, maintenance, and rehabilitation.

The GMWC Board approved the GMWC Asset Management Strategy in December 2019. This Strategy is part of a comprehensive infrastructure asset management approach that supports the 2019-2023 GMWC Strategic Plan and promotes the effective and efficient planning, design, acquisition, construction, installation, commissioning, operation and maintenance, renewal and disposal of assets at the appropriate time in a long-term and financially sustainable manner. TransAqua is committed to creating a clear line of sight between the Strategy, Policy and procedures while striving for continuous improvement of the Asset Management Program.

The Strategy provides TransAqua's approach to Asset Management. It identifies where TransAqua is currently aligned with practices related to asset management, where TransAqua would like to be and how TransAqua will get there. The Strategy identifies the 7 Steps – Knowledge and Competencies, Governance, Assess, Commitment, Plan, Implement and Measure for the next 5 years. Within these 7 Steps, issues related to consistency, risk, life cycle, asset function, performance and condition requirements and continual improvement are identified.

The Asset Management Strategy provides the following:

- An approach and process to develop an asset management plan.
- Clarify the roles and responsibilities of the asset management team.
- Identify TransAqua's asset management objectives.
- Displaying a plan for implementing the asset management policy.
- Identify the current status of the asset management practices and the required practices to achieve the asset management policy and future vision.
- Identify the project resources requirements for developing and implementing asset management plans, including future requirements for capital, operation, and maintenance.

The purpose of the Asset Management Plan is to develop a link between the existing asset management policy and strategies and the technical asset management requirements.

As the assets age their risk level generally increases. High-risk assets are assets that are required to operate to ensure the federal effluent regulations are met. It is imperative that mitigation measures be generated to reduce the risks associated with that the catastrophic failure of these assets. Potential mitigation measures include increased monitoring and inspections, capital investment, refurbishment, determine the level of acceptable risk, enhanced maintenance, critical spare part inventory, etc. It is crucial to continue to review the critical asset list and make revisions on a regular basis to ensure all assets are captured and evaluated. An Asset Risk Assessment and Mitigation Plan was identified for critical assets including but not limited to the Main Pumps, Bioreactor Blowers, Dewatering Centrifuges, Recirculating Sludge Pumps, Backup Generators,

and major electrical infrastructure. Most of the process equipment is currently provided with redundancy to allow for maintenance and repairs to be completed without interruption to the overall operations. Potential mitigation measures include increased monitoring and inspections, capital investment, refurbishment, determine the level of acceptable risk and enhance maintenance.

**Asset Replacement Plan**

GMWC staff has developed a 100-year Asset Replacement Plan that captures all assets to the end of their life cycle. This Plan outlines which assets are due to be replaced in each year along with the replacement cost. A 2% / year inflation cost has been applied to each asset due to be replaced in future years. For the purposes of the GMWC 2023 Business Plan, a 15-year Asset Replacement Plan has been developed.

GMWC has completed an asset condition assessment and the existing assets are mostly in fair to very good condition with ratings provided for more than 2358 assets. Theoretically, where an asset’s life cycle is 25 years and there are 5 condition categories (Very Good, Good, Fair, Poor and Very Poor), every 5 years, the asset is assumed to move into another category (19-year-old asset = Poor). The results of the condition analysis assessment are as follows:

**Condition Assessment by Asset Category**

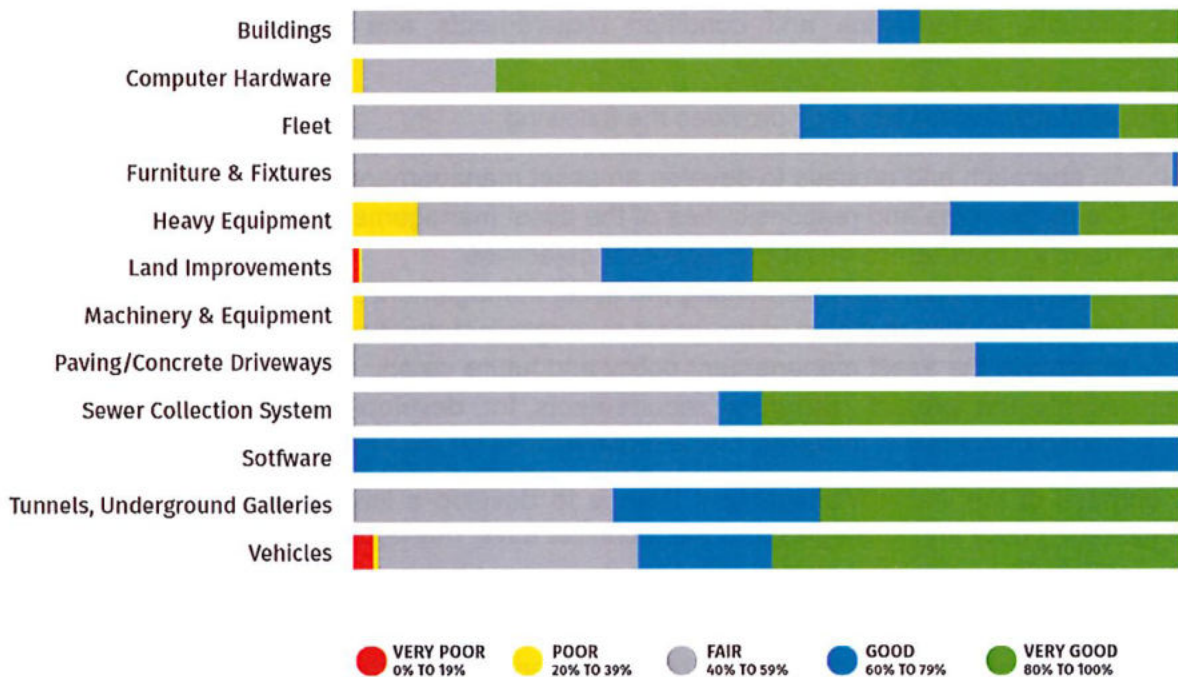


Figure 7: Asset Condition Assessment



Understanding the how long an asset life cycle is and the completion of the condition, the 15-year annual asset replacement expenditures are estimated as follows:

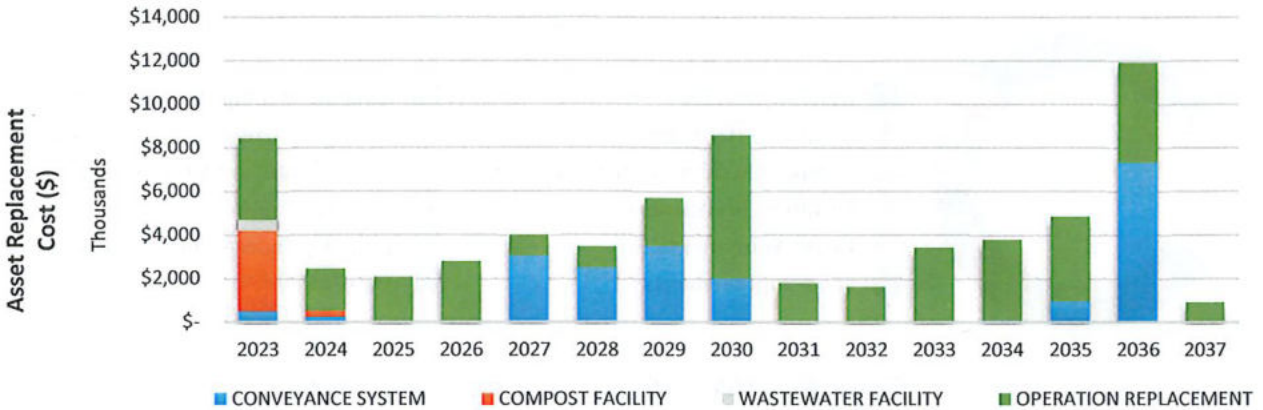


Figure 8: GMWC 15-year Asset Replacement Profile

The GMWC wastewater treatment process has been in operation since 1994. GMWC replaces assets that are in very poor condition or fail prematurely. As a Best Management Practice, staff completed a field condition analysis of all assets within the 15-year Asset Replacement Plan. Some assets at the end of their life cycle are still in operation that requires little maintenance. Each year, assets at the end of their life cycle will be assessed to determine if they must be replaced the next year. If not, the asset will be moved to the next year. While some vehicles may have a life cycle of 5 years, good maintenance practices could allow them to operate for 10 or more years delaying costly replacement. The 15-year average annual asset replacement cost is estimated to be just over \$2.7 million.

### **GMWC Infrastructure Deficit**

The 2023 GMWC Business Plan aligns current and future financial resources as it relates to the rate structure. This Business Plan will identify any funding gaps and recommend a rate structure that ensures GMWC's long-term financial sustainability.

GMWC is regularly confronted with difficult choices in setting and funding its priorities. Important tenets when making those decisions regarding capital investments include:

1. Providing a high level of wastewater collection, conveyance and treatment and composting service to the ratepayers.
2. Consistently maintaining existing assets in fair condition at a minimum (recapitalization) – refurbish versus replacement of old assets at the end of their life cycle.
3. Meeting the stakeholder's needs and expectations.
4. Responding to new community or Commission priorities (new or expanded mandates such as green initiatives and becoming environmentally sustainable).

The following chart summarizes the replacement value of the assets by category. The value of the land is excluded from replacement value.

## 15-year Asset Replacement Value: \$41.2 Million



Figure 9: GMWC 15-year Infrastructure Deficit

## Resources Needed to Meet Goals & Objectives

The Commission Board provides the resources required to successfully undertake the Strategic Initiatives. There are currently 6 volunteer Commission Board members and 17 full-time equivalents that are responsible for the governance and operations of the Commission's wastewater collection, conveyance, treatment, and compost facility assets.

The New Brunswick Department of Environment and Climate Change issues GMWC's Approval to Operate for the wastewater works and compost facility. There is a requirement to have a certified Wastewater Treatment Class 4 and 3 and a Wastewater Collection Class 3 and 2 Operator. GMWC currently meets this requirement based on the following certifications held by staff: Operations Manager (Class 4 WWT and Class 3 WWC). There is currently one operator (Class 3 WWT and Class 2 WWC) and one Class 3 WWT Operator-in-Training (Class 2 WWT and Class 2 WWC) resource.

## Next Steps

Staff will continue to increase operational efficiency and stability by increasing preventative maintenance activities and undertaking cost savings initiatives through Six Sigma projects, Polymer and potable water use and developing the Energy Management System to reduce, where possible, the consumption of electricity and fossil fuels.

The following initiatives will be undertaken to continuously improve GMWC's financial sustainability objectives.

- ▶ Develop a master inventory list with a unique identifier that can be applied to all future asset lists. We recommend utilizing the continuity schedule and adding the following information: asset condition, critical assets, operation and maintenance costs, and updated condition data.
- ▶ Provide accurate condition ratings for all critical assets on a yearly basis by conducting inspections or interviews with operating staff.

- ▶ Conduct Risk assessments of critical assets on a yearly basis to develop a risk based financial planning approach.
- ▶ Carryout the mitigation measures for all high-risk assets identified.
- ▶ Establish a baselined operating expense for enhanced forecasting of operational costs.
- ▶ Incorporate changes such as changes to levels of service, regulatory requirements, strategic planning into capital forecasting.

