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Final Report

Proposed Level of Services and Financial Strategy Update

Date: September 26th, 2025

GEORGINA

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Executive Summary

Effective asset management is fundamental to the Town of Georgina's commitment to delivering sustainable, reliable, and high-quality services to its residents, businesses, and visitors. This report fulfills the Town's next milestone under Ontario Regulation 588/17 by establishing proposed levels of service across all asset classes and setting out the lifecycle and financial strategies required to sustain them. Building on the Town's 2022 Core and 2024 Non-Core Asset Management Plans, the report provides a forward-looking framework that consolidates technical analysis, financial requirements, and strategic recommendations to guide Council in making informed, transparent, and sustainable investment decisions.

ES.1 State of the Infrastructure

The foundation of this work is an updated State of the Infrastructure (SOTI), which revisited and refreshed the Town's core and non-core asset inventories with 2023–2024 data. The Town's infrastructure portfolio is valued at approximately **$2.4 billion** (2025 dollars), with roads and bridges, stormwater systems, and facilities representing the largest replacement values. The updated hierarchy now follows a standardized parent–child structure, ensuring consistency across divisions and providing a scalable basis for condition assessments, lifecycle modeling, and financial forecasting. Overall, most assets are in Good to Very Good condition; however, localized vulnerabilities were identified in aging wastewater forcemains, corrugated steel stormwater pipes, select pumping stations, and some facility and fleet assets. These findings highlight areas where targeted reinvestment and proactive renewal will be critical to sustaining performance.

ES.2 Levels of Service

The Town developed a comprehensive Proposed Levels of Service (PLOS) framework that balances community expectations, Council priorities, regulatory requirements, and financial capacity. The framework integrates Community LOS (the resident experience) with Technical LOS (quantitative measures such as compliance, condition, and performance). Targets were calibrated through staff workshops, technical analysis, and validation against existing master plans and community feedback. In many cases, service levels will be maintained to protect essential services; in others, targeted increases will enhance resilience (e.g., increasing pavement condition targets, wastewater CCTV inspection rates, or accessible parking compliance). Select reductions were also proposed where efficiencies could be achieved without compromising safety or performance (e.g., optimized winter control practices).

A summary of the results, including the metrics recommended for an increase or decrease in service level and the projected costs to achieve them, is presented in Table ES 0-1 below.

Table ES 0-1: Proposed Levels of Service Financial Impact

Service Area	Technical Measure	Current Performance	Increase, Maintain or Decrease	PLOS	Proposed Cost to Achieve PLOS - 10 Year Forecast (Cost Δ for PLOS-LOS)	Proposed Cost to Achieve PLOS - Annual Cost (Cost Δ PLOS-LOS)
Water	Total number of system service leaks (count of work orders related to a service leak)	27	Decrease	**25**	**$ 280,000**	$ 28,000
Wastewater	% of sewers CCTV inspected annually	9%	Increase	**10%**	**$ 10,200**	$ 1,020
Stormwater	% of sewers CCTV inspected annually	0% per year	Increase	**10% per year**	**$ 296,000**	$ 29,600
	% of open ditch system maintained or rehabilitated (non-capital) per calendar year in flooding areas	1%	Increase	**8%**	**$ 3,104,000**	$ 310,400
	# of new complaints related to the open ditch system per 100km	21	Decrease	**20**	**- $ 64,000**	- $ 6,400
Roads	For paved roads in the municipality, the average pavement condition index value.	65.7 PCI	Increase[1]	**71 PCI**	**N/A**	N/A
	% of gravel roads rehabilitated with additional gravel (~3in)	25%	Increase	**33%**	**$ 79,200**	$ 7,920
	% of sand applied, by tonnage per year per lane kilometer per cm of snow	90%	Decrease	**85%**	**$ 31,500**	$ 3,150
Bridges	% of bridges in the municipality with loading or dimensional restrictions.	22%	Decrease	**11%**	**$ 1,511,000**	$ 151,100
Facilities	% of parking lots that have at least two accessible parking spots	80%	Increase	**90%**	**$ 735,000**	$ 73,500

[1] This target has been established based on the preliminary results of the 2025 Pavement Condition Index. The results of the 2025 PCI have not yet been finalized as of the release of this Asset Management Plan Update, and the finalization of this inspection may result in a revision to the proposed cost.

Service Area	Technical Measure	Current Performance	Increase, Maintain or Decrease	PLOS	Proposed Cost to Achieve PLOS - 10 Year Forecast (Cost Δ for PLOS-LOS)	Proposed Cost to Achieve PLOS - Annual Cost (Cost Δ PLOS-LOS)
	% of facilities that are compliant with AODA requirements	6%	Increase	**30%**	**$ 510,000**	$ 51,000
	Overall facilities Energy Use Intensity (EUI) score (kBtu/ft^2/year)	124	Decrease	**111**	**$ 425,000**	$ 42,500
Parks	% of parks in fair or better condition	46%	Increase	**50%**	**$ 2,481,000**	$ 248,100
	# of park waste collection days per week	2	Increase	**3**	**$ 1,500,000**	$ 150,000
Fleet	% of fleet that are in fair or better condition	84%	Increase	**90%**	**$ 1,603,000**	$ 160,300
	# of oil changes completed (on light and medium duty vehicles) per 5,000kms	63%	Increase	**100%**	**$ 180,000**	$ 18,000
Equipment	% of fleet equipment in fair or better condition	42%	Increase	**50%**	**$ 1,955,000**	$ 195,500
	% of equipment with AVL (where AVL is applicable)	40%	Increase	**75%**	**$ 592,600**	$ 59,260
Active Transportation	% of hard surfaced trails that are in fair or better condition	56%	Increase	**60%**	**$ 215,000**	$ 21,500

Implementing these targets results in incremental annual investment requirements by service area, summarized as follows:

- **Water** – service leak reduction: +$28,000/year
- **Wastewater** – enhanced CCTV inspection: +$1,020/year
- **Stormwater** – expanded ditch and sewer maintenance: net +$333,600/year (including savings from complaint reductions)
- **Roads** – gravel rehabilitation and optimized winter control: +$11,070/year
- **Bridges** – reduced restrictions through rehabilitation: +$151,100/year
- **Facilities** – accessibility and energy efficiency upgrades: +$124,500/year
- **Parks** – improved condition and enhanced waste collection: +$398,100/year
- **Fleet** – condition upgrades and enhanced preventive maintenance: +$178,300/year
- **Equipment** – reliability and technology upgrades: +$297,300/year
- **Active Transportation** – trail condition improvements: +$21,500/year

Together, these service level enhancements require approximately $1.54 million in additional annual investment, phased in over the 10-year planning horizon (see Table 1). These costs represent the incremental funding needed to move from current performance to the proposed targets, and they directly feed into the lifecycle management and financial strategies that follow.

ES.3 Lifecycle Management Strategy

The Asset Management Strategy (AMS) outlines a structured approach for sustaining PLOS in a cost-effective and risk-aware manner. Drawing on ISO 55000 principles and Ontario's Infrastructure for Jobs and Prosperity Act, lifecycle activities were defined across five standard intervention types: non-infrastructure solutions, maintenance, renewal/rehabilitation, replacement, and disposal. Workshops with departmental staff validated existing practices and identified gaps, resulting in tailored strategies for each service category. These strategies ensure the "right intervention on the right asset at the right time," minimizing total cost of ownership while maintaining safe and reliable service delivery.

ES.4 Financial Strategy

The Town's infrastructure portfolio has an estimated replacement value of **$2.4 billion**, representing the largest single investment made on behalf of the community. Core tax-supported assets comprise the largest share of this total at 35 percent, followed by stormwater at 27 percent, non-core tax-supported at 17 percent, water at 11 percent,

and wastewater at 10 percent. This distribution underscores the significant role of transportation and stormwater systems in shaping long-term financial needs.

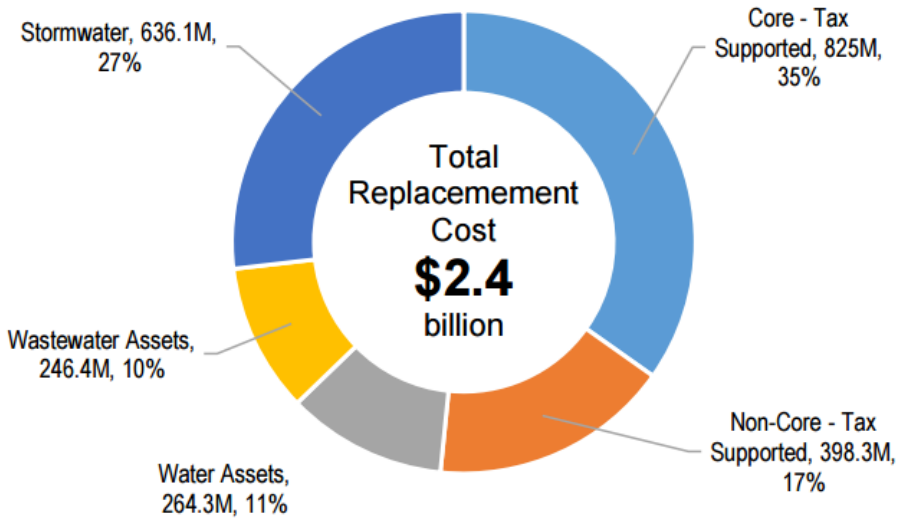
The total replacement cost for the Town's infrastructure assets is estimated to be approximately $2.4 billion. Core – Tax Supported assets account for the largest share of replacement costs (35%), followed by Stormwater assets (27%), Non-Core – Tax Supported assets (17%), Water assets (11%), and Wastewater assets (10%).

Table ES 0-2 provides a detailed breakdown of replacement cost by asset category and funding type, while Figure ES 0-1 illustrates the proportional share of each category across the portfolio

Table ES 0-2: Replacement Cost (2025$) by Asset Category and Funding Type

Description	Replacement Cost	
Core - Tax Supported	$	825,039,200
Non-Core - Tax Supported	$	398,257,800
Water Assets	$	264,275,000
Wastewater Assets	$	246,444,100
Stormwater	$	636,084,900
Total	**$**	**2,370,101,000**

Figure ES 0-1: Distribution of Replacement Cost by Asset Category and Funding Type



Building on this asset base, the analysis identified an annual lifecycle funding requirement of $25.3 million in 2025, rising to $26.3 million by 2039. Current annual funding falls short by approximately $6.3 million, representing the funding gap that must be addressed over time. While the Asset Management Plan is based on a 10-year timeframe, the tax-supported financial plan is extended to a 15-year timeframe to close the gap while the rate-supported plan closes the gap within 10 years. This approach balances the requirements of O. Reg588/17 in achieving the proposed levels of service with affordability and financial sustainability.

The strategy recommends a phased approach to closing this gap, supported by:

- Average annual levy increases of 1.6%
- Prudent use of reserves and debt
- Active pursuit of external funding opportunities

This balanced plan ensures affordability for ratepayers while providing the financial capacity to sustain service levels and manage long-term infrastructure needs.

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1 Introduction

Effective asset management is fundamental to the Town of Georgina's (the Town) commitment to delivering sustainable, reliable, and high-quality services to its residents, businesses, and visitors. The Town has continued to strengthen this commitment through the development of a comprehensive asset management planning framework, guided by the Strategic Asset Management Policy (2019), that supports informed decision-making, long-term financial sustainability, and regulatory compliance.

The Town delivers services across a diverse portfolio of asset categories, including, core infrastructure (water, wastewater, stormwater, and road infrastructure) and non-core infrastructure (facilities, parks, fleet, equipment, active transportation, roadway appurtenances, urban forestry, and IT assets). The Town has adopted a holistic approach to asset management—one that integrates both core and non-core assets—to better understand infrastructure performance, manage risk, and meet evolving service delivery expectations.

This report provides a comprehensive update on the Town's asset management planning efforts. It establishes proposed levels of service (PLOS) across all asset classes and sets out the lifecycle and financial strategies required to sustain them.

Specifically, it includes:

- Current and proposed levels of service across all asset categories.
- A lifecycle management strategy to support the delivery of proposed service levels.
- A financial strategy to ensure the necessary resources are available to implement lifecycle activities and maintain service performance over time.

1.1 Objectives

In January 2018, Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure came into effect, introducing a phased approach for municipalities to develop and implement comprehensive asset management systems. Specifically, Section 6(2) of the regulation requires that every municipality:

- Identifies current and proposed levels of service for all core and non-core assets.
- Establishes a lifecycle management strategy for maintaining those service levels.
- Sets out a financial strategy to fund the lifecycle activities necessary to achieve the proposed levels of service.

This report has been prepared to fulfill that legislative requirement, subsequent to the Town's adopted Strategic Asset Management Policy as well as its 2022 Core and 2024

Non-Core AMPs. It builds on the Town's existing asset management practices and plans, providing a forward-looking framework that strengthens service delivery, risk management, and financial sustainability.

The specific objectives of this report are to:

- Define and document current LOS and PLOS across all core and non-core asset categories, reflecting both community expectations and technical performance standards.
- Detail lifecycle management strategies that identify the right actions, on the right assets, at the right time—ensuring service reliability, risk mitigation, and cost-effectiveness.
- Outline a financial strategy that supports the implementation of lifecycle activities and ensures the availability of resources to meet service targets over the short and long term.
- Align asset management planning with the Town's Strategic Plan and growth forecasts, embedding climate resilience to ensure infrastructure investments remain sustainable and responsive to future needs.

This strategic approach enables the Town to achieve compliance with O.Reg. 588/17, optimize asset performance, and support Council in making informed decisions while continuing to deliver high-quality services to the community.

1.2 Scope

This report outlines the Town's approach to defining PLOS and developing the supporting lifecycle and financial strategies.

Key activities included:

- Reviewing current service performance across all asset categories.
- Engaging stakeholders and the public to inform and refine the proposed levels of service.
- Updating lifecycle strategies to identify the actions needed to achieve service targets.
- Assessing risks associated with lifecycle activities and service delivery.
- Evaluating financial scenarios to determine the most cost-effective path forward.

Together, these activities reflect a coordinated effort to align infrastructure planning with community needs, operational capacity, and long-term sustainability.

2 Methodology

This Final Report consolidates the four Technical Memorandums prepared throughout the assignment: State of the Infrastructure (SOTI), Levels of Service, Asset Management Strategy, and Financial Strategy. Each memorandum was reviewed and finalized in collaboration with Town staff. Together, they form the basis of this document, which integrates their findings into a single, final report that fulfills the requirements of Ontario Regulation 588/17, Section 6.

The report is organized by service category, with each section structured to mirror the progression of the four Technical Memorandums—moving from the SOTI, to levels of service, to lifecycle management, and concluding with the financial strategy. This alignment ensures consistency across service areas and provides a clear framework for understanding how the Town's assets are managed.

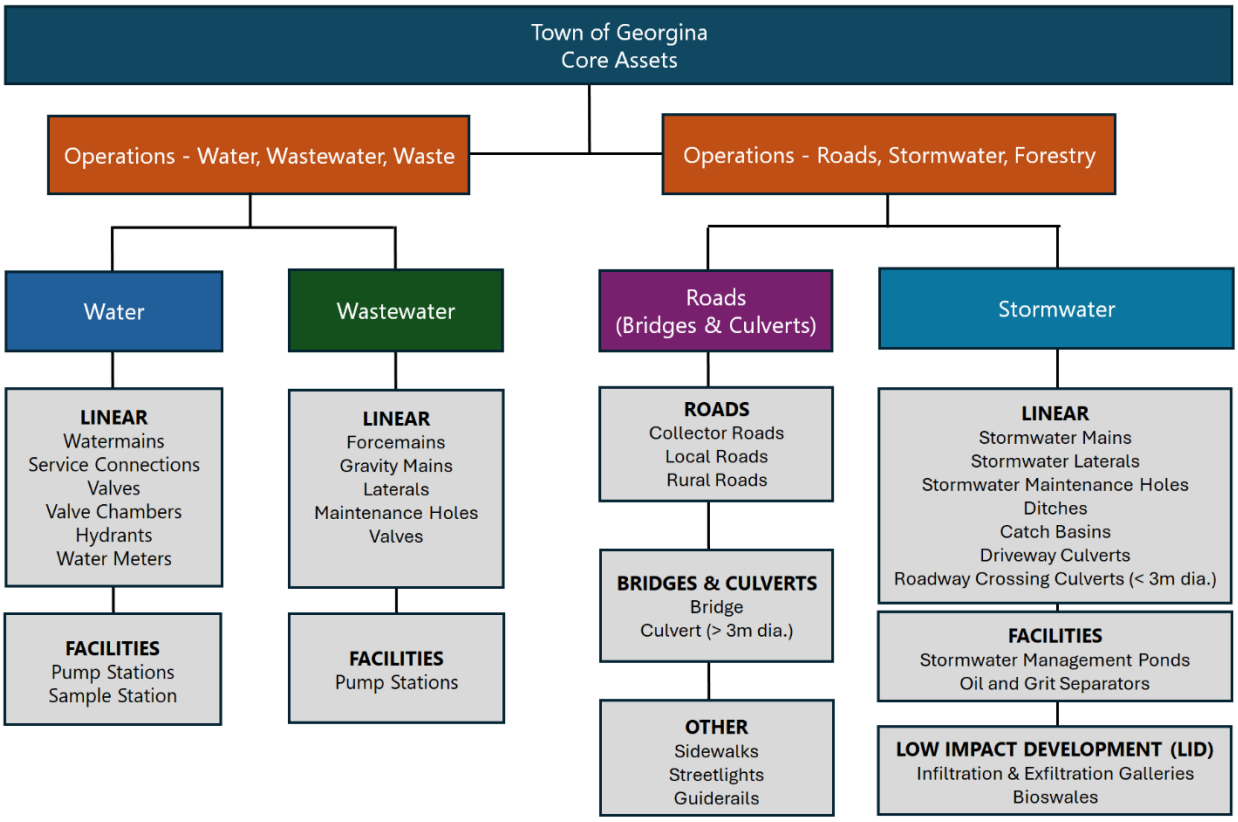
2.1 State of the Infrastructure

The assessment of the SOTI began with a comprehensive update to the Town's core asset inventory, hierarchy, and valuation. Core asset data from the 2022 Asset Management Plan was revisited and refreshed with 2023–2024 datasets, capturing newly constructed, replaced, or retired assets across roads, water, wastewater, and stormwater systems. In parallel, the non-core asset groups were utilized from the Town's recent 2024 AMP using 2023 data.

The Town's asset hierarchy has been standardized into a clear parent–child structure that reflects how assets are managed in practice, replacing the format used in the 2022 Asset Management Plan. This updated hierarchy ensures consistency across operational divisions and provides a scalable basis for condition assessments, lifecycle modeling, and financial forecasting.

As shown in Figure 2-1, the hierarchy groups assets into logical categories—core services (water, wastewater, stormwater, and roads) with associated linear systems, facilities, and supporting components. This structure provides both a system-level perspective for service delivery and detailed sub-categories for technical analysis and investment planning.

Figure 2-1 2025 Core Infrastructure AMP Asset Hierarchy



To establish a defensible valuation all unit costs from the 2022 AMP, where actual costing from recent condition assessment and tender pricing was not available, unit costs were escalated to 2025 dollars using Statistics Canada's Building Construction Price Index (BCPI), which recorded a cumulative 21.83% increase for Toronto over the period 2022–2025. This adjustment was followed by an item-by-item validation against current industry benchmarks and tender data, providing assurance that replacement costs represent realistic market conditions.

Condition, age, expected service life (ESL), and remaining service life (RSL) were updated for each asset group, ensuring a consistent foundation for risk analysis and lifecycle planning. Together, these updates provide a current and accurate snapshot of the Town's core infrastructure portfolio, forming the basis for levels of service, lifecycle strategies, and financial planning.

2.2 Levels of Service

Building on the refreshed infrastructure data, the Town developed a comprehensive PLOS framework to comply with Section 6 of O. Reg. 588/17. Levels of service were defined to balance community expectations, Council objectives, regulatory requirements, and financial capacity. Two dimensions were used: Community LOS, which

capture the qualitative experience of residents and customers, and Technical LOS, which track quantitative measures such as regulatory compliance, response times, asset condition, and system performance.

The framework was informed through workshops with departmental stakeholders, who applied a structured methodology to review and refine existing metrics. Current performance was assessed against 2024 data, and targets were calibrated for achievability, affordability, and alignment with the Town's Strategic Plan (2023–2027), Official Plan, and supporting master plans. In some cases, maintaining current levels was appropriate to safeguard essential services; in others, modest reductions were considered where savings could be achieved with minimal risk; and in select areas, higher targets were adopted to secure long-term environmental or operational benefits.

Metrics remain tied to both customer expectations and operational constraints, ensuring they are achievable, repeatable, and meaningful for reporting. As additional data becomes available, the framework is designed to adapt: new metrics can be added or refined without disrupting the overall structure. Community engagement findings from past master plans, surveys, and studies have also shaped the framework, ensuring it remains relevant, actionable, and aligned with long-term goals.

The new structure clearly distinguishes three components:

- **Level of Service Statement** – Communicates the Town's commitment to service quality, reliability, and sustainability in a way that is transparent and accountable to Council, residents, and stakeholders.
- **Current Levels of Service (Current LOS)** – Describes existing performance for each asset category using both Community LOS and Technical LOS. These reflect actual performance based on recent data, staff input, and service experience.
- **Proposed Levels of Service (PLOS)** – Defines the intended or target LOS over the next 10 years, reflecting the Town's strategic priorities, public feedback, and available resources.

For example, critical water and wastewater metrics such as effluent compliance and watermain break frequency are maintained to safeguard public health. Conversely, non-critical services may be earmarked for modest reductions where cost savings can be achieved with minimal risk. Where investment promises long-term operational or environmental benefits, elevated targets are proposed. These recommendations blend best practices, professional judgement, and stakeholder workshop outcomes, then are validated by community feedback to confirm alignment with service level expectations and affordability. The result is an integrated framework of service measures that applies consistently across all asset categories, both core and non-core. This structure ensures a clear line of sight between high-level strategic objectives and day-to-day asset activities, providing a transparent and accountable foundation for decision-making.

To determine the financial impact of setting PLOS, the project team began by reviewing approved master plans, established standards, ran scenario analysis and through the results of subject matter expert workshops. This process defined each PLOS, ensuring targets were both realistic and aligned with customer performance expectations. Existing financial data tied to assets was then used to forecast the costs of increasing, maintaining, or potentially decreasing each level of service. By normalizing these investment requirements, an average annual investment amount was calculated. This approach enables the Town to balance spending over time, allocating surplus funds to reserves in years with lower-than-average expenditures, and drawing from reserves in years with higher-than-average needs.

2.3 Lifecycle Management Strategy

The Asset Management Strategy (AMS) establishes the Town's structured approach to managing the full lifecycle of its assets, ensuring that the PLOS are achieved in a sustainable and cost-effective manner. The strategy integrates industry best practices, ISO 55000 principles, and Ontario's Infrastructure for Jobs and Prosperity Act guidance to provide a consistent framework across both core and non-core municipal services.

At the foundation of the AMS is a baseline review of lifecycle strategies. Through targeted workshops with departmental staff, the Town validated existing practices, identified service-specific gaps, and refined lifecycle activities to address both short-term (10-year) and long-term (25-year) horizons. This collaborative process incorporated operational knowledge, condition data, and risk considerations, resulting in tailored strategies for each service category.

The AMS organizes lifecycle interventions into five standard categories: non-infrastructure solutions, maintenance, renewal/rehabilitation, replacement, and disposal. These activities provide the Town with a proactive, systematic approach to sustaining service delivery while managing risk and minimizing total cost of ownership. For example, non-infrastructure solutions include master planning and demand management, while renewal strategies encompass targeted rehabilitation such as relining sewers or resurfacing roads. Replacement and disposal policies ensure assets are addressed at the end of their useful lives, with attention to compliance, safety, and fiscal stewardship.

Lifecycle strategies were then tailored to each asset service category, from water, wastewater, and stormwater systems through to transportation networks, facilities, parks, fleet, equipment, urban forestry, and IT. The detailed framework describes for each category the types of interventions, their frequency, associated risks if activities are not undertaken, and mitigation measures. Summaries of these key activities are presented in the service-specific sections of this report that follow, allowing readers to

see how the overarching methodology translates into tailored actions for each asset class.

2.4 Financial Strategy

This strategy is intended to ensure the long-term financial sustainability of the Town's infrastructure by aligning the proposed levels with service with realistic and achievable funding approaches. The project has been completed in two phases.

While informed by the broader AMP, this technical memo focuses specifically on the financial strategy, providing a framework to guide infrastructure funding decisions over the long term. It should be noted that the information presented in this Financial Strategy is based on the best data available to the Town at this time. While best efforts have been taken to ensure the accuracy and completeness of the data used to develop this Financial Strategy, it is best viewed as a living document that will continue to be refined as newer/better information becomes available.

The financial strategy is detailed further in section 15.

3 Roads Infrastructure

3.1 State of the Infrastructure

3.1.1 Asset Inventory, Hierarchy and Valuation

As of 2025, the Town's road network is managed by the Roads, Stormwater, and Forestry Operations Division. It consists of:

- 346 centreline kilometres of roads, organized into Collector, Local, and Rural classifications (243 km HCB, 93 km LCB, 10 km gravel).
- 9 bridges and 10 structural culverts (>3 m diameter), which provide critical connectivity.
- Supporting assets including 104 km of sidewalks, 4,381 streetlights, and 4,184 m of guide rails that ensure safe and accessible corridors.

This hierarchy reflects the functional role of each roadway. Collectors carry higher volumes and connect neighbourhoods, locals provide direct access to properties, and rural roads serve dispersed communities and agricultural areas. Bridges and culverts are considered critical assets given their high consequence of failure.

The total replacement value of the Town's road infrastructure, including roads, bridges and structural culverts, sidewalks, and streetlights, is estimated at $825,040,000 (2025 dollars). Of this, approximately $23,200,000 is attributable to bridges and structural culverts.

Table 3-1: Road Infrastructure Asset Inventory and Replacement Value

Asset Sub-Group	Asset	Quantity and Unit	Total Replacement Value
Roads	HCB Roads	243 km	$ 551,830,000
	LCB Roads	93 km	$ 160,585,000
	Gravel Roads	10 km	$ 13,194,000
Bridges & Culverts	Bridge	9 each	$ 13,600,000
	Culvert (>3m diameter)	10 each	$ 9,600,000
Roadside Infrastructure	Sidewalks	104 km	$ 27,829,000
	Streetlights	4,381 each	$ 42,699,000
	Guide Rails	4,184 m	$ 3,724,000
			Total Roads: $ 725,609,000
			Total Bridges & Culverts: $ 23,200,000
			Total Roadside Infrastructure: $ 76,232,000
			Total: $ 825,040,000

** Unit cost ranges are due to varying culvert diameters, bridge deck areas, and sidewalk material types.*
*** These culverts are structural culverts with diameters greater than 3 m.*
**** The Town's Community Services Division maintains and operates other streetlights and luminaires in addition to the streetlights in Table 3-1*
***** Only Town-owned assets that are in service are included. Private, unassumed, decommissioned and assets under constructions are excluded.*

3.1.2 Asset Age Summary & Expected Service Life

The Town's road network is generally midway through its expected service life, with renewal needs anticipated to accelerate over the next 10 to 20 years. Asphalt roads typically have an expected service life of 60 years, supported by resurfacing and rehabilitation cycles at 15–20 year intervals to maintain serviceability. Gravel roads require more frequent surface maintenance and regrading to ensure safe and reliable performance.

Bridges and structural culverts generally have an expected service life of 75 years, though actual performance can vary based on materials, construction era, and exposure to environmental stressors. Sidewalks, streetlights, and guide rails have shorter service lives, typically ranging from 20–50 years, depending on component type.

The age profile of the network shows that:

- A significant portion of paved roads are in the mid-life stage of their service cycle, with many approaching the window for surface rehabilitation.
- Some segments of the rural and local network are older and will require more immediate reinvestment.
- Bridges and culverts are generally well-distributed across their service lives, but isolated structures are approaching the need for renewal planning.

This age distribution highlights the importance of proactive lifecycle management to avoid compounding backlogs of renewal needs and to maintain safe and reliable service levels across the network.

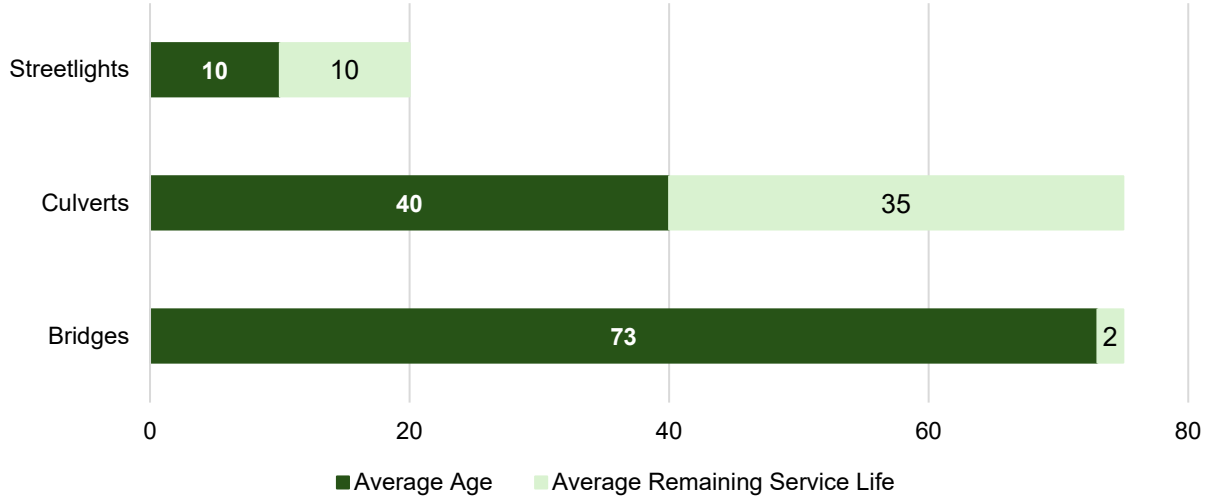


Figure 3-1: Average Age vs. ESL for Road Infrastructure

3.1.3 Asset Condition

The condition of the Town's road network was evaluated using the Pavement Condition Index (PCI) methodology, consistent with the 2022 Asset Management Plan. Each road segment was rated on a 0–100 scale and grouped into standardized PCI bands:

Condition Rating	PCI / BCI Score
1 / Very Good	80 - 100
2 / Good	60 - 80
3 / Fair	40 - 60

4 / Poor	20 - 40
5 / Very Poor	0 - 20

Gravel roads, which are not suited to PCI scoring, were assessed separately using the Town's Gravel Road Condition Assessment Tool. These results were integrated into lifecycle modelling to provide a complete representation of the network.

Overall, the Town's High-Class Bituminous (HCB) and Low-Class Bituminous (LCB) roads are predominantly in Good to Fair condition, reflecting recent investments and ongoing maintenance practices. Localized deterioration is more common on lower-volume roads, particularly in rural areas, where rehabilitation cycles have historically been longer. Gravel road conditions vary significantly depending on surface treatments and drainage.

The Town's bridges and large culverts are also generally in Good to Fair condition, with no assets currently classified as Poor or Very Poor under the Town's adopted AMP scale. It is noted, however, that under the Ministry of Transportation's stricter rating system, three structures would be rated Poor and several additional structures Fair, underscoring the importance of continued monitoring and timely reinvestment.

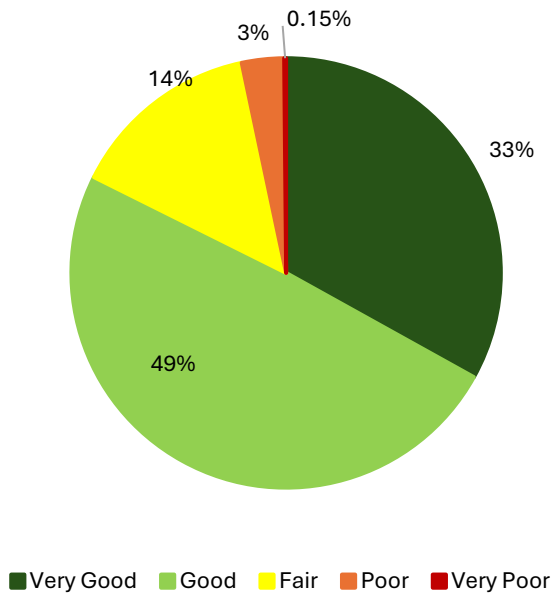


Figure 3-2: Road Infrastructure Condition Summary

Figure 3-3: Distribution of Road Infrastructure Condition Summary

3.2 Levels of Service

The Town's road network includes paved and gravel roads, sidewalks, bridges, and large culverts that provide safe and reliable transportation. Service levels address accessibility, pavement condition, maintenance standards, and safety. Table 3 and 4 outlines the current and proposed levels of service for roads and bridges, respectively, reflecting recent condition assessments and lifecycle priorities.

Table 3-2: Roads Infrastructure Proposed Levels of Service

Shareholder Interests	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Description, which may include maps, of the road network in the municipality and its level of connectivity.	map	Community	The Town maintains the road network in GIS, which is updated when roads are constructed or assumed.		Maintain	GIS mapping provides clear visualization of road network and connectivity for community understanding. Maintaining current format supports transportation planning and public information needs.
Access & Capacity	To provide customers with feasible access and availability to the service	# of lane-kilometers of each of arterial roads, collector roads and local roads as a proportion of square kilometers of land area of the municipality.	#	Technical	Collector: 125.762 lane-km/m^2 Local: 530.865 lane-km/m^2	Collector: 125.762 lane-km/m^2 Local: 530.865 lane-km/m^2	Maintain	Current road network density provides adequate connectivity for community size and development pattern. Maintaining these levels supports transportation needs while managing infrastructure costs.
Access & Capacity	To provide customers with feasible access and availability to the service	Description or images that illustrate the different levels of road class pavement condition.	Photos	Community	Condition assessment data. Examples of road conditions are included in the 2022 Non-Core AMP. The percentage of roads considered to be in Good to Very Good condition is about 78%.		Maintain	Visual condition information helps residents understand maintenance priorities and standards. Maintaining current communication method supports transparency in road management decisions.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	For paved roads in the municipality, the average pavement condition index value.	PCI	Technical	65.7	71	*Increase	Improved pavement condition reduces vehicle operating costs and enhances driving comfort. Higher PCI target reflects increased investment in road maintenance and renewal programs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	For unpaved (gravel) roads in the municipality, the average surface condition	Text	Technical	Fair	Fair	Maintain	Current gravel road condition provides adequate access for rural and local areas. Maintaining this level balances user expectations with available maintenance

Shareholder Interests	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								resources and supports cost-effective service delivery.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Frequency of gravel road maintenance (grading, dust control)	# /yr	Technical	Grading = 4 per year Dust Control = 1 per year	Grading = 4 per year Dust Control = 1 per year	Maintain	Current maintenance frequency provides acceptable gravel road condition for rural areas. Maintaining this level balances service quality with operational costs and resource allocation.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of gravel roads rehabilitated with additional gravel (~3in)	%	Technical	25%	33%	Increase	Increased gravel rehabilitation improves road condition and reduces maintenance needs. Higher rehabilitation rate extends road life and improves accessibility for rural residents.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Frequency of LCB, HCB, and EXP road maintenance (crack sealing, pothole repair)	# /yr	Technical	2	2	Maintain	Current maintenance frequency provides good pavement preservation and extends road life. Maintaining this level balances proactive maintenance with available resources and budget constraints.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of sand applied, by tonnage per year per lane kilometer per cm of snow	%/yr	Technical	90%	85%	Decrease	The proposed reduction supports environmental protection goals while maintaining safe winter road conditions. Advancements in material usage and improved application efficiency allow for reduced tonnage without compromising public safety.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of alternative to salt applied	%	Technical	100%	100%	Maintain	Current proportion maintains good winter road conditions and environmental protection. Continued use of alternative de-icing materials supports sustainability objectives while ensuring roadway safety.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of Thaw Rock applied, by tonnage per year per	%/yr	Technical	10%	10%	Maintain	Existing application rate is effective in addressing freeze-thaw conditions. Maintaining this level ensures road safety

Shareholder Interests	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
		lane kilometer per cm of snow						in colder temperatures while minimizing excess material use and associated costs

**Although an increase is indicated based on the Town's 2024 PCI, through the duration of this work 2025 network assessed PCI was determined to be 74 resulting in no increase needing to be projected.*

Table 3-3: Bridges Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	text	Community	No limitation on traffic type is stated. There is a range of AADT Bridge Scores (60 for B2 - Frog Street to 1660 for B7 Shorecrest Road). AADT Culvert Scores ranged from 294 (C201 Lake Dr) to 2000 (C205 McCowan Rd)		Maintain	Current traffic description accurately reflects bridge usage and loading requirements. Maintaining this information supports transportation planning and load management decisions.
Access & Capacity	To provide customers with feasible access and availability to the service	% of bridges in the municipality with loading or dimensional restrictions.	%	Technical	22%	11%	Decrease	Reduced restrictions improve transportation connectivity and support economic activity. Lower restriction percentage reflects planned bridge improvements and capacity enhancements.
Access & Capacity	To provide customers with feasible access and availability to the service	Description or images of the condition of bridges and how this would affect use of the bridges.	Photos	Community	Conditions range from poor to good. Two bridges with limitations. The condition is based on several factors including age of the structures, material deterioration due to exposure to chlorides, instable embankments due to erosion, and excessive deformation.		Maintain	Condition information helps community understand bridge status and any usage limitations. Maintaining current communication supports informed transportation decisions and public safety.
Access & Capacity	To provide customers with feasible access and availability to the service	Description or images of the condition of culverts and how this would affect use of the culverts	Photos	Community	Conditions mostly in fair to good with one culvert poor having deterioration requiring rehabilitation in 1-5 years. The condition of the culverts is based on factors including the age of the structures, material deterioration due to exposure to chlorides.		Maintain	Culvert condition information supports understanding of drainage capacity and road integrity. Maintaining current communication helps residents

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								understand infrastructure maintenance priorities.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	For bridges in the municipality, the average bridge condition index value.	BCI	Technical	65	65	Maintain	Current bridge condition provides adequate structural integrity and service life. Maintaining this level supports safe bridge operation while managing capital renewal investments.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	For structural culverts in the municipality, the average bridge condition index value.	BCI	Technical	68	68	Maintain	Current culvert condition supports drainage function and road integrity. Maintaining this level ensures continued performance while balancing capital investment with other infrastructure needs.

3.3 Lifecycle Management Strategy

The Town's transportation network covers roads, sidewalks, bridges, and streetlights. Lifecycle strategies aim to preserve pavement condition, maintain accessibility and safety, and coordinate works with underground utilities. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Transportation master plans, traffic counts, winter control programs, and OSIM inspections.
- **Maintenance** – Patrols, snow and ice control, sweeping, pothole repairs, guiderail fixes, and line painting.
- **Renewal/Rehabilitation** – Pavement preservation (crack sealing, micro-surfacing), resurfacing, sidewalk repairs, and bridge rehab.
- **Replacement** – Road reconstructions, bridge replacements, and streetlight upgrades.
- **Disposal** – Coordinated recycling/disposal of road materials and structures.

4 Water

4.1 State of the Infrastructure

4.1.1 Asset Inventory, Hierarchy and Valuation

The Town's water system is managed to meet provincial regulatory requirements and to ensure reliable service delivery. It consists of:

- 214 km of watermains forming the backbone of the distribution network.
- Service connections, valves, hydrants, and water meters supporting delivery, fire protection, and monitoring functions.
- 2 water pumping stations that maintain system pressure and ensure redundancy.

This hierarchy reflects the role of linear assets in transporting water and the critical function of pumping facilities in maintaining operational reliability. Valves, hydrants, and meters, while smaller in unit cost, are vital to the network's operability and resilience.

The total replacement value of the Town's water infrastructure is approximately $264 million. This valuation includes all linear and facility assets, with replacement costs escalated to 2025 dollars using the Statistics Canada Building Construction Price Index (BCPI, +21.83%), and validated against recent tender and unit cost data.

Table 4-1: Water Asset Inventory and Replacement Value

Asset Sub-Group	Asset		Quantity and Unit	Total Replacement Value
Water Linear	Watermains		214 km	$124,843,000
	Service Connections		14,250 each	$ 43,402,000
	Valves	600 mm diameter and larger	19 each	$ 950,000
		Between 150 mm and 600 mm	734 each	$ 22,020,000
		150 mm diameter and smaller	2,439 each	$ 36,585,000
	Valve Chambers		274 each	$3,740,000
	Hydrants		1,480 each	$ 17,760,000
	Water Meters		14,250 each	$ 7,838,000
Water Facilities	Pump Stations		2 each	$ 6,817,000
	Sample Station		12 each	$ 278,000
				Total Water Linear: $ 257,085,000
				Total Water Facilities: $ 7,095,000
				Total: $ 264,180,000

** Unit cost ranges are due to varying pipe diameters and facility capacities.*
*** Only Town-owned assets that are in service are included. Private, unassumed, decommissioned and assets under constructions are excluded.*
**** Valve chamber quantity is an approximation.*

4.1.2 Asset Age Summary & Expected Service Life

The Town's water system is predominately composed of polyvinyl chloride (PVC) watermains, which account for about 83% of total length. These pipes have an ESL of 80

years, meaning that the majority of the system, installed post-1980, remains in the early to mid-stage of its lifecycle.

The Town's water system also includes smaller proportions of cast iron and ductile iron watermains, which are more advanced in age and approaching their ESL. These materials are more prone to corrosion in certain soils and require monitoring.

Other components include:

- Valves: average age ~28 years, with ~22 years remaining ESL.
- Hydrants: ~60% through service life, mid-cycle.
- Pumping stations: in Very Good condition overall, with one newly commissioned in 2021.

This age profile indicates that while the system is generally stable, targeted reinvestment will be needed in the medium term, particularly for iron mains and aging valves.

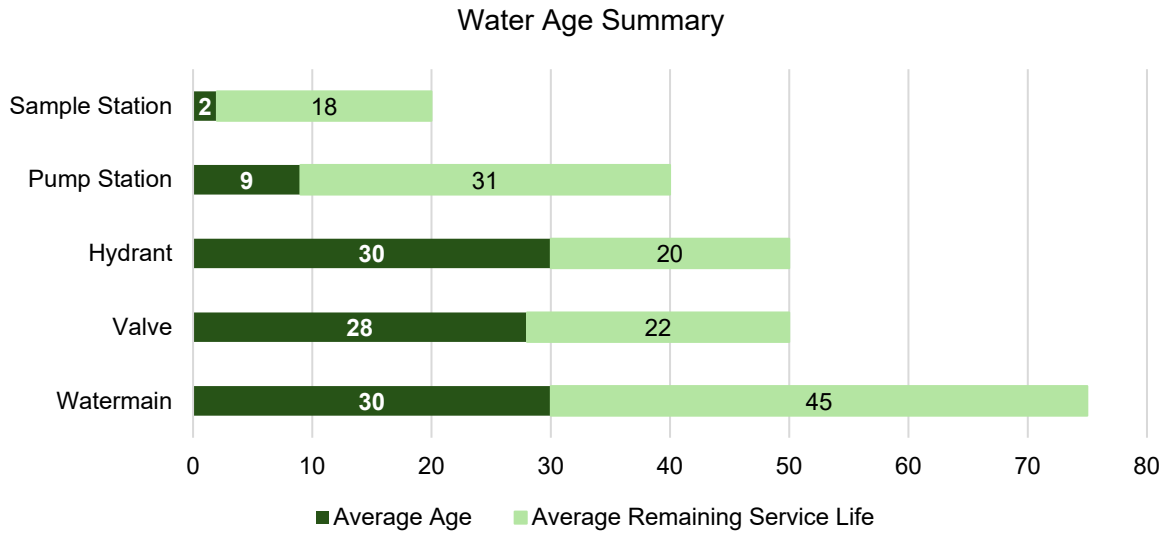


Figure 4-1: Average Age vs. ESL for Water Infrastructure

4.1.3 Asset Condition

The condition of the Town's water system was assessed using a combination of asset age, ESL, and inspection data where available. Condition data was most robust for pumping stations, while over 99% of the network relied on age-based assessment due to limited inspection records.

Results of the assessment indicate that:

- 76% of assets are in Very Good condition.
- 12% are in Good condition.

- 10% are in Fair condition, warranting monitoring.
- 3.2% are in Poor or Very Poor condition, nearing or exceeding their ESL and requiring reinvestment.

By asset type, the condition profile is as follows:

- Watermains: majority Very Good/Good, but ~6% are Poor, primarily cast and ductile iron pipes.
- Valves and hydrants: greater proportion in Fair to Poor condition relative to other categories, highlighting operational risks if not addressed.
- Pumping stations: predominantly Very Good, with recent upgrades reinforcing stability.

This distribution underscores the need for ongoing targeted reinvestment, particularly in older metallic pipes and key operating components.

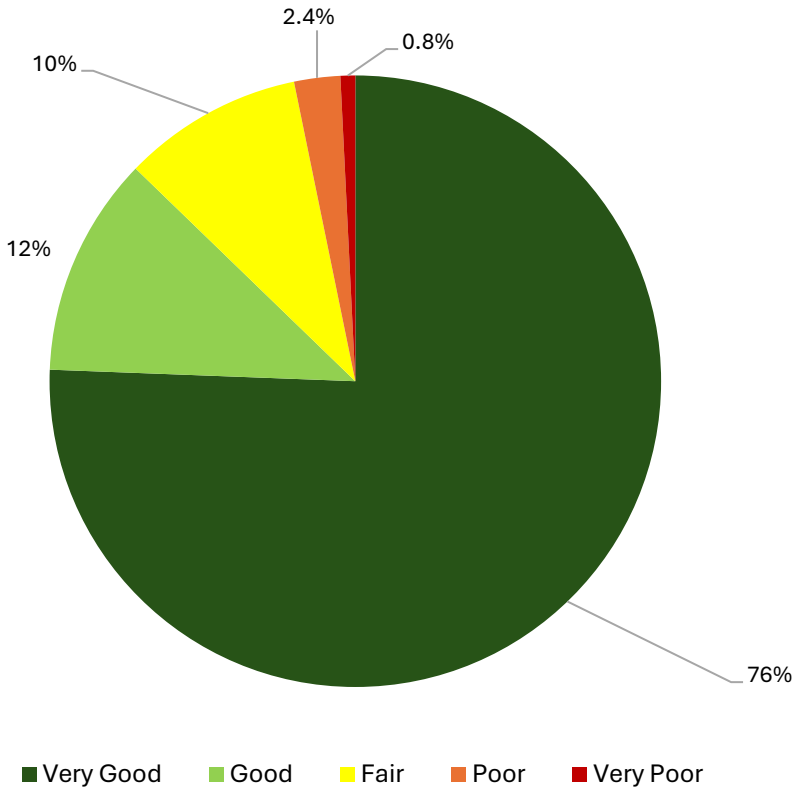


Figure 4-2: Water Infrastructure Condition Summary

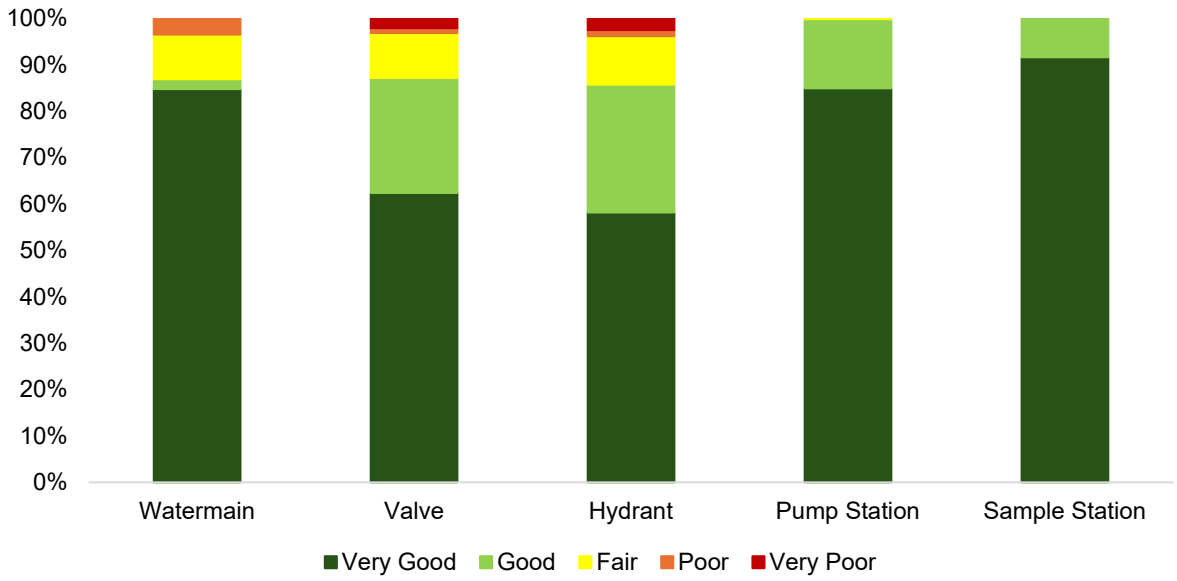


Figure 4-3: Distribution of Water Infrastructure Condition Summary

4.2 Levels of Service

The Town's water system includes watermains, hydrants, valves, meters, and booster stations that provide safe and reliable drinking water. Service levels focus on connectivity, water quality, system condition, and operational performance. Table 7 summarizes the current and proposed levels of service for the Town's water system, reflecting updated operational data and community expectations.

Table 4-2: Water Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system.	map	Community	The Town maintains a water distribution system map. The GIS data set includes asset inventory attributes such as pipe size and material. The Town maintains records of its water distribution system including a library of as-built drawings and water service connection records.		Maintain	Existing GIS mapping system provides comprehensive visual representation of service areas for community understanding. Maintaining current mapping standard supports transparency and service planning.
Access & Capacity	To provide customers with feasible access and availability to the service	Description, which may include maps, of the user groups or areas of the municipality that have fire flow.	map	Community	The Town has fire flow data as a GIS layer and fire hydrant locations are included on the water distribution map in GIS.		Maintain	Current fire flow mapping supports emergency response planning and insurance requirements. Maintaining GIS layer format ensures accessibility for fire services and development planning.
Access & Capacity	To provide customers with feasible access and availability to the service	% of properties connected to the municipal water system.	%	Technical	74%	74%	Maintain	Current connection rate reflects servicing capacity within urban boundary. Maintaining this level balances infrastructure investment with development patterns and service sustainability.
Access & Capacity	To provide customers with feasible access and availability to the service	% of properties where fire flow is available.	%	Technical	74%	74%	Maintain	Fire flow availability aligns with water system connections and supports emergency response capability. Maintaining current level ensures adequate fire protection coverage for existing development.
Environment & Sustainability	To operate in an environmentally responsible manner.	Description of boil water advisories and service interruptions.	text	Community	There are no current boil water advisories in effect; and there have been none in the past two years.		Maintain	Zero boil water advisories demonstrates excellent water quality management and regulatory compliance. Maintaining this

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
					For other service interruptions, the Overall Responsible Operator (ORO) or Operator In-Charge (OIC) are notified by Environmental Services and are responsible for notifying the Town, York Region Public Health and the Ministry when required.			standard protects public health and community confidence in water supply.
Environment & Sustainability	To operate in an environmentally responsible manner.	# of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system.	#/yr	Technical	0	0	Maintain	Zero advisory days reflects robust water treatment and distribution system performance. Maintaining this level ensures continued public health protection and regulatory compliance.
Access & Capacity	To provide customers with feasible access and availability to the service	# of Connection-days per year due to watermain breaks compared to the total number of properties connected to the municipal water system.	#/yr	Technical	8 days	8 days	Maintain	Current break frequency reflects acceptable system reliability for infrastructure age and condition. Maintaining this level balances service continuity with capital investment in system renewal.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of watermains that are in fair or better condition	%	Technical	97%	97%	Maintain	Watermains deemed to be in fair or better condition, support reliable service delivery and minimizes interruptions. Maintaining this level ensures continued system performance while managing asset renewal costs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of water booster stations that are in fair or better condition	%	Technical	100%	100%	Maintain	Full booster station functionality is essential for maintaining system pressure and service reliability. Perfect condition rating ensures continued water supply to all service areas.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of total system valves cycled annually	%	Technical	30%	30%	Maintain	Regular valve cycling prevents operational failures and maintains system control capability. Current cycling rate provides

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								good balance between preventive maintenance and operational resources.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of total network metallic watermains	%	Technical	9%	9%	Maintain	Current proportion of metallic mains is sufficient to maintain water quality and maintenance needs. The current level maintains system reliability while balancing capital investment requirements.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Total number of system service leaks (count of work orders related to a service leak)	%	Technical	27	25	Decrease	Reduced leak frequency improves system efficiency and reduces water loss. Target reflects improved and proactive maintenance to minimize service disruptions.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of valves repaired or replaced annually	%	Technical	1%	1%	Maintain	Current valve replacement rate supports system reliability and operational control. Maintaining this level ensures continued valve functionality while managing capital renewal costs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of hydrants repaired, replaced or upgraded annually	%	Technical	4%	4%	Maintain	Regular hydrant maintenance ensures fire protection capability and regulatory compliance. The current replacement rate maintains system reliability while balancing capital investment requirements.
Affordability	To provide service in a cost effective and fiscally responsible manner.	Water capital and operating cost per service connection	$/yr	Technical	$ 965	$ 965	Maintain	Current cost per connection reflects efficient system operation and capital management. Maintaining this level ensures sustainable service delivery while controlling rate impacts on customers.

4.3 Lifecycle Management Strategy

The Town's water infrastructure includes watermains, valves, hydrants, and associated appurtenances that deliver safe, reliable drinking water. Lifecycle strategies emphasize maintaining system reliability, meeting regulatory requirements, and minimizing service disruptions. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Master plans, financial and user rate studies, DWQMS compliance, and GIS updates to guide coordinated planning.
- **Maintenance** – Annual valve exercising, hydrant inspections, watermain flushing, and leak detection to sustain reliability and regulatory compliance.
- **Renewal/Rehabilitation** – Condition-based relining, cathodic protection, and booster station rehabilitation.
- **Replacement** – End-of-life replacement of mains, valves, hydrants, and chambers, coordinated with road projects.
- **Disposal** – Removal of retired assets with records updated to support financial reporting.

5 Wastewater

5.1 State of the Infrastructure

5.1.1 Asset Inventory, Hierarchy and Valuation

The Town's wastewater system collects and conveys sewage to treatment facilities through a network of linear and facility assets. It consists of:

- 282 km of gravity mains and forcemains, supported by lateral connections.
- Maintenance holes and wastewater valves, which provide access for inspection and flow control.
- 20 sewage pumping stations, which ensure reliable conveyance in areas where gravity flow is insufficient.

This hierarchy reflects the importance of linear assets as the backbone of the collection system, while pumping stations represent critical facilities with a high consequence of failure.

The total replacement value of the Town's wastewater infrastructure is approximately $246 million. This includes both linear and facility assets, with replacement costs escalated to 2025 dollars using the Statistics Canada Building Construction Price Index (BCPI, +21.83%), and validated against current unit cost benchmarks.

Table 5-1: Wastewater Asset Inventory and Replacement Value

Asset Sub-Group	Asset	Quantity and Unit	Total Replacement Value
Wastewater Linear	Forcemains	17 km	$ 12,341,000
	Gravity Mains	178 km	$ 98,664,000
	Laterals	14,100 each	$ 68,713,000
	Maintenance Holes	2,502 each	$ 33,774,000
	Valves	30 each	$ 690,000
Wastewater Facilities	Pump Stations	20 each	$ 32,240,000
			Total Wastewater Linear: $ 214,182,000
			Total Wastewater Facilities: $ 42,177,000
			Total: $ 246,422,000

** Unit cost ranges are due to varying pipe diameters and facility capacities.*
*** Only Town-owned assets that are in service are included. Private, unassumed, decommissioned and assets under constructions are excluded.*

5.1.2 Asset Age Summary & Expected Service Life

The wastewater system includes a mix of materials and vintages:

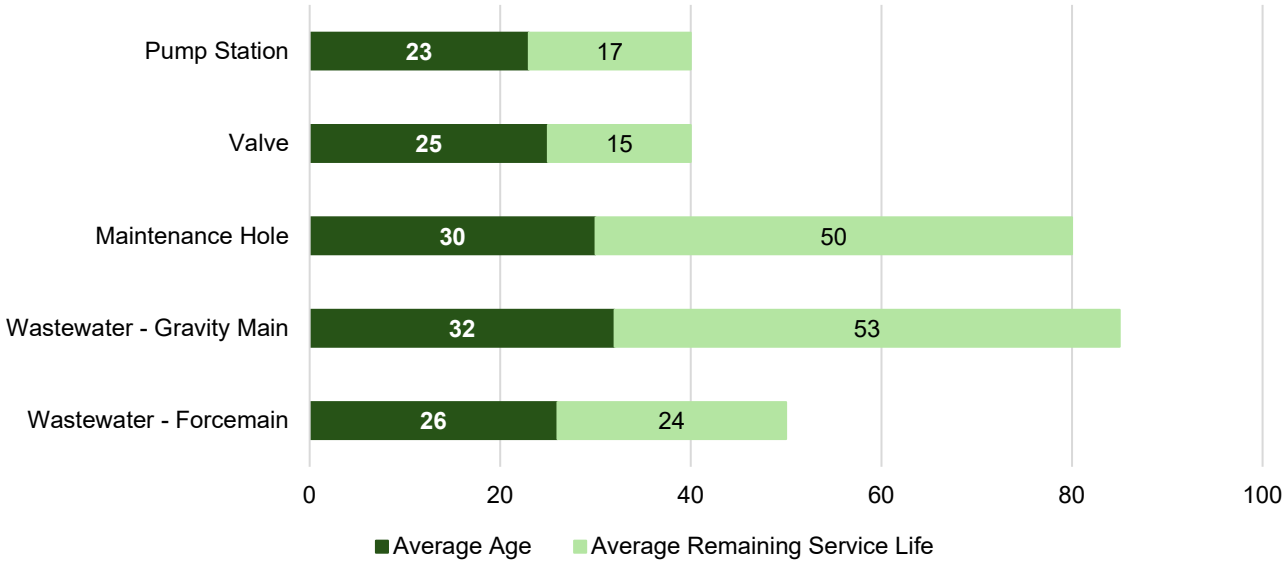
- PVC mains (majority of system): relatively young, with long remaining service life.
- Concrete mains: mid-life, generally stable performance.
- Vitrified clay pipes (VCP): older assets, many approaching or exceeding their expected service life, requiring targeted monitoring and eventual replacement.

Key facility and component profiles include:

- Gravity mains: average age ~32 years, with ~53 years of remaining service life.
- Laterals: average age ~23 years, with ~67 years of remaining service life.
- Pumping stations: varied ages, with several approaching reinvestment needs despite routine maintenance.

This age profile highlights that while the overall system is in mid-life condition, targeted reinvestment will be required for older VCP segments and select pumping stations.

Figure 5-1: Average Age vs. ESL for Wastewater Infrastructure



5.1.3 Asset Condition

Condition was assessed using a combination of Pipeline Assessment Certification Program (PACP) scores from closed-circuit television (CCTV) inspections and age-based modelling where inspection data was unavailable. Approximately 43% of the wastewater network was evaluated using direct inspection data, while the balance was age-based.

Results of the assessment indicate that:

- 73% of assets are in Very Good condition.
- 16% are in Good condition.
- 6% are in Fair condition, showing localized deterioration.
- 6% (3% Poor, 3% Very Poor) are at or beyond their expected service life, representing near-term reinvestment needs.

By asset type, the distribution is as follows:

- Forcemains: show the highest proportion of Very Poor ratings, indicating elevated short-term risk.
- Gravity mains: predominantly Very Good to Good, with a small share rated Fair or Poor.
- Maintenance holes: generally Very Good, with minimal deterioration.
- Valves: higher proportion in Poor condition, requiring targeted replacement.
- Pumping stations: a noticeable portion in Poor to Very Poor condition, underscoring the need for reinvestment planning.

This profile emphasizes the importance of continued CCTV inspections and condition monitoring to validate deterioration trends and prioritize rehabilitation.

Figure 5-2: Wastewater Infrastructure Condition Summary

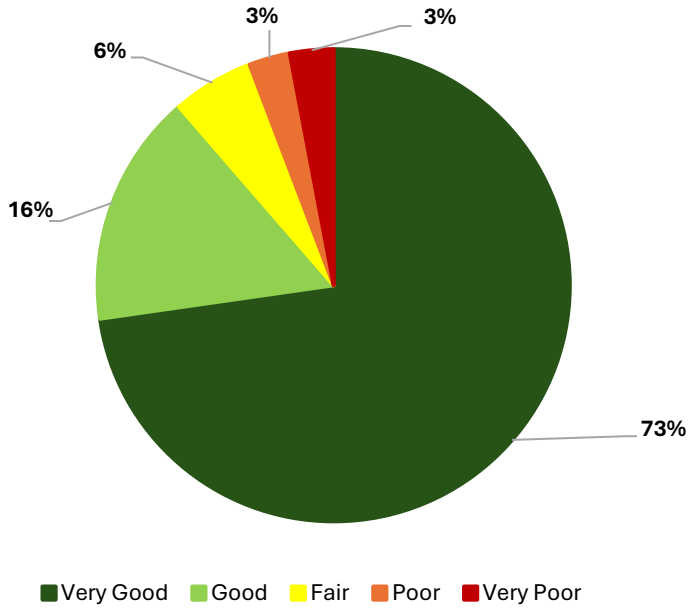
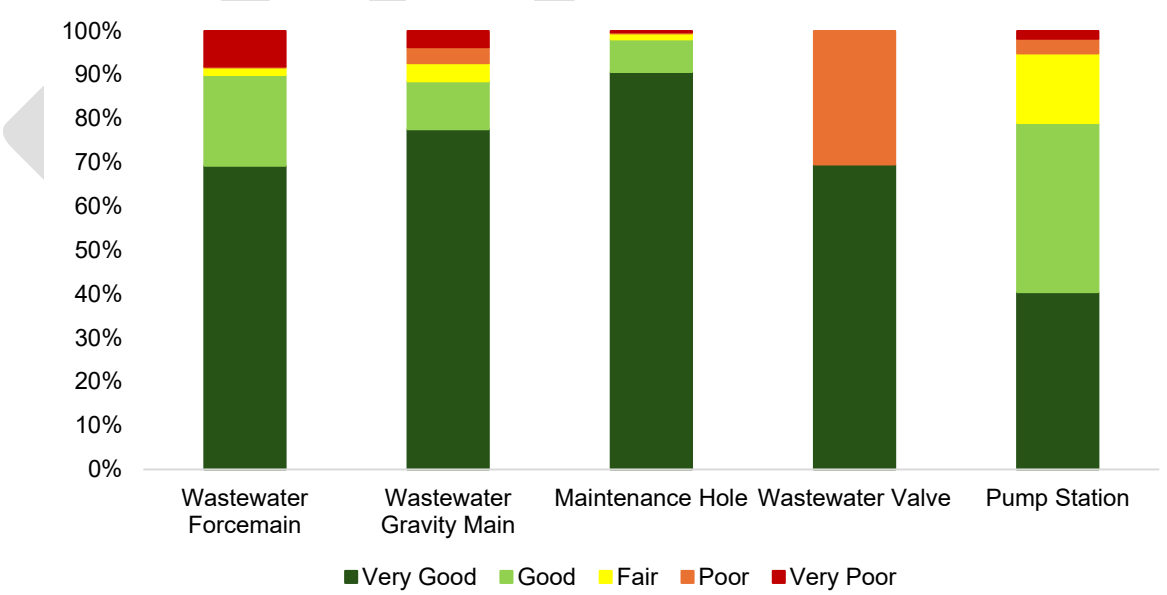


Figure 5-3: Distribution of Wastewater Infrastructure Condition Summary



5.2 Levels of Service

The wastewater system comprises gravity mains, forcemains, laterals, maintenance holes, and pumping stations that ensure reliable collection and conveyance. Service levels emphasize regulatory compliance, system reliability, environmental protection, and asset condition. Table 9 presents the current and proposed levels of service for wastewater infrastructure, based on updated performance data and operational insights.

Table 5-2: Wastewater Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system.	map	Community	The Town maintains a wastewater system GIS map. The GIS data set includes asset inventory attributes such as pipe size and material.		Maintain	GIS mapping provides clear visualization of wastewater service areas for community understanding. Maintaining current format supports development planning and service transparency.
Access & Capacity	To provide customers with feasible access and availability to the service	% of properties connected to the municipal wastewater system.	%	Technical	72%	72%	Maintain	Current connection rate reflects servicing within urban boundary and system capacity. Maintaining this level supports environmental protection while managing infrastructure expansion costs.
Access & Capacity	To provide customers with feasible access and availability to the service	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes.	text	Community	Stormwater can get into the wastewater system through maintenance hole covers, inflow and infiltration (I&I), as well as cross connections from residential properties.		Maintain	Maintaining educational information helps residents understand inflow/infiltration issues and their role in system protection. Clear communication supports system performance and environmental compliance.
Access & Capacity	To provide customers with feasible access and availability to the service	Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described in previous paragraph.	text	Community	Sanitary sewers have to be built to the Town's design standards which meet or exceed Ontario's MECP Sanitary Sewer Design Guidelines and Current OPSS requirements.		Maintain	Design standards meeting MECP guidelines ensure system resilience and environmental protection. Maintaining these standards supports regulatory compliance and public health protection.

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	# of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.	#/yr	Technical	3 days	3 days	Maintain	Current backup frequency reflects acceptable system performance for infrastructure age. Maintaining this level balances system reliability with capital investment in capacity improvements.
Health & Safety	To protect public health and safety.	# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.	#/yr	Technical	0	0	Maintain	Zero effluent violations demonstrate excellent treatment system performance and environmental compliance. Maintaining this standard protects receiving waters and regulatory standing.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of sewers CCTV inspected annually	%/yr	Technical	9%	10%	Increase	Increased inspection rate improves asset condition knowledge and enables proactive maintenance. Higher inspection frequency supports system reliability and reduces emergency repairs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of sewers flushed annually	% /yr	Technical	20%	20%	Maintain	Current flushing program prevents blockages and maintains system capacity. Maintaining this level provides good balance between preventive maintenance and operational resources.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of sanitary sewers that are in fair or better condition	%	Technical	92%	92%	Maintain	High sewer condition supports reliable service and environmental protection. Maintaining this level ensures continued system performance while managing asset renewal priorities.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of wastewater pumping stations that are in fair or better condition	%	Technical	86%	86%	Maintain	Good pumping station condition ensures reliable wastewater conveyance and treatment. Maintaining this level supports

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								system operation while balancing capital investment needs.
Affordability	To provide service in a cost effective and fiscally responsible manner.	Wastewater capital and operating cost per service connection	$/yr	Technical	$ 1,160	$ 924	Decrease	Cost reduction reflects operational efficiency improvements and optimized capital planning. Lower cost per connection supports rate sustainability while maintaining service quality.

5.3 Lifecycle Management Strategy

Wastewater infrastructure consists of collection systems and sewage pumping stations that protect public health and the environment. Lifecycle strategies focus on optimizing system performance, reducing infiltration and inflow, and ensuring compliance with MECP approvals. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Sewer modelling, I&I reduction, CLI-ECA amendments, and planning studies.
- **Maintenance** – Annual CCTV inspections, flushing, lateral repairs, and pumping station servicing.
- **Renewal/Rehabilitation** – Lining, grout/seal, equipment upgrades, and major pumping station rehabilitation.
- **Replacement** – Open-cut sewer replacement and major facility upgrades at end-of-life.
- **Disposal** – Coordinated with replacements; asset register updates ensure compliance.

6 Stormwater

6.1 State of the Infrastructure

6.1.1 Asset Inventory, Hierarchy and Valuation

The Town's stormwater system manages runoff and protects both the natural and built environment through a combination of linear and facility assets. The inventory includes approximately 74 km of stormwater mains and 33 km of laterals, supported by 1,210 maintenance holes and 3,260 catch basins. The system also incorporates 904 roadway crossing culverts, 7,577 driveway culverts, and an extensive network of 463 km of roadside ditches that provide overland flow conveyance.

At the facility level, the Town operates 20 stormwater management (SWM) ponds and 18 oil and grit separators (OGS) that provide quality control and flow attenuation. In addition, the Town has constructed two infiltration/exfiltration galleries and one bioswale to advance its low impact development (LID) program.

The total replacement value of stormwater infrastructure is estimated at $636 million (2025 dollars), comprised of $626.1 million in linear assets, $9.9 million in facilities, and $0.03 million in LID features.

Table 6-1: Stormwater Asset Inventory and Replacement Value

Asset Sub-Group	Asset	Quantity and Unit	Total Replacement Value
Stormwater Linear	Stormwater Mains	74 km	$ 81,744,000
	Stormwater Laterals	33 km	$ 43,142,000
	Maintenance Holes	1,210 each	$ 34,875,000
	Ditches	463 km	$ 355,029,000
	Catch Basins	3,260 each	$ 58,262,000
	Driveway Culverts	7,577 each	$ 41,922,000
	Roadway Crossing Culverts (<3m diameter)	904 each	$ 11,150,000
Stormwater Facilities	Stormwater Management Ponds	20 each	$ 9,385,000
	Oil and Grit Separators	18 each	$ 549,000
LIDs	Infiltration & Exfiltration Galleries	2 each	$ 20,700
	Bioswales	1 each	$ 10,400
			Total Stormwater Linear: $ 626,124,000
			Total Stormwater Facilities: $ 9,934,000
			Total Stormwater LID: $ 32,000
			Total $ 636,060,000

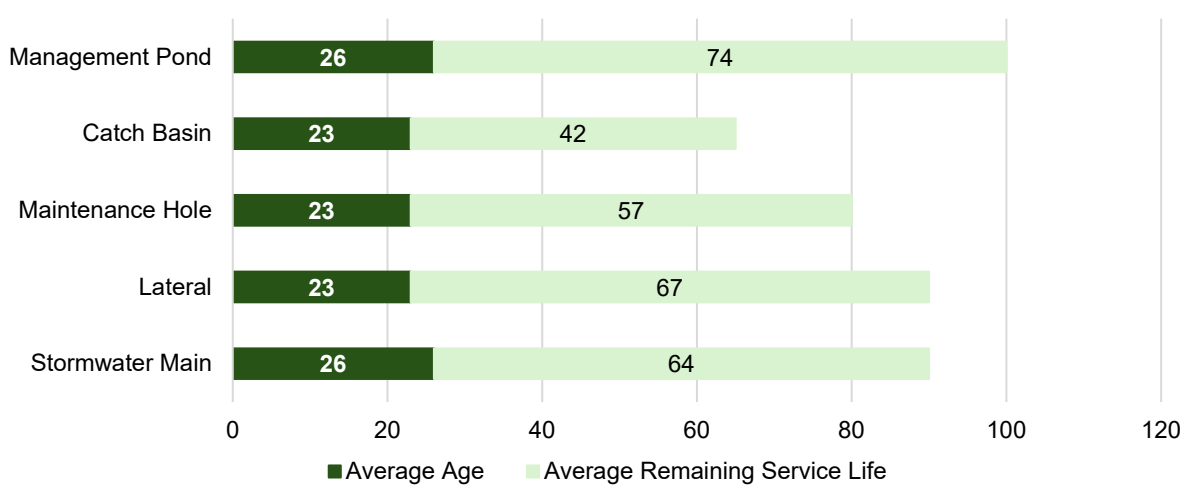
** Unit cost ranges are due to varying pipe diameters and facility capacities.*
*** Only Town-owned assets that are in service are included. Private, unassumed, decommissioned and assets under constructions are excluded.*

6.1.2 Asset Age Summary & Expected Service Life

Storm sewers are predominantly PVC and concrete, with typical service lives of 75 to 100 years, and most are considered mid-life based on installation dates. Older corrugated steel pipe (CSP) segments, which have a shorter expected service life due to susceptibility to corrosion, remain in the network and represent a key renewal risk.

SWM ponds and ditches provide longer functional service lives but require periodic interventions, such as sediment removal, embankment maintenance, and outlet works rehabilitation, to maintain performance. LID assets are newer additions to the system and are expected to have long service lives with proper upkeep.

Figure 6-1: Average Age vs. ESL for Stormwater



6.1.3 Asset Condition

Condition information for stormwater assets is based on a combination of inspection records, age, and material profiles.

- PVC and concrete sewers are generally in Good to Fair condition.
- CSP sewers exhibit Poor condition in many locations due to corrosion, creating localized risks of failure and need for near-term reinvestment.
- SWM ponds and LID features are predominantly in Good condition given their recent construction, though functionality is dependent on ongoing maintenance such as vegetation control and sediment removal.

Overall, the stormwater system is functioning adequately, but targeted investment will be required to address aging CSP segments and to ensure that ponds and LID assets continue to perform as intended.

Figure 6-2: Stormwater Infrastructure Condition Summary

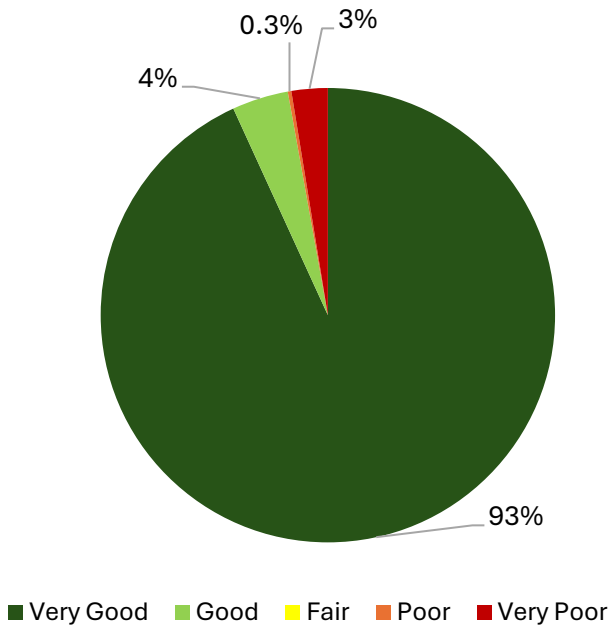
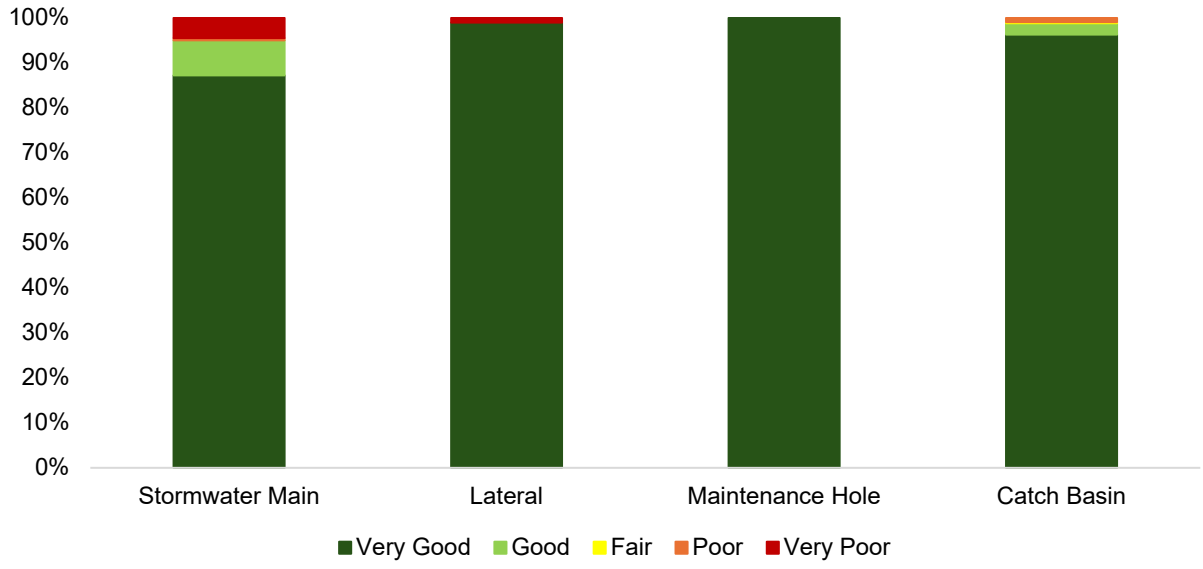


Figure 6-3: Distribution of Stormwater Infrastructure Condition Summary



6.2 Levels of Service

Stormwater infrastructure includes mains, laterals, catchbasins, ponds, low-impact development features, and ditches that manage drainage and protect against flooding. Service levels focus on system resilience, drainage capacity, and maintenance practices. Table 11 summarizes the current and proposed levels of service for stormwater assets, incorporating updated inventories and climate resilience considerations.

Table 6-2: Stormwater Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system	map	Community	The Town maintains a stormwater system map in GIS. The GIS data set includes asset inventory attributes such as pipe size and material.		Maintain	Enhanced mapping will better communicate flood protection levels to residents and support development planning. Improved visualization supports emergency preparedness and public understanding.
Access & Capacity	To provide customers with feasible access and availability to the service	% of properties in municipality resilient to a 100-year storm	%	Technical	100%	100%	Maintain	Full protection against 100-year storms provides excellent flood resilience for the community. Maintaining this level protects property and ensures public safety during extreme weather events.
Access & Capacity	To provide customers with feasible access and availability to the service	% of the municipal stormwater management system resilient to a 5-year storm	%	Technical	100%	100%	Maintain	Complete system resilience to frequent storms prevents regular flooding and property damage. Maintaining this level ensures reliable drainage during typical weather events.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of sewers CCTV inspected annually	%/yr	Technical	0%	10% per year	Increase	Regular inspection program will improve asset condition knowledge and maintenance planning. Systematic inspection supports preventive maintenance and reduces system failures.

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of retention pond assets that are fair or better condition	%	Technical	2%	2%	Maintain	Current pond condition provides adequate stormwater protection. Maintaining this level balances expectations with available maintenance resources and supports cost-effective service delivery.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of new complaints related to the open ditch system per 100km	# /100 km	Technical	21	20	Decrease	Reduced number of complaints target reflects planned improvements to infrastructure maintenance and renewal.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of open ditch system maintained or rehabilitated (non-capital) per calendar year in flooding areas	% /yr	Technical	1%	8%	Increase	Increased ditch maintenance prevents localized flooding and improves drainage capacity. Higher maintenance rate addresses flooding concerns while supporting system performance.
Affordability	To provide service in a cost-effective and fiscally responsible manner.	Stormwater operating costs per 100 km length (pipe, ditches and culvert)	$ /100 km	Technical	$ 484,374	$ 475,000	Decrease	Cost reduction reflects operational efficiency improvements while maintaining service levels. Lower operating costs support budget sustainability without compromising system performance.

6.3 Lifecycle Management Strategy

Stormwater assets include pipes, culverts, ponds, and outlets that provide drainage and water quality protection. Lifecycle strategies are designed to improve flood resilience, manage sediment and erosion, and address climate impacts. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Drainage plans, CLI-ECA compliance, flood management strategies, and utility rate planning.
- **Maintenance** – CCTV inspections, flushing, catch basin cleaning, and pond inspections.
- **Renewal/Rehabilitation** – Erosion control, inlet/outlet structure repairs, and pond dredging.
- **Replacement** – End-of-life replacement of storm sewers, culverts, ponds, and outlets.
- **Disposal** – Decommissioning/removal tied to replacement with proper record-keeping.

7 Facilities

7.1 Levels of Service

The Town's facilities include a diverse portfolio of buildings such as corporate offices, community centres, fire stations, and libraries. Performance measures for this category focus on accessibility, safety, condition, and efficiency. Table 12 summarizes the current and proposed levels of service for facilities, reflecting updated condition assessments, maintenance practices, and accessibility improvements.

Table 7-1: Facilities Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service.	Maintain facilities to support service delivery	text	Community	All signs, markers, and building infrastructure within these facilities are maintained for authorized use by staff, visitors, and service providers.		Maintain	Current facility maintenance standard supports safe and accessible public service delivery. Maintaining this level ensures continued functionality and professional appearance of municipal facilities.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Average response time for security incidents	text	Community	15 minutes	15 minutes	Maintain	Current security response time provides adequate protection for facilities and staff safety. Maintaining this level balances security needs with operational costs and resource allocation.
Health & Safety	To protect public health and safety.	% of parking lots that have at least two accessible parking spots	%	Technical	80%	90%	Increase	Improved accessibility compliance supports inclusive access to municipal facilities. Enhanced parking accessibility reflects commitment to AODA compliance and community equity.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of facilities in fair or better condition	%	Technical	77%	77%	Maintain	Current facility condition supports service delivery and user safety requirements. Maintaining this level provides stable infrastructure while managing capital renewal costs.
Health & Safety	To protect public health and safety.	% of facilities that are compliant with AODA requirements	%	Technical	6%	30%	Increase	Increased AODA compliance ensures inclusive access to municipal services. Progressive improvement reflects legal

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								obligations and commitment to accessibility for all residents.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of buildings inspected (BCA) every 5 years	%	Technical	100%	100%	Maintain	Complete building condition assessment program supports proactive facility management and safety. Full inspection coverage ensures regulatory compliance and optimal asset performance.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of days unplanned facility closures	#	Technical	0	0	Maintain	Zero unplanned closures ensures reliable public access to municipal services. Maintaining this level demonstrates excellent facility management and emergency preparedness.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Overall facilities Energy Use Intensity (EUI) score (kBtu/ft^2/year)	#	Technical	124	111	Increase	Decrease average EUI score to reduce energy usage and improve energy efficiency to meet sustainability objectives.

7.2 Lifecycle Management Strategy

Municipal facilities provide space for administration, operations, and community services. Lifecycle strategies address building safety, energy efficiency, accessibility, and space optimization. A full copy of the lifecycle management strategy can be found in Appendix A

- **Non-Infrastructure Solutions** – Facility master planning, condition assessments, and accessibility reviews.
- **Maintenance** – Preventative programs (HVAC, fire safety, lighting) and reactive repairs.
- **Renewal/Rehabilitation** – Building system rehabilitation (roofs, windows, mechanical systems).
- **Replacement** – Major building system/component replacements at end-of-life.
- **Disposal** – Coordinated demolition or disposal tied to replacements.

8 Parks

8.1 Levels of Service

Parks and recreation assets are vital to community well-being and environmental stewardship. Metrics in this category focus on accessibility, play value, safety, and lifecycle maintenance. Table 13 provides the current and proposed levels of service for the Town's park system, highlighting updates that reflect evolving community expectations and asset renewal needs.

Table 8-1: Parks Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain parks to support service delivery	text	Community	All signs, structures, and amenities throughout this park are maintained for public recreational enjoyment.		Maintain	Current park maintenance standard supports safe and enjoyable recreation experiences. Maintaining this level ensures continued community access to quality recreational facilities and programming.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of parks meeting CSA inspection frequency	%	Technical	100%	100%	Maintain	Complete CSA inspection compliance ensures playground safety and regulatory requirements. Full inspection coverage protects public safety and reduces liability exposure for the municipality.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of park types exceeding their ratio per population	#	Technical	0	0	Maintain	Current park provision meets population-based service standards for different park types. Maintaining balanced park ratios ensures equitable recreation access across the community.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of parks in fair or better condition	%	Technical	46%	50%	Increase	Improvement in park condition enhances recreational opportunities and community quality of life. Investment reflects priority on recreation infrastructure and asset renewal program.
Health & Safety	To protect public health and safety.	% of playgrounds that have two or more AODA features	%	Technical	100%	100%	Maintain	Complete AODA compliance ensures inclusive recreation access for all children and families. Maintaining this level

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								demonstrates commitment to accessibility and inclusive community design.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of days unplanned park closures	#/yr	Technical	0	0	Maintain	Zero unplanned closures ensures reliable recreational access and programming continuity. Maintaining this level demonstrates excellent park management and emergency preparedness capabilities.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of park waste collection days per week	days/ wk	Technical	2	3	Increase	Increased frequency of park waste collection enhances user experience, supports cleanliness, and reduces environmental impact. This aligns with community expectations for well-maintained recreational spaces and promotes environmental stewardship.

8.2 Lifecycle Management Strategy

Parks infrastructure includes playgrounds, sports fields, and recreational amenities that support community wellbeing. Lifecycle strategies emphasize safety, accessibility, and long-term usability. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Parks and Recreation Master Plan updates and community engagement.
- **Maintenance** – Regular inspections, seasonal upkeep, and preventative maintenance.
- **Renewal/Rehabilitation** – Playground and amenity rehabilitation based on inspections.
- **Replacement** – Full replacement of park amenities and structures at lifecycle end.
- **Disposal** – Decommissioning of outdated assets coordinated with replacements.

9 Fleet

9.1 Levels of Service

The Town's fleet supports the delivery of a wide range of municipal services, from winter control and fire response to parks and utilities. Service levels are measured through vehicle condition, regulatory compliance, maintenance standards, and operating efficiency. Table 14 summarizes the current and proposed levels of service for fleet assets.

Table 9-1: Fleet Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain fleet to support service delivery	text	Community	A variety of services are offered using fleet serving: Development Engineering, Facilities, Fire and Emergency Services, Fleet, Parks, Recreation and Culture, Operations & Infrastructure		Maintain	Enhanced fleet service description reflects expanded service delivery capabilities. Improved fleet management supports efficient municipal operations across all departments and service areas.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of fleet that are in fair or better condition	%	Technical	84%	90%	Increase	Improved fleet condition reduces operational downtime and enhances service reliability. Higher vehicle condition supports efficient service delivery and reduces maintenance costs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of oil changes completed (on light and medium duty vehicles) per 5,000kms	#/ 5000km	Technical	63%	100%	Increase	Complete preventive maintenance program extends vehicle life and reduces breakdown costs. Full oil change compliance demonstrates professional fleet management and asset protection.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of required MTO regulated maintenance/ safety inspections completed per year	%	Technical	100%	100%	Maintain	Complete regulatory inspection compliance ensures vehicle safety and operational authorization. Full inspection coverage is mandatory for commercial vehicle operations and public safety.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of fleet that is electric or hybrid	%	Technical	3%	3%	Maintain	Current electrification level reflects initial fleet transition and available technology. Maintaining this level pending comprehensive fleet electrification strategy and infrastructure development.

9.2 Lifecycle Management Strategy

The Town's fleet consists of vehicles and rolling stock that support service delivery across departments. Lifecycle strategies balance preventative maintenance, timely replacement, and transition to sustainable technologies. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Fleet master plans, replacement strategies, and route optimization.
- **Maintenance** – Manufacturer-recommended preventative servicing and reactive repairs.
- **Renewal/Rehabilitation** – Major component refurbishment or mid-life vehicle overhauls.
- **Replacement** – Vehicle replacement at optimal lifecycle, with transition to electrification.
- **Disposal** – Auction or resale of retired fleet vehicles.

10 Equipment

10.1 Levels of Service

Specialized equipment underpins service delivery across all Town operations, supporting functions such as roads, water, wastewater, facilities, and emergency response. Metrics in this category focus on condition, availability, and maintenance practices. Table 15 outlines the current and proposed levels of service for equipment.

Table 10-1: Equipment Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain equipment to support service delivery	text	Community	A variety of services are offered using equipment serving: Development Engineering, Facilities, Fire and Emergency Services, Fleet, Parks, Recreation and Culture, Operations & Infrastructure.		Maintain	Current equipment deployment supports comprehensive municipal service delivery across all departments. Maintaining this arrangement ensures operational efficiency and resource optimization.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of fleet equipment that are in fair or better condition	%	Technical	42%	50%	Increase	Significant equipment condition improvement reduces service disruptions and maintenance costs. Enhanced equipment reliability supports efficient operations and service delivery quality.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of equipment with AVL (where AVL is applicable)	%	Technical	40%	75%	Increase	Complete AVL coverage improves equipment tracking and operational efficiency. Enhanced monitoring supports better resource allocation and equipment utilization optimization.

10.2 Lifecycle Management Strategy

Operational equipment includes specialized tools, pumps, and machinery that enable municipal service delivery. Lifecycle strategies ensure availability, reliability, and cost-effective operation. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Equipment planning, standardization, and inventory management.
- **Maintenance** – Preventative servicing and reactive repairs per manufacturer specs.
- **Renewal/Rehabilitation** – Overhauls or major component replacement for high-value equipment.
- **Replacement** – Lifecycle-based replacement of tools, pumps, and machinery.
- **Disposal** – Auction, recycling, or parts salvage at end-of-life.

11 Active Transportation

11.1 Levels of Service

Active transportation infrastructure supports safe, inclusive, and sustainable mobility options for residents. Measures focus on connectivity, condition, and accessibility of multi-use pathways. Table 16 presents the current and proposed levels of service for the active transportation network.

Table 11-1: Active Transportation Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain trails to support service delivery	text	Community	Suitable for walking, hiking, jogging, and cycling. No motorized vehicles allowed.	Multi-use paths shall be accessible and suitable for walking, hiking, jogging, and cycling. No motorized vehicles allowed.	Maintain	Enhanced trail description emphasizes accessibility and inclusive design standards. Improved trail management supports active transportation goals and community health initiatives.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of hard surfaced trails that are in fair or better condition	%	Technical	56%	60%	Increase	Improved trail condition enhances user safety and experience for active transportation. Better trail quality supports cycling, walking, and recreation goals while encouraging healthy lifestyle choices.

11.2 Lifecycle Management Strategy

Active transportation assets include trails, pathways, and multi-use connections. Lifecycle strategies support safe, accessible, and connected networks that are resilient to seasonal and climate challenges. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Integration with Roads and Active Transportation plans, accessibility and climate resilience planning.
- **Maintenance** – Routine inspections, vegetation control, snow clearing, and spot repairs.
- **Renewal/Rehabilitation** – Surface material upgrades, drainage improvements, and accessibility retrofits.
- **Replacement** – Full path replacement or reconstruction when required.
- **Disposal** – Decommissioning or removal aligned with replacement programs.

12 Roadway Appurtenances

12.1 Levels of Service

Roadway appurtenances, such as traffic control devices, signage, and related infrastructure, are critical for safety and wayfinding. Performance measures address visibility, condition, and compliance with regulatory standards. Table 17 summarizes the current and proposed levels of service for roadway appurtenances.

Table 12-1: Roadway Appurtenances Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain roadway appurtenances to support service delivery	text	Community	All signs, markers, and roadway appurtenances along this pathway are maintained exclusively for non-motorized recreational activities.		Maintain	Current roadway appurtenance maintenance supports safe transportation and wayfinding. Maintaining this standard ensures clear traffic control and user guidance throughout the road network.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of regulatory signage in fair or better condition	%	Technical	92%	92%	Maintain	High regulatory sign condition ensures traffic safety and legal compliance. Maintaining this level supports clear traffic control and reduces liability exposure for traffic incidents.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of overall roadway appurtenances in fair or better condition	%	Technical	96%	96%	Maintain	Excellent appurtenance condition supports safe and efficient transportation operations. Maintaining this level ensures continued functionality of traffic control devices and roadway safety features.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of annual retro reflectivity assessments resulting in a 'pass' as required under MMS	% /yr	Technical	82%	82%	Maintain	Current retro reflectivity performance meets most regulatory requirements for sign visibility. Maintaining this level

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
								ensures adequate nighttime visibility while managing sign replacement costs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of regulatory signs and warning signs inspected annually	% /yr	Technical	100%	100%	Maintain	Complete sign inspection program ensures traffic safety and regulatory compliance. Full inspection coverage identifies maintenance needs and prevents sign-related safety incidents.

12.2 Lifecycle Management Strategy

Roadway appurtenances such as guiderails, signage, and roadside safety features support safe and efficient transportation corridors. Lifecycle strategies ensure these assets remain reliable and compliant. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Studies, policies, and condition monitoring.
- **Maintenance** – Routine inspections and reactive repairs (e.g., guide rails, signage).
- **Renewal/Rehabilitation** – Rehabilitation of roadside safety features and appurtenances.
- **Replacement** – Replacement of appurtenances at end-of-life.
- **Disposal** – Removal and recycling during replacement programs.

13 Urban Forestry

13.1 Levels of Service

The Town's urban forest provides environmental, aesthetic, and community benefits. Metrics for this category focus on canopy health, maintenance responsiveness, and species diversity. Table 18 outlines the current and proposed levels of service for urban forestry.

Table 13-1: Urban Forestry Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	Maintain healthy urban tree canopy	%	Technical	The trees are inspected regularly during the summer months. Maintenance based in inquiries from the public.		Maintain	Current urban forestry program provides responsive tree maintenance and public safety. Maintaining this approach balances proactive care with community-driven maintenance priorities and budget constraints.

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of urban trees in fair or better condition	%	Technical	83%	83%	Maintain	Current tree condition supports urban canopy health and public safety requirements. Maintaining this level balances tree preservation with replacement needs and environmental sustainability goals.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of urban trees under 10 years old	#	Technical	8%	8%	Maintain	Current young tree proportion reflects ongoing tree replacement and new planting programs. Maintaining this level supports long-term canopy succession and urban forest sustainability.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of annual 'new' urban trees (does not include replacement)	# /yr	Technical	1,525	1,525	Maintain	Current new tree planting rate supports urban canopy expansion and environmental goals. Maintaining this level enhances urban forest coverage while balancing planting capacity and budget resources.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of instances where response time to an urban tree hazard is greater than 5 working days	# /yr	Technical	0	0	Maintain	Immediate hazard response ensures public safety and prevents property damage from tree-related incidents. Maintaining zero delayed response demonstrates excellent emergency response and risk management.

13.2 Lifecycle Management Strategy

Urban forestry assets include trees and natural vegetation within public rights-of-way and parks. Lifecycle strategies focus on sustaining canopy health, mitigating risks, and enhancing resilience to climate change. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – Forestry management planning and policy development.
- **Maintenance** – Tree health inspections, pruning, and hazard removals.
- **Renewal/Rehabilitation** – Replanting and canopy renewal initiatives.
- **Replacement** – Tree replacement and large-scale planting programs.
- **Disposal** – Safe disposal of removed or fallen trees.

14 IT Assets

14.1 Levels of Service

Information technology assets provide the digital backbone for municipal operations and customer service delivery. Measures focus on system reliability, lifecycle management, and security. Table 19 presents the current and proposed levels of service for IT assets.

Table 14-1: IT Assets Proposed Levels of Service

Shareholder Interest	Level of Service Objective	Level of Service Statement	Unit	Community or Technical	Current LOS (2024)	PLOS	Change to Performance	PLOS Justification
Access & Capacity	To provide customers with feasible access and availability to the service	Maintain IT assets to support Town services	text	Technical	The Town of Georgina provides equipment and technological solutions to support its staff to efficiently delivery services to our residents.		Maintain	Current IT service description accurately reflects technology support for municipal operations. Maintaining this standard ensures continued technological capability for efficient service delivery to residents.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of overall IT assets in fair or better condition	%	Technical	91%	91%	Maintain	Excellent IT asset condition supports reliable technology services and operational efficiency. Maintaining this level ensures continued system performance while managing technology refresh costs.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	% of IT equipment and systems that exceed the manufacturer's end of life support	%	Technical	27%	27%	Maintain	Current end-of-life equipment proportion reflects balanced technology refresh approach. Maintaining this level balances security risks with capital investment requirements for technology renewal.
Quality & Reliability	To provide a safe, reliable, and well-maintained service.	# of unplanned network or system outages	# /yr	Technical	0	0	Maintain	Zero unplanned outages demonstrate excellent IT infrastructure reliability and service continuity. Maintaining this level ensures stable technology platform for municipal operations and service delivery.

14.2 Lifecycle Management Strategy

IT assets include hardware, software, and digital systems that support municipal operations and service delivery. Lifecycle strategies emphasize reliability, security, and modernization. A full copy of the lifecycle management strategy can be found in Appendix A.

- **Non-Infrastructure Solutions** – IT master planning, software policies, and standardization.
- **Maintenance** – Routine updates, monitoring, inspections of server and broadband tower, and security patches.
- **Renewal/Rehabilitation** – Hardware upgrades and system reconfiguration.
- **Replacement** – Replacement of servers, hardware, and software at end-of-life.
- **Disposal** – Secure disposal/recycling of retired IT equipment.

15 Financial Strategy

The development of the Financial Strategy section, completed by Watson and Associates, was guided by the work undertaken by Aspire, the Town's core and non-core AMPs, discussions with the Town's staff, information gathered through reviews of various background documents and studies, and detailed analysis of the Town's capital asset data (e.g. asset inventory information) and financial information.

The key steps involved in the development of this financial strategy are summarized below:

1. Compile a 15-year forecast of capital and operating expenditures required to achieve the proposed level of service, informed by the AMP and the lifecycle management strategies contained within it. The outputs of these strategies are summarized in the forecast of annual capital and operating expenditures required to achieve these levels of service outcomes.
2. Develop a financial strategy to support the lifecycle management strategy. The financial strategy informs how the capital and operating expenses arising from the asset management strategy will be funded over the forecast period, and how any existing funding gaps will be managed.
3. Document the comprehensive financial strategy in a technical memo to inform future decision-making and to communicate planning to stakeholders.

15.1 Introduction

This chapter outlines the financial strategy that would sustainably fund the lifecycle management strategies presented in this final report. This financial strategy focuses on examining how the Town can fund the lifecycle activities required to achieve the proposed levels of service. The strategy incorporates Council-approved rate increases and identifies when overall funding targets are expected to be met. Tax-supported assets will meet their funding target by 2039, and all rate-supported assets (i.e. Water, Wastewater and Stormwater) will meet their funding targets by 2034 assets. With respect to stormwater, as the Town continues to update its understanding of the condition of the stormwater network it will identify any funding gaps and address them within the 2034 time horizon. The strategy presented is a suggested approach which

should be examined and re-evaluated during the annual budgeting processes to ensure the sustainability of the Town's financial position as it relates to its assets.

O. Reg. 588/17 requires, at a minimum, a 10-year capital plan that forecasts the costs of implementing the lifecycle management strategy and the lifecycle activities identified therein. The financial strategy in this asset management plan has been developed for a 10-year forecast period for rate-funded assets (i.e. 2025-2034) and an extended, 15-year forecast period for tax-funded assets (i.e., 2025-2039) to be in compliance with this requirement, with an additional projection period to support long-term financial planning. By extending the timeframe for achieving sustainable funding targets for the tax-funded assets the Town can balance affordability and achievement of the proposed levels of service.

Various financing options, including reserve funds, debt, and grants, were considered during the process of developing the financial strategy and are described in more detail in the section below.

15.2 Annual Contribution and Lifecycle Funding Target

An annual lifecycle funding target represents the amount of funding that would be required annually to fully finance a lifecycle management strategy over the long term. By planning to achieve this annual funding level, the Town would theoretically be able to fully fund capital works as they arise. In practice, capital expenditures often fluctuate year-to-year based on the asset replacement and renewal/rehabilitation projects being undertaken in a particular year. By planning to achieve the lifecycle funding target over the long term, however, the periods of relatively low capital needs would allow for the building up of lifecycle reserve funds that could be drawn upon in times of relatively high capital needs.

In light of the proposed levels of service and the Town's existing asset portfolio, the annual lifecycle funding target as of 2025 is approximately $25.3 million ($17.0 million for tax supported assets, $3.3 million for water assets, $2.6 million for wastewater assets, and $2.4 million for stormwater assets).

With respect to the annual lifecycle funding for future assets (D.C. eligible projects) over the 15-year forecast, it is estimated that an additional $1.0 million per year ($1.0 million

for tax supported assets, $1,300 for water assets, and $1,000 for wastewater assets) will need to be funded by 2039.

This provides an estimated total annual lifecycle funding target of $26.3 million. This is broken down into $18.0 million for tax supported assets by 2039 and $3.3 million for water assets, $2.6 million for wastewater assets, and $2.4 million for stormwater assets, achieved by 2034. A breakdown of the lifecycle funding target by asset category is provided in *Table 15-1* below.

Table 15-1: Average Annual Lifecycle Cost by Asset Category

Asset Category	Annual Lifecycle Cost	Incremental Cost to Achieve the Proposed Level of Service	Incremental Cost of Growth-related Projects	Total Annual Lifecycle Cost
Tax Supported				
Core Assets				
Capital	$ 9,258,071	$ 162,170	$ 11,635	$ 9,431,876
Non-Core Assets				
Capital	$ 6,542,072	$ 1,019,660	$ 1,009,077	$ 8,570,809
Total Tax Supported	**$ 15,800,143**	**$ 1,181,830**	**$ 1,020,712**	**$ 18,002,685**
Water				
Capital	$ 3,313,100	$ 27,700	$ 1,279	$ 3,342,079
Total Water	**$ 3,313,100**	**$ 27,700**	**$ 1,279**	**$ 3,342,079**
Wastewater				
Capital	$ 2,556,934	$ 780	$ 1,050	$ 2,558,764
Total Wastewater	**$ 2,556,934**	**$ 780**	**$ 1,050**	**$ 2,558,764**
Stormwater				
Capital	$ 2,052,042	$ 324,230	$ -	$ 2,376,272
Total Stormwater	**$ 2,052,042**	**$ 324,230**	**$ -**	**$ 2,376,272**
Grand Total	**$ 23,722,219**	**$ 1,534,540**	**$ 1,023,040**	**$ 26,279,800**

With respect to the tax-supported assets, the Town budgeted to contribute approximately $13.6 million from the tax levy and other current revenue sources towards capital-related needs in 2025. Included in this are budgeted contributions to capital-related reserves and reserve funds, debt servicing costs related to outstanding debt (excluding portions of debt servicing costs funded from development charges), and ongoing federal and provincial grants (i.e., Canada Community-Building Fund (CCBF) and Ontario Community Infrastructure Fund (OCIF)).

With respect to water and wastewater assets, the Town budgeted to contribute approximately $3.4 million from water and wastewater rates towards the capital-related needs in 2025. Included in this are budgeted contributions to capital-related reserves and reserve funds and debt servicing costs related to outstanding debt (excluding portions of debt servicing costs funded from development charges).

With respect to stormwater assets, the Town budgeted to contribute approximately $2.0 million from stormwater rates towards the capital-related needs in 2025. Included in this are budgeted contributions to capital-related reserves and reserve funds.

The difference between the annual lifecycle funding target and current annual contribution is referred to as the lifecycle funding gap.

Based on the analysis of 2025 budgeted capital funding relative to the annual lifecycle funding targets (excluding D.C.-related assets), the Town is currently facing an annual lifecycle funding gap of approximately $6.3 million, of which $3.4 million is related to tax-supported assets, $2.5 million is related to water and wastewater assets, and $0.4 million is related to stormwater assets. Figure 15-1, *Figure 15-2 , and*

Figure 15-3 illustrate the funding gap based on current annual lifecycle targets relative to the 2025 budgeted capital funding for tax-supported, water and wastewater, and stormwater assets, respectively.

Figure 15-1: Annual Lifecycle Funding Targets vs. Budgeted Capital Funding – Tax Supported

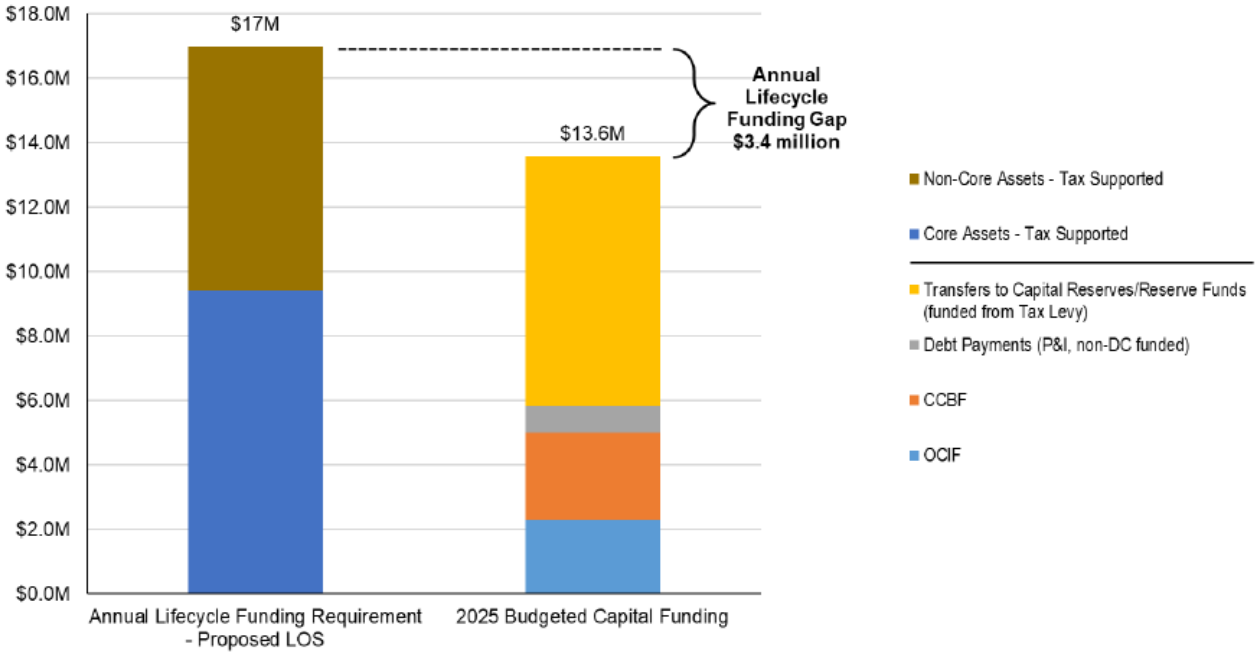

$18.0M
$16.0M
$14.0M
$12.0M
$10.0M
$8.0M
$6.0M
$4.0M
$2.0M
$0.0M
$17M
$13.6M
Annual Lifecycle Funding Gap $3.4 million
Annual Lifecycle Funding Requirement - Proposed LOS
2025 Budgeted Capital Funding
Non-Core Assets - Tax Supported
Core Assets - Tax Supported
Transfers to Capital Reserves/Reserve Funds (funded from Tax Levy)
Debt Payments (P&I, non-DC funded)
CCBF
OCIF

Figure 15-2: Annual Lifecycle Funding Targets vs. Budgeted Capital Funding – Water and Wastewater

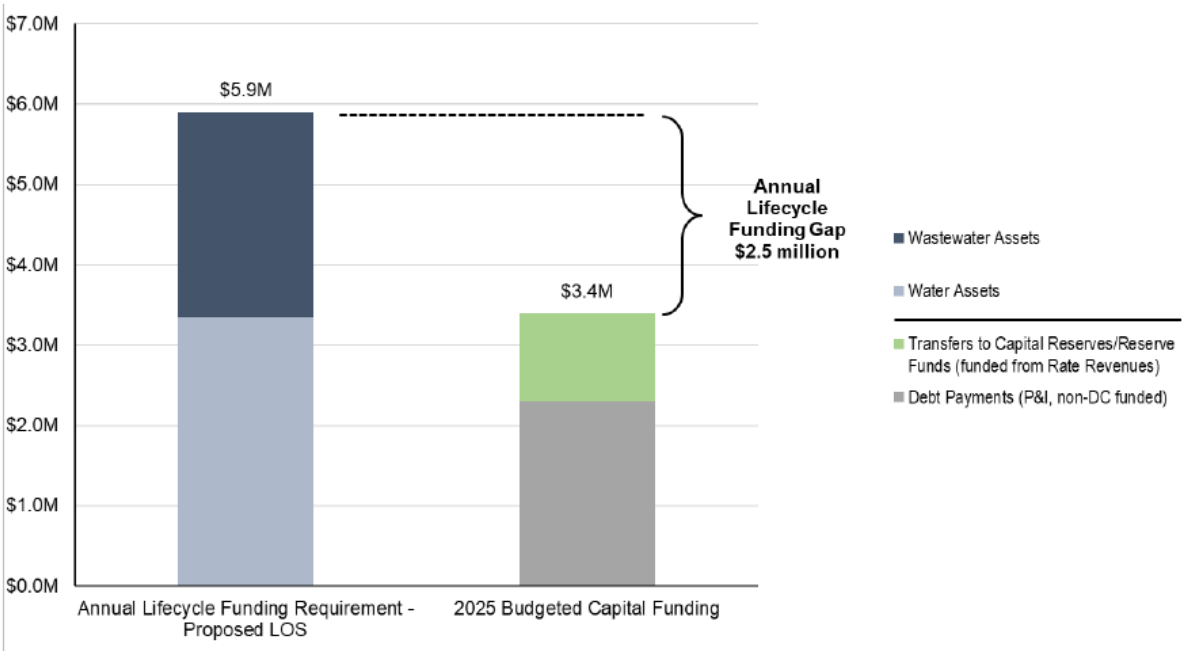
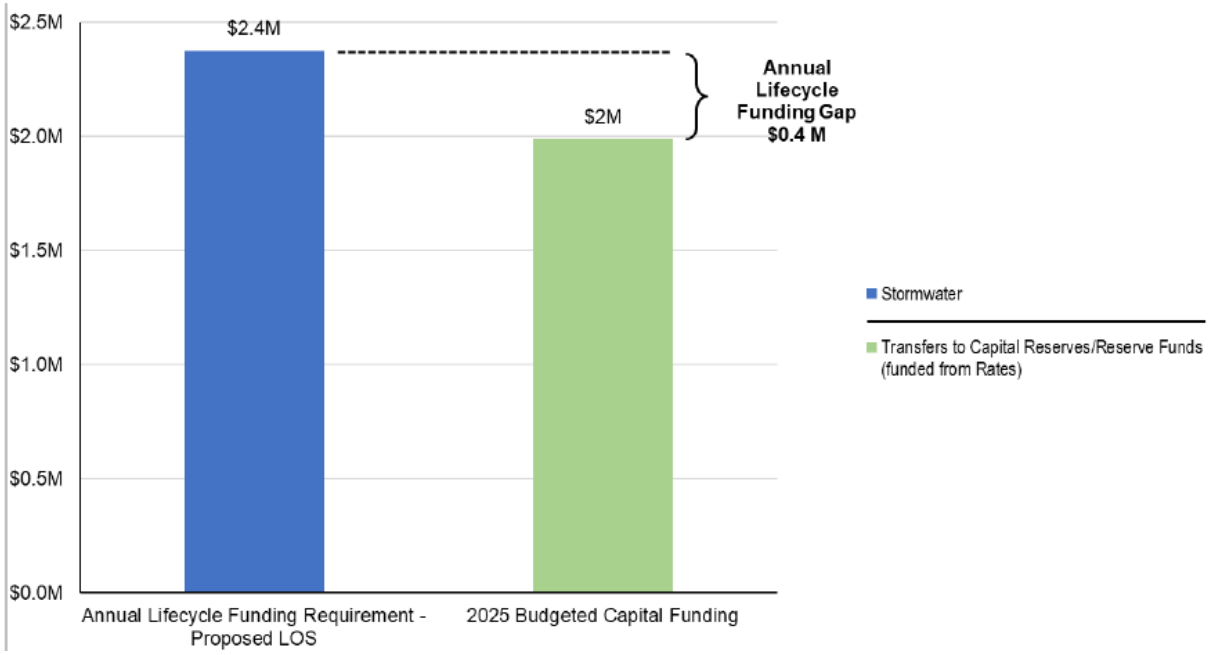


Figure 15-3: Annual Lifecycle Funding Targets vs. Budgeted Capital Funding – Stormwater



15.3 Capital Expenditure Forecast

The financial strategy incorporates a combined 10-year (2025 to 2034) capital expenditure forecast for the Town's assets is based on the 2025 capital budget and the lifecycle activities identified in the Town's Asset Management Plan. Growth-related projects from the Town's 2025 Budget Book have also been incorporated. Over this period, the Town is expected to invest approximately $281.5 million in capital renewal and growth projects. Of that total, the rate-funded capital projects will account for $61.8 million in that period. The tax-supported infrastructure accounts for $219.7 million.

As part of this plan, the forecast for the tax-supported infrastructure was extended by 5 years for a total of 15 years. For this subsequent period (2035 to 2039), the annual capital expenditures are estimated based on the average capital expenditures over the initial 2025 to 2034 period for the tax-supported infrastructure only. This extended timeline for tax-funded assets to ensure a balanced and sustainable funding level. No

additional growth-related projects are assumed beyond 2034. Over the 15-year capital plan, the tax-supported infrastructure accounts for $308.5 million, including $54.2 million in growth-related works identified in the 2025 Budget.

The total investment required for both rates- and tax-supported assets over the Town's 15-year capital expenditure forecast amounts to $403.4 million.

15.4 Funding

This funding forecast was based on the funding sources identified in the Town's 2025 budget.

The lifecycle costs required to sustain established level of service targets are being partially recovered through several external funding sources:

- OCIF formula-based funding is assumed to remain based on the Town's 2025 allocation, then reduced to 75% after 2026. It is noted that the Ministry of Infrastructure recently shifted from using historical costs to using replacement costs in the formula used for calculating annual OCIF funding allocations. As a result of this formula change, the Town's OCIF allocation may continue to change in the coming years. The amount of OCIF funding will need to be monitored by the Town's staff and, if a significant variance occurs relative to the estimate provided in this asset management plan, the financial strategy may need to be updated.
- CCBF funding has been shown as a stable and long-term funding source for eligible capital projects. Annual funding estimates are provided based on the Town's 2025 Budget Book.

This financial strategy has been developed to be fully funded by grants, reserves, taxes, rates, debt, or other funding sources to ensure no funding shortfall. This means, however, that if identified grants are not received at expected amounts, shortfalls may present themselves. In such an event, the difference could be made up through increases to the tax levy/user rates over and above those presented hereafter.

Through discussions with the Town's staff, the financial strategy was designed to phase-in annual contributions towards capital, such that the Town reaches full lifecycle funding levels by 2039 for tax-supported assets. For rate-supported assets, the strategy reflects Council-approved rate increases and follows the same phased approach, reaching full funding by 2034 for water, wastewater and stormwater.

15.5 Tax Levy Impact

This section presents the overall impacts on the Town's general tax levy of gradually eliminating the infrastructure funding gap with respect to tax-funded assets. As noted in section 2.2, the Town is currently facing an annual infrastructure gap of approximately $3.4 million. As also noted in that section, the Town allocated approximately $13.6 million in its 2025 budget towards capital-related needs for its tax-funded infrastructure assets. Of that portion, approximately $8.6 million (comprising debt payments and contributions to capital reserves and reserve funds) was sourced directly from the Town's 2025 general tax levy. The remainder was sourced from on-going transfer payments revenues (i.e., OCIF and CCBF).

To support the Town's capital program over the forecast period, both non-D.C. debt and D.C.-related debt have been assumed. These debt assumptions are limited to funding capital-related needs that cannot be financed through reserves, development charges, grants, or other external sources.

The total amount of non-D.C. debt financing for tax-supported capital over the 15-year forecast period (i.e., 2025 to 2039) is estimated at $14.1 million.

The total amount of D.C.-related debt financing, which will ultimately be recovered through future development charge revenues, is estimated at $15.6 million over the 15-year forecast period.

Consideration for cash flow and positive reserve fund balances has been included in setting the capital reserve transfer amounts.

Through consultations with Town staff, the financial strategy was designed to eliminate the tax-based infrastructure funding gap over a 15-year timeframe (i.e., by 2039). Extending the timeframe from 10 to 15 years has multiple benefits for the Town, while minimizing delays in achieving the proposed levels of service targets, achieving 67% of the PLOS by year 10, and 100% by year 15. This approach balances affordability and financial sustainability of the tax levy for taxpayers. It also provides the necessary flexibility in timelines to allow the Town to achieve it's goals for tax-funded assets with regards to data enhancement that will strengthen the Town's understanding of asset inventories, conditions and current performance. This will position the Town to use evidenced-based, prioritized decision-making processes across all aspects of the asset lifecycle, from acquisition, to operations and maintenance and renewals and

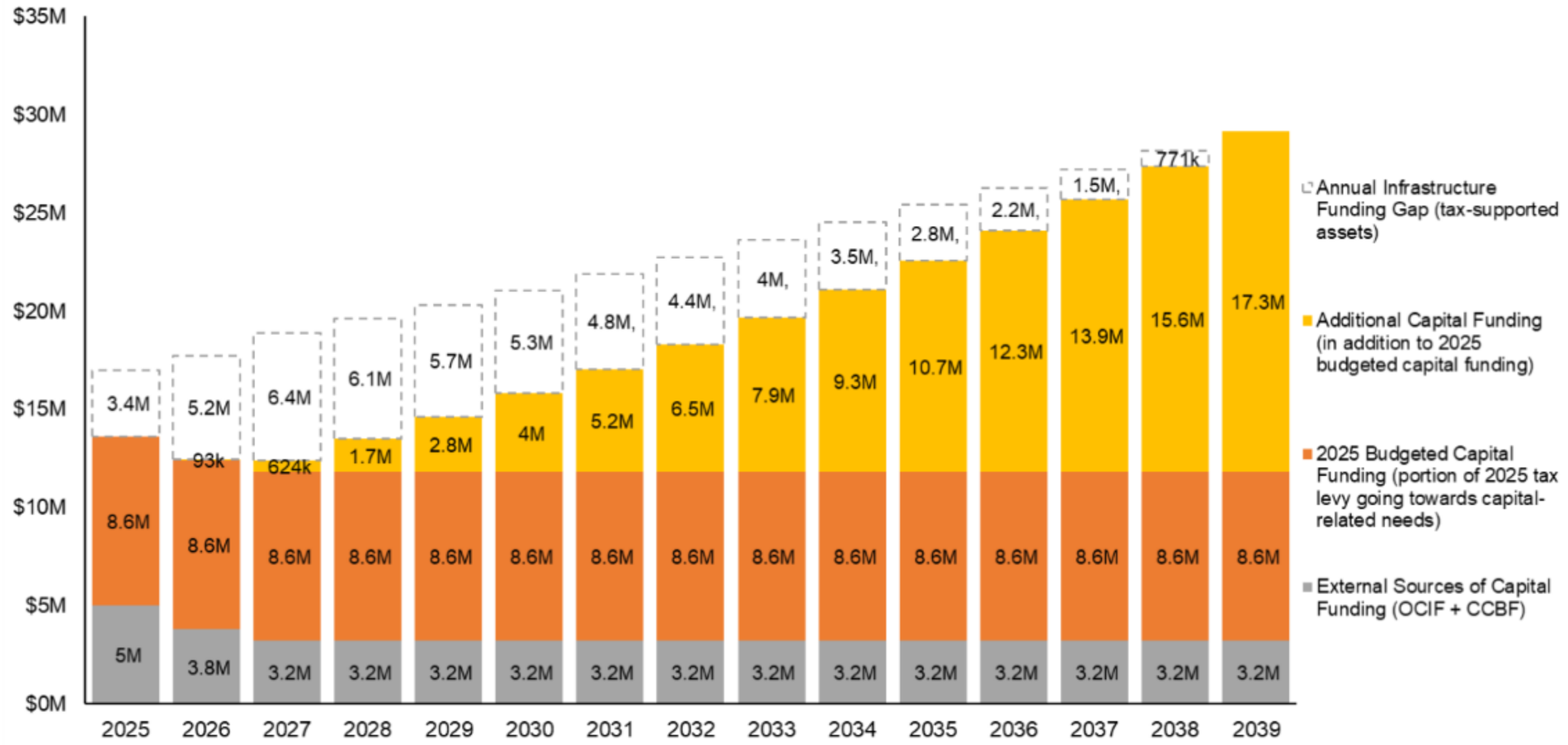
replacements. As a result, the Town will be able to develop targeted asset lifecycle programs based on current, complete data to make achieve the maximum return on all resource investment.

To accomplish this, the strategy recommends phasing in an annual tax levy increase of 1.6 percent towards the capital infrastructure. Figure 15-4 illustrates the capital funding forecast for the Town's tax funded assets to eliminate the infrastructure funding gap with respect to tax-supported assets by 2039.

If additional funding sources become available (as mentioned above), or if maintenance practices allow for the deferral of capital works, the impact on the capital portion of the Town's tax levy would potentially decrease.

As mentioned in section 15.4, this strategy aims to fully fund the annual lifecycle requirements by 2039 using a phased-in approach. If the Town adopts a tax rate that is less than what is noted above, then achieving the annual lifecycle target requirements will be delayed beyond the 2039 estimated timeframe.

Figure 15-4: Capital Funding Forecast (Inflated) – Tax Supported



15.6 Rate Supported Impact

Similar to the tax-supported impacts, the rate-supported analysis aims to forecast a consistent, yet increasing, annual investment in water, wastewater, and stormwater capital so that the excess annual funds can accrue in capital reserve funds..

Non-D.C. debt has been assumed over the forecast period to address the portion of the capital program not funded from reserves or grants. The debt is estimated at $19.0 million for rate-supported capital programs over the 10-year period (i.e., 2025 to 2034).

Consideration for cash flow and positive reserve fund balances has been included in setting the capital reserve transfer amounts.

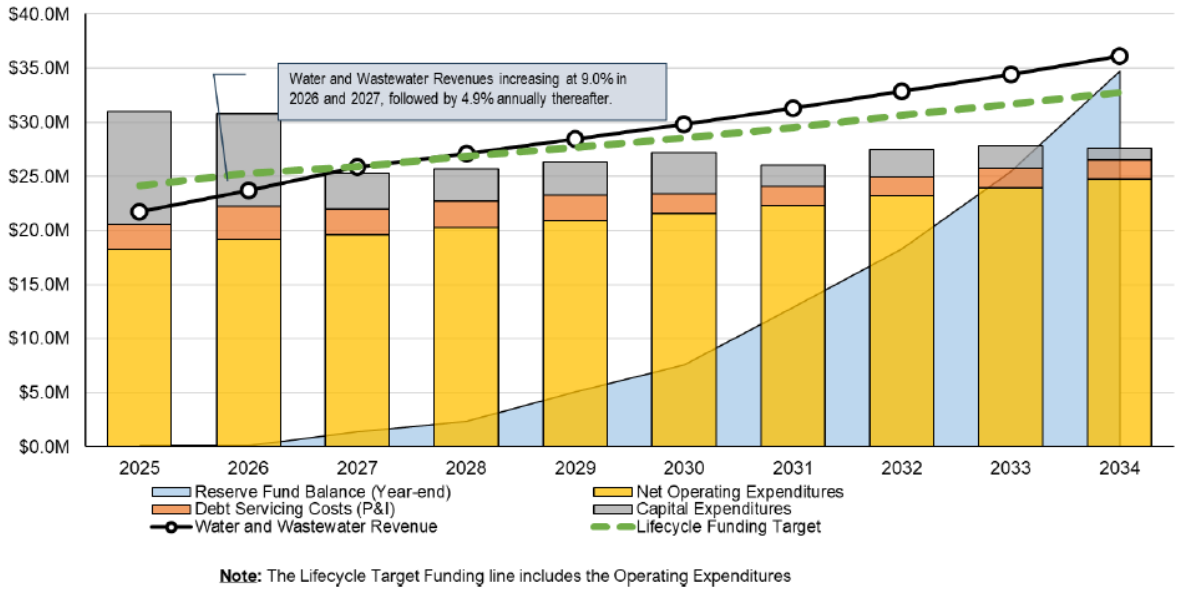
Based on discussions with Town's staff, water and wastewater revenues are projected to increase by 9% in 2026 and 2027, followed by 4.9% annually thereafter. Stormwater revenues are projected to increase by 2% annually. These projections align with Council-approved rate increases. Using the Town's own available funding sources (i.e., water, wastewater, and stormwater rates), the recommended lifecycle management strategy is forecasted to be fully funded by 2034 for water, and by 2030 for wastewater. With respect to stormwater, as the Town continues to update its understanding of the condition of the stormwater network it will identify any funding gaps and address them within the 2034 time horizon.

The timing of the lifecycle management strategy identified above includes inflationary adjustments to the Town's operating costs and revenues (operating inflation for water and wastewater is 3% for 2026 and 2027, then 2% annually thereafter, while stormwater is capped at 2% annually). If, however, other funding sources become available (as mentioned above), or if maintenance practices allow for the deferral of capital works, the timing to achieve full funding would potentially shorten.

As mentioned in section 2.4, this strategy aims to fully fund the annual lifecycle requirements using a phased-in approach. If the Town's water, wastewater, and stormwater revenues are less than what is noted above, then achieving the annual lifecycle target requirements will be delayed beyond the estimated timeframes identified above.

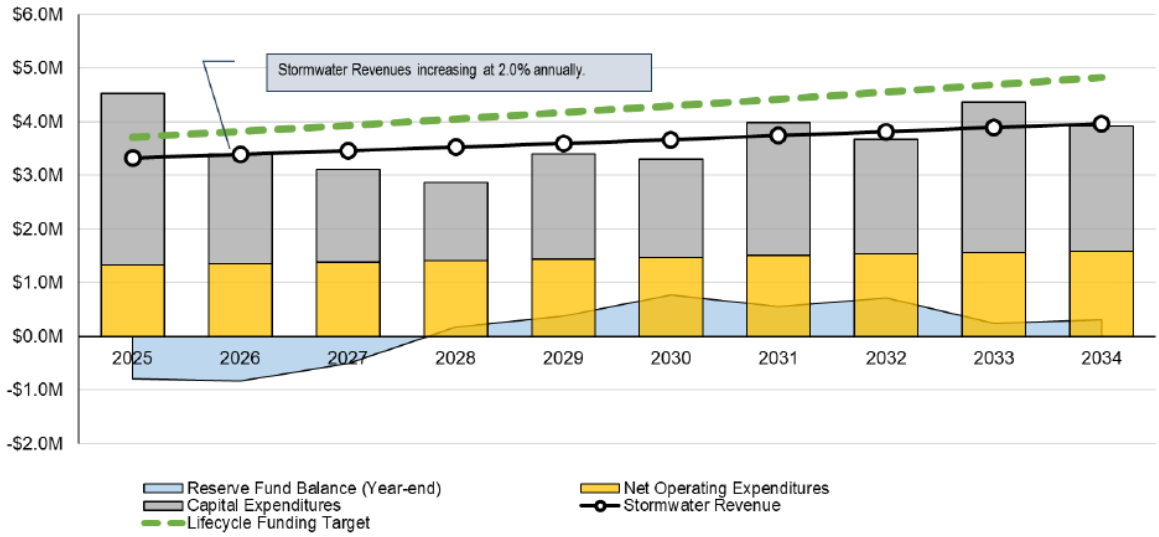
Figure 15-5 and *Figure 15-6* illustrate the overall rate-supported financial forecast (excluding D.C.-related items).

Figure 15-5: Overall Financial Forecast (Inflated) – Water and Wastewater



Note: The Lifecycle Target Funding line includes the Operating Expenditures

Figure 15-6: Overall Financial Forecast (Inflated) – Stormwater



Note: The Lifecycle Target Funding line includes the Operating Expenditures

16 Conclusions

This report consolidates the findings of the four Technical Memorandums—State of the Infrastructure, Levels of Service, Lifecycle Management Strategy, and Financial Strategy—into a single document that fulfills the requirements of O.Reg 588/17, Section 6. Together, these components provide the Town with a clear, evidence-based foundation to guide service delivery, infrastructure renewal, and long-term financial sustainability.

The updated SOTI for the Town's core infrastructure assets confirmed that the majority of these assets remain in Good to Very Good condition, reflecting the Town's ongoing investment in maintenance and renewal. However, areas of vulnerability were identified, including aging wastewater forcemains and a portion of the stormwater mains that have exceeded their ESL. The analysis highlights the importance of continued monitoring and data collection for asset categories with limited or outdated condition information.

Building on this baseline, the development of PLOS established clear, measurable targets across all asset categories. The framework balances community expectations, Council priorities, and operational realities, while embedding flexibility to adapt as new information and technologies become available.

To support achievement of these targets, lifecycle management strategies were developed for each asset group. These strategies apply a structured, risk-based approach to intervention timing, ensuring the right action is taken on the right asset at the right time. By incorporating preventative maintenance, renewal, and replacement activities, the strategies minimize total lifecycle costs, extend asset life, and enhance resilience against climate change and other future challenges.

The financial strategy translates the Town's lifecycle needs into a clear, phased funding framework. As of 2025, the annual lifecycle funding target is approximately $25.3 million, rising to $26.3. Current contributions leave an annual funding gap of about $6.3 million, with the greatest pressures on tax-supported assets. To close this gap, the strategy phases in increases such that full lifecycle funding is achieved by 2039 for tax-supported assets, by 2034 for water, and by 2030 for wastewater, with stormwater targeted within the same horizon. This approach combines levy increases averaging 1.6% annually, Council-approved rate adjustments, prudent reserve and debt management, and ongoing pursuit of external funding opportunities. Importantly, it positions the Town to embed asset management within the annual budget process, supported by annual reporting to Council and required five-year AMP updates, ensuring the strategy remains a living document that adapts to new data and evolving priorities

17 Next Steps & Recommendations

The Town's 2024 non-core Asset Management Plan provided a comprehensive understanding of facilities, parks, fleet, and other non-core assets. With this 2025 work to define Proposed Levels of Service and the Financial Strategy, Georgina has now established the performance and funding framework needed to manage its services. Looking ahead, the Town will complete its full core Asset Management Plan in 2026, integrating the outcomes of this work into a single, comprehensive plan.

To ensure the Proposed Levels of Service and Financial Strategy are successfully embedded into municipal practice, the following actions are recommended:

- **Annual Compliance Reporting** – deliver a July 1 Council progress report each year, starting Q4 2026, that summarizes progress in advancing the strategy. To streamline this process and improve transparency, the Town should consider implementing a front-end dashboard linked to the Town's lifecycle model. Such a dashboard can pull from the latest available datasets (condition, risk, costs) to automatically generate progress indicators, highlight gaps, and produce visual summaries for both staff and Council.
- **Investment Alignment** – use this AMP framework to guide capital and operating budget submissions over the next 10 years, ensuring consistency between service targets and financial allocations.
- **Milestones** – endorse the PLOS in 2025; integrate them into annual budgets beginning in 2026; complete the core AMP update in 2026 in accordance with O.Reg. 588/17; and continue with five-year updates thereafter. An additional consideration would be for the Town to take this opportunity to combine their core and non-core AMPs into one comprehensive document during the 2026 update. This would result in one singular plan update every 5 years.
- **Data and Risk Improvements** – continue to enhance data maturity through addressing identified data gaps, implement enhanced monitoring technologies, and refine risk models to inform future decision-making.
- **Policy and Plan Refresh Cycles** – maintain the Strategic Asset Management Policy and AMPs as living documents, updated at least every five years with formal Council approval.
- **Capacity Building** – provide ongoing staff training and cross-departmental workshops to strengthen asset management knowledge, ensure consistent use of the framework, and embed asset management practices into daily operations.

In conclusion, this report represents a significant milestone for the Town of Georgina. By sequencing its work across the 2024 non-core AMP, this 2025 Proposed LOS and

Financial Strategy update, and the proposed 2026 core AMP update, the Town is demonstrating a clear, proactive, and regulatory-compliant pathway for asset management. This disciplined, forward-looking approach will enable the Town to strengthen transparency, improve evidence-based decision-making, and ensure sustainable service delivery for the community for decades to come.

Appendix A – Lifecycle Management Strategies

Water

The water infrastructure lifecycle management strategy focuses on maintaining safe, reliable drinking water distribution throughout the Town. This framework addresses watermains, valves, hydrants, and associated appurtenances while integrating York Region water conservation initiatives and preparing for future condition assessment programs. By implementing these lifecycle activities, the Town can work towards achieving service levels for water quality, system reliability, and pressure consistency while minimizing service disruptions and emergency repairs.

Table 1: Water Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, financial plans, User Rate Study, capacity studies, AMPs, Drinking Water Quality Management Standard (DWQMS) Compliance, Form 1 Authorization) that may result in and require: • Policies, procedures/standards and by-laws (e.g. municipal servicing connection policy; Break History Mapping; Back Flow Prevention By-Law) • Geographic Information System (GIS) data analysis and mapping updates	As required	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning between service areas. • Reduced understanding of climate change impacts. • Inaccurate GIS data, and poor data management between systems. • Non-compliance with DWQMS Element 3 (Commitment & Endorsement), Element 4 (QMS Representative), Element 20 (Management Review), and Form 1 requirements. • Risk of misalignment with MECP expectations for long-term system capacity and infrastructure renewal planning. • Incomplete or outdated planning may hinder adherence to O. Reg. 588/17	• Alignment of asset management documents and processes to integrate recommendations from all master plans, service studies, and community engagement activities to maximize planning efficiency, reduce duplication, increase alignment, and support proactive planning and analysis. This will streamline forecasting, business plan development, and understanding of asset priorities and needs. In particular: ○ Integration of all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning. • Integration of climate change risks and other studies with on-going condition assessment and monitoring programs to support coordinated planning within the water distribution network and across interconnected services (e.g. roads, linear sanitary and stormwater, etc.), and to support proactive analysis of climate change impacts to support risk planning. • Support staff in receiving software training to keep them up to date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets relevant to asset management track information in a consistent manner, allowing for ease of access and data transfer.
	Water usage reduction incentives (Region)	Ongoing	• Unsustainable demand on water system. • Increasing costs to increase system capacity and performance, unrelated to population growth. • Inability to meet MECP expectations related to water conservation and demand management under Permit to Take Water (PTTW) conditions or	• Develop a community engagement strategy to support consistent outreach and education with stakeholders. • Use priorities of water reduction program to guide LOS metrics and use outcomes of LOS framework analysis to support community engagement and education and assess success of program.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			Drinking Water Works Permit (DWWP) conditions.	
	Condition Assessment Program (Linear inspection)	Future Initiative	• Uncertainty about asset condition leading to increased likelihood of unexpected asset failure. • Inability to demonstrate proactive risk management or due diligence under MECP inspections.	• Integration of condition assessment data outputs into asset management hierarchy/asset information to streamline data uploads. • Incorporate condition assessments into other plans and reports.
	Condition Assessment Program (Water Booster Stations inspection)	Once Every 5 Years	• Reduced ability to identify mechanical or structural deficiencies before failure. • Increased risk of service interruptions impacting water supply and pressure. • Higher lifecycle costs due to reactive maintenance and emergency response. • Greater risk of non-compliance with regulatory requirements or operating permits. • Missed opportunities to optimize asset renewal and rehabilitation planning.	• Standardize inspection protocols and rating systems to ensure consistent assessments across booster stations. • Incorporate findings into capital planning, asset renewal forecasts, and risk-based prioritization. • Coordinate assessments with SCADA/telemetry data to identify performance trends and anomalies. • Establish a centralized tracking system (e.g., CMMS or asset registry) to document findings, schedule reassessments, and monitor condition trends over time. • Use assessment outcomes to support funding applications or grant programs that require documented asset condition.
Operations and Maintenance	Repairs (watermains, services, chambers, valves, curb stops, hydrants, appurtenances)	As required	• Decline in service level due to unexpected asset failure and resulting service outage. • Non-compliance with DWQMS Element 15 (Infrastructure Maintenance), particularly for documented corrective actions and maintenance. • Potential for non-conformance with Emergency Management and Spill Reporting under Ontario Regulation 675/98.	• Leverage condition program to support proactive repairs and maintenance programs to maximize service life of assets and quality of asset performance. • Integrate findings of condition assessment work to proactively identify asset candidates for maintenance activities. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of longer-term preventative maintenance programs and help build business cases to secure funding for these programs. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures by pipe material or manufacturer, for example.
	Exercise valves (mainline/curb stops)	Annually/As Required	• Decline in service level due to unexpected asset failure. • Localized flooding due to asset failure.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Increasing costs due to asset failure (e.g. water loss due to leaking, increased maintenance call-outs, etc.) • Inability to isolate sections during emergency repair may violate DWWP operational constraints.	
	Valve replacements	As required	• Decline in service level due to unexpected asset failure. • Localized flooding due to asset failure. • Increasing costs due to asset failure (e.g. water loss due to leaking, increased maintenance requests, etc.)	
	Watermain flushing (unidirectional)	Annually	• Unexpected pipe blockages, leading to pipe failure and service disruptions. • Non-compliance with DWQMS Element 14 (Sampling, Testing, Monitoring) due to inability to maintain water quality in dead-end mains.	
	Hydrant inspection including: • Full inspection: open/close operation, pressure testing, flow and branch valve check • Winter inspection: ensuring barrel has no water		• Decline in quality of fire service response. • DWQMS Element 15 breach if maintenance not documented.	
	Leak Detection Program	Ongoing	• Localized flooding due to asset failure. • Increasing costs due to asset failure (e.g. water loss due to leaking, increased maintenance call-outs, etc.)	
Renewal (Rehabilitation & Replacement)	CIPP Lining and Cathodic Protection	Future Initiative	• Reduced asset service life resulting in higher capital costs due to more frequent full line replacement.	• Incorporate findings of condition assessment to reinforce professional judgement when proactively identifying candidates for relining programs.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Replacement of watermains, services, chambers, valves, curb stops, hydrants, appurtenances	When asset reaches poor condition, when relining not undertaken	• Overall decline in water service level due to increased number of outages and service disruptions. • Localized flooding due to asset failure. • Other service area disruptions due to unplanned closures and repairs – i.e. road closures, pedestrian walkways, etc.	• Use an integrated planning approach to coordinate renewal projects with other near-by assets (e.g. in shared right of way, or physically close proximity) where feasible. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by the contractor in an editable format at the end of the project. • Ensure renewal, rehabilitation and replacement programs are aligned with non-infrastructure activities, such as master plans, studies and assessments.
Disposal	Removed as part of the project or abandoned	Coordinated with watermain replacement	• Inaccurate data and information if mapping indicate pipes are removed, but not recorded in other registers. • Improper disposal tracking may result in inaccurate TCA reporting and non-compliance with O. Reg. 588/17 financial strategies.	• Track information in asset register, use work order management software if available, and/or request contractor to submit editable digital documentation at the end of project to record disposed assets. • Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.
Expansion and Service Improvements	Pipe upsizing	Based on growth, modelling and studies	• Poor distribution service capacity resulting in a failure to achieve PLOS.	• Align projects with recommendations from non-infrastructure solutions • Adopt an integrated planning approach to coordinate expansion projects with other near-by assets (e.g. in shared right of way, or close proximity) to maximize efficient use of resources and timing. • Maintain current data by requesting project data submission as part of close-out of project to be supplied from the contractor in an editable format (e.g. AutoCAD, excel, CVS, etc.) • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity to support expansion. • Align asset register with financial register to streamline tracking asset expenditures against funding to compare with levels of service. • Use PLOS in coordination with other non-infrastructure solutions (e.g. policies around fleet electrification) to monitor for compliance with targets.
	Expansion – new subdivisions	Based on growth, modelling and studies	• Uninhabitable subdivisions without core service provision. • Potential DWWP non-compliance if upgrades not completed before new demand is added.	
	Special Service Levy	Ratepayer Request and Council Approval/Provincial Authority Order	• Unsustainable funding level resulting in decline in overall Level of service.	

Wastewater

Georgina's wastewater infrastructure lifecycle management encompasses collection systems and sewage pumping stations critical to public health and environmental protection. The strategy emphasizes system optimization and the integration of new technologies to maintain regulatory compliance while managing aging infrastructure. These activities support the Town's levels of service for system reliability while managing overflow risks and environmental impacts.

Table 2: Wastewater Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, User Rate Study, financial plans, capacity studies, AMPs, models) that may result in and require: • Amendments to the Consolidated Linear Infrastructure Environmental Compliance Approval, sewer modelling, I & I reduction initiatives, Policies, standards/procedures and by-laws (Service Lateral Policy) • Geographic Information System (GIS) data analysis and mapping updates	As required	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning between service areas. • Reduced understanding of climate change impacts. • Inaccurate GIS data, and poor data management between systems. • Risk of incomplete or outdated asset information contributing to CLI-ECA Schedule A and B non-conformance.	• Alignment of asset management documents and processes to integrate recommendations from all master plans, service studies, and community engagement activities to maximize planning efficiency, reduce duplication, increase alignment, and support proactive planning and analysis. This will streamline forecasting, business plan development, and understanding of asset priorities and needs. In particular, integration of all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning, LOS frameworks and Risk Management strategies. • Integration of climate change risks and other studies with on-going condition assessment and monitoring programs to support coordinated planning within the water distribution network and across interconnected services (e.g. roads, watermains, stormwater, etc.), and to support proactive analysis of climate change impacts to support risk planning. • Support staff in receiving software training to keep them up-to-date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets relevant to asset management track information in a consistent manner, allowing for ease of access and data transfer.
	Condition Assessments Program (Linear inspections)	Annual program	• Reduced understanding of sanitary pipe network condition. • Increasing reactive maintenance costs. • Increasing service disruptions and outages, both within Sanitary service and in neighbour services (e.g. transportation and roads network) • Inability to demonstrate system condition awareness as required under CLI-ECA Schedule C.	• Use data management standard to ensure data collected during CCTV inspection aligns with existing sanitary network register, streamlining updating and QA/QC work. • Align and integrate condition assessment and monitoring program with preventative maintenance to support business case for on-going and/or expanded CCTV program.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Condition Assessments (Pumping Stations inspections)	Once every 5 Years	• Reduced ability to proactively identify and address deterioration or performance issues. • Increased likelihood of unexpected equipment failures and service outages. • Higher emergency repair costs and operational disruptions. • Greater risk of non-compliance with regulatory requirements. • Shortened asset life due to undetected wear or damage. • Non-compliance with site-specific Environmental Compliance Approvals (ECAs) or CLI-ECA Schedule C maintenance expectations.	• Align condition assessments with asset lifecycle strategies to prioritize high-risk or aging stations. • Develop a standardized inspection checklist and reporting template to ensure consistency across assessments. • Incorporate findings into capital planning cycles to secure funding for major rehabilitation or replacement needs. • Utilize CMMS to log and track inspection results, enabling data-driven decision-making. • Schedule assessments to coincide with major maintenance events to reduce downtime and optimize resources.
Operations and Maintenance	Reactive and preventative maintenance: • Spot repair • Service lateral repairs • Appurtenances repairs • Flushing • Reaming • Link seal • Pumping station maintenance	Following preventative maintenance programs, or as needed	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of sewer backups. • Increasing risk of regulatory non-compliance, and associated fines and reputational impacts.	• Integrate findings of condition assessment work to support short term, immediate proactive maintenance activities to minimize reactive maintenance. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Track work orders in CMMS or equivalent to support KPI reporting and identify trends in asset failures (e.g. by pipe material or manufacturer).
Renewal (Rehabilitation & Replacement)	Grout and seal, main and service lining, open cut replacements	Based on inspections and condition assessments	• Reduced asset service life resulting in higher capital costs due to more frequent, larger-scale sewer replacement.	• Incorporate findings of condition assessment to proactively identify candidates for relining programs.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Pumping station upgrades • Minor Rehabilitation (e.g., programmable logic control replacement, pump replacement, valving) • Major Rehabilitation – any time the system needs to be bypassed (e.g., structural repairs, motor control cabinet, valving, header system)	As required	• Decreasing level of service due to unplanned asset failures and outages. • Increasing risk of regulatory non-compliance and associated fines and reputation impacts. • Increased likelihood of adverse environmental events (e.g., bypasses or spills) triggering MECP response. • Decreasing service capacity. • Negative impact on surrounding environment in the event of unexpected asset failure leading to leakage or discharge.	• Align projects with recommendations from non-infrastructure solutions to ensure compliance with organizational objectives and efficient use of resources. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures (e.g., by pipe material or manufacturer).
	Major equipment or structural building component replacement. Open cut replacement of mainline pipe and connected assets	When assets reach end of service life	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of sewer blockages and backups. • Increasing risk of regulatory non-compliance, and associated fines and reputational impacts. • Decreasing service capacity.	• Align projects with recommendations from non-infrastructure solutions to ensure compliance with organizational objectives and efficient use of resources. • Incorporate findings of condition assessment to proactively identify candidates for replacement. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures by pipe material or manufacturer, for example.
Disposal	Building and equipment disposal	Coordinated with asset replacement	• Risk of non-compliance with regulatory requirements. • Inefficient use of land and building resources due to leaving vacant structure in place, rather than repurposing/renewing the lot. • Risk of inaccurate asset records impacting financial audits and PSAB/TCA compliance.	• Align projects with recommendations from non-infrastructure solutions to ensure compliance with organizational objectives and efficient use of resources. • Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Equipment re-use	As required where possible	• Increased costs due to purchasing new when re-use is possible. • Increased negative environmental impacts due to purchasing new.	• Leverage asset management committees or similar to engage other service areas in conversation about equipment re-use options and/or equipment needs.
Expansion and Service Improvements	Pump/Equipment Upsizing	As identified in the Master Plan and Capacity Studies/Analysis	• Unable to support increasing demand due to population growth.	• Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to assess ability of existing system to meet growth and demand requirements, and use outcomes of analysis to support integrated planning to drive project identification and prioritization across plans, studies and recommendations, and integrate those recommendations into budgeted, actionable project plans. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity to support expansion. • Support staff in on-going training to keep knowledge and skills up-to-date with relevant software systems and requirements governing those systems. • Align asset register with financial register to streamline tracking asset expenditures against funding to compare with levels of service.
	Expansion and upsizing	Through development	• Unable to support increasing demand due to population growth. • Service outages due to unsustainable demand on existing network of assets.	
	Supervisory Control and Data Acquisition (SCADA) system and software upgrades	As needed	• Unexpected software outages resulting in loss of data and system control. • Unsupported SCADA system due to being out of date.	
	Special Service Levy	Ratepayer Request and Council Approval/Provincial Authority Order	• Unsustainable funding level resulting in decline in overall Level of service.	

Stormwater

Stormwater infrastructure management focuses on protecting properties and the environment through effective drainage and water quality control systems. The strategies address both linear infrastructure (pipes and culverts) and facilities (ponds and outlets) while incorporating climate resilience measures and regulatory compliance requirements. These lifecycle activities enable the Town to meet service level objectives for flood prevention, water quality protection, and system capacity during extreme weather events.

Table 3: Stormwater Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, financial plans, capacity studies, AMPs, Master Drainage Plan, models) that may result in and require: • Municipal drains assessment • Consolidated Linear Infrastructure Environmental Compliance Approvals • Policies, procedures/standards and by-laws • Geographic Information System (GIS) data analysis and mapping upgrades	As required	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning between service areas. • Reduced understanding of climate change impacts. • Inaccurate GIS data, and poor data management between systems.	• Alignment of asset management documents and processes to integrate recommendations from all master plans, service studies, and community engagement activities to maximize planning efficiency, reduce duplication, increase alignment, and support proactive planning and analysis. This will streamline forecasting, business plan development, and understanding of asset priorities and needs. In particular, integration of all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning, LOS frameworks and Risk Management strategies. • Integration of climate change risks and other studies with on-going condition assessment and monitoring programs to support coordinated planning within the water distribution network and across interconnected services (e.g. roads, watermains, sanitary sewer, etc.), and to support proactive analysis of climate change impacts to support risk planning. • Support staff in receiving software training to keep them up-to-date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets relevant to asset management track information in a consistent manner, allowing for ease of access and data transfer. • Ensure asset management plan reflects policy, and analysis is updated to reflect implementation of a stormwater utility rate.
	Sump Pump Policy Stormwater Utility Implementation	Future Initiative	• Increased localized flooding during storm events. • Unsustainable funding levels to support service delivery performance expectations.	
	Flood Implementation Plan	As required	• Reduced understanding of flooding-related risks. • Inability to proactively plan for flood risk events. • Reduced coordination between service areas with regards to flood risk mitigation, both through O&M programs and renewal/rehabilitation programs. • Failure to identify and plan for flood risks may breach local floodplain regulations or Provincial Policy Statement (PPS) hazard management requirements.	
	Conduct community engagement to define priorities and standards to	Future Initiative	• Inequitable stakeholder engagement around service delivery expectations. • Negative impacts to reputation due to limited engagement.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	establish budgeting and service levels for the future.			• Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Review previously completed community engagement activities, if available, to establish a baseline for the current community engagement activity, where applicable.
Operations and Maintenance	Condition Assessment of Linear Assets (Mains & culvert inspections, CCTV)	As required	• Reduced understanding of pipe network conditions. • Increasing reactive maintenance costs. • Increasing service disruptions and outages, both within stormwater service and in neighbour services (e.g. transportation and roads network) • Increased I&I when system is not working as intended. • Reduced ability to demonstrate due diligence during MECP compliance audits.	• Use data management standard to ensure data collected during CCTV inspection aligns with existing stormwater network register, streamlining updating and QA/QC work. • Consider inclusion of Stormwater Collection Network in annual CCTV program to align with industry best practice. • If implemented, use condition program to support development of a proactive flushing and repair programs by using data to identify candidates for lifecycle activities. • Integrate findings of condition assessment work to support short term, immediate proactive maintenance activities to minimize reactive maintenance. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Track work orders in CMMS or equivalent to support KPI reporting, look for trends in asset failures by pipe material or manufacturer, for example.
	Flushing (mains, culverts) to remove debris	As required	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of localized flooding or backups due to blockages. • Increasing risk of regulatory non-compliance, and associated fines and reputational impacts. • Failure to meet internal standards and policy around stormwater management and flooding. • Risk of blocked storm sewers resulting in urban flooding and environmental discharge violations.	
	Pipe spot repairs (Appurtenances repairs)	As required	• Reduced asset service life resulting in higher capital costs due to more frequent, larger-scale pipe replacement. • Unplanned service disruptions and outages due to unexpected asset failure. • Increased I&I when system is not working as intended	
	Catch basin, lateral and maintenance hole repairs	As per inspections	• Reduced asset service life resulting in higher capital costs due to more frequent, larger-scale pipe replacement. • Unplanned service disruptions and outages due to unexpected asset failure.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Risk of sediment transport violating discharge limits or leading to downstream infrastructure failures.	
	Groundwater management systems and catch basin cleaning to remove debris and sediment	As per inspection, Catch basin cleaning occurs biennially	• Reduced asset capacity due to sediment and debris buildup. • Downline asset failure due to debris and sediment movement into pipes. • Localized flooding, and associated service disruption.	
	Condition Assessment of SWM Facilities (E.g., ponds): • Includes bathymetric surveys, sediment sampling and depth measurement, visual inspections, thermal regime monitoring	As required/ Future Initiative	• Reduced understanding of facility condition. • Increasing reactive maintenance costs. • Increasing service disruptions and outages	
Renewal/ Rehabilitation	Erosion control	As per inspections	• Increased rate of erosion leading to reduced service delivery in surrounding assets. • Increased costs to address and correct erosion issues. • Increased risk of unpermitted discharges or downstream impacts triggering regulatory action.	• Align projects with recommendations from other non-infrastructure solutions to ensure compliance with organizational objectives and efficient use of resources. • Consider implementation of annual erosion control inspection to monitor for changes. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures. • Incorporate inspection program into asset data to document whole-life needs of associated assets. This will support long-
	Inlet/Outlet and outfall	As per inspections	• Reduced overall level of service due to decline in asset condition. • Service disruptions and unplanned outages.	
	Sewer Lining	As Required	• Reduced asset service life resulting in higher capital costs due to more frequent, larger-scale sewer replacement.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
				term planning (monitoring for change over time), minimize erosion risk, manage cost risk, and streamline business planning activities. • Adopt an integrated planning approach to coordinate work between near-by assets to ensure effective use of resources and project timing.
Replacement/ Disposal	Pipe replacement Service lateral replacement (open cut replacement of mainline pipe and connected assets)	End of life	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of localized flooding or backups due to blockages. • Increasing risk of regulatory non-compliance, and associated fines and reputational impacts. • Failure to meet internal standards and policy around stormwater management and flooding.	• Align projects with recommendations from other non-infrastructure solutions to ensure compliance with organizational objectives and efficient use of resources. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.
	Maintenance hole replacement	Coordinated with sewer replacement	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of localized flooding or backups due to blockages. • Failure to meet internal standards and policy around stormwater management and flooding.	
	Storm sewer structure replacement • Replace inlet/outlet structure • Stormwater outlet/headwall replace	End of life	• Decreasing overall level of service due to increase rate of service disruptions and outages. • Increasing risk of localized flooding or backups due to blockages. • Increasing risk of regulatory non-compliance, and associated fines and reputational impacts. • Failure to meet internal standards and policy around stormwater management and flooding.	
	OGS replacement	End of life	• Reduced asset capacity and service performance. • Increased risk of localized flooding.	
	SWM pond dredging/cleanouts and sediment disposal	As per inspections	• Reduced asset capacity • Increased risk of localized flooding. • Reduction of service level of surrounding services (e.g. trails, parks and recreation, etc.).	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Asset disposal coordinated with asset replacement	Coordinated with replacement/end of life	• Increased costs of capital projects.	
Expansion and Service Improvements	Conduct community engagement to define priorities and standards to establish sustainable budgets and service levels.	Future Initiative	• Inequitable stakeholder engagement around service delivery expectations resulting in inequitable LOS. • Negative impacts to reputation due to limited engagement.	• Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Review previously completed community engagement activities, if available, to establish a baseline for the current community engagement activity, where applicable. • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity (both resources, and system design) to support expansion.
	Growth needs identified based on the Development Charges and Master Servicing and Stormwater Management Report and other Secondary Plans.	Through growth and development	• Unable to support increasing demand due to population growth. • Service outages due to unsustainable demand on existing network of assets.	
	Stormwater network expansion/ upgrades to service new areas or expand capacity of existing network (pipe upsizing, new subdivisions, coordination with other services).	Through growth and development	• Reduction in LOS due to insufficient capacity. • Increased asset failure and costs due to over-used assets. • System disruption and failure due to unaccounted for climate change impacts.	

Road Infrastructure

The roads lifecycle management framework addresses Georgina's extensive transportation network. This approach balances pavement preservation, winter maintenance operations, and accessibility improvements while coordinating with underground utility work to minimize community disruption. Through systematic implementation, the Town can achieve its pavement condition targets, maintain safe driving surfaces, and ensure accessibility compliance across the network.

Table 4: Road Infrastructure Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, financial plans, capacity studies, AMPs, Regional Transportation Master Plan, traffic counting program, Active Master Transportation Plan) that may result in and require: • Sidewalk warrant study (matrix for implementing new sidewalks based on priority) • Policies, procedures/standards, and by-laws (e.g. Driveway/Access Guidelines, Ditch Alteration Policy) • Boundary Road Agreements • Geographic Information System (GIS) data analysis and mapping updates	As required/ Ongoing	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning between service areas. • Reduced understanding of climate change impacts. • Reduced understanding and coordination between various planning, studies and performance assessment activities resulting in poor future project planning and coordination, and prioritization. • Reduced understanding of the value and expenditure in service relating to land acquisition, and overall value of portfolio. • Inaccurate GIS data, and poor data management between systems. • Gaps in transportation network planning may conflict with PPS (Provincial Policy Statement) or growth plan servicing policies.	• Support staff in receiving software training to keep them up-to-date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets are maintained in a consistent manner, allowing for ease of access and data transfer. • Integrate all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning. • Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Consider impacts of recommendations on design standards (e.g. fleet equipment to support changed approach, storage facilities, etc.) • Update recommendations from assessment into lifecycle management strategy at regular intervals.
	Conduct community engagement to define priorities and standards to establish budgeting and service levels.	Future Initiative	• Inequitable identification and coordination of stakeholder service delivery priorities. • Negative impacts on reputation due to low levels of engagement.	
	Smart about salt program to reduce the impacts of de-icing salts	Ongoing	• Over-reliant on traditional winter control management programs resulting in negative environmental impacts. • Inefficient resource usage due to poor understanding of advancing technologies and options for winter control.	
	Condition Assessment Program	LCB – every 2 years	• Reduced understanding of asset condition leading to: ○ Decreased understanding of asset priorities and needs.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			○ Reduced ability to coordinate projects, programs and activities across road network. ○ Failure to maintain accurate road condition data may breach O. Reg. 588/17 obligations and hinder defensibility under O. Reg. 239/02.	
		HCB – every 2 years	• Reduced understanding of asset condition leading to: ○ Decreased understanding of asset priorities and needs. ○ Reduced ability to coordinate projects, programs and activities across road network. ○ Failure to maintain accurate road condition data may breach O. Reg. 588/17 obligations and hinder defensibility under O. Reg. 239/02.	
Operations and Maintenance	Maintenance determined through inspections, patrol, and complaints, such as: • Street sweeping/cleaning • Snow and ice removal • Line painting • Vegetation removal • Ditching	As required	• Overall reduction of levels of service due to increased rate of asset failure and resultant service disruptions and outages. • Non-compliance with O. Reg. 239/02 for winter maintenance, patrol, and visibility standards.	• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Use outputs of community engagement to support targets for maintenance programs, in addition to professional judgement. • Regularly review PLOS achievement against minimum maintenance standards to evaluate performance and support reporting and communication. • Integrate findings of condition assessment work to support short term, immediate proactive maintenance activities to minimize reactive maintenance. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance.
	Minimum maintenance standards (sidewalk inspections and road patrol)	As per O. Reg.239/02	• Increases likelihood of safety hazard for users. • Direct breach of O. Reg. 239/02 – Minimum Maintenance Standards for sidewalks and roads.	
	Reactive and preventative maintenance: • Pothole repairs • Crack sealing • Reactive maintenance or spot repairs • Curb repairs • Guiderail damage repairs • Maintenance paving • Ball bank program • Dust suppressant	As required	• Reduced asset condition leading to: ○ Increased reactive maintenance needs. ○ Decreased asset service life. ○ Increased overall costs. ○ Higher likelihood of unplanned outages and service disruptions that can impact surrounding infrastructure and services. • Failure to address known hazards may violate minimum standards and expose the municipality to liability.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	• Roadside ditch cleaning/debris removal			• Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting to identify trends in asset failures (e.g., by road class, traffic volume)
	Streetlight luminaire replacement determined by road patrol	As required	• Reduced visibility and safety • Increased crime risk • Public complaints • Energy inefficiency	• LED conversion program for energy efficiency • Regular patrol schedules • Public reporting system for outages • Coordinate with utility company where applicable
Renewal (Rehabilitation & Replacement)	Performing renewals/rehabilitations (asphalt resurfacing, surface treatment reapplication, gravel resurfacing) based on condition inspections and lifecycle renewal procedures	As required	• Reduced asset performance due to poor asset condition. • Increased operational costs due to aging infrastructure. • Increased likelihood of unplanned service disruptions and outages due to unexpected asset failure. • Increased likelihood of project costs due to increased deterioration of asset (e.g. more repairs to road base, etc).	• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term rehabilitation and renewal programs (e.g. resurfacing, etc) and help build business cases to secure funding for these programs. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures..
	HCB (Hard Top) Preservation Activities: • Rout & Seal – sealing of cracks to prevent water infiltration and extend pavement life	Condition based	• Accelerated pavement deterioration • Water infiltration leading to base failure • Increased lifecycle costs • Premature need for rehabilitation	• Implement proactive preservation program based on PCI • Target treatments when pavements are in fair to good condition • Coordination with utility work to avoid conflicts

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	• Two Layer Micro-Surfacing – thin protective surface treatment to seal and preserve existing pavement			• Track performance metrics to optimize treatment timing
	HCB (Hard top) Rehabilitation Activities: • Partial Depth Removal & Resurfacing – mill and replace top layers while preserving base • Full Depth Reclamation & Resurfacing – pulverize existing pavement, stabilize base, and resurface	When preservation is no longer cost-effective	• Structural failures requiring reconstruction • Higher costs from deferred maintenance • Extended traffic disruptions • Poor ride quality and safety concerns	• Use lifecycle cost analysis to determine optimal intervention timing • Bundle projects for economy of scale • Coordination with underground infrastructure renewal • consider traffic impacts and phasing strategies
	HCB (Hard Top) Reconstruction Full Reconstruction – complete removal and replacement of road structure, including base and subbase	Project specific based on condition deterioration or functional improvements/ coordination efforts	• Complete asset failure • Major service disruptions • Emergency repairs at premium costs • Inability to meet functional requirements	• Integrate with master planning for multi-modal improvements • Maximize coordination with utilities • Consider complete streets design standards • Plan for future growth and intensification
	LCB (Loose Top) Rehabilitation Full Depth Reclamation – pulverize and regrade existing granular surface, add new granular material as needed	Condition based	• Loss of road crown and drainage • Potholes • Dust control issues • Higher maintenance frequency	• Prioritize based on traffic volumes and functional classification • Consider upgrade to HCB for high-volume roads • Coordination with drainage improvements • Evaluate dust suppressant alternatives
	Sidewalk Repairs: • Spot replacements • Asphalt padding • Grinding • Slab lifting	As required	• Reduced asset performance due to poor asset condition. • Increased operational costs due to aging infrastructure. • Increased likelihood of unplanned service disruptions and outages due to unexpected asset failure.	• Perform regular sidewalk condition inspections and integrate findings into maintenance planning cycles. • Prioritize repairs based on risk to pedestrian safety and proximity to high-use areas (e.g., schools, transit stops). • Align repair timing with adjacent road or utility work to minimize disruption and cost.
	LED lighting conversions and upgrades	Opportunistic with other work	• Higher energy costs • Increased maintenance • Environmental impact • Missed funding opportunities	• Prioritize high-use areas • Apply for energy efficiency grants • Coordinate with road reconstruction • Track energy savings
	Streetlight pole and luminaire replacement	30-50 year lifecycle	• Structural failures • Safety hazards	• Lifecycle cost analysis for replacement decisions • Coordinate with road reconstruction

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Service interruptions • Inefficient lighting	• Consider decorative vs. standard options • Energy efficiency priorities • Smart technology integration preparation
Disposal	Asset disposal coordinated with asset replacement	Coordinated with replacement/ end of life	• Increased costs associated with disposing of assets outside of primary project.	• Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting. • Were applicable, incorporate recycling requirements into procurement process.
	Material from roads, sidewalks recycled and repurposed for construction	Coordinated with replacement/end of life	• Failure to meet internal standards and policies around environmental and fiscal responsibility.	
	Streetlight equipment disposal	With replacement	• Environmental contamination (mercury, lead) • Lost recycling value • Storage space issues • Regulatory violations	• Develop equipment disposal procedures • Contract certified e-waste recyclers • Recover salvage value where possible • Ensure proper documentation • Handle hazardous materials appropriately
Expansion and Service Improvements	Transportation network expansion/upgrades to service new areas or expand capacity of existing network (additional roads and sidewalks, road widening, upgrading loose top roads to hard top, etc.)	Through growth and development	• Inability to meet increasing service demand. • Negative reputational impacts due to declining service delivery.	• Incorporate recommendations from other non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity (both resources, and system design) to support expansion.
	Sidewalk expansions	Through growth and development	• Inability to meet increasing service demand. • Negative reputational impacts due to inadequate and/or unmodernized service delivery.	
	Road conversions/widenings	Through growth and development	• Inability to meet increasing service demand. • Negative reputational impacts due to inadequate and/or unmodernized service delivery.	
	Streetlight improvements (new poles/luminaires, decorative upgrades)	Through growth and development	• Inadequate lighting levels • Safety and security concerns • Non-compliance with standards • Missed modernization opportunities	• Apply design standards consistently • Consider energy efficiency in all new installations • Plan for smart city technology integration • Ensure adequate spacing and coverage • Balance decorative and functional needs

Table 5: Bridges and Structural Culvert Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, financial plans, capacity studies, AMPs, Active Transportation Master Plan, Environmental Assessments) that may include and result in: • Geographic Information System (GIS) data analysis and mapping updates	As required	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning within and between service areas. • Reduced understanding of climate change impacts. • Reduced understanding and coordination between various planning, studies and performance assessment activities resulting in poor future project planning and coordination, and prioritization. • Inaccurate GIS data, and poor data management between systems.	• Support staff in receiving software training to keep them up-to-date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets are maintained in a consistent manner, allowing for ease of access and data transfer. • Integrate all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning. • Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Align program with related environmental policies. • Consider impacts of recommendations on design standards (e.g. fleet equipment to support changed approach, storage facilities, etc.) • Use a data standard to align incoming data sets from condition assessment with existing asset hierarchy to improve ease of upload.
	Conduct community engagement to define priorities and standards to establish budgeting and service levels.	Future Initiative	• Inequitable identification and coordination of stakeholder service delivery priorities. • Negative impacts on reputation due to low levels of engagement.	
	Smart about salt program to reduce the impacts of de-icing salts	Ongoing	• Over-reliant on traditional winter control management programs resulting in negative environmental impacts. • Inefficient resource usage due to poor understanding of advancing technologies and options for winter control	
	Condition Assessment (Bridge and culvert inspection, OSIM program)	Every 2 years as prescribed through O. Reg. 104/97	• Increases likelihood of safety hazards for users. • Failure to comply with regulatory requirements. • Decreased understanding of asset condition leading to increasing reactive work, reduced asset lifespan and higher asset investment. • Non-compliance with O. Reg. 104/97 (OSIM) requirements for biennial inspections.	
	Regular inspections and road patrol	Weekly to Monthly	• Increased reactive maintenance and unplanned closures.	• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments,

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Operations and Maintenance			• Failure to comply with O. Reg. 239/02 – Minimum Maintenance Standards for Municipal Highways.	internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Use a data standard to align incoming data sets from condition assessment with existing asset hierarchy to improve ease of upload. • Regularly review PLOS achievement against minimum maintenance standards to evaluate performance and support reporting and communication. • Integrate findings of condition assessment work (both road scans as well as internal inspections) to support short term, immediate proactive maintenance activities to minimize reactive maintenance. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures.
	Minimum maintenance standards (road patrol)	As per O. Reg.239/02 and procedures	• Increases likelihood of safety hazards for users. • Failure to comply with regulatory requirements.	
	Reactive and preventative maintenance: • Structure washing and removing debris • Minor repairs • Pothole repairs • Erosion repairs	As required	• Increased reactive maintenance, and associated increase in costs. • Reduced asset service life. • Decreased asset performance due to worsening condition. • Increased capital investments due to shortened service life.	
	Perform Ontario Structure Inspection Manual (OSIM) inspections on bridges, significant culverts, and footbridges	Biennially	• Increases likelihood of safety hazards for users. • Failure to comply with regulatory requirements. • Decreased understanding of asset condition leading to increasing reactive work, reduced asset lifespan and higher asset investment. • Increased unexpected asset failure, service disruptions and outages. • Negative reputational impacts.	
Renewal (Rehabilitation & Replacement)	Minor rehabilitation (wearing surface repairs, structure repairs as needed)	Determined through Condition Inspections	• Worsening condition of assets due to failure to resolve known defects. • Reduced asset service life. • Creates safety risk for users. • Risk of violating bridge safety and load posting requirements under OSIM and bridge design standards.	• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term rehabilitation and renewal programs (e.g. resurfacing, etc) and help build business cases to secure funding for these programs.
	Major renewals/rehabilitations (wearing surface repairs, substructure	Determined through Condition Inspections	• Worsening condition of assets due to failure to resolve known defects. • Reduced asset service life.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	repairs, superstructure repairs, conversion of use)		• Creates safety risk for users.	• Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between asset networks. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project. • Track work orders in CMMS or equivalent to support KPI reporting and identify any trends in asset failures.
	Full bridge replacement including foundations	At optimal point in lifecycle analysis/ end of life, or as determined through Condition Inspections	• Worsening condition of assets due to failure to resolve known defects. • Reduced asset service life. • Creates significant safety risk for users. • Creates significant likelihood of service outages and disruptions. • Negative reputational impacts.	
Disposal	Asset disposal coordinated with asset replacement and material from structures recycled and repurposed for construction	Coordinated with replacement/ end of life	• Increased costs associated with disposing of assets outside of primary project. • Non-compliance with PSAB TCA reporting or failure to meet environmental standards for deconstruction waste management.	• Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.
Expansion and Service Improvements	Conduct community engagement to define priorities and standards to establish budgeting and levels of service for the future.	Future Initiative	• Inequitable identification and coordination of stakeholder service delivery priorities. • Negative impacts on reputation due to low levels of engagement.	• Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Review previously completed community engagement activities, if available, to establish a baseline for the current community engagement activity, where applicable. • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity (both resources, and system design) to support expansion.
	Growth needs are determined based on the Development Charges Study, Town Transportation Master Plan, and Official Plan to service new areas or expand capacity.	Through growth and development	• Inability to meet increasing service demand. • Negative reputational impacts due to inadequate and/or unmodernized service delivery.	

Facilities

The facilities lifecycle framework manages municipal buildings that house services and support community activities. This approach addresses aging building components, energy efficiency opportunities, accessibility requirements, and space optimization while ensuring safe, functional environments for staff and public use. Implementation enables the Town to meet service levels for facility condition ratings, AODA compliance, energy performance, and user satisfaction.

Table 6: Facilities Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (i.e., Master Plans, financial plans, capacity studies, AMPs)	As required	• Reduced understanding of future needs & growth impacts. • Reduced ability to coordinate project planning within and between service areas. • Reduced understanding of climate change impacts. • Reduced understanding and coordination between various planning, studies and performance assessment activities resulting in poor future project planning, coordination, and prioritization.	• Support staff in receiving software training to keep them up-to-date on data management best practices, and other essential software systems. • Use an asset information/data management standard to ensure that data sets relevant to asset management track information in a consistent manner, allowing for ease of access and data transfer. • Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Review previously completed community engagement activities, if available, to establish a baseline for the current community engagement activity, where applicable. • Use condition to support evaluation of current LOS against proposed LOS achievement to assess asset performance and support reporting and communication. • Use outputs of condition assessments and inspections to help establish business cases for programs and help identify asset candidates for programs
	Conduct community engagement to define priorities and standards to establish budgeting and service levels.	Future Initiative	• Inequitable identification and coordination of stakeholder service delivery priorities. • Negative impacts on reputation due to low levels of engagement.	

	Condition Assessment Program (Building inspection)	Ongoing	• Limited understanding of the condition of building assets resulting in:
			  ○ Reduced coordination of asset needs and priorities.
			  ○ Reduced ability to coordinate between various programs, studies and other assessments.
			• Inability to demonstrate conformance with Ontario Building Code or Fire Code requirements for facility safety and integrity.	

Operations and Maintenance	Performing regular preventative maintenance to extend service lives	As per maintenance programs	• Increased reactive maintenance, and associated increase in costs. • Reduced asset service life. • Decreased asset performance due to worsening condition. • Increased capital investments due to shortened service life.	• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Integrate findings of building condition assessment work (both road scans as well as internal inspections) to support short term,

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Non-compliance with Fire Code and other facility-specific regulations (e.g., boiler, HVAC, emergency lighting testing).	immediate proactive maintenance activities to minimize reactive maintenance. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term preventative maintenance programs (e.g. coil cleaning, fire safety systems tests, filter replacement, etc.) and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Consider establishing an internal building condition assessment program to monitor for changes over time, particularly in older or higher risk/priority facilities. • Track work orders in CMMS or equivalent to support KPI reporting, look for trends in asset failures by make, model, manufacturer, material, and facilitate understanding of maintenance staffing needs.
	Reactive maintenance to address issues found through inspections, preventative maintenance, or complaints	As required	• Reduced asset service life. • Increasing capital costs to replace vehicle due to shorter service lives.	
Renewal (Rehabilitation & Replacement)	Building rehabilitation needs	Based on inspections and condition assessments	• Reduced service life of connected/dependent assets. • Increased operating and maintenance costs. • Potential safety risks to users and/or occupants. • Unplanned service disruptions and facility closures.	• Align renewal, and replacement rehabilitation activities with recommendations from other non-infrastructure activities (e.g. master plans) to ensure efficient use of resources. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term rehabilitation and renewal programs (e.g. larger scale replacement for particular building systems, such as windows, rooftop units, roofs and other exterior finishes etc) and help build business cases to secure funding for these programs. • Use LOS framework to support prioritization of rehabilitation activities. • Track work orders in CMMS or equivalent to support KPI reporting, look for trends in asset failures by make, model, manufacturer, material, and support monitoring of project management hours to facilitate understanding of staffing needs. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between building
	Equipment or building component replacement	As required	• Reduced service life of connected/dependent assets. • Increased operating and maintenance costs. • Potential safety risks to users and/or occupants. • Unplanned service disruptions and facility closures.	
	Major equipment or structural building component replacement	At optimal point in lifecycle analysis/ end of life	• Reduced service life of connected/dependent assets. • Increased operating and maintenance costs. • Potential safety risks to users and/or occupants. • Unplanned service disruptions and facility closures.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
				asset systems. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project.
Disposal	Asset disposal coordinated with asset replacement	Coordinated with replacement/ end of life	• Increased costs associated with disposing of assets outside of primary project.	• Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.
Expansion and Service Improvements	Conduct community engagement to define priorities and standards to establish budgeting and service levels.	Future Initiative	• Inequitable stakeholder engagement around service delivery expectations resulting in inequitable LOS. • Negative impacts to reputation due to limited engagement.	• Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity (both resources, and system design) to support expansion. • Align asset procurement with anticipated changes in service demand identified in non-infrastructure solutions, such as master plans, DC studies, and internal stakeholder engagement as part of updates to asset lifecycle strategies and budget cycle. • Use PLOS in coordination with other non-infrastructure solutions (e.g. policies around fleet electrification) to monitor for compliance with targets.
	Construction of new facilities in new subdivisions to accommodate for population growth or expansion of existing facilities to accommodate for population intensification	Through growth and development	• Unable to support increasing demand due to population growth. • Service outages due to unsustainable demand on existing network of assets.	
	Purchase/procure additional equipment and fleet assets to support population growth or service expansion	As required	• Reduced service delivery due to staff not having the correct fleet and equipment assets available.	
	New fire station construction	Through growth and development	• Inadequate service delivery to regions of the Town. • Failure to meet forecasted demand may result in Fire Code, Building Code, or Accessibility for Ontarians with Disabilities Act (AODA) non-compliance.	

Parks

The parks infrastructure lifecycle strategies ensure safe, accessible recreational facilities that enhance community wellbeing and quality of life. This framework covers playground equipment, sports facilities, and park amenities while balancing maintenance needs with seasonal usage patterns and evolving community expectations. Implementation of these activities helps achieve service level targets for facility safety, accessibility compliance, and user satisfaction while maximizing recreational opportunities for residents.

Table 7: Parks Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (Master Plans, financial plans, capacity studies, AMPs, Parks and Recreation Master Plan, Arts and Culture Master Plan)	As required	• Reduced understanding of future needs & growth impacts due to incomplete studies/plans/reports/analysis. • Reduced ability to coordinate project planning within and between service areas. • Reduced understanding of climate change impacts. • Reduced coordination between various planning, studies and performance assessment activities resulting in poor future project planning, coordination, and prioritization.	• Support staff in receiving software training to keep them up-to-date on data management best practices, and other essential software systems. • Use an asset information/data management standard to ensure that data sets relevant to asset management track information in a consistent manner, allowing for ease of access and data transfer. • Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Review previously completed community engagement activities, if available, to establish a baseline for the current community engagement activity, where applicable. • Use condition to support evaluation of current LOS against proposed LOS achievement to assess asset performance and support reporting and communication. • Use outputs of condition assessments and inspections to help establish business cases for programs and help identify asset candidates for programs
	Conduct community engagement to define priorities and standards to establish budgeting and service levels	Future Initiative and ongoing	• Inequitable identification and coordination of stakeholder service delivery priorities. • Negative impacts on reputation due to low levels of engagement. • Insufficient engagement to support asset design and selection to best support desired programming.	

Operations and Maintenance	Routine (weekly, monthly, and annual) parks inspections for all outdoor recreation assets	Annually as per inspection programs	• Limited understanding of the condition of building assets resulting in:
			  ○ Reduced coordination of asset needs and priorities.
			  ○ Reduced ability to coordinate between various programs, studies and other assessments.
				• Align projects and programs with recommendations from other non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources.
				• Integrate findings of building condition assessment work (both road scans as well as internal inspections) to support short term, immediate proactive maintenance activities to minimize reactive maintenance.
				• Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and

	Performing regular preventative maintenance to extend service lives	As per maintenance programs	• Increased reactive maintenance, and associated increase in costs. • Reduced asset service life. • Decreased asset performance due to worsening condition.	

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Increased capital investments due to shortened service life.	strategic documents) to support identification of long-term preventative maintenance programs and help build business cases to secure funding for these programs. Preventative maintenance programs will also extend asset service life and minimize risk of regulatory non-compliance. • Consider establishing an internal building and structure condition assessment program to monitor for changes over time, particularly in older or higher risk/priority facilities • Retain fleet or equipment that has served its useful life, but is in acceptable condition, as spares for unexpected asset outages. • Track work orders in CMMS or equivalent. Historical information can be used to guide future decisions on lifecycle activities.
	Reactive maintenance to address issues found through inspections, preventative maintenance, or complaints	As required	• Reduced asset service life. • Increasing capital costs to replace vehicle due to shorter service lives.	
Renewal (Rehabilitation and Replacement)	Performing renewals/rehabilitations proactively that were predicted/scheduled via regular preventative maintenance and annual inspections	As required	• Reduced service life of connected/dependent assets. • Increased operating and maintenance costs. • Potential safety risks to users and/or occupants. • Unplanned service disruptions and facility closures.	• Align renewal, and replacement rehabilitation activities with recommendations from other non-infrastructure activities (e.g. master plans) to ensure efficient use of resources. • Use relevant asset management analysis (e.g. lifecycle forecasting tools, LOS and Risk assessments, and other planning and strategic documents) to support identification of long-term rehabilitation and renewal programs and help build business cases to secure funding for these programs. • Use LOS framework to support prioritization of rehabilitation activities. • Track work orders in CMMS or equivalent to support KPI reporting, look for trends in asset failures by make, model, manufacturer, material, and support monitoring of project management hours to facilitate understanding of staffing needs. • Maintain up-to-date datasets to support prioritization of asset needs and understand the interdependencies between building asset systems. Where relevant, request updated datasets provided by contractor in an editable format at the end of the project.
	Component replacement before asset requires full replacement (e.g., playgrounds)	As required	• Increased operating and maintenance costs. • Potential safety risks to users and/or occupants. • Unplanned service disruptions and asset closures.	
	Asset replacement/reconstruction	At optimal point in lifecycle analysis/end of life	• Reduced service life of assets. • Increased operating and maintenance costs. • Safety risks to users and/or occupants. • Unplanned service disruptions and facility closures.	
Disposal	Asset disposal coordinated with asset replacement	Coordinated with replacement/end of life	• Increased costs associated with disposing of assets outside of primary project.	• Align disposal documentation processes with asset hierarchy data structures to streamline TCA reporting.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Expansion and Service Improvements	Conduct community engagement to define priorities and standards to establish budgeting and service levels	Future Initiative and ongoing	• Inequitable stakeholder engagement around service delivery expectations resulting in inequitable LOS. • Negative impacts to reputation due to limited engagement.	• Develop a continuous improvement plan for regular community engagement, aligned with corporate community engagement cycle for efficient resource uses. • Incorporate recommendations from non-infrastructure planning activities into lifecycle and financial strategy to ensure capacity (both resources, and system design) to support expansion. • Align asset procurement with anticipated changes in service demand identified in non-infrastructure solutions, like master plans, DC studies, and internal stakeholder engagement as part of updates to asset lifecycle strategies and budget cycle. • Use PLOS in coordination with other non-infrastructure solutions (e.g. program plans, master plans, etc) to monitor for compliance with targets.
	Growth needs are determined based on the Parks and Recreation Master Plan service standards and target provision levels. There is opportunity for collaboration amongst services for service expansion.	Through growth and development	• Unable to support increasing demand due to population growth. • Service outages due to unsustainable demand on existing network of assets. • Reduced coordination and prioritization of related needs between different services.	
	Purchase/procure additional outdoor recreation assets to support population growth or service expansion.	As required and based on Master Plan	• Reduced service delivery due to outdoor recreation facilities not meeting design and service delivery expectations.	

Fleet

Fleet lifecycle management strategies ensure reliable vehicles and equipment are available to deliver essential municipal services across all departments. The strategy balances maintenance optimization, replacement timing, and emerging technologies while considering the municipality's climate action goals and potential for fleet electrification. These activities support service level targets for vehicle availability, operational efficiency, and emissions reduction while minimizing equipment downtime.

Table 8: Fleet Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Fleet planning and studies (Fleet Master Plans, vehicle replacement strategies, route optimization studies)	As required	• Reduced understanding of future transportation needs & service delivery impacts • Reduced ability to coordinate vehicle sharing between departments • Inefficient route planning and fuel consumption • Poor coordination of vehicle procurement and replacement	• Develop fleet management policies specific to vehicles (passenger vehicles, vans, light trucks) • Implement telematics and GPS tracking for route optimization • Integrate transportation planning with departmental service delivery needs • Establish vehicle sharing protocols between departments
Operations and Maintenance	Performing regular preventative maintenance for fleet vehicles	As per manufacturer's maintenance schedule	• Increased breakdowns affecting staff mobility and service delivery • Higher vehicle rental costs due to unexpected failures • Reduced vehicle service life • Safety risks to staff and public	• Track maintenance in fleet management system • Monitor fuel consumption and efficiency metrics • Implement driver training programs for vehicle care • Schedule maintenance during low-use periods to minimize service disruption • Use telematics data to identify maintenance needs
	Reactive maintenance for fleet vehicles	As required	• Service disruptions affecting staff productivity • Increased costs for emergency repairs	
Renewal/ Rehabilitation	Vehicle refurbishment and major component replacement	Based on lifecycle analysis	• Premature vehicle replacement increasing capital costs • Reduced fleet availability affecting service delivery	• Establish criteria for rehabilitation vs. replacement decisions • Consider mid-life refurbishment for high-value vehicles • Monitor total cost of ownership to optimize replacement timing
	Fleet vehicle replacement at optimal lifecycle point	7-10 years typically	• Excessive maintenance costs on aging vehicles • Reduced reliability affecting service delivery • Poor fuel efficiency increasing operating costs	
	Purchase/procure electric vehicles for fleet	As per replacement schedule	• Failure to meet climate action and GHG reduction targets • Higher long-term fuel costs	
Replacement/ Disposal	Sale of fleet vehicles through auction	At optimal disposal point	• Lost residual value recovery • Storage costs for unused vehicles	• Use GovDeals or similar platforms for disposal • Time disposal to maximize resale value • Maintain service records to support resale value
	Review fleet needs across departments	Annually	• Inefficient vehicle allocation and underutilization • Unnecessary vehicle purchases	• Conduct annual utilization reviews • Implement vehicle sharing programs

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Expansion and Service Improvements	Expand transportation fleet for growth	As required	• Inadequate transportation capacity affecting service delivery • Staff productivity losses due to vehicle shortages	• Right-size vehicles to actual needs • Consider car-share or rental alternatives for low-use needs

Equipment

The equipment lifecycle management framework ensures that specialized tools and machinery are available to support efficient municipal service delivery across all departments. These strategies cover operational equipment while balancing standardization needs with department-specific requirements. Implementation of these activities enables the Town to meet service level targets for equipment availability, operational readiness, and cost-effectiveness while supporting staff productivity and minimizing service disruptions due to equipment failures.

Table 9: Equipment Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Equipment planning and standardization (generators, pumps, tools, mowers, ice resurfacers, etc.)	As required	• Incompatible equipment across departments • Inefficient parts inventory management • Reduced equipment availability • Poor understanding of equipment lifecycle costs	• Develop equipment standardization policies • Create equipment sharing protocols between departments • Maintain equipment inventory database in WorkTech • Track usage hours for lifecycle planning
Operations and Maintenance	Preventative maintenance for equipment	Per manufacturer specifications and usage	• Equipment failures disrupting operations • Safety hazards from poorly maintained equipment • Shortened equipment lifespan • Voided warranties from improper maintenance	• Implement hour-based maintenance schedules • Maintain service logs for warranty compliance • Stock common wear parts and filters • Train operators on daily inspection procedures • Schedule maintenance during off-seasons where applicable
	Equipment repairs and troubleshooting	As required	• Extended downtime affecting operations • Higher repair costs from deferred maintenance	
Renewal/ Rehabilitation	Equipment overhauls and major component replacement	Based on hours/condition	• Complete equipment failure requiring emergency replacement • Loss of productivity from unreliable equipment	• Track repair costs vs. replacement value • Consider rebuilding high-value equipment (generators, pumps) • Evaluate rental options for seasonal equipment • Maintain spare equipment for critical operations
	Equipment replacement at end of useful life	Varies by equipment type	• Excessive maintenance costs • Obsolete technology limiting efficiency • Safety risks from aging equipment	
		Procure electric/battery-powered equipment	• At replacement	
Replacement/ Disposal	Equipment disposal through auction or recycling	End of useful life	• Environmental liability from improper disposal • Lost salvage value • Storage costs for obsolete equipment	• Sell functional equipment through GovDeals • Properly dispose of fluids and batteries • Consider parts salvage for similar equipment • Document disposal for asset tracking
	Equipment needs assessment	Annually	• Inadequate equipment for service delivery • Inefficient equipment sharing • Duplicate purchases across departments	• Coordinate equipment purchases across departments • Evaluate rental vs. purchase for low-use items • Consider attachments vs. dedicated equipment

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Expansion and Service Improvements	New equipment procurement for service expansion	As required	• Service limitations from equipment shortages • Staff inefficiency from inadequate tools	• Plan for operator training on new equipment

Active Transportation

Active transportation infrastructure management strategies address diverse surface materials, seasonal maintenance challenges, and network connectivity while coordinating with Parks and Operations departments for efficient service delivery. These lifecycle activities help achieve service level objectives for path condition, network connectivity, accessibility compliance, and year-round usability.

Table 10: Active Transportation Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Active transportation planning integrated with Roads and Active Transportation Study	Future initiative (2026)	• Missed opportunity for operational efficiency • Inconsistent application of standards • Increased environmental impact • Higher capital and operating costs • Poor network connectivity	• Develop comprehensive asset condition assessment program • Implement integrated CMMS system linking condition data to maintenance tracking • Establish standard operating procedures for path inspections and maintenance • Create coordination protocols between Parks and Operations departments • Develop user feedback system for public reporting of path issues • Integration with broader active transportation network planning • Coordinate with Parks service for trail maintenance • Establish partnerships with conservation authorities
	Multi-use path condition assessments	As required	• Limited understand of asset conditions • Reduced ability to coordinate project planning • Inefficient resource allocation • Safety concerns for unmaintained paths	• Develop basic coordination checklist for staff • Create simple public reporting process using existing channels • Implement regular interdepartmental meetings for path maintenance planning
	Climate resilience planning	Ongoing	• Increased vulnerability to weather events • Higher long term maintenance costs • Premature failures	• Develop seasonal maintenance optimization strategies • Plan for winder snow clearing and spring debris removal • Implement drainage and erosion control measures
Operations and Maintenance	Condition Assessment	Systematic Assessments every 5 Years	• Accelerated asset deterioration • Higher emergency repair costs • Extended path closures • Reduced service reliability • Safety risks to users	• Prioritize critical path segments based on usage and connectivity • Regular vegetation management and debris removal • Basic drainage improvements at problem areas • Spot repairs for high traffic areas • Implement SOP for routine inspections • Develop material specific maintenance schedules • Establish accessibility program
	Reactive maintenance	As required	• Increased frequency of failures • Higher repair costs • User dissatisfaction • Liability issues	• CMMS systems • Develop Preventative maintenance schedules for different surface types • Share equipment between departments for efficiency

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Coordination with Parks department for trail maintenance	Ongoing	• Service gaps • Duplicated efforts	• Establish clear SOP to delineate responsibilities • Regular coordination meetings
Renewal/ Rehabilitation	Surface material upgrade program	As required	• Accelerated deterioration • Higher replacement costs • Increased user costs • Premature failure • Safety hazards • Extended service disruptions	• Focus on high impact connectivity improvements • Phased approach to accessibility upgrades • Surface treatments rather than full reconstruction where feasible • Standardize maintenance approaches by surface type • Address high priority safety concerns first • Consider environmental impact assessments for work near natural heritage sites • Plan seasonal timing for rehabilitation work • Implement user communication and detour planning
	Climate resilience improvements for drainage and erosion control	Condition based	• Increased vulnerability to weather damage • Higher long term costs • Path washouts and failures	• Integrate climate adaptation measures in all renewal projects • Focus on improving drainage at known problem areas • Use durable materials suited to local conditions
	Accessibility retrofits to meet AODA standards	As opportunities arise	• Non-compliance with regulations • Limited access for users with disabilities • Potential legal liability	• Prioritize high-use areas for accessibility improvements • Coordinate with other renewal work for cost efficiency • Ensure all new work meets current standards
Replacement	Full path reconstruction	Condition based	• Safety hazards • High maintenance costs • Service disruptions • User dissatisfaction • Emergency replacement premiums • Missed modernization opportunities	• Prioritize replacement based on condition, usage and connectivity • Phased replacement approach for aging infrastructure • Standardize specifications for common surface types • Create standard replacement guidelines • Implement basic replacement program for critical segments • Include climate adapted design standards • Ensure accessibility compliance in design • Coordination with other infrastructure projects
Disposal	Limited formal disposal procedures for path materials	Coordinated with replacement	• Lost recycling opportunities • Environmental contamination • Regulatory compliance issues • Inefficient land use • Higher disposal costs	• Develop basis disposal guidelines ensuring regulatory compliance • Implement simple material salvage assessment procedures • Create basic inventory or reusable materials and disposal protocols • Establish coordination checklist for disposal capabilities • Use exiting documentation systems for disposal tracking • Consider recycling opportunities for asphalt materials • Coordinate with waste management procedures

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Expansion and Service Improvements	Network connectivity planning to link exiting segments	Through development and official plan policies	• Inadequate transportation capacity • Development restrictions • Traffic congestion • Inefficient network connectivity • Poor integration with land use	• Align expansion with Official Plan growth projections • Incorporate basic multi-modal elements in new corridors • Leverage development charges and agreements for growth related infrastructure • Prioritize connection to existing networks • Integration with municipal cycling and pedestrian master plans • Coordination with Regional active transportation initiatives • Connect to community amenities • Consider seasonal usability in design
	New trail connections through development review process	As development occurs	• Missed opportunities for network expiation • Fragmented trail system • Poor accessibility to community destinations	• Review all development applications for trail opportunities • Require developer contributions for trail construction • Ensure design standards are met • Plan for future maintenance requirements

Roadway Appurtenances

Roadway appurtenances lifecycle management strategies address the critical infrastructure elements that support safe and efficient transportation operations throughout Georgina. This framework encompasses traffic signals, streetlights, signs, guiderails, and other roadside infrastructure while integrating energy efficiency initiatives and regulatory compliance requirements. By implementing these lifecycle activities, the Town can achieve its targeted service levels for traffic safety, visibility standards, regulatory compliance, and system reliability while reducing energy consumption and maintaining clear communication with road users.

Table 11: Roadway Appurtenances Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Transportation Master Plan: Master Mobility Transportation Plan development	Future Initiative	• Reduced understanding of future needs & growth impacts • Reduced ability to coordinate project planning between service areas • Poor coordination of transportation infrastructure • Inefficient resource allocation	• Develop multi-modal transportation strategy to provide whole picture of demand management • Implement integrated transportation planning approach • Create pavement preservation standard/guideline • Support staff in receiving software training • Develop asset information/data management standard • Establish Traffic Signal Condition Inspections program • Address Traffic Intersection AODA Compliance
	Design Standards for transportation assets including traffic calming	Ongoing development	• Inconsistent infrastructure design • Safety concerns • Non-compliance with regulations • Higher lifecycle costs	• Develop comprehensive design standards • Include traffic calming procedures and solutions • Ensure AODA compliance in all designs • Regular updates to reflect best practices
	Traffic counting program and data management	Ongoing	• Inaccurate data on current traffic needs and levels • Poor decision-making for infrastructure investments • Inadequate traffic calming solutions	• Maintain regular traffic counting schedule • Integrate data into planning decisions • Use data to justify infrastructure improvements • Support warrant studies for new installations
Operations and Maintenance	Minimum Maintenance Standards (MMS) compliance for signs including retro-reflectivity assessment	As per O. Reg. 239/02 and SOPs	• Creates safety hazards for users • Failure to comply with regulatory requirements • Liability issues • Increased accident risk	• Incorporate findings of inspections into asset data • Update asset data at regular intervals • Track work orders in CMMS systems • Annual condition and retro-reflectivity assessments • Coordinate replacements with other nearby work • Maintain inventory of critical spare parts

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Replacement of missing, damaged, and/or deteriorated signs	As required	• Safety hazards • Regulatory non-compliance • Confusion for road users • Liability exposure	• Implement systematic inspection program • Maintain adequate sign inventory • Quick response protocols for critical signs • Coordinate with road maintenance activities
Renewal/ Rehabilitation	Sign rehabilitation and marking maintenance programs	Not typically applied - replace instead	• Premature asset replacement • Higher capital costs • Inefficient use of resources	• Focus on replacement rather than rehabilitation for low-cost items • Implement bulk replacement programs • Standardize sign types where possible • Consider warranty programs with suppliers
Replacement	Sign replacement when condition is 4 or 5 or when reflectivity fails	Based on condition and MMS requirements	• Safety hazards • High maintenance costs • Service disruptions • User dissatisfaction • Liability issues	• Annual investment based on condition assessments • Relatively low unit costs allow regular replacement • Maintain adequate inventory • Standardize specifications • Bulk purchasing for cost efficiency
Disposal	Redundant signs removed during condition surveys	During inspections/replacement	• Confusion from conflicting signage • Cluttered streetscapes • Wasted maintenance effort • Environmental concerns	• Track disposal in CMMS systems • Recycle metal components • Proper disposal of electronic components • Document disposal for TCA reporting • Salvage reusable components
Expansion and Service Improvements	Traffic management expansion to service new areas (signs, signals, streetlights, traffic calming)	Through growth, warrant studies, and development	• Inability to meet service demand • Safety concerns in new areas • Development restrictions • Negative reputational impacts	• Incorporate recommendations from transportation master planning • Ensure adequate capacity for growth • Development charge funding optimization • Warrant study requirements • Coordinate with development approvals

Urban Forestry

The urban forestry lifecycle strategies manage Georgina's tree canopy as vital green infrastructure that provides environmental, social, and economic benefits. This framework addresses tree health, safety, and replacement while responding to threats and supporting climate adaptation goals. Through systematic management, the Town can achieve its canopy coverage targets, maintain public safety standards, and enhance urban forest resilience.

Table 12: Urban Forestry Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Tree Preservation and Conservation Policy implementation	Ongoing	• Higher lifecycle costs due to inefficient use of assets • Premature asset deterioration • Increased maintenance needs • Higher long-term capital requirements • Inefficient resource allocation	• Develop a forestry masterplan to guide strategic decision-making • Implement Tree preservation bylaw • Expand Lake Simcoe Region Conservation Authority resource sharing • Establish formal community volunteer tree planting programs • Enhance public awareness campaigns about tree health • Optimize species selection for climate change adaptation • Provide community education on invasive species identification
	Community partnership coordination and public education through municipal communications	Ongoing	• Safety concerns from unmaintained trees • Traffic congestion from fallen branches • Higher long-term capital requirements	• Develop data collection and condition assessment procedures • Create simple public reporting process using existing channels • Establish basic performance metrics using current data sources
	Georgina Forest Study in coordination with York Region	As required	• Inefficient resource allocation • Missed opportunities for operational efficiencies	• Use community education programs • Develop policy updates using staff time only • Coordinate volunteer programs with minimal direct costs • Leverage social media awareness campaigns using existing resources • Build partnerships with existing community groups
Operations and Maintenance	Condition Assessment (Tree inspection and health assessment including Emerald Ash Borer Assessment)	Ongoing Inspections	• Increase frequency of breakdowns • Higher emergency repair costs • Extended downtime • Reduced service reliability • Premature asset failure • Safety risks and regulatory non-compliance	• Implement basic visual inspection by staff • Develop volunteer assisted watering programs • Focus on preventative treatments vs. reactive removals • Use inhouse maintenance with existing staff • Coordinate maintenance schedules to reduce mobilization costs • Establish Preventative watering programs and systematic mulching for trees • Implement proactive pest and disease management • Create structural support systems for mature trees • Conduct annual condition assessments (~2-5% of inventory annually) • Establish pre-scheduled assessment and pruning cycle.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Regular tree trimming, pruning and roadway clearance maintenance	Regular/reactive based on inquires	• Accelerated deterioration • Safety hazards • Liability concerns	• Develop standardized operating procedures for maintenance activities • Implement proactive protocols during construction activities
	Removal of dead/fallen trees, branches and stumps	All hazards rectified within 1-5 working days	• Public safety concerns • Service disruptions • Increased liability	• Coordinate with other municipal departments for efficiency • Track work orders in CMMS system • Provide enhanced staff training and certification
Renewal/ Rehabilitation	Case by case assessment for tree health restoration	As required	• Higher replacement costs • Operational inefficiencies • Increased energy consumption • Service interruptions • Higher operational costs	• Prioritize soil amendment programs using municipal compost • Implement selective pruning and canopy management • Support natural regeneration where appropriate • Use basic mulching and soil improvement • Engage volunteer assisted rehabilitation activities • Consider structural support systems to protect mature trees • Implement comprehensive pest and disease treatment programs • Focus on native species replacement and biodiversity enhancement • Develop ecosystem restoration initiative • Establish forested areas within Town lands
	Replanting and canopy restoration programs for damaged trees	Case by case basis	• Accelerated deterioration • Process reliability issues • Regulatory non-compliance risks	• Conduct cos-benefit analysis of treatment vs. replacement • Phase renewal programs based on priority areas • Include species diversification during renewal projects • Support natural regeneration strategies
Replacement	Tree replacement following Conservation Policy ratios	Standards	• Escalating maintenance costs • Service disruptions • Operational inefficiencies • Decreased public service quality • High replacement failure rates • Vandalism or damage of new plantings	• Implement bulk ordering and coordinated planting events • Select hardy, low maintenance specifies • Engage community volunteer planting programs • Optimize seasonal timing for survival rates • Coordinat with infrastructure projects • Establish enhanced post-planting care protocols
Disposal	Standard tree removal and disposal procedures	As required	• Environmental liabilities • Lost revenue opportunities • Ongoing carrying costs for dead trees • Community concerns about tree loss	• Implement onsite chipping for municipal reuse • Develop community firewood distribution programs • Coordinate removal schedules to reduce mobilization • Use municipal equipment for disposal operations

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
			• Inefficient us of resources	• Recover material for compost production • Develop communication strategy for wood public pickup/use • Establish formal decommissioning process • Create environmental assessment procedures • Consider wood chip production for municipal and public reuse.
Expansion and Service Improvements	Limited systematic expansion planning with planting based on development requirements	Through planting program for new trees or replacements	• Inadequate facility capacity • Service level efficiencies • Reactive, higher-cost expansions • Poor alignment with community needs	• Develop strategic canopy coverage increase initiatives • Create new planting area development programs • Improve urban forest connection • Integrate enhanced inventory management technology • Expand partnership with conservation authorities • Implement private property tree planting incentive programs and policies • Develop community stewardship programs • Follow master plan implementation recommendations
	Tree giveaways to community	Annual or as funding available	• Missed opportunities for canopy expansion • Limited community engagement • Reduced urban forest benefits	

IT Assets

Information technology lifecycle management supports all municipal operations through reliable hardware, software, and network infrastructure. The strategies address rapid technological change, cybersecurity requirements, and the need for system integration while planning for the transition to a new ticketing system in 2026. These activities ensure the Town meets its service levels for system uptime, data security, and operational efficiency while supporting digital service delivery to residents.

Table 13: IT Lifecycle Activities

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
Non-Infrastructure	Planning and studies (Master Plans, financial plans, capacity studies, AMPs)	As required	• Reduced understanding of future needs & growth impacts	• Support staff in receiving software training to keep them up to date with software and technology advances, and data management best practices. • Develop an asset information/data management standard to ensure that data sets are maintained in a consistent manner, allowing for ease of access and data transfer. • Integrate all asset recommendations from planning and studies into the lifecycle management strategy to ensure alignment of all project and O&M planning.
	Policies and procedures/standards		• Reduced ability to coordinate project planning within and between service areas. • Reduced understanding and coordination between various planning, studies and performance assessment activities resulting in poor future project planning, coordination, and prioritization.	
	Condition assessment and system performance testing		• Reduced asset service life. • Increased security risks to networks and systems. • Reduced staff performance due to lack of access or underperforming equipment.	
Operations and Maintenance	Reactive and preventative maintenance: • Broadband tower assessment • Server inspection	As required	• Equipment no longer modern enough to support software and system upgrades. • Increasing capital costs to replace equipment. • Reduced asset service life.	• Regularly assess maintenance/replacement costs against value of equipment and resource allocation to support service delivery to identify optimal time to replace assets. • Track work orders in CMMS or equivalent to support KPI reporting, look for trends in asset failures by make/model/manufacturer.
Renewal (Rehabilitation and Replacement)	Software updates and on-going support	As required	• Unexpected software outages due to out-of-date licensing, or unexpected end of software support. • Reduced staff performance due to lack of access to appropriate licenses for software.	• Align projects and programs with recommendations from non-infrastructure solutions (e.g. condition assessments, internal policies, master plans, etc) to ensure compliance with organizational objectives and efficient use of resources. • Ensure that asset data is updated regularly to reflect equipment condition (age/downtime/uptime) and availability. • Establish a process for review of assets prior to end of life/disposal to determine candidacy for spares inventory.

Lifecycle Activity	Description	Frequency	Risks Associated with Not Completing the Activities	Observations & Mitigating Actions
	Equipment replacement programs	At optimal point in lifecycle analysis	• Unplanned service disruption due to inadequate spares impacting dependent services. • Reduced staff performance due to lack of access to suitable equipment and unexpected system outages.	• Establish a process to identify end of life of asset and monitor at regular intervals (e.g. a target organized by vehicle type, for the amount of money spent on maintenance and repairs against purchase value). • Incorporate results into lifecycle strategy.
Disposal	Determine optimal point in asset lifecycle for asset replacement that minimizes maintenance and renewal/rehabilitation costs	At optimal point in lifecycle analysis/end of life	• Inefficient usage of budget resources. • Unplanned asset failure leading to equipment shortages, impacting dependent services.	• Use PLOS in coordination with other non-infrastructure solutions to monitor for compliance with targets.
Expansion and Service Improvements	Review shared assets amongst services to determine overall capacity/needs	Annually	• Inefficient use and allocation of assets (e.g. not sized correctly for use, does not have adequate/necessary features, etc.) and corresponding inefficient use of financial resources.	• Establish process for regular reviews with stakeholders across service areas to coordinate needs. • Align asset procurement with anticipated changes in service demand identified in non-infrastructure solutions, like master plans, DC studies, and internal stakeholder engagement as part of updates to asset lifecycle strategies and budget cycle
	Purchase/procure additional equipment assets, software licenses to support population growth or service expansion	Through growth and development	• Reduced service delivery due to staff not having the correct assets.	