Township of Severn | Asset Management Plan

2025

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Executive Summary

Municipal infrastructure provides the foundation for the economic, social, and environmental health and growth of a community through the delivery of services. The goal of asset management is to balance delivering critical services in a cost-effective manner. This involves the development and implementation of asset management strategies and long-term financial planning.

Scope

The scope of this document is to identify the current practices and strategies that are in place to manage the public infrastructure and to make recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of services.

The AMP's categories are summarized in Figure 1.

Core Assets

- Road Network
- Bridges & Culverts
- Water System
- Wastewater System
- Stormwater System

Non-Core Assets

- Buildings & Facilities
- Land Improvements
- Vehicles
- Machinery & Equipment

Figure 1: Core and Non-Core Asset Categories

Compliance

With the development of this AMP the Township of Severn has achieved compliance with July 1, 2025, requirements under O. Reg. 588/17. This includes requirements for proposed levels of service and inventory reporting for all asset categories.

Findings

This 2025 asset management plan (AMP) for the Township of Severn was developed as an update to the 2021 AMP, in continued compliance with Ontario Regulation 588/17 ("O. Reg"). It incorporates key elements of an industry-standard AMP, and provides a comprehensive overview of the Township's core and non-core infrastructure.

Together, the nine service areas analyzed in this plan represent a total current replacement cost of approximately $443.1 million, based on the Township's asset portfolio as of 2024. This estimate was calculated using a combination of user-defined costing and inflation-adjusted historical costs. The Road Network continues to represent the largest share of the Township's portfolio at 34%, followed by the Water System at 19%.

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the municipality's average annual capital requirement totals $12.5 million. Based on a historical analysis of sustainable capital funding sources, Severn is committing approximately $7.9 million towards capital projects or reserves per year. As a result, there is currently an annual funding gap of $4.5 million.

To support the proposed levels of service and eliminate this funding gap, the Township has selected a financial strategy aimed at achieving full funding within 10 years. This phased approach includes increasing municipal taxes by 1.4% per year over a 10-year period, along with annual rate revenue increases of 5.3% for water services and 2.6% for wastewater services over the same timeframe. These incremental adjustments are designed to gradually increase reinvestment levels, enabling the Township to meet both current and future infrastructure needs while minimizing the risk of service disruptions and avoiding significant one-time financial impacts on ratepayers.

It is important to note that this AMP represents a snapshot in time and is based on the best available processes, data, and information at the municipality. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

About this Document

This 2025 Asset Management Plan (AMP) for the Township of Severn was developed in accordance with Ontario Regulation 588/17 ("O. Reg 588/17"), marking the completion of the first full regulatory cycle introduced under the Infrastructure for Jobs and Prosperity Act, 2015. It provides a comprehensive analysis of the Township's infrastructure portfolio across nine service areas and incorporates all required components, including both current and proposed levels of service.

This AMP builds upon a broad base of asset studies, inventory records, and financial data to identify strategic renewal requirements across the Township's infrastructure systems. Rather than replacing individual asset-specific lifecycle plans, it enhances them by offering an integrated perspective on service delivery, cost, and risk.

As a living document, the AMP is expected to evolve through annual updates and five-year review cycles, as mandated under O. Reg 588/17. Continued refinement of asset and financial data will strengthen the Township's ability to manage infrastructure proactively, sustainably, and in alignment with long-term community goals.

Ontario Regulation 588/17

As part of the Infrastructure for Jobs and Prosperity Act, 2015, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure. Along with creating better performing organizations, more livable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

Table 1 Ontario Regulation 588/17 Requirements and Reporting Deadlines

Requirement	2019	2022	2024	2025
Asset Management Policy	●		●	
Asset Management Plans		●	●	●
State of infrastructure for core assets		●		
State of infrastructure for all assets			●	●
Current levels of service for core assets		●		
Current levels of service for all assets			●	
Proposed levels of service for all assets				●
Lifecycle costs associated with current levels of service		●	●	

Requirement	2019	2022	2024	2025
Lifecycle costs associated with proposed levels of service				●
Growth impacts		●	●	●
Financial strategy			●	●

Strategic Planning and Asset Management

Foundational Documents

In the municipal sector, 'asset management strategy' and 'asset management plan' are often used interchangeably. Other concepts such as 'asset management framework', 'asset management system', and 'strategic asset management plan' further add to the confusion; lack of consistency in the industry on the purpose and definition of these elements offers little clarity. To make a clear distinction between the policy, strategy, and the plan see the following sections for detailed descriptions of the document types.

Strategic Plan

The strategic plan has a direct, and cascading impact on asset management planning and reporting, making it a foundational element. At the beginning of each term, Council holds strategic planning exercises and discussions to identify major initiatives and administrative improvements it wishes to achieve during its tenure. Staff then identify the scope, resources, timing & other logistical matters associated with proposed initiatives.

Mission

Township of Severn is a welcoming, community-focused municipality that promotes responsible development, encourages all-season tourism, and delivers a high level of service. We celebrate our unique identity, preserve the natural environment, and value our historic small-town charm.

Vision

Through excellence in service and preservation of our historic and natural assets, the Township of Severn enhances the quality of life for residents and creates opportunities for the community. We welcome investments that complement and respect our rural character.

Asset Management Policy

An asset management policy represents a statement of the principles guiding the Township's approach to asset management activities. It aligns with the organizational strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program.

The Township's Asset Management Policy was developed in 2019 in compliance with the requirements outlined in O. Reg. 588/17.

The approval of this policy is important to integrate the Township's strategic mission, vision and goals with its asset management program, and ensuring the critical municipal infrastructure assets and vital services are maintained and provided to the community in a reliable, sustainable manner. The essential services include transportation networks, stormwater management, facilities and parks and other infrastructure.

Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than the policy on how the Township plans to achieve asset management objectives through planned activities and decision-making criteria. The Township's Asset Management Policy contains many of the key components of an asset management strategy and may be expanded on in future revisions or as part of a separate strategic document.

Asset Management Plan

The asset management plan is often identified as a key output within the strategy. The AMP has a sharp focus on the current state of the Township's asset portfolio, and its approach to managing and funding individual asset groups. It is tactical in nature and provides a snapshot in time.

Limitations and Constraints

The asset management program development required substantial effort by staff, it was developed based on best-available data, and is subject to the following broad limitations, constraints, and assumptions:

- The analysis is highly sensitive to several critical data fields, including an asset's estimated useful life, replacement cost, quantity, and in-service date. Inaccuracies, gaps, or inconsistencies in these fields can have significant and compounding impacts on condition modeling, lifecycle projections, and financial forecasts.
- User-defined and unit cost estimates, based typically on staff judgment, recent projects, or established through completion of technical studies, offer the most precise approximations of current replacement costs. When this isn't possible, historical costs incurred at the time of asset acquisition or construction can be inflated to present day. This approach, while sometimes necessary, can produce inaccurate estimates.
- In the absence of condition assessment data, age was used to estimate asset condition ratings. This approach can result in an over- or understatement of asset needs. As a result, financial requirements generated through this approach can differ from those produced by in-field assessments.
- The risk models are designed to support objective project prioritization and selection. However, in addition to the inherent limitations that all models face, they also require availability of important asset attribute data to ensure that asset risk ratings are valid, and assets are properly stratified within the risk matrix. Missing attribute data can misclassify assets.

These limitations have a direct impact on most of the analysis presented, including condition summaries, age profiles, long-term replacement and rehabilitation forecasts, and shorter term, 10-year forecasts that are generated from Citywide, the municipality's primary asset management system.

These challenges are quite common and require long-term commitment and sustained effort by staff. As the municipality's asset management program evolves and advances, the quality of future AMPs and other core documents that support asset management will continue to increase.

Introduction and Context

Community Profile

Census Characteristic	Township of Severn	Ontario
Population 2021	14,576	14,223,942
Population Change 2016-2021	+8.3%	5.8%
Total Private Dwellings	7,073	5,929,250
Population Density	27.9/ km2	15.9/km^2
Land Area	523.06 km2	892,411.76 km^2

Table 2: The Township of Severn Census Information

The Township of Severn is a lower-tier municipality in Simcoe County, Central Ontario, located at the northern edge of the Greater Golden Horseshoe. Strategically situated between Orillia and Muskoka, Severn benefits from direct connections to Highway 11 and Highway 400, linking the Township to Barrie and the Greater Toronto Area. Its geography is defined by the Trent-Severn Waterway, Lake Couchiching, Severn River, and extensive forested and agricultural lands, which together shape its character as a predominantly rural community with strong ties to tourism, recreation, and agriculture.

Severn was established in 1994 through municipal restructuring that amalgamated the Village of Washago with the former Townships of Coldwater, Matchedash, Orillia, and Severn. The Township includes several distinct settlement areas including Coldwater, Fesserton, Marchmont, Port Severn, Washago and Westshore, each contributing a mix of village cores, shoreline development, rural hamlets, and agricultural landscapes.

Severn's economy is supported by agriculture, tourism, small businesses, and service industries, with natural amenities attracting both seasonal residents and visitors. Proximity to Orillia and the Greater Toronto Area has increased residential growth pressures, particularly in serviced settlement areas such as Coldwater and Westshore, driving demand for infrastructure and municipal services.

The Township's Official Plan directs growth to serviced settlement areas, promoting compact development, intensification, and the protection of agricultural and natural heritage lands. As a rural municipality with a large geographic area, Severn faces challenges in delivering infrastructure efficiently while maintaining environmental stewardship and fiscal sustainability.

Transportation has been identified as a key infrastructure priority, with regional traffic from Highways 11 and 400 placing pressure on local roads. Ongoing investment is also required to expand and maintain water, wastewater, and stormwater infrastructure in growth areas. Through proactive planning and lifecycle-based asset management, Severn aims to support safe, efficient service delivery while preserving its rural character and quality of life.

Asset Management Overview

Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks while maximizing the value and levels of service the community receives from the asset portfolio.

Lifecycle costs can span decades, requiring planning and foresight to ensure financial responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of the broader asset management program. The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan (AMP).

This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents.

The foundation of good asset management practice is accurate and reliable data on the current condition of infrastructure. Assessing the condition of an asset at a single point in time allows staff to have a better understanding of the probability of asset failure due to deteriorating condition.

Key Technical Concepts

Effective asset management integrates several key components, including data management, lifecycle management, risk management, and levels of service.

Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. The two methodologies are:

- User-Defined Cost and Cost/Unit: Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience.
- Cost Inflation/CPI Tables: Historical cost of the asset is inflated based on Consumer Price Index or Non-Residential Building Construction Price Index.

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs. Cost inflation is typically used in the absence of reliable replacement cost data. It is a reliable method for recently purchased and/or constructed assets where the total cost is reflective of the actual costs that the Township incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

Estimated Useful Life and Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which the Township expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary.

By using an asset's in-service date and its EUL, the Township can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, the Township can more accurately forecast when it will require replacement. The SLR is calculated as follows:

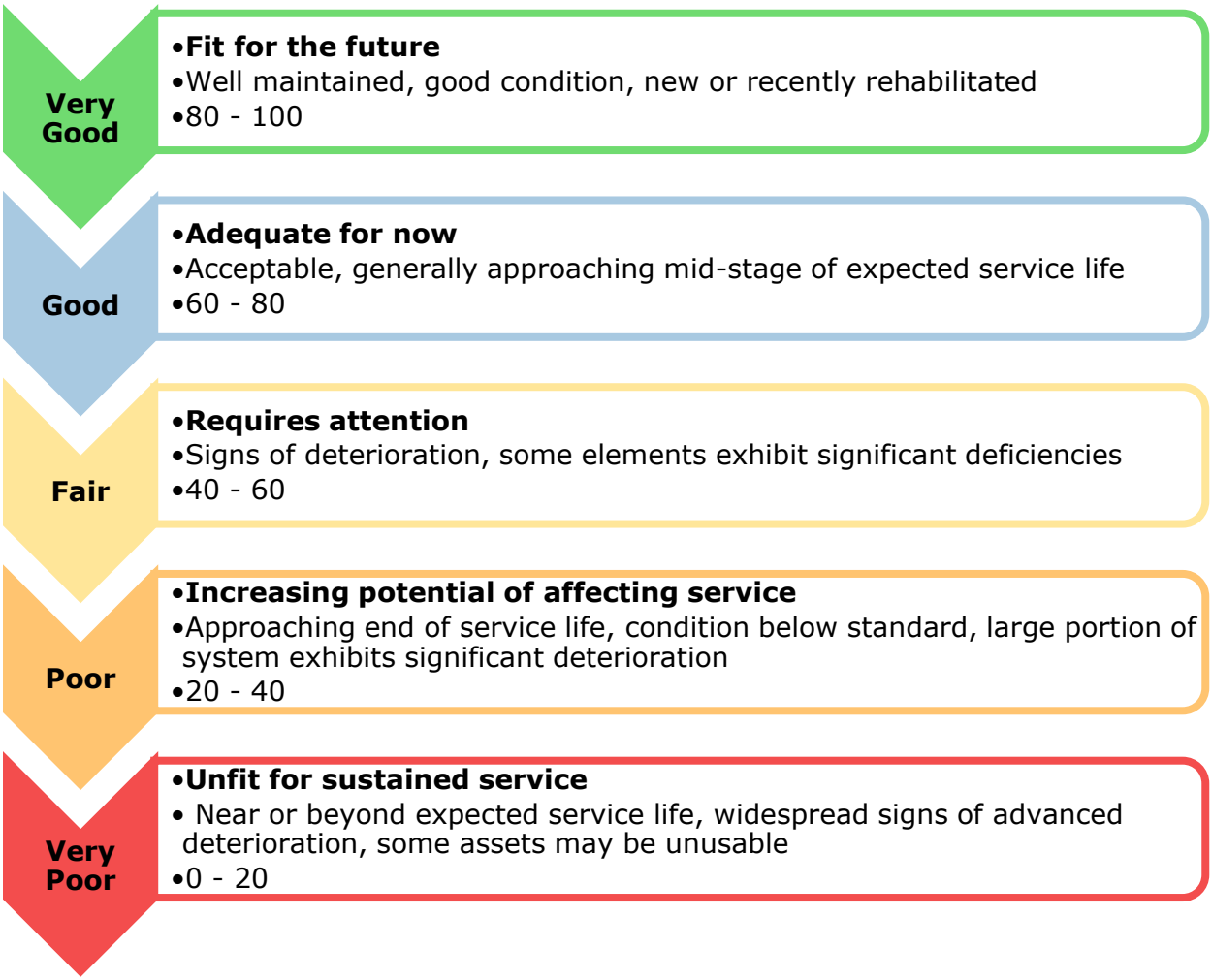
Figure 2: Service Life Remaining Calculation

Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Township's asset portfolio. The figure below outlines the condition rating system used to determine asset condition for all assets in Severn.

Figure 3: Standard Condition Rating Scale



The analysis is based on assessed condition data (only as available). In the absence of assessed condition data, asset age is used as a proxy to determine asset condition. Appendix C includes additional information on the role of asset condition data and provides basic guidelines for the development of a condition assessment program.

Lifecycle Management Strategies

The condition or performance of assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories:

maintenance, rehabilitation, and replacement. Table 3 provides a description of each type of activity.

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

The Township's approach to lifecycle management is described within each asset category. Developing and implementing a proactive lifecycle strategy will help staff to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

Table 3: Lifecyle Management Typical Interventions

Activity Type	Description
Non-Infrastructure Activities	Activities such as studies, condition inspections, planning, and monitoring that support decision-making but do not directly impact the asset's physical state.
Maintenance	Routine and preventive actions that preserve the asset's current condition and functionality, such as cleaning, minor repairs, and regular upkeep.
Renewal, Rehabilitation, and Replacement	Major interventions aimed at restoring, improving, or replacing infrastructure to extend its useful life, including significant repairs, overhauls, and complete asset replacement.
Growth	Activities related to the expansion of infrastructure capacity to meet increased demand, such as constructing new facilities or extending existing ones.
Disposal	The process of decommissioning, removing, or repurposing infrastructure that is no longer needed or has reached the end of its useful life.

Levels of Service

Levels of service (LOS) measure the quality and quantity of service provided, and offer direction for infrastructure investments. They are necessary for performance tracking and reporting. Many agencies attempt to deliver levels of service that cannot be sustainably funded by the existing tax base. This can lead to an eventual drop in quality of service, or increases to tax and utility rates to fund higher service levels.

LOS should be affordable and aligned with the community's long-term vision for itself, and the service attributes it most values for different infrastructure programs.

Community Levels of Service

Community LOS are a simple, plain language description or measure of the service that the community receives. For core asset categories, the Province, through O.

Reg. 588/17, has provided qualitative descriptions that are required. For non-core asset categories, the Township must determine the qualitative descriptions that will be used. The community LOS can be found in the Levels of Service subsection within each asset category section.

Technical Levels of Service

Technical LOS are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the Township's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories, the Province, through O. Reg. 588/17, has provided technical metrics that are required. For non-core asset categories, the Township determined the technical metrics that will be used. The metrics can be found in the LOS subsection within each asset category.

Current and Proposed Levels of Service

Current LOS are the past performance metrics of an asset category up until present day. In contrast, Proposed LOS looks toward the municipality's goal for asset performance by a defined future date.

It is important to note that O. Reg 588/17 does not dictate which proposed LOS metrics municipality's need to strive for. A proposed LOS will be very specific to each community's resident desires, political goals, and financial capacity. This can range from increasing service levels and costs, to maintaining or even reducing current performance in order to mitigate future cost increases. Regardless of the proposed LOS chosen, O. Reg 588/17 requires municipalities to demonstrate the achievability of their selected metrics.

Reinvestment Rate

As assets age and deteriorate, they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost. By comparing the actual vs. target reinvestment rate the Township can determine the extent of any existing funding gap

Portfolio Overview

Asset Hierarchy and Data Classification

Asset hierarchy illustrates the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Key category details are summarized at the asset segment level.

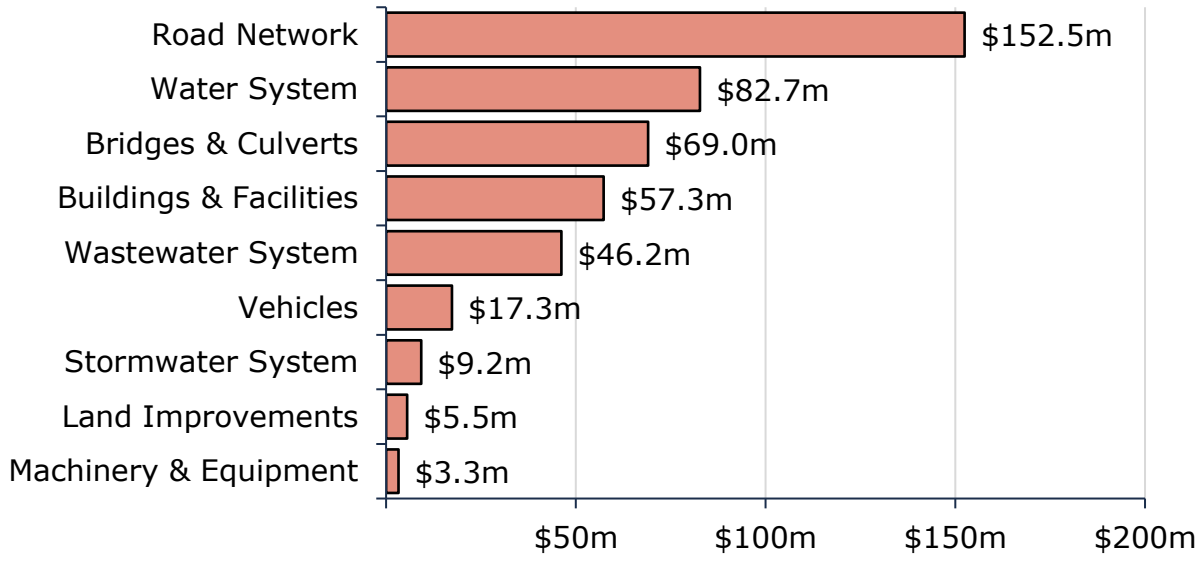
Table 4 Asset Hierarchy

•Curbs & Gutters •Gravel Roads •Paved Roads •Sidewalks •Streetlights	•Bridges •Major Culverts	•Utilities Vehicles •Water Equipment •Water Linear •Water Non-Linear •Water Treatment
Road Network	**Bridges & Culverts**	**Water System**
•Wastewater Equipment •Wastewater Linear •Wastewater Non-Linear •Wastewater Treatment	•Stormwater Linear •Stormwater Management Ponds •Stormwater Non-Linear	•Administration Buildings •Cemetary •Fire Halls •Library •Public Works Buildings •Recreation Buildings
Wastewater System	**Stormwater System**	**Buildings & Facilities**
•Fencing •Landscaping •Outdoor Lighting •Outdoor Structures •Parking Lots •Playground Equipment •Trails	•Building Vehicles •Bylaw Vehicles •Fire Vehicles •Public Works Vehicles •Recreation Vehicles	•Admin Equipment •Dry Hydrants •Fire Equipment •Library Equipment •Public Works Equipment •Recreation Equipment
Land Improvements	**Vehicles**	**Machinery & Equipment**

Replacement Cost

All Severn' asset categories have a total replacement cost of $443.1 million based on available inventory data. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

Figure 4: Portfolio Replacement Value



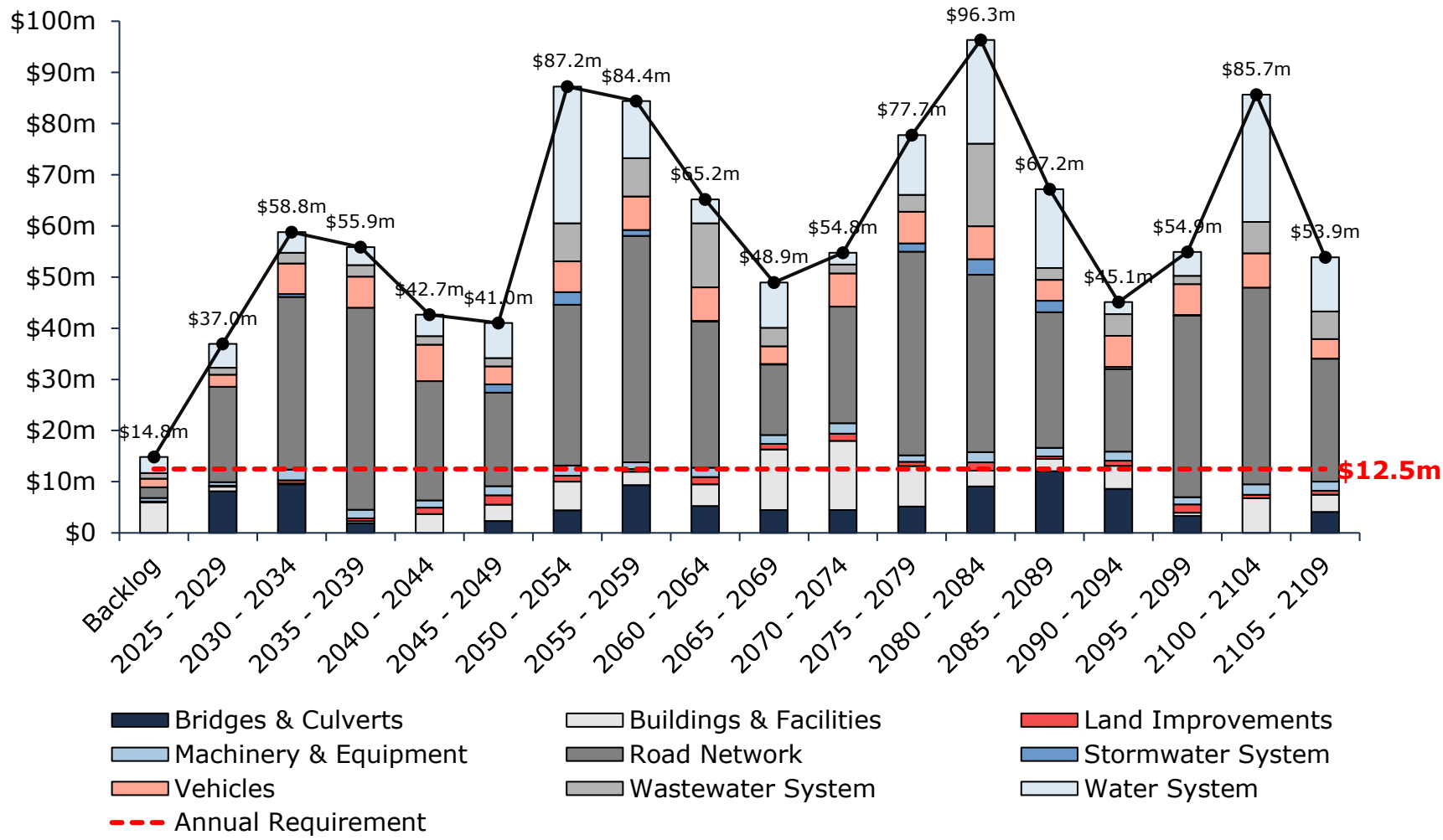
Where possible, replacement values are based on user-defined costs informed by recent projects, engineering studies, condition assessments, or insurance appraisals. In cases where updated cost information is not available, historical costs have been adjusted using applicable inflation indices.

Forecasted Capital Requirements

The figure on the next page illustrates the cyclical short-, medium- and long-term replacement requirements for the nine asset categories, forecasted for the next 85 years. In addition to replacements, the chart also illustrates the repair and rehabilitation lifecycle needs for the Township's road network. All values presented in the forecast are expressed in 2025 dollars and do not account for inflation.

On average, these service areas require $12.5 million annually to meet capital needs related to the assets held by the Township as of the end of 2024. Based on the current replacement cost of the portfolio, estimated at $443.1 million, this represents an annual target reinvestment rate of 2.8%. Although actual spending and replacement needs may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement and rehabilitation needs are met as they arise.

Figure 5: Forecasted Capital Requirements

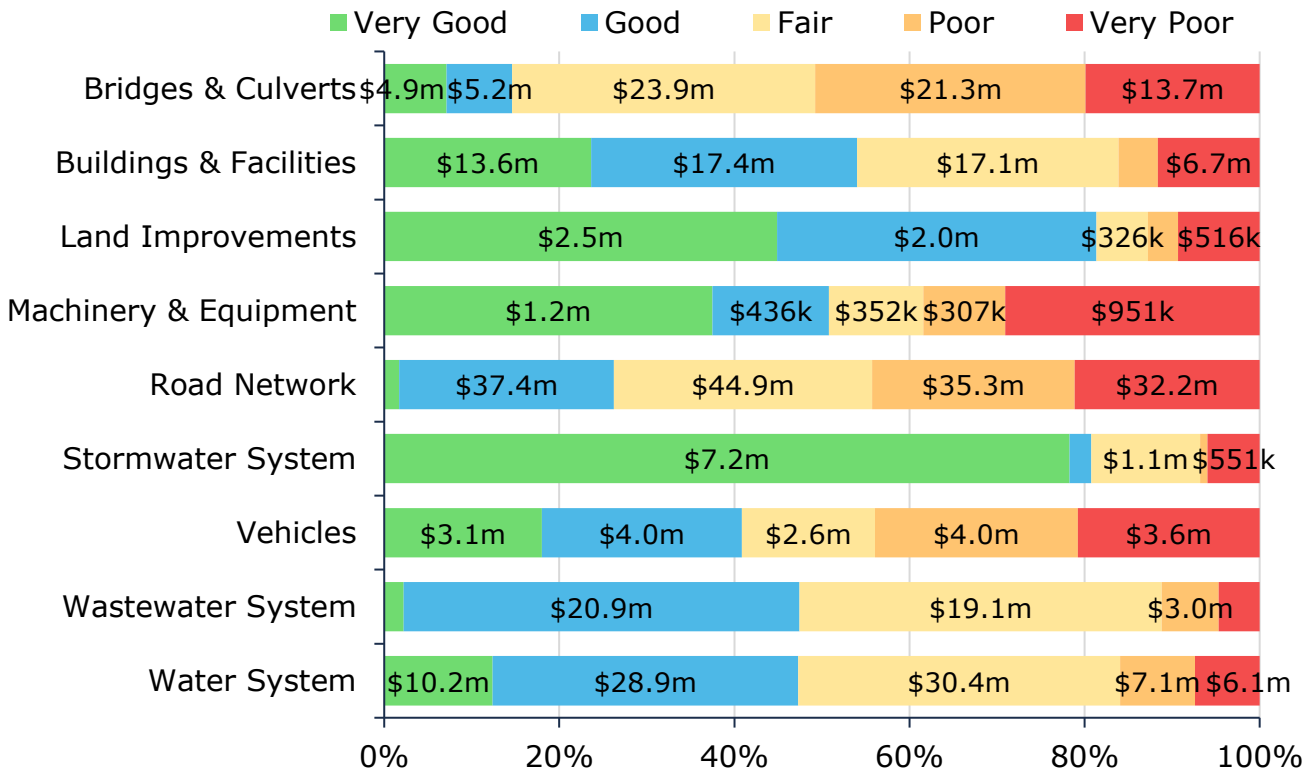


The chart also shows that a portion of assets, with a replacement cost of $14.8 million have reached the end of their useful life, based either on condition ratings, or age-only data. While not all such assets may require immediate replacements, further evaluation may be warranted to identify actual asset needs. The magnitude of capital requirements typically far exceeds what most agencies can afford to fund. A risk-based approach can be used to direct funds where they are needed most.

Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 68% of assets in Severn are in fair or better condition. This estimate relies on both age-based and field condition data.

Figure 6: Asset Condition by Asset Category



Source of Condition Data

This AMP relies on assessed condition for 50% of the asset portfolio, based on and weighted by replacement cost. For all remaining assets, age was used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions. Age-based condition estimations can skew data and lead to potential under- or overstatement of asset needs.

Further, when assessed condition data was available, it was projected to align with the year-end used (2024). This "projected condition" can generate lower condition ratings than those established at the time of the condition assessment. The rate of this deterioration will also depend on lifecycle curves used to project condition over time. Table 5 identifies the source of condition data used throughout this AMP

Table 5: Assessed Condition Data Sources

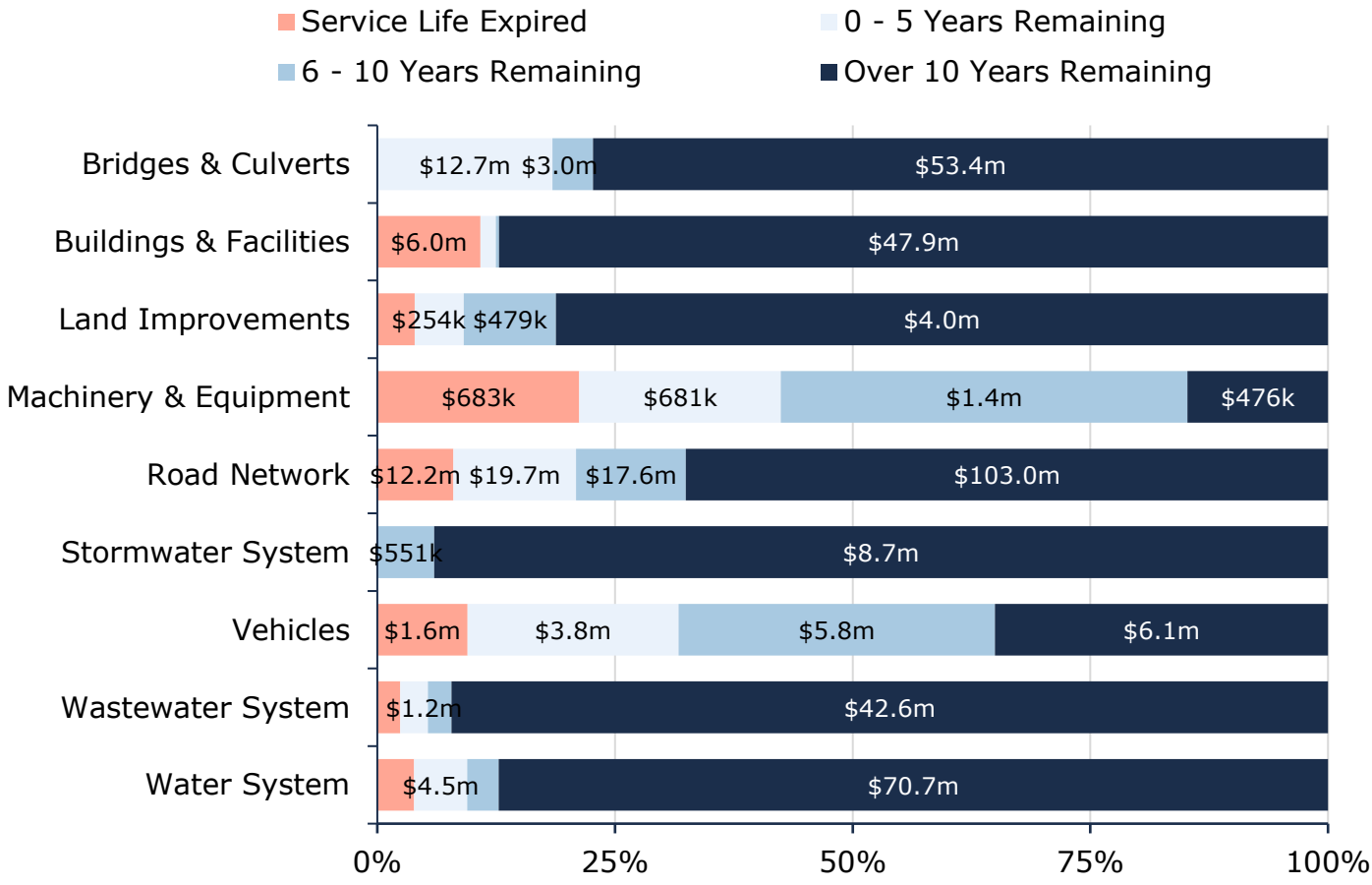
Asset Category	Assets with Assessed Condition	Source of Condition Data
Bridges & Culverts	100%	2023 OSIM Report (Doug Dixon & Associates Inc.)
Road Network	98%	2022 Road Needs Study (Public Works Department)
Land Improvements	3%	Staff Assessments
Machinery & Equipment	1%	Staff Assessments

Assessed condition data is available for bridges and culverts, the road network, and some machinery & equipment and land improvement assets; for the remaining portfolio, age is used as an approximation of condition.

Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 14% of the Township's assets will require rehabilitation/replacement within the next 10 years. Details of the capital requirements are identified in each asset section.

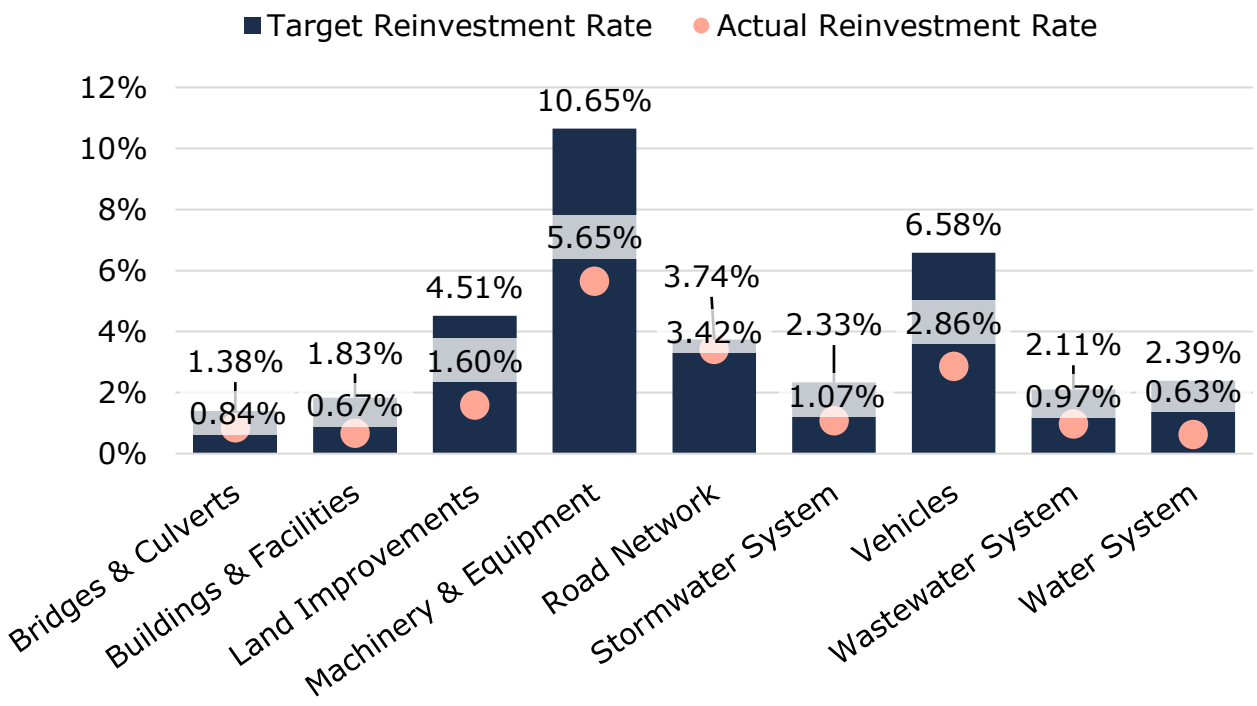
Figure 7: Service Life Remaining by Asset Category



Reinvestment Rate

The graph below depicts funding gaps or surpluses by comparing target vs actual reinvestment rate. To meet the long-term replacement needs, the Township is recommended to be allocating approximately $12.5 million annually, for a target reinvestment rate of 2.8%. Actual annual spending on infrastructure totals approximately $7.9 million, for an actual reinvestment rate of 1.8%.

Figure 8: Target vs Actual Reinvestment Rates



Road Network

The Road Network is a critical component of the provision of safe and efficient transportation services. It includes all municipally owned and maintained roadways in addition to supporting roadside infrastructure including, sidewalks, and streetlights.

Other responsibilities include the preservation, maintenance and rehabilitation of municipal roads, bridges, sidewalks, streetlights, drainage, winter control, signage, maintenance and removal of trees on municipal properties and the acquisition, maintenance and repair of corporate vehicles and equipment.

Inventory & Valuation

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Road Network inventory.

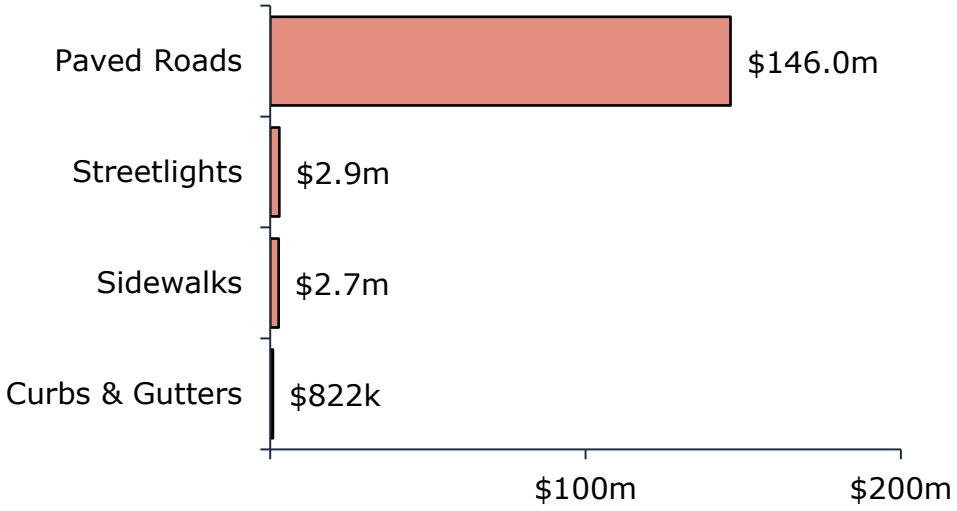
Table 6: Road Network Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Curbs & Gutters	5.5[1]	Kilometers	Cost per Unit	$821,719
Gravel Roads	50.2	Kilometers	Not Planned for Replacement[2]	
Paved Roads	352.9	Kilometers	Cost per Unit	$146,019,981
Sidewalks	9.0	Kilometers	User-Defined	$2,685,999
Streetlights	584	Assets	CPI	$2,930,659
Total				**$152,458,358**

[1] The reported quantity of curbs and gutters may be understated due to data gaps, reporting practices, and the inclusion of pooled assets within broader asset segments.

[2] Gravel roads have been included as they comprise a significant portion of the Township's road network. However, the lifecycle management strategies for these assets consist of perpetual maintenance activities and do not require capital costs for rehabilitation or replacement.

The figure below displays the replacement cost of each asset segment in the Township's road inventory.

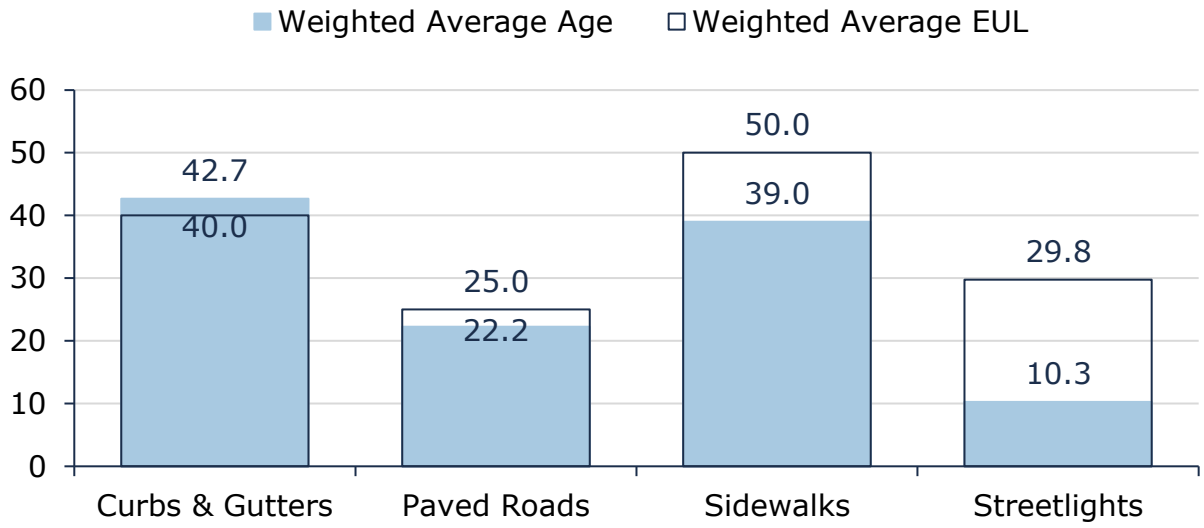


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

The graph below identifies the average age, and the estimated useful life for each asset segment. It is all weighted by replacement cost.

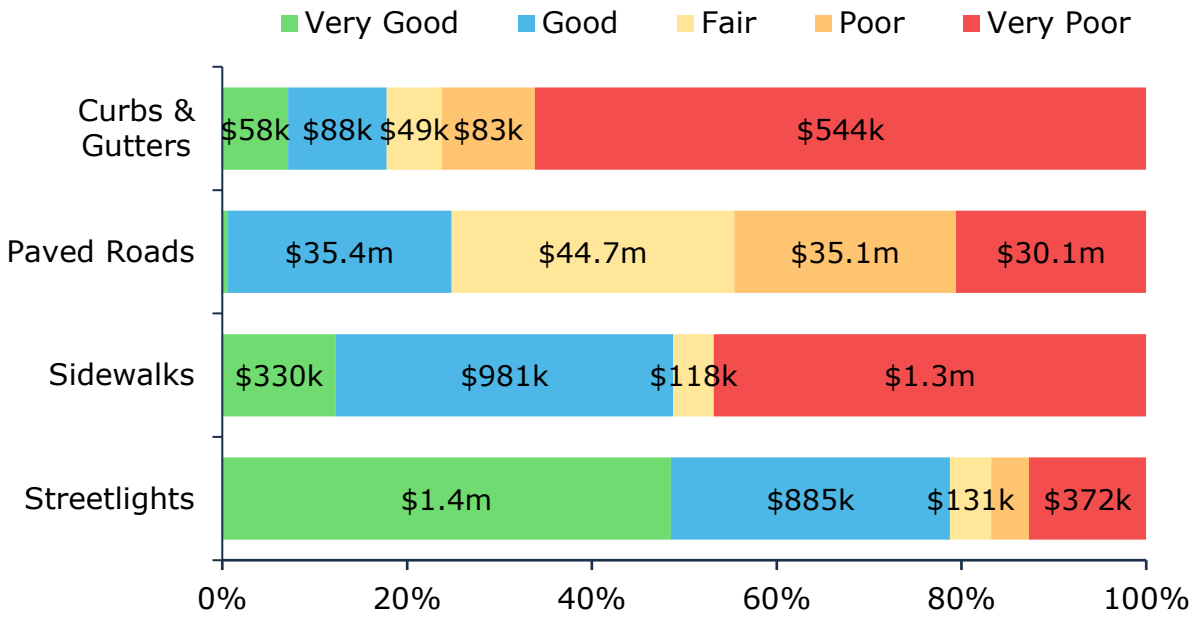
Figure 10: Road Network Average Age vs Average EUL



The analysis shows that, based on in-service dates, many road assets are nearing their expected useful life and continue to operate effectively as a result of the life cycle management strategies being applied.

The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 11: Road Network Condition Breakdown



Managing a large road network requires an understanding of condition, performance, and long-term investment needs. The Township uses network-level condition information to prioritize road improvements and support capital planning decisions. The following describes the Township's current approach:

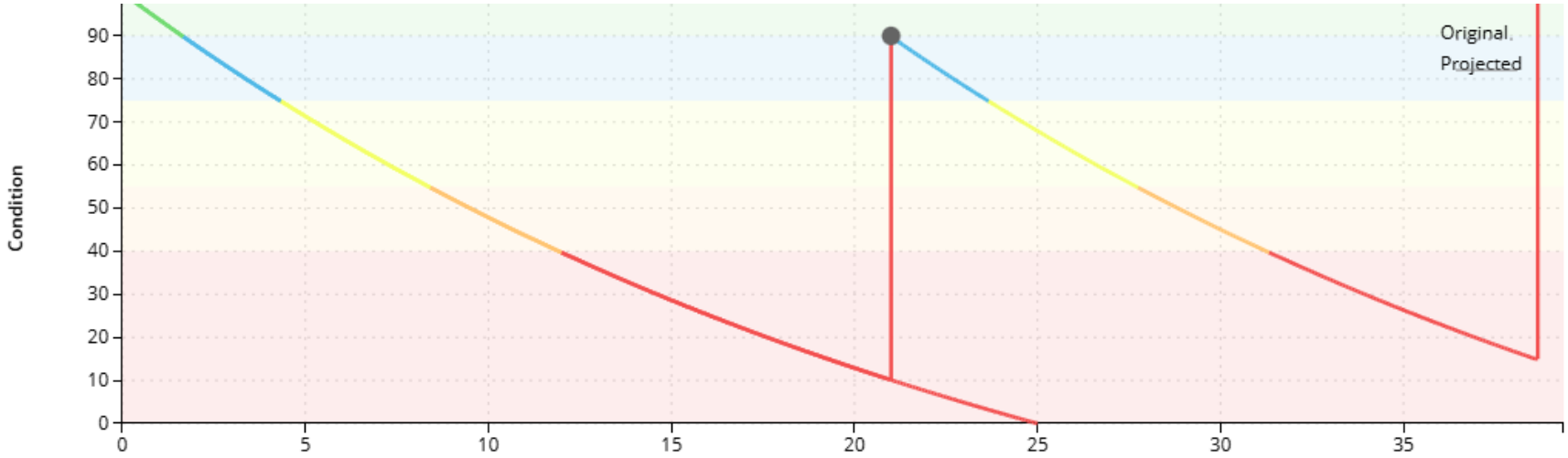
- The most recent Road Needs Study was completed internally in 2022 by the Public Works Department.
- Included in the Road Needs Study is a Pavement Condition Index (PCI) rating for every road in addition to a broader rating on the structural condition of the road structure and a Ten-Year Road Improvement Plan.

Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment.

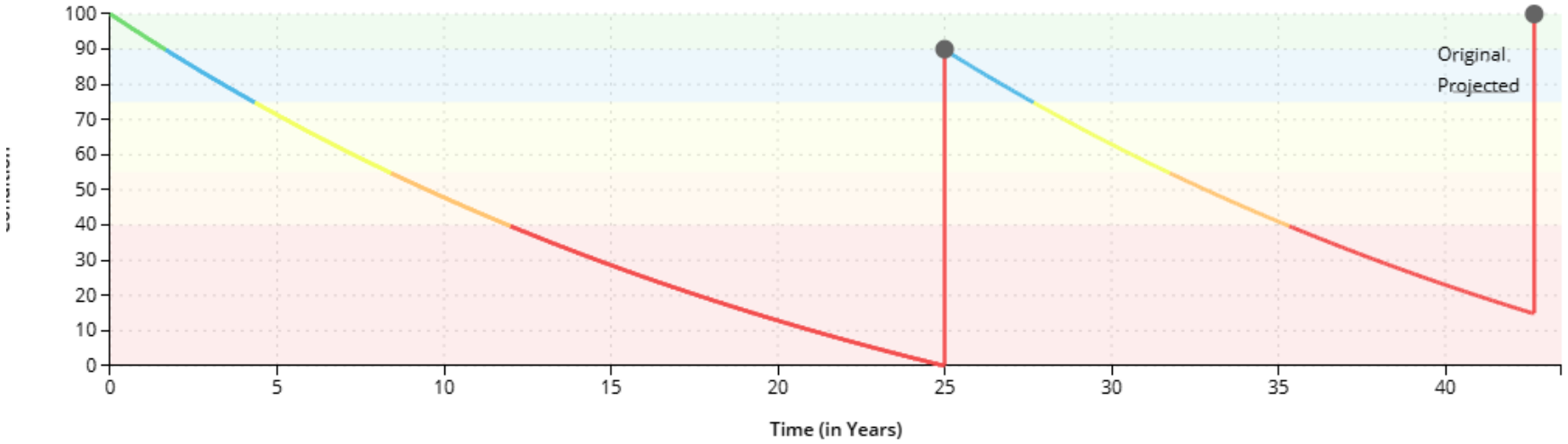
Lifecycle models used to estimate the savings to annual capital requirement are shown below in Figure 12 for Paved (HCB) roads, Figure 13 for Surface Treated Roads and Figure 14 for Gravel Roads.

Figure 12: Roads (Semi-Urban) Lifecycle Model



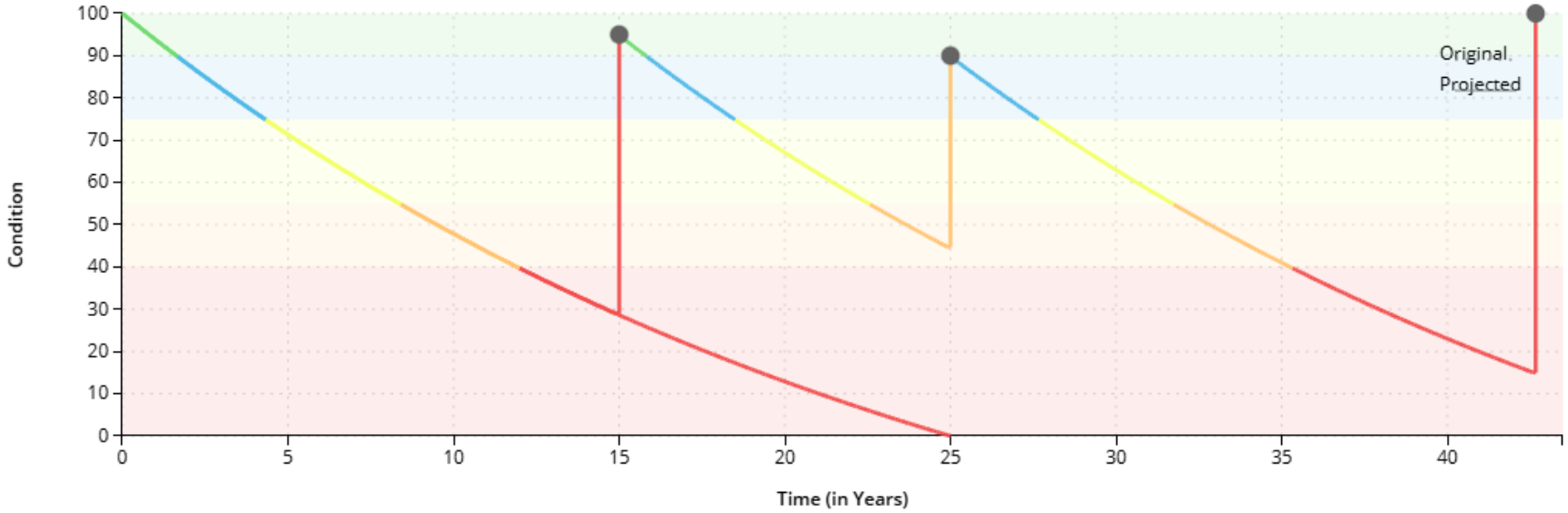
Roads (Semi-Urban)		
Event Name	**Event Class**	**Event Trigger**
Pulverize + 100mm Gran A + 1 HMA	Rehabilitation	Age: 21 Years
Full Reconstruction	Replacement	15% Condition

Figure 13: Roads (Urban) Lifecycle Model



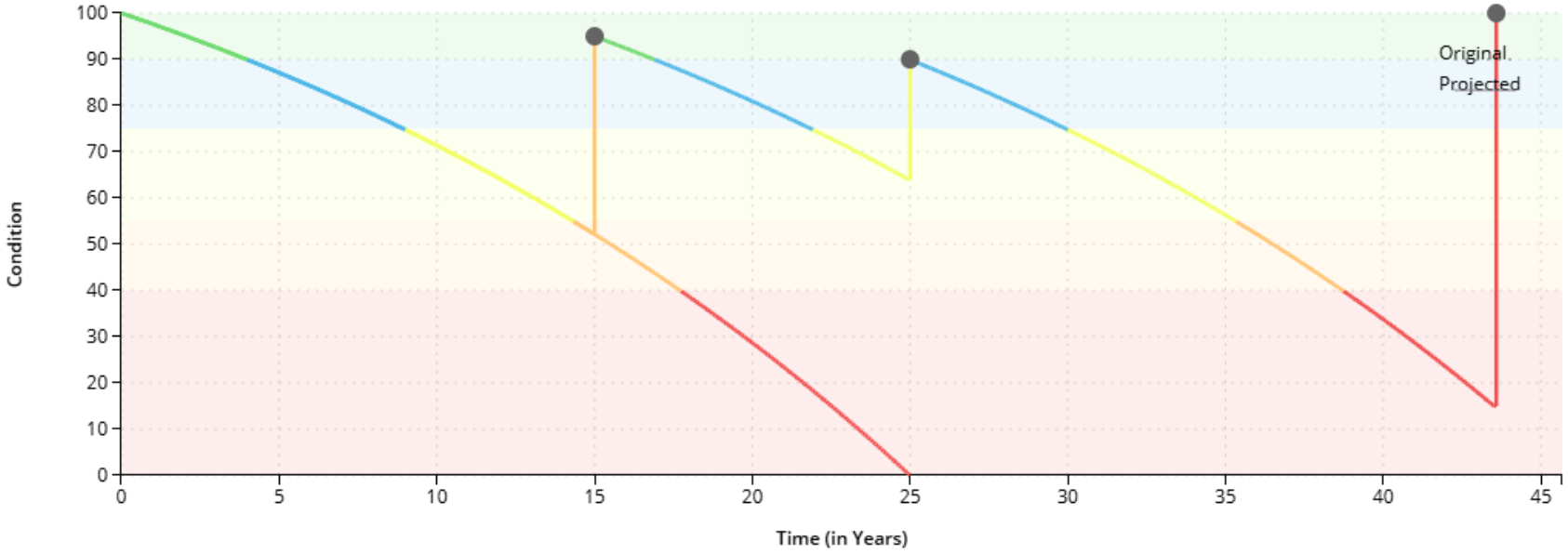
Roads (Urban)		
Event Name	**Event Class**	**Event Trigger**
Mill + 1 HMA	Rehabilitation	Age: 25 Years
Full Reconstruction	Replacement	15% Condition

Figure 14: Rural (0-400 AADT) Roads Lifecycle Model



Rural (0-400 AADT) Roads		
Event Name	**Event Class**	**Event Trigger**
Surface Treatment + Slurry Seal	Rehabilitation	Age: 15 Years
Pulverize + 100 mm Gran A + Double Surface Treatment	Rehabilitation	Age: 20 to 25 Years
Full Reconstruction	Replacement	15% Condition

Figure 15: Rural (>400 AADT) Roads Lifecycle Model



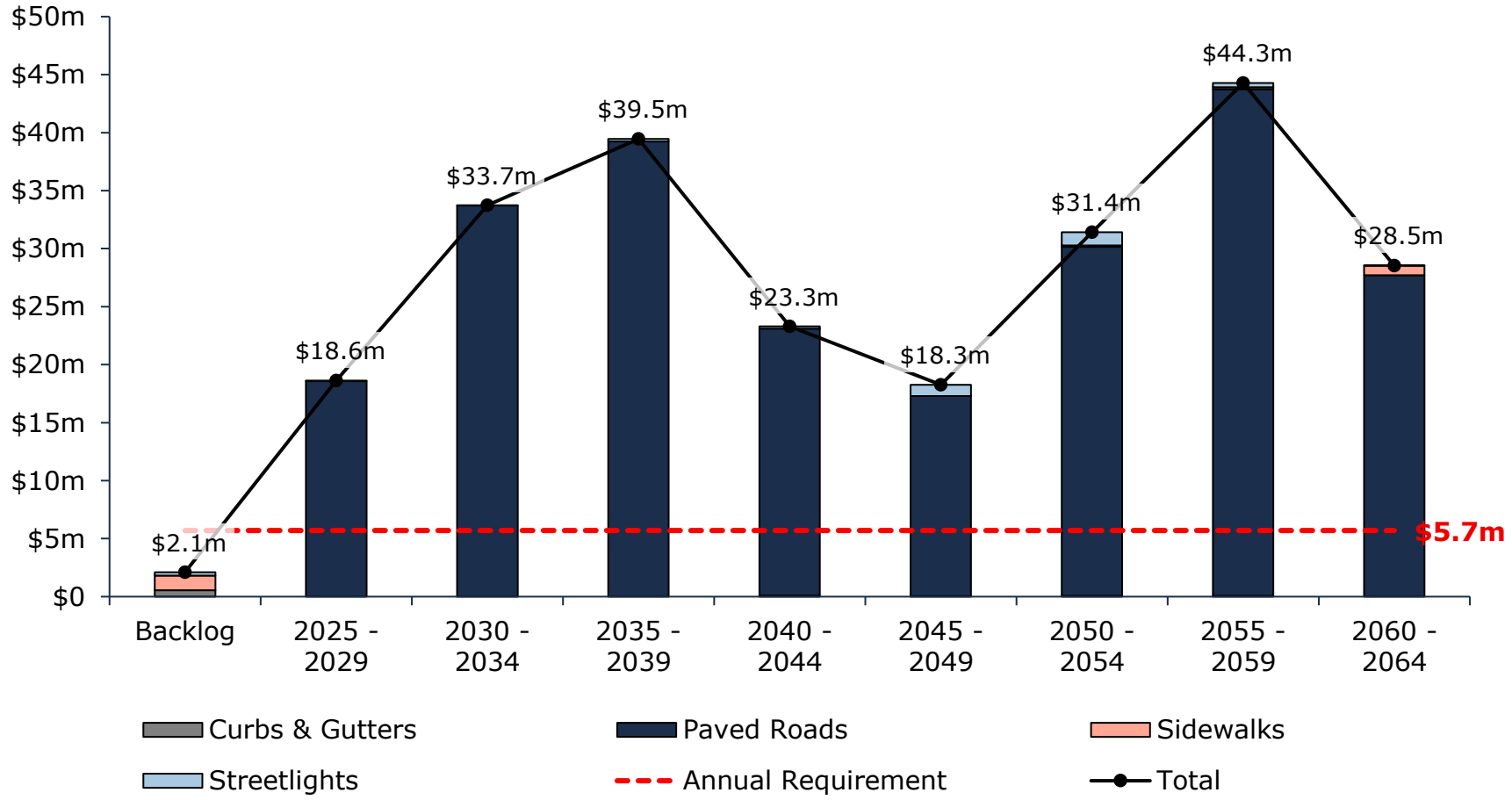
Rural (>400 AADT) Roads		
Event Name	**Event Class**	**Event Trigger**
Surface Treatment + Slurry Seal	Rehabilitation	Age: 15 Years
Pulverize + 100 mm Gran A + 1 HMA	Rehabilitation	Age: 20 to 25 Years
Full Reconstruction	Replacement	15% Condition

Forecasted Capital Requirements

The figure below illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's road network. This analysis was run until 2064 to capture at least one iteration of replacement for the longest-lived asset in the asset register.

Severn's average annual requirements (red dotted line) total $5.7 million for all assets in the road network. These requirements are based on asset replacement costs, age analysis, and condition data when available, as well as lifecycle modeling.

Figure 16: Road Network Forecasted Capital Replacement Requirements



The table below summarizes the projected cost of lifecycle activities (rehabilitation and replacement) that may need to be undertaken over the next 10 years to support current levels of service. These projections are generated in Citywide and rely on the data available in the asset register.

Table 7 Road Network System-generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Curbs & Gutters	$544k	-	-	-	-	-	-	-	-	-	-
Paved Roads	-	$3.2m	$2.3m	$3.8m	$4.0m	$5.2m	$3.2m	$12.2m	$5.9m	$9.7m	$2.7m
Sidewalks	$1.3m	-	-	-	-	-	-	-	-	-	-
Streetlights	$313k	$21k	$24k	-	-	$14k	-	$7k	-	-	$9k
Total	**$2.1m**	**$3.3m**	**$2.3m**	**$3.8m**	**$4.0m**	**$5.2m**	**$3.2m**	**$12.2m**	**$5.9m**	**$9.7m**	**$2.7m**

Bridges & Culverts

Bridges & Culverts are a critical component of the Township's transportation network. They facilitate the movement of passenger vehicles, trucks, pedestrians, and cyclists.

All bridges and structural culverts are subject to biennial inspections as per the Ontario Bridge Inspection Manual (OSIM).

The Township's Bridges & Culverts are maintained by the Public Works Department.

Inventory & Valuation

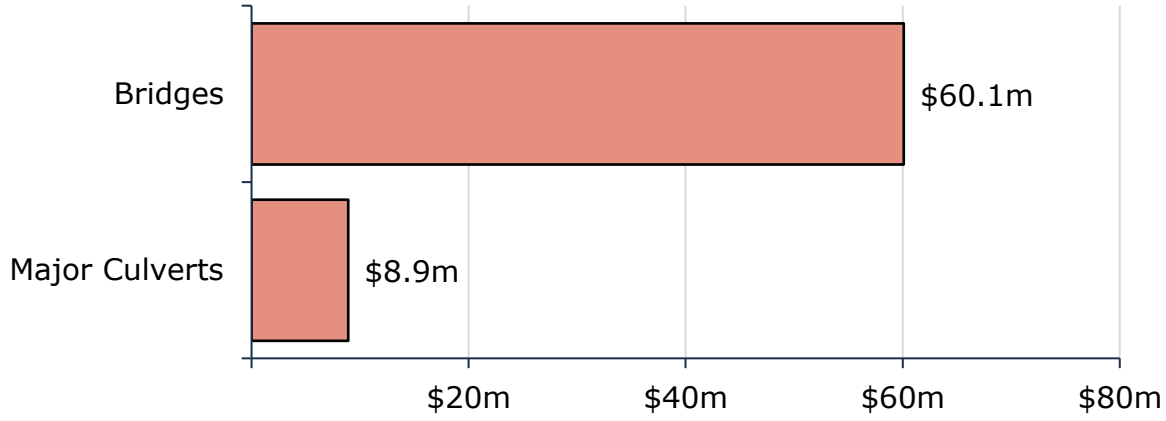
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Bridges & Culverts inventory.

Table 8: Bridges & Culverts Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Bridges	32	Assets	User-Defined	$60,101,080
Major Culverts	11	Assets	User-Defined	$8,908,500
Total	**43**	**Assets**	**User-Defined**	**$69,009,580**

The figure below displays the replacement cost of each asset segment in the Township's bridges and culverts inventory.

Figure 17: Bridges & Culverts Replacement Cost

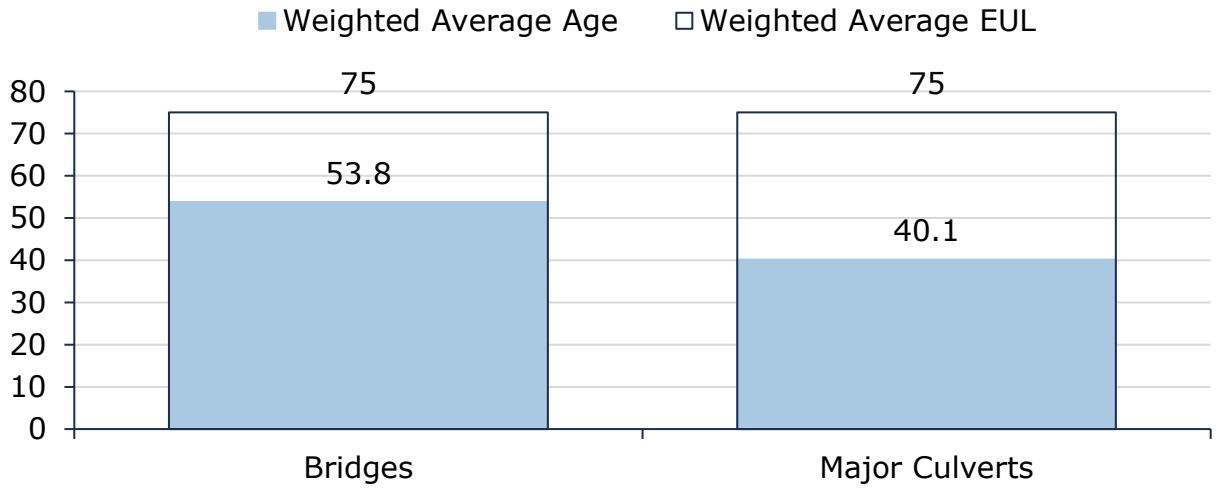


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed. This can be included in the Ontario Structures Inspection Manual (OSIM) inspections as the replacement cost is part of the calculation for the bridge condition index (BCI).

Asset Condition & Age

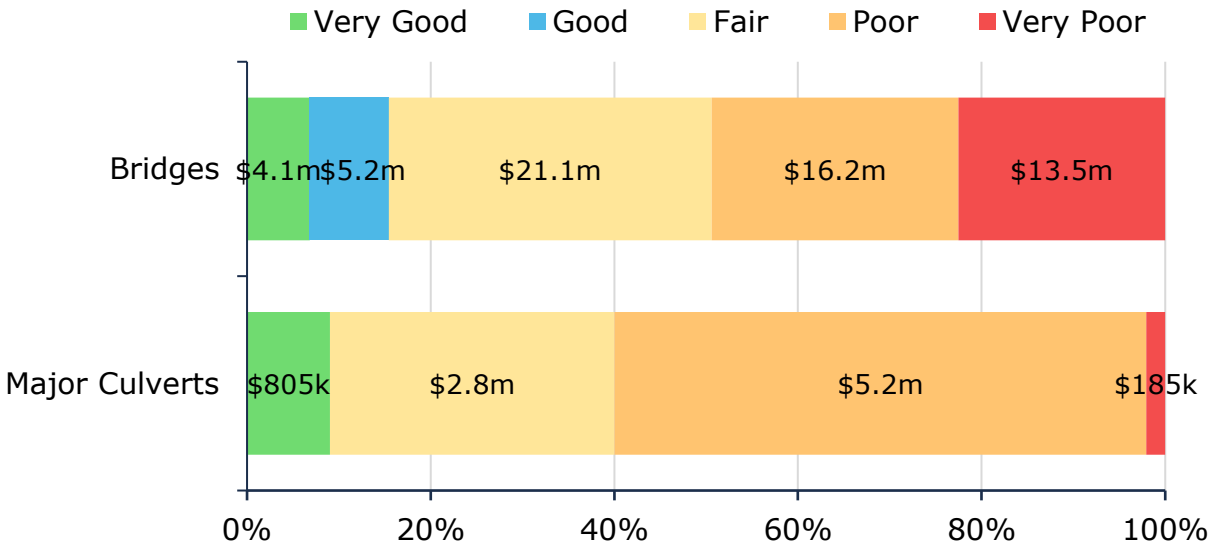
The graph below identifies the average age and the estimated useful life for each asset segment. The values are weighted based on replacement cost.

Figure 18: B&C Average Age vs Average EUL



The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 19: B&C Condition Breakdown



Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets.

Severn' current approach is to assess the 32 bridges and 11 structural culverts every 2 years in accordance with the Ontario Structure Inspection Manual (OSIM). The most recent assessment was completed in 2025 by Burnside & Associates. BCI ratings provided for each structure and used to inform the development of a prioritized capital program. Bridge Condition Index (BCI) ratings are assigned to each structure and used to inform the development of a prioritized capital rehabilitation and replacement program.

Lifecycle Management Strategy

Due to their critical role in public safety and mobility, bridges and culverts require a structured and regulation-driven lifecycle management approach. The Township's strategy is aligned with the Ontario Structure Inspection Manual (OSIM) and focuses on timely maintenance, rehabilitation, and replacement to manage risk and ensure continued safe operation.

Table 9: B&C Current Lifecycle Strategy

Activity Type	Description

Maintenance	• Maintenance activities are guided by OSIM inspection recommendations and include:
	  ○ Annual sweeping and drainage system cleaning
	  ○ Regular guardrail maintenance and replacement

Rehabilitation & Replacement	• Rehabilitation and replacement activities are primarily based on the rehabilitation and replacement needs identified in OSIM inspection reports completed on a two-year inspection cycle.

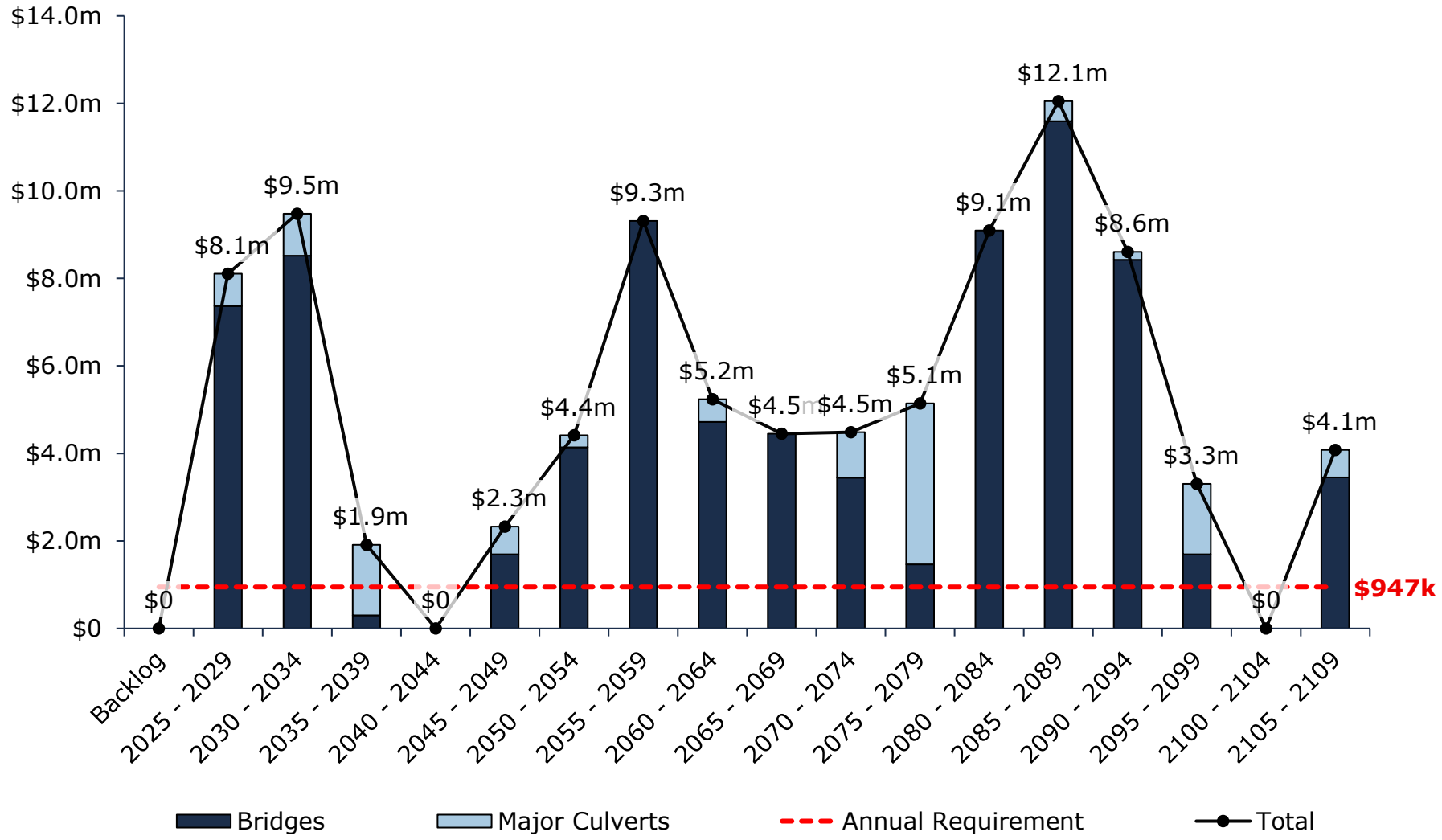
Forecasted Capital Requirements

The figure below illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Township's bridges and culverts. These projections are based on asset replacement costs, age analysis, and condition data. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.

The following analysis and the resulting graph identify capital requirements until 2109. Severn' average annual requirements (red dotted line) for bridges and culverts total $947 thousand. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

OSIM condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including rehabilitation and replacement activities.

Figure 20: B&C Forecasted Capital Replacement Requirements



The table below summarizes the projected cost of lifecycle activities (as previously described) that may need to be undertaken over the next 10 years to support current levels of service. These are represented at the major asset level.

Table 10 B&C System-generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Bridges	-	$132k	$2.4m	$1.1m	$1.5m	$2.2m	$1.2m	$2.9m	$2.1m	$77k	$2.2m
Major Culverts	-	$43k	-	$42k	$659k	-	$42k	$605k	$315k	-	-
Total	**-**	**$175k**	**$2.4m**	**$1.1m**	**$2.2m**	**$2.2m**	**$1.3m**	**$3.5m**	**$2.4m**	**$77k**	**$2.2m**

These projections are generated in Citywide and rely on the data available in the asset register. Assessed condition data and replacement costs were used to assist in forecasting replacement needs for bridges and structural culverts.

Water System

The Township of Severn owns and operates the Washago, Sandcastle, Westshore, Coldwater, Bass Lake Woodlands and Severn Estates water treatment and distribution systems.

The Utilities Department, under the direction of the Director of Public Works, is committed to ensure a consistent supply of safe, high quality drinking water, and to maintain and continuously improve its quality management system and to meet all applicable regulations.

Key responsibilities of the department include water supply, treatment and distribution operations & maintenance, water meter distribution and customer service, systems operations & maintenance, and regulatory compliance.

Inventory & Valuation

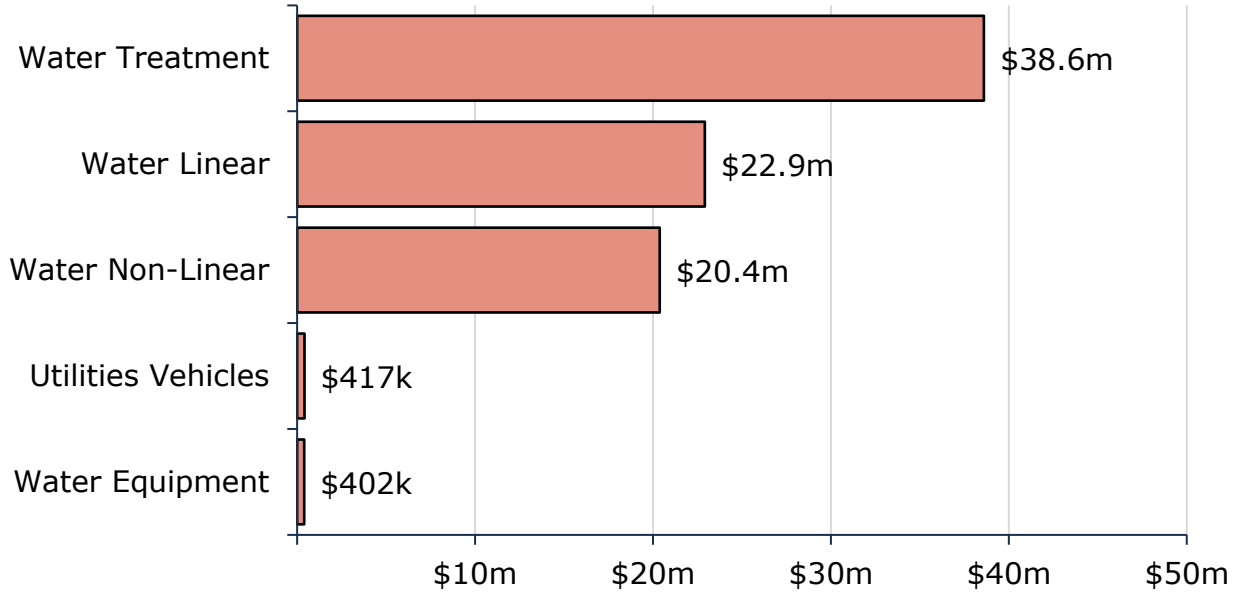
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment for the Township's Water System.

Table 11: Water System Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Utilities Vehicles	9	Assets	CPI	$416,969
Water Equipment	19	Assets	CPI	$401,511
Water Linear	49,393	Meters	Cost per Unit	$22,909,834
Water Non-Linear	5,854	Assets	User-Defined	$18,736,873
Water Treatment	345	Assets	User-Defined	$38,603,667
Total			**User-Defined**	**$81,068,855**

The graph below displays the total replacement cost of each asset segment in Severn's Water System inventory.

Figure 21: Water Network Replacement Cost

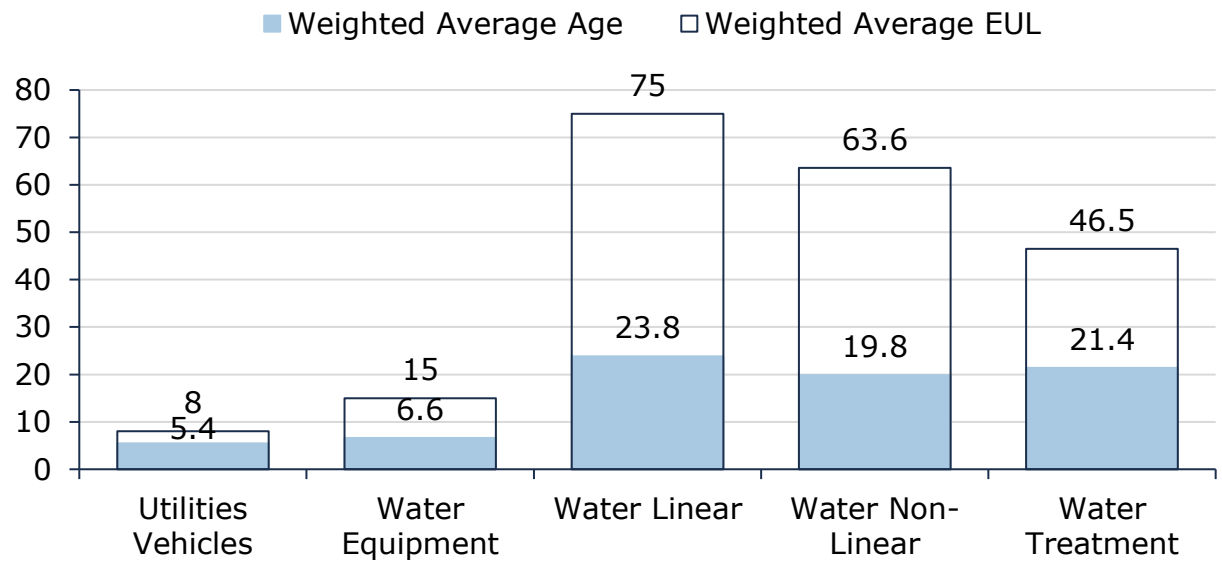


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

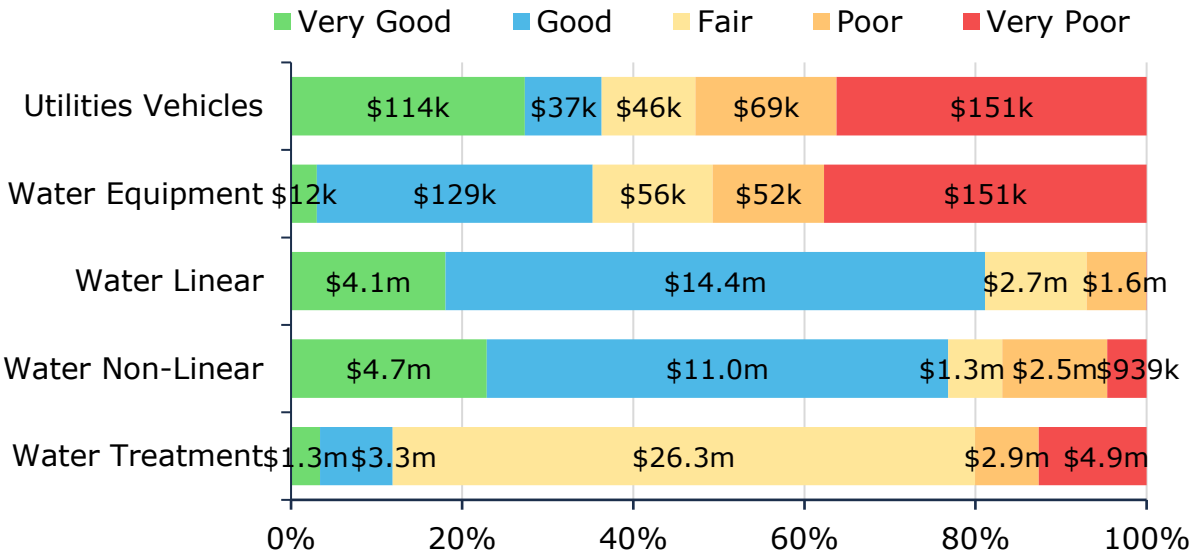
The figure below identifies the current average condition, the average age, and the estimated useful life for each asset segment. The average condition (%) is a weighted value based on replacement cost.

Figure 22: Water System Average Age vs Average EUL



The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 23: Water Network Condition Breakdown



Water system condition is monitored primarily through operational performance rather than periodic physical inspections. While the Township does not currently have a formal condition assessment program for the water system, continuous monitoring through the SCADA system allows staff to track system performance in real time, identify emerging issues, and respond in a timely manner.

Lifecycle Management Strategy

Effective lifecycle management of the water system focuses on maintaining reliable operation while planning for future system needs. The Township's approach emphasizes routine maintenance, targeted responses to operational issues, and long-term capital planning to support growth and system sustainability.

Table 12: Water System Current Lifecycle Strategy

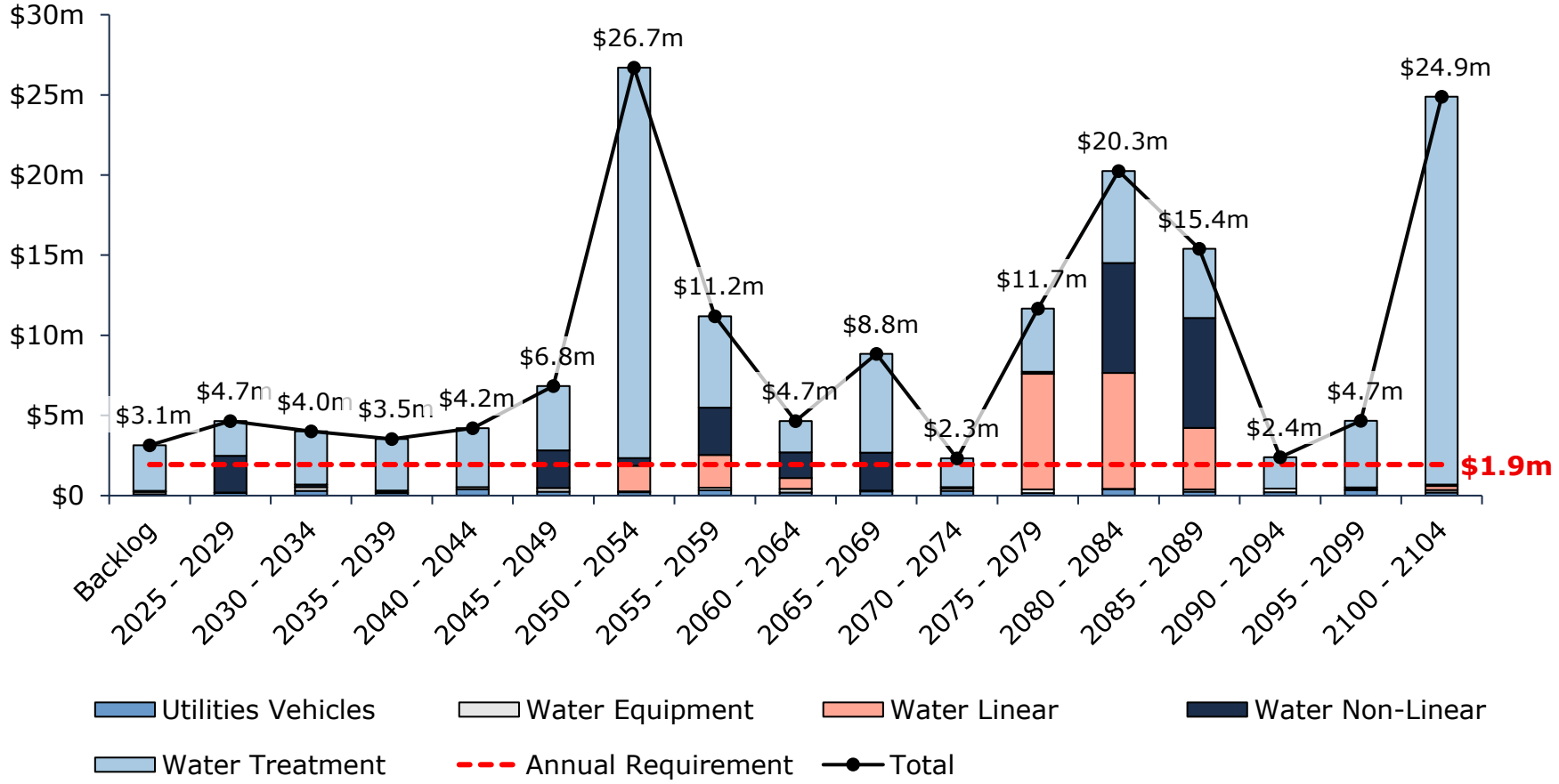
Activity Type	Description
Maintenance	• Maintenance activities are carried out routinely across the water network and include: ○ Water main swabbing and flushing ○ Valve exercising ○ Increased flushing frequency in areas with known operational concerns
Rehabilitation	• Rehabilitation and replacement activities are limited and generally addressed on a case-by-case basis in response to operational issues.

Activity Type	Description
Replacement	• Much of the water network is relatively new, and as a result, historical capital planning has focused on accommodating future growth rather than replacing existing infrastructure.
	• A 10-year capital plan is in place to guide water system investments, with the Township's Servicing Master Plan continuing to inform long-term rehabilitation and replacement planning.

Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that Severn should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 80 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average capital requirement of $1.9 million.

Figure 24: Water System Forecasted Capital Replacement Requirements



The table below summarizes the projected cost of lifecycle activities (capital activities only) that may need to be undertaken over the next 10 years to support current levels of service.

Table 13: Water System System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Utilities Vehicles	$86k	-	$65k	$69k	$46k	-	$37k	-	$114k	$86k	$65k
Water Equipment	$151k	-	-	-	$6k	-	$56k	-	$6k	$56k	$112k
Water Linear	$6k	-	-	-	-	-	-	-	-	-	-
Water Non-Linear	$49k	$2k	-	$443k	$59k	$1.8m	-	-	-	-	$151k
Water Treatment	$2.8m	$200k	$108k	$210k	$1.4m	$274k	$352k	$1.0m	$65k	$1.1m	$745k
Total	**$3.1m**	**$202k**	**$172k**	**$722k**	**$1.5m**	**$2.1m**	**$445k**	**$1.0m**	**$185k**	**$1.3m**	**$1.1m**

These projections are generated in Citywide and rely on the data available in the asset register. Aged-based condition data and replacement costs were used to assist in forecasting replacement needs for water network assets.

Wastewater System

The Utilities Department, under the direction of the Director of Public Works, operates and maintains wastewater collection and treatment facilities in Washago, Westshore, and Coldwater.

Key responsibilities of the department include wastewater collection and treatment, systems operations & maintenance, and regulatory compliance.

Inventory & Valuation

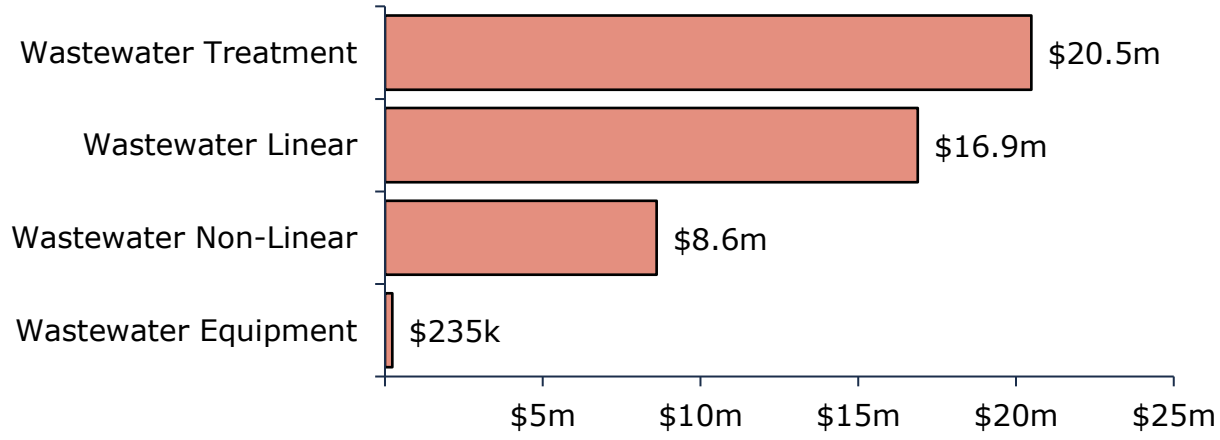
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment for the Township's Wastewater System.

Table 14: Wastewater System Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Wastewater Equipment	9	Assets	CPI	$235,353
Wastewater Linear	33,732	Meters	Cost per Unit	$16,885,386
Wastewater Non-Linear	288	Assets	User-Defined	$8,611,643
Wastewater Treatment	154	Assets	User-Defined	$20,487,832
Total			**User-Defined**	**$46,220,214**

The graph below displays the total replacement cost of each asset segment in Severn' Sanitary Sewer Network inventory.

Figure 25: Wastewater System Replacement Cost

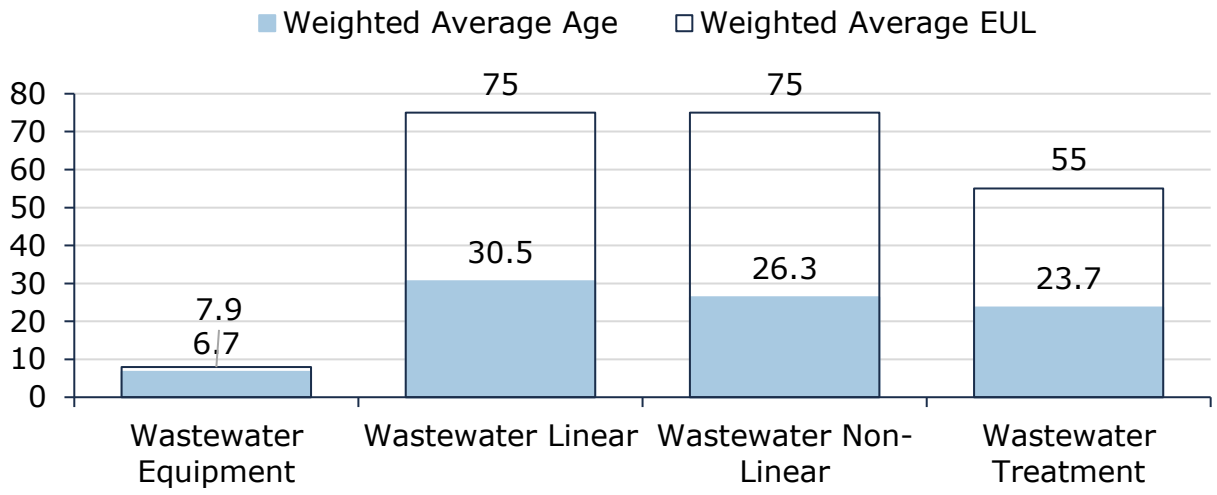


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

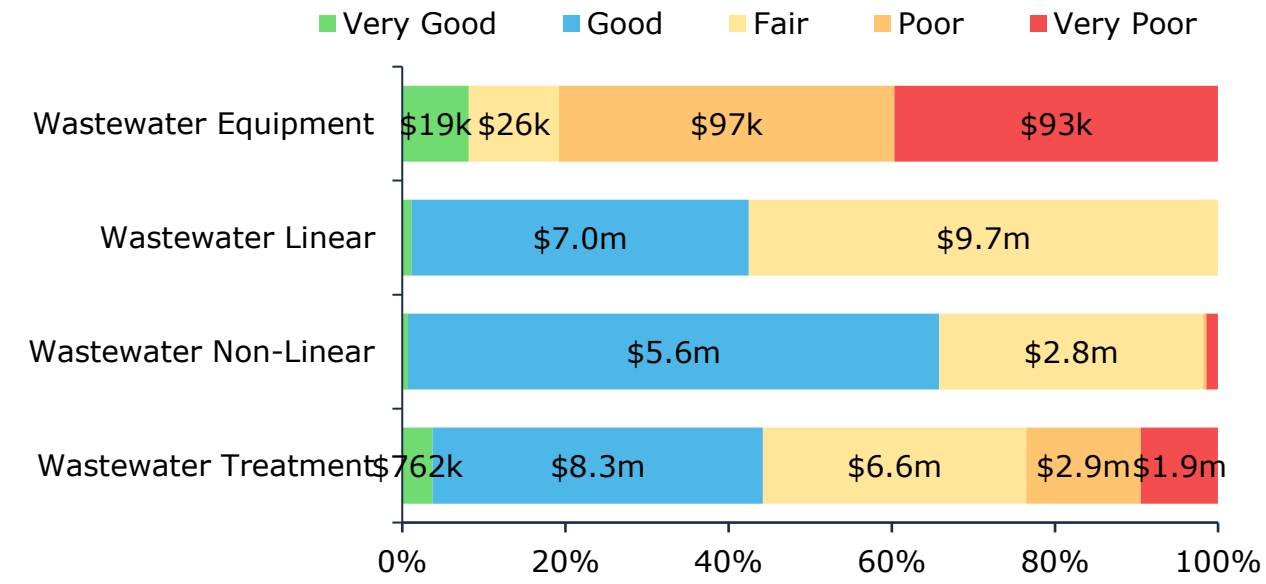
The figure below identifies the current average condition, the average age, and the estimated useful life for each asset segment. The average condition (%) is a weighted value based on replacement cost.

Figure 26: Wastewater System Average Age vs Average EUL



The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 27: Wastewater System Condition Breakdown



Maintaining reliable wastewater service requires regular monitoring and timely identification of system deficiencies. The Township's condition assessment approach focuses on inspections and targeted investigations to support both operational response and long-term planning:

- Township staff perform regular inspections, particularly during seasonal transitions, to anticipate and address potential issues.
- Sewer flushing and CCTV inspections are completed on a five-year cycle, with inspection footage reviewed by staff to identify deficiencies and inform both operational and capital planning decisions.

Lifecycle Management Strategy

Effective lifecycle management of the wastewater system focuses on maintaining system reliability while addressing issues before they result in service disruptions. The Township's approach emphasizes routine maintenance, targeted rehabilitation, and long-term planning to support continued system performance.

Table 15: Wastewater System Current Lifecycle Strategy

Activity Type	Description

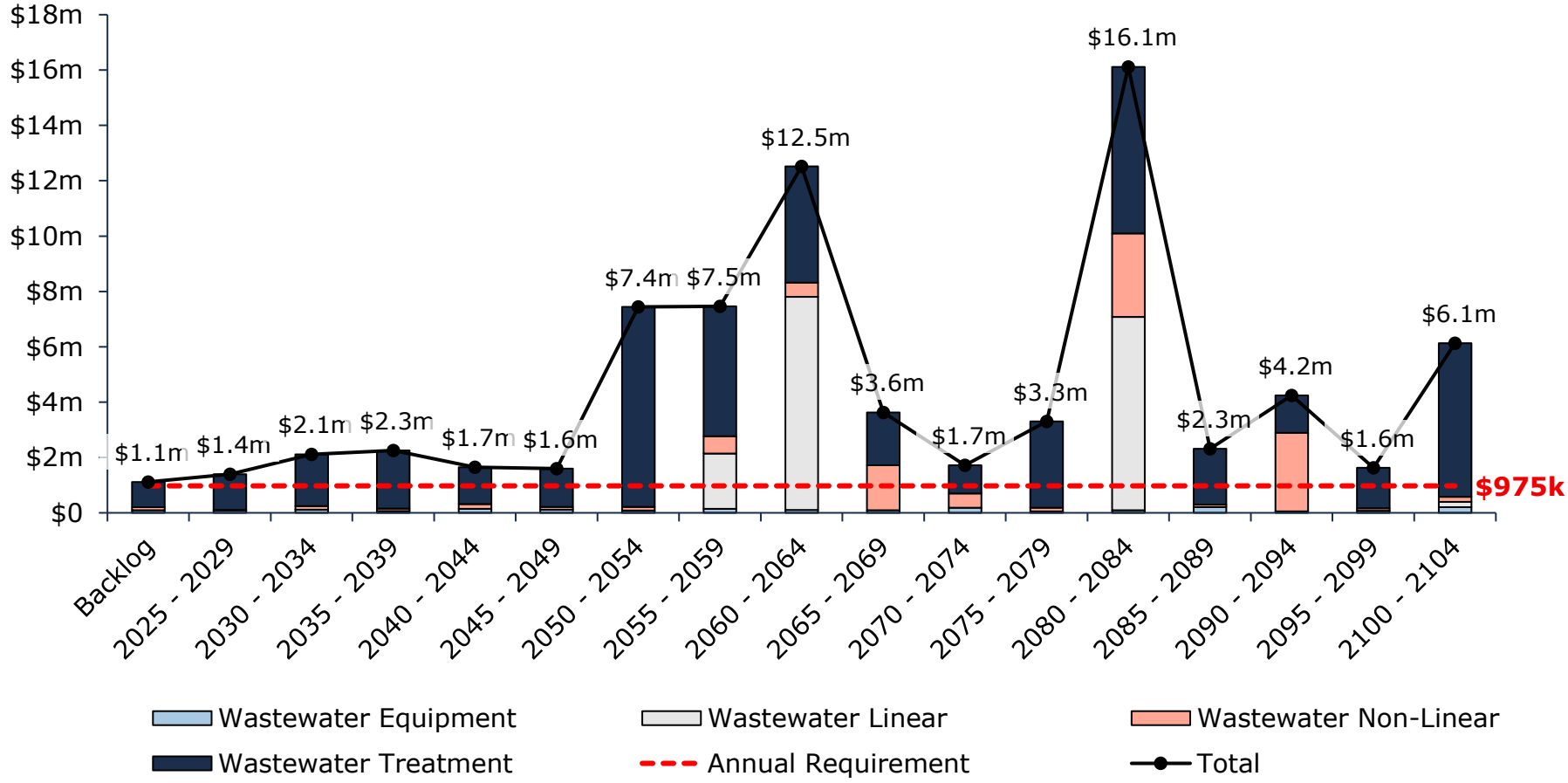
Maintenance	• Maintenance activities include:
	  ○ Annual sewer flushing
	  ○ Flow monitoring and inflow analysis
	• Ongoing inspection of portions of the linear system each year, with the full network reviewed via CCTV every five years

Rehabilitation	• Rehabilitation activities consist primarily of non-structural sewer main relining, completed on an as-needed basis to address identified deficiencies and extend the service life of existing infrastructure.
Replacement	• Replacement activities are currently limited, as much of the wastewater network is relatively new. • The 10-year capital plan guides wastewater system investments, while the Township's Servicing Master Plan informs long-term planning and renewal strategies.

Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that Severn should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 80 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average capital requirements at $975 thousand.

Figure 28: Wastewater System Forecasted Capital Replacement Requirements



The Table below summarizes the projected cost of lifecycle activities (capital activities only) that may need to be undertaken over the next 10 years to support current levels of service.

Table 16 Wastewater System System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wastewater Equipment	$93k	-	$25k	$4k	-	$68k	$2k	$45k	$43k	$25k	$4k
Wastewater Linear	-	-	-	-	-	-	-	-	-	-	-
Wastewater Non-Linear	$116k	$6k	-	-	$6k	-	$81k	$6k	-	-	$41k
Wastewater Treatment	$908k	$79k	$86k	-	$865k	$253k	$736k	$625k	-	$212k	$294k
Total	**$1.1m**	**$86k**	**$111k**	**$4k**	**$872k**	**$321k**	**$819k**	**$676k**	**$43k**	**$238k**	**$339k**

These projections are generated in Citywide and rely on the data available in the asset register. Age-based condition data and replacement costs were used to assist in forecasting replacement needs for sanitary network assets.

Stormwater System

The Township owns and maintains a Stormwater System consisting of 7.9 kilometres of storm sewer mains, 400 kilometres of open ditches, catch basins, manholes, 14 stormwater management facilities and one Oil Grit Separator.

The Stormwater System is maintained throughout the year by the Public Works Department.

Inventory & Valuation

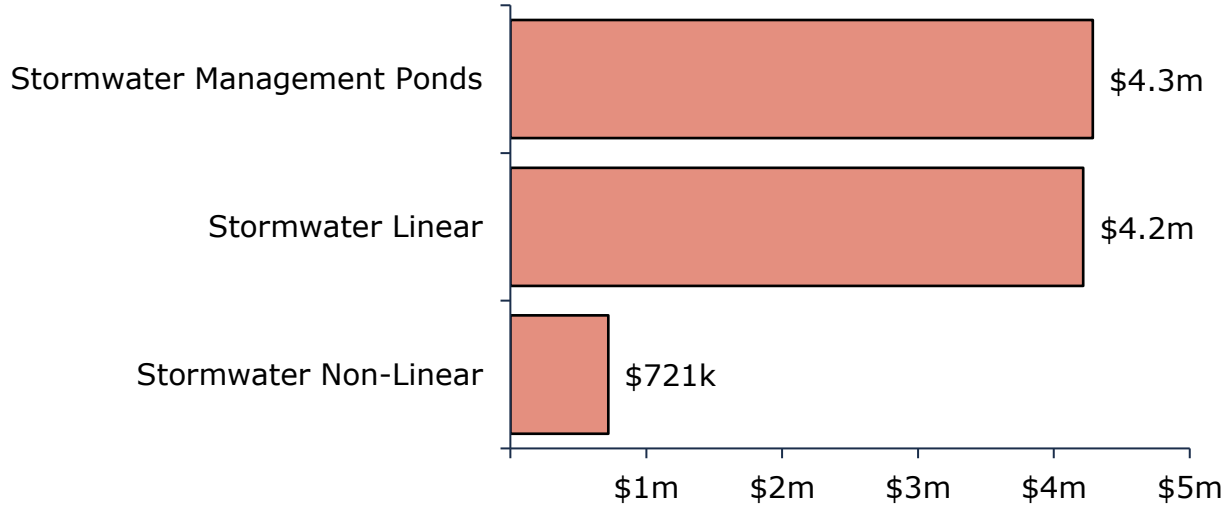
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment for the Township's Storm Water Network.

Table 17: Stormwater System Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Stormwater Linear	7,991	Meters	Cost per Unit	$4,216,559
Stormwater Management Ponds	10	Assets	CPI	$4,285,575
Stormwater Non-Linear	67	Assets	Cost per Unit	$720,500
Total			**Cost per Unit**	**$9,222,634**

The graph below displays the total replacement cost of each asset segment in Severn' Storm Sewer Network inventory.

Figure 29: Stormwater System Replacement Cost

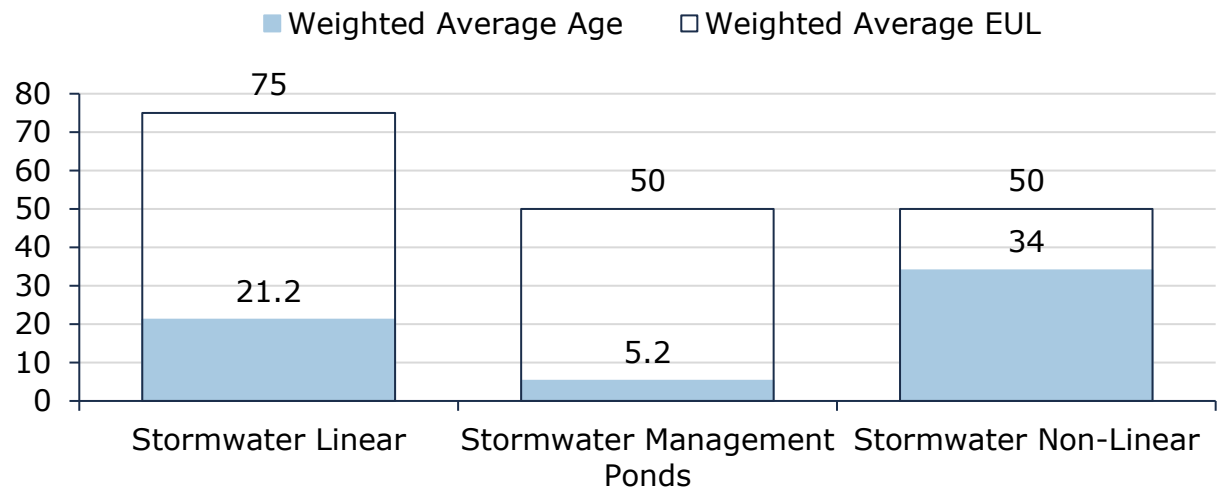


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

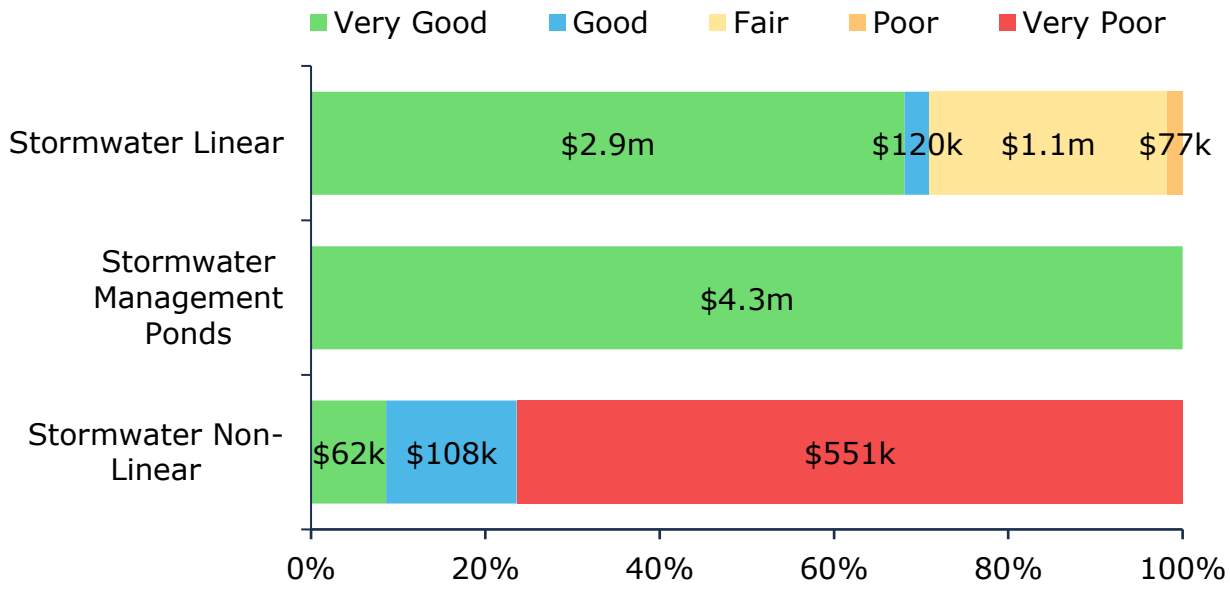
The graph below identifies the current average condition, the average age, and the estimated useful life for each asset segment. The average condition (%) is a weighted value based on replacement cost.

Figure 30: Stormwater System Average Age vs Average EUL



The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 31: Stormwater System Condition Breakdown



Ongoing monitoring of stormwater assets allows the Township to detect emerging issues and make informed decisions on maintenance and capital planning. The current approach includes:

- Township staff perform routine inspections of Stormwater Management Ponds, including measuring sediment depth, checking operational performance, and identifying signs of wear, damage, or potential failure

Lifecycle Management Strategy

Stormwater assets are managed through regular operational monitoring and maintenance activities designed to maintain system performance and prevent service interruptions. Lifecycle interventions are applied as needed to address deficiencies and support long-term functionality.

The following table outlines the Township's current lifecycle management strategy.

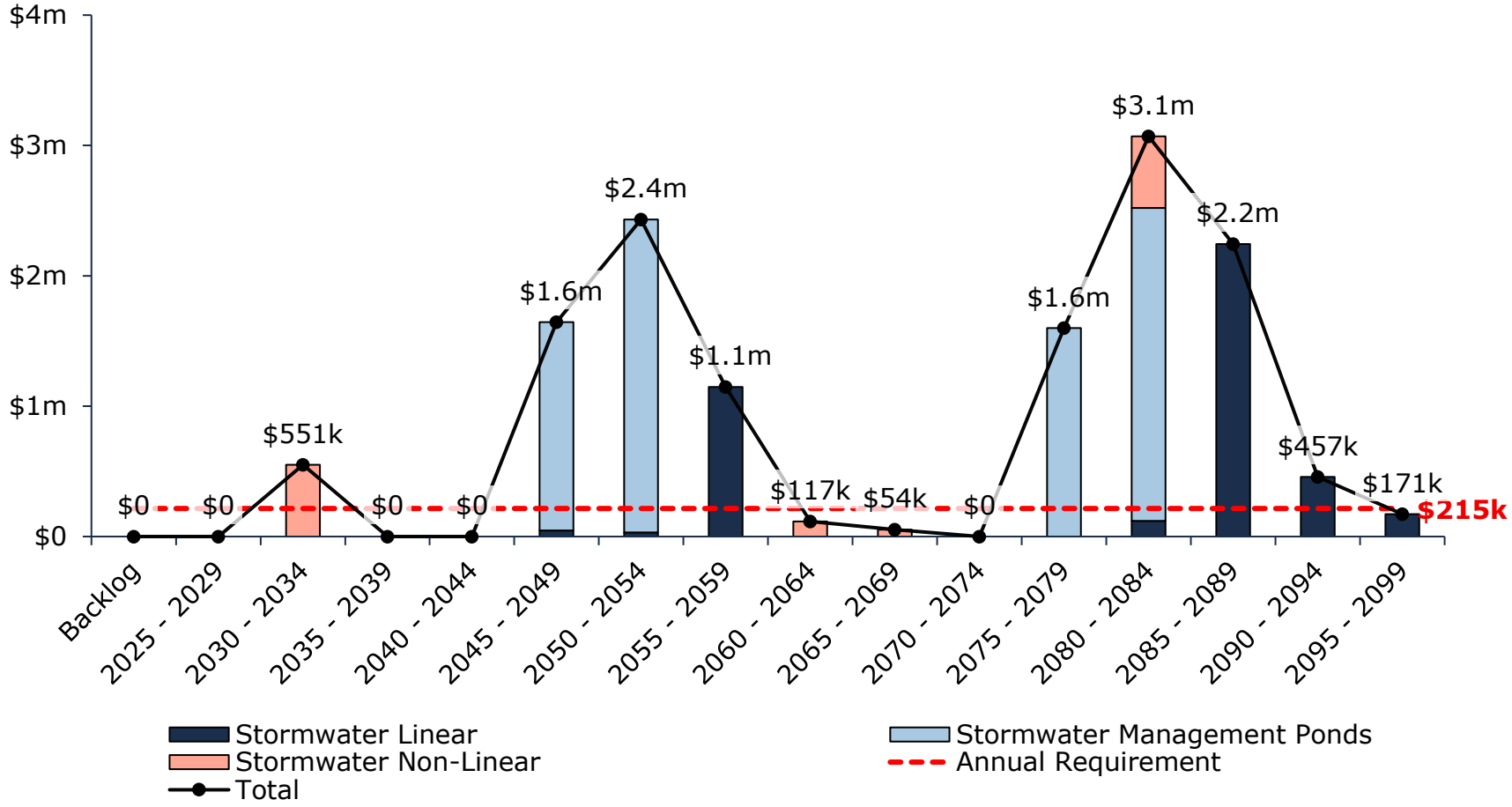
Table 18: Stormwater System Current Lifecycle Strategy

Activity Type	Description
Maintenance	• Maintenance activities include: ○ Pond and oil/grit separator maintenance and cleaning ○ Flow monitoring and discharge quality sampling ○ Clearing sewer blockages on an as-needed basis ○ Annual catchbasin cleaning across the entire network ○ Annual maintenance of approximately 7 km of channels
Rehabilitation	• Implementation of a stormwater pond cleanout program on a 20-year cycle, guided by bathymetric surveys, as proposed in the 2025 Servicing Master Plan, to support long-term remediation and management of the consolidated linear infrastructure (CLI-ECA)
Replacement	• Replacement of cross-drainage culverts at end-of-life, typically coordinated with planned road work • Replacement of storm sewer infrastructure is aligned with planned road projects as required

Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that Severn should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 75 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average capital requirements at $215 thousand.

Figure 32: Stormwater System Forecasted Capital Replacement Requirements



The Table below summarizes the projected cost of lifecycle activities (capital activities only) that may need to be undertaken over the next 10 years to support current levels of service.

Table 19 Storm Sewer Network System-Generated 10-Year Capital Costs

Segment	Total	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Stormwater Linear	-	-	-	-	-	-	-	-	-	-	-
Stormwater Management Ponds	-	-	-	-	-	-	-	-	-	-	-
Stormwater Non-Linear	-	-	-	-	-	-	-	-	-	-	$551k
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**$551k**

These projections are generated in Citywide and rely on the data available in the asset register. Age-based condition data and replacement costs were used to assist in forecasting replacement needs for storm sewer lines assets.

Buildings & Facilities

The Township's Buildings and Facilities asset category consists of administration buildings, public works facilities, fire halls, recreation and arena facilities, library buildings and associated building components. In total, the Township operates approximately 62,582 square feet of indoor recreation space, a 2,260-square-foot library branch in Coldwater (net of contracted space), five Public Works facilities totalling approximately 82,889 square feet, and fire protection facilities totalling approximately 20,099 square feet.

Inventory & Valuation

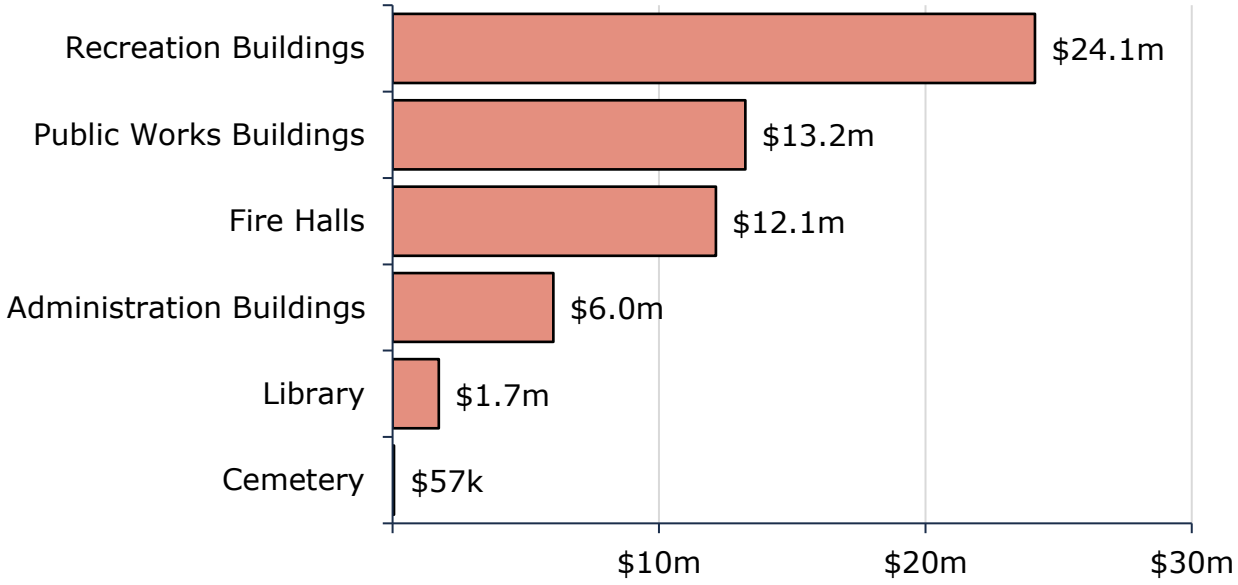
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Buildings and Facilities inventory.

Table 20: Buildings & Facilities Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Administration Buildings	1 (18)	Assets (Components)	CPI	$6,032,966
Cemetery	2	Assets	CPI	$57,001
Fire Halls	4 (4)	Assets (Components)	User-Defined	$12,131,958
Library	1 (6)	Assets (Components)	User-Defined	$1,740,461
Public Works Buildings	2 (21)	Assets (Components)	User-Defined	$13,244,328
Recreation Buildings	4 (60)	Assets (Components)	User-Defined	$24,117,705
Total			**User-Defined**	**$57,324,419**

The graph below displays the total replacement cost of each asset segment in Severn' Buildings and Facilities inventory.

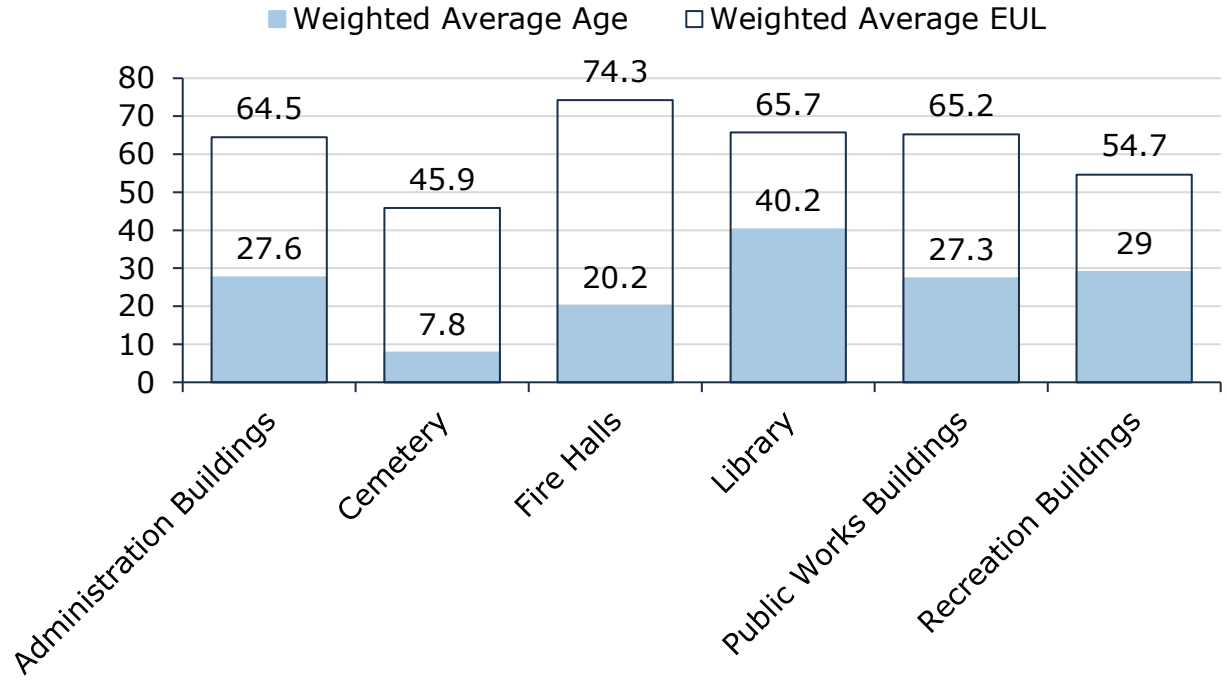
Figure 33: Buildings & Facilities Replacement Cost



Asset Condition & Age

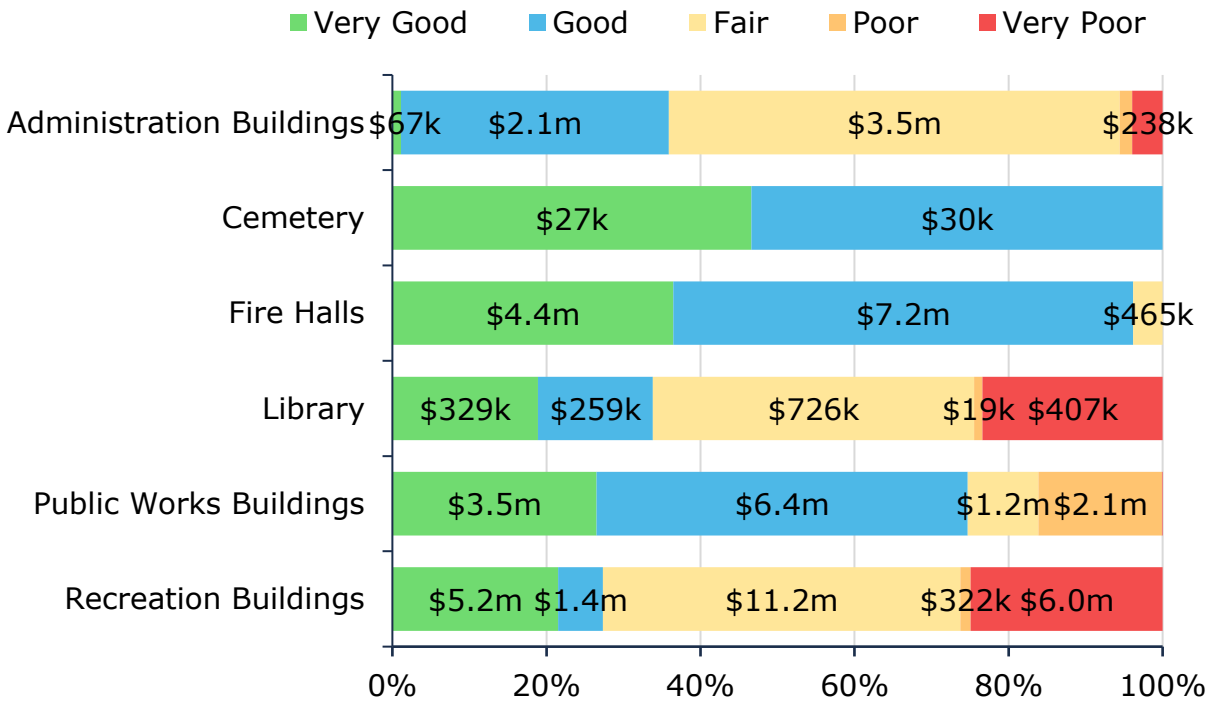
The graph below identifies the average age, and the estimated useful life for each asset segment. The values are weighted based on replacement cost.

Figure 34: Buildings & Facilities Average Age vs Average EUL



The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 35: Buildings & Facilities Condition Breakdown



Ensuring the safety and functionality of municipal buildings requires ongoing monitoring and inspections. The Township's approach relies on regular health and safety checks, with more detailed condition assessments applied as needed:

- Health and safety inspection by internal staff is completed monthly
- Currently, there are no formal condition structural assessment programs for building assets in place

Lifecycle Management Strategy

Lifecycle management for municipal buildings focuses on maintaining functionality, safety, and asset longevity. The Township applies routine maintenance, planned rehabilitations, and strategic replacements to ensure facilities remain operational and cost-effective.

The following describes the Township's current lifecycle management strategy.

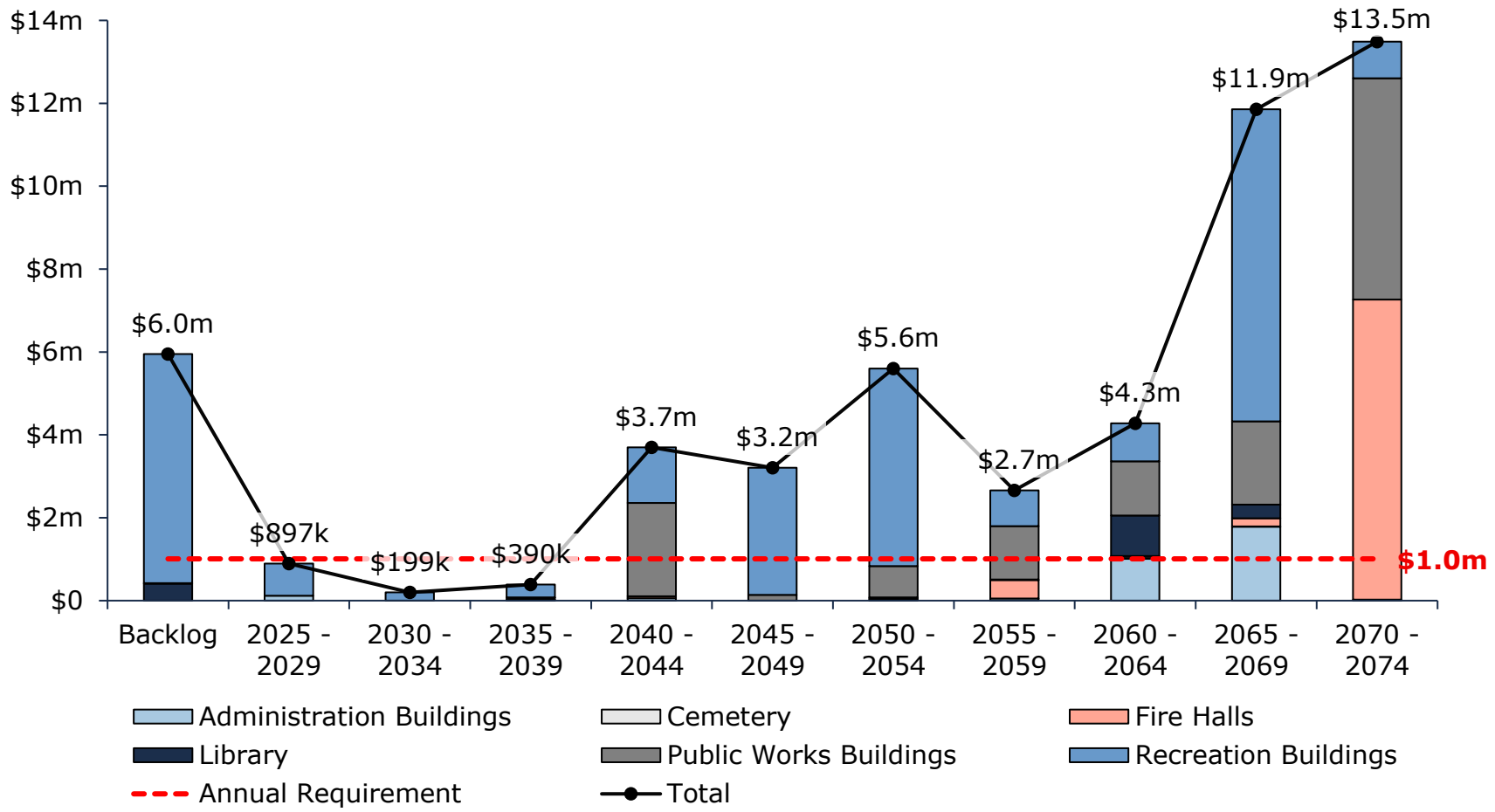
Table 21: Buildings & Facilities Current Lifecycle Strategy

Activity Type	Description
Maintenance	• Building and facility components are maintained in accordance with original equipment manufacturer (OEM) recommendations.
Rehabilitation & Replacement	• Planned rehabilitation activities are undertaken to extend the useful life of assets, including periodic shop renewals every 5–10 years, with approximately $200,000 allocated per facility for minor upgrades and replacements.
	• Recreation facilities are guided by the Recreation Master Plan, which outlines recommended improvements and upgrades. These initiatives are implemented on a phased basis as funding becomes available.

Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that Severn should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 50 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average capital requirements at $1.0 million.

Figure 36: Buildings & Facilities Forecasted Capital Replacement Requirements



The table below summarizes the projected cost of lifecycle activities (capital activities only) that may need to be undertaken over the next 10 years to support current levels of service.

Table 22 Buildings & Facilities System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Administration	-	-	-	-	$119k	-	-	-	-	-	-
Cemetery	-	-	-	-	-	-	-	-	-	-	-
Fire Halls	-	-	-	-	-	-	-	-	$181k	-	-
Library	$407k	-	-	-	-	-	-	-	-	-	-
Public Works	$12k	-	-	-	-	-	-	-	-	-	-
Recreation	$5.5m	-	-	$252k	$525k	-	$107k	$74k	-	-	$18k
Total	**$6.0m**	**-**	**-**	**$252k**	**$644k**	**-**	**$107k**	**$74k**	**$181k**	**-**	**$18k**

These projections are generated in Citywide and rely on the data available in the asset register, which was limited to asset age, replacement cost, and useful life.

Land Improvements

The Township maintains approximately 132 acres of active and passive parkland, comprising 87 park amenities such as playgrounds, sports fields, skateparks, multi-use courts, picnic shelters, trails, parking areas, outdoor lighting, fencing, docks, and landscaped areas. These assets are distributed across community parks, fairgrounds, waterfront locations, and trail corridors and play a key role in delivering recreational opportunities, accessibility, and public safety.

Inventory & Valuation

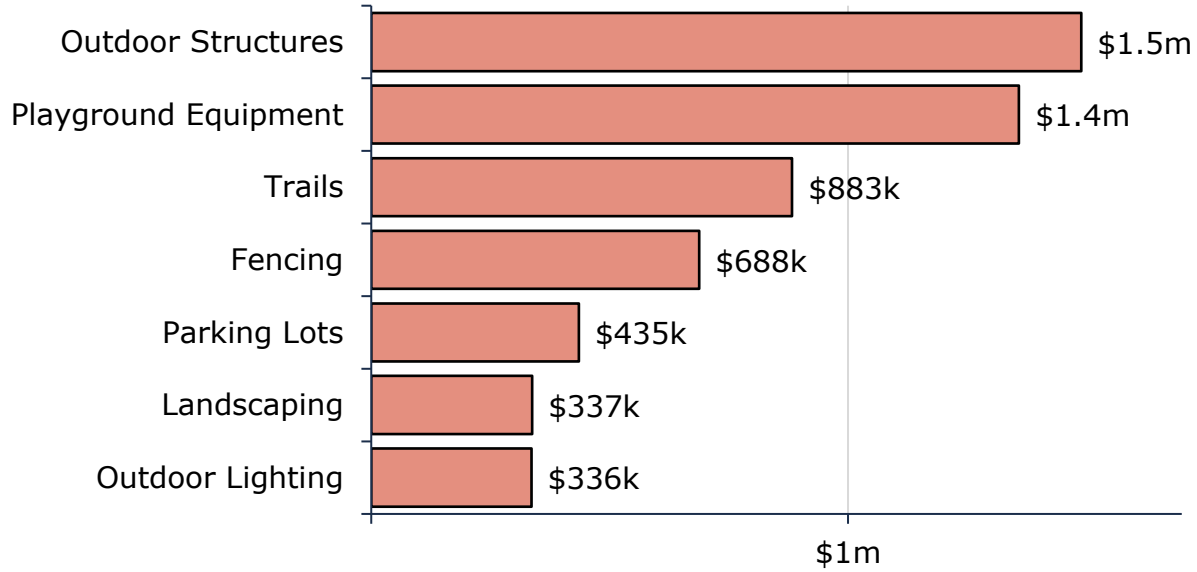
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment for the Township's Land Improvements.

Table 23: Land Improvements Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Fencing	15	Assets	CPI	$687,616
Landscaping	6	Assets	CPI	$337,187
Outdoor Lighting	11	Assets	CPI	$336,235
Outdoor Structures	18	Assets	CPI	$1,489,087
Parking Lots	9	Assets	CPI	$435,302
Playground Equipment	42	Assets	CPI	$1,358,562
Trails	15	Assets	CPI	$882,758
Total	**116**	**Assets**	**CPI**	**$5,526,747**

The graph below displays the replacement cost of each asset segment in the Township's Land Improvements inventory.

Figure 37: Land Improvements Replacement Cost

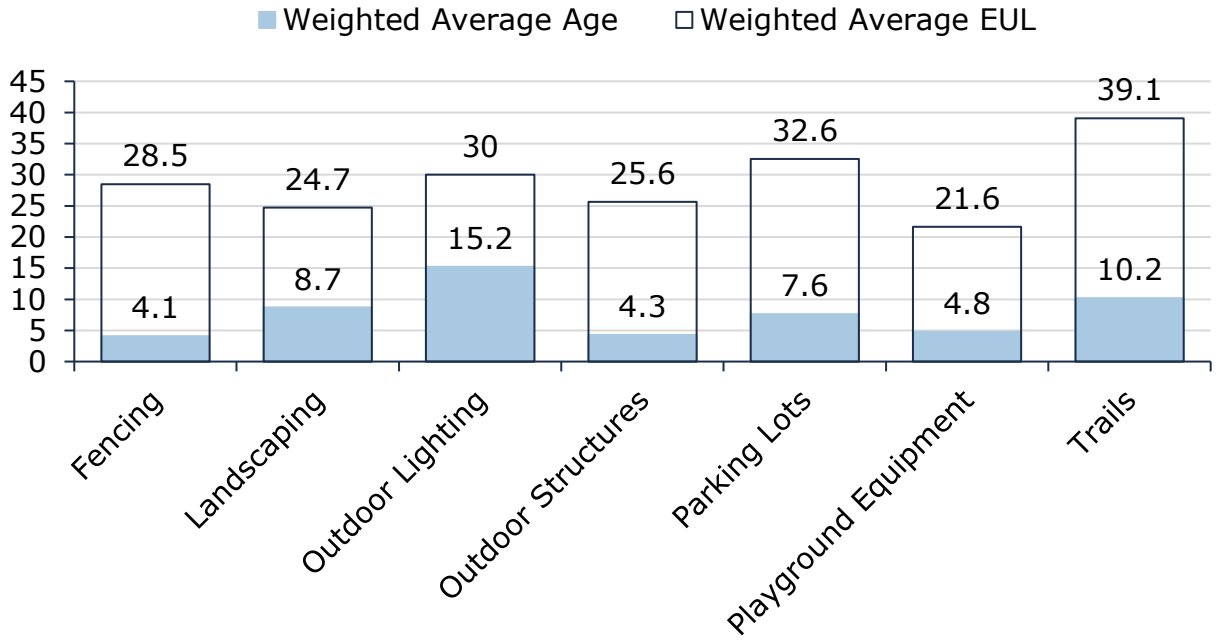


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to represent capital requirements more accurately.

Asset Condition & Age

The graph below identifies the average age, and the estimated useful life for each asset segment. The values are weighted based on replacement cost.

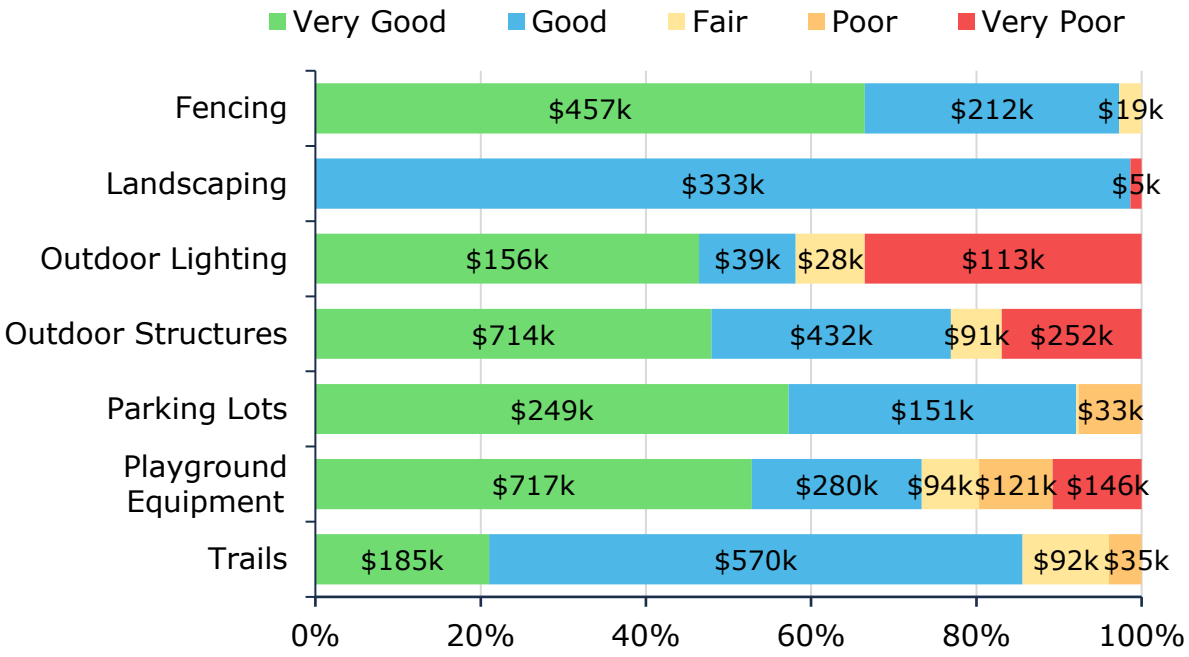
Figure 38: Land Improvements Average Age vs Average EUL



Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 39: Land Improvements Condition Breakdown



The Township regularly monitors land improvement assets to ensure public safety and identify emerging issues. Routine inspections, including ice thickness and surface condition checks guide operational decisions.

Lifecycle Management Strategy

Proactive management of land improvements ensures assets remain safe and accessible to the public. Routine maintenance, periodic upgrades, and phased improvements are applied based on need, condition, and strategic planning guidance.

Table 24: Land Improvements Current Lifecycle Strategy

Activity Type	Description

Maintenance	• Maintenance activities include:
	  ○ Class A pathways: regular maintenance
	  ○ Class B pathways: occasional maintenance
	  ○ Class C trails: seasonal maintenance

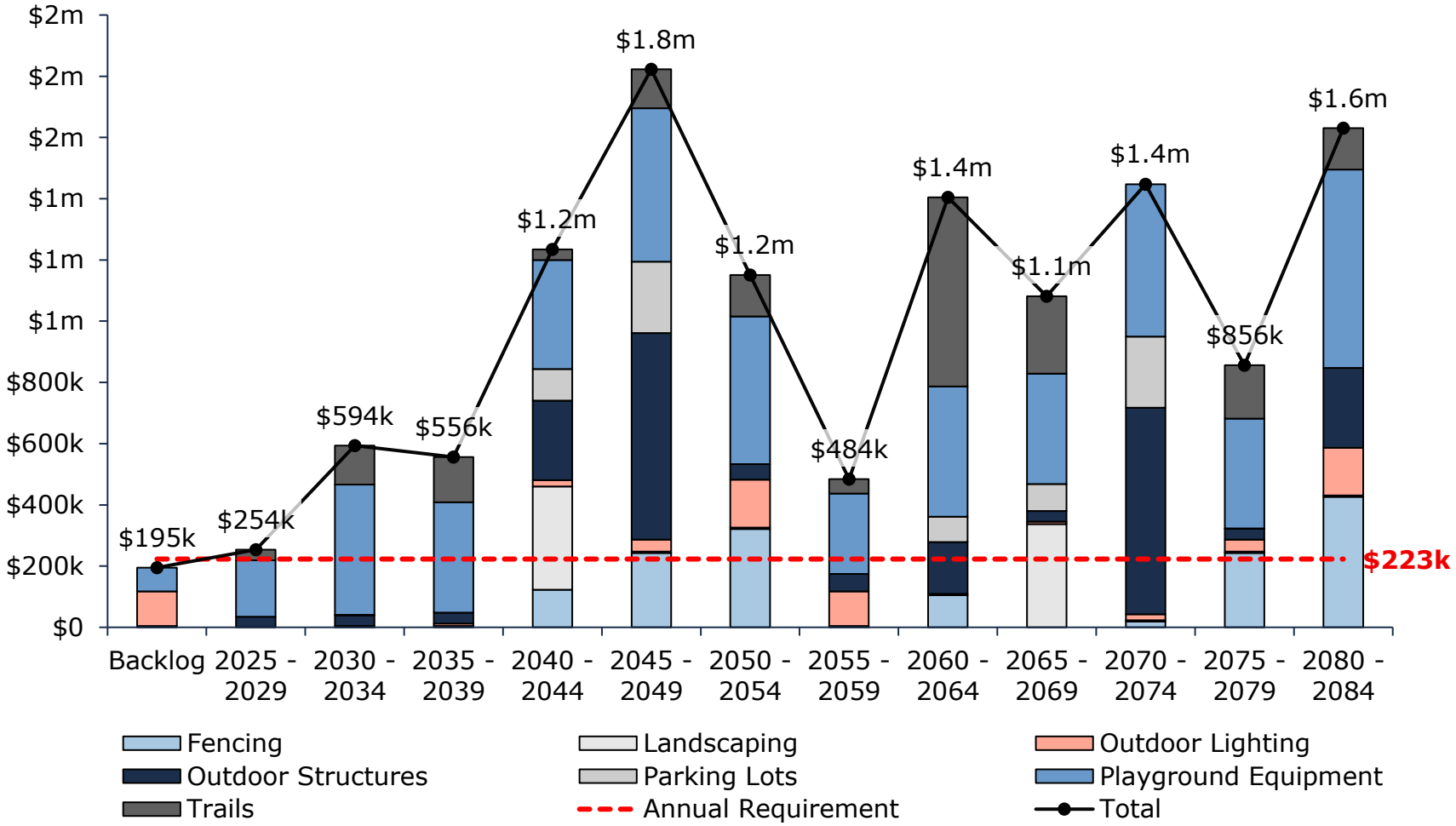
Activity Type	Description
	• Accessibility upgrades to parks are being implemented as part of ongoing maintenance and improvements
Rehabilitation & Replacement	• Recreation facility improvements are guided by the Recreation Master Plan, with recommendations and upgrades phased in as funding allows

Forecasted Capital Requirements

The figure below illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Township's parks and recreation infrastructure. This analysis was run until 2084 to capture at least one iteration of replacement for the longest-lived asset in the asset register. Severn' average annual requirements (red dotted line) total $223 thousand for all parks and recreation assets. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

These projections and estimates are based on asset replacement costs and age analysis. They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.

Figure 40: Land Improvements Forecasted Capital Replacement Requirements



It is unlikely that all land improvement assets will need to be replaced as forecasted. Coordinated projects may help drive replacements and rehabilitations.

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that will need to be undertaken over the next 10 years to support current levels of service. These projections are generated in Citywide and rely on the data available in the asset register, which was limited to asset age, replacement cost, and useful life.

Table 25 Land Improvements System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Fencing	-	-	-	-	-	-	-	-	-	-	-
Landscaping	$5k	-	-	-	-	-	$5k	-	-	-	-
Outdoor Lighting	$113k	-	-	-	-	-	-	-	-	-	-
Outdoor Structures	-	-	$35k	-	-	-	-	$35k	-	-	-
Parking Lots	-	-	-	-	-	-	-	-	$1k	-	-
Playground Equipment	$78k	$68k	-	-	$40k	$76k	$18k	$54k	$7k	$66k	$281k
Trails	-	-	$35k	-	-	-	-	-	$92k	$35k	-
Total	**$195k**	**$68k**	**$70k**	**-**	**$40k**	**$76k**	**$23k**	**$89k**	**$100k**	**$100k**	**$281k**

Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Township's capital expenditure forecasts.

Machinery & Equipment

The Township maintains a wide range of machinery and equipment including Public Works equipment such as brush chippers, pavement tools, radar and signage systems, and fuel pumps; recreation equipment like ice resurfacers, tractors, arena scrubbers, and security systems; and fire equipment including SCBA gear, bunker suits, jaws of life, and portable radios. Administrative and library equipment includes computers, servers, printers, tablets, and office furniture.

Inventory & Valuation

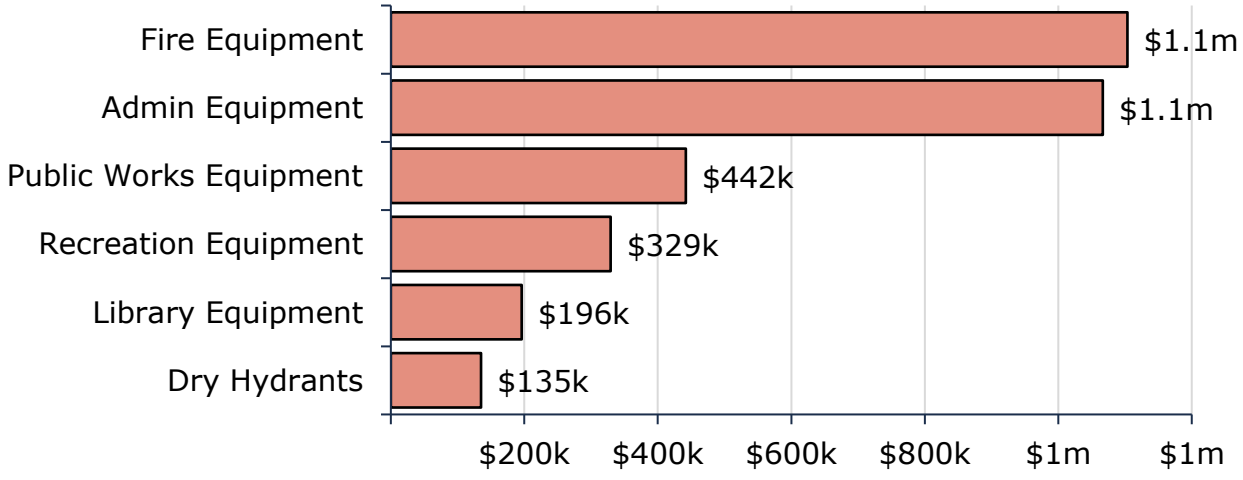
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Machinery & Equipment inventory.

Table 26: Machinery & Equipment Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Admin Equipment	65	Assets	CPI	$1,066,566
Dry Hydrants	7	Assets	CPI	$135,047
Fire Equipment	30	Assets	CPI	$1,103,467
Library Equipment	15	Assets	CPI	$196,025
Public Works	19	Assets	CPI	$442,053
Recreation	22	Assets	CPI	$329,394
Total	**158**	**Assets**	**CPI**	**$3,272,552**

The graph below displays the total replacement cost of each asset segment in the Severn' Machinery & Equipment inventory.

Figure 41: Machinery & Equipment Replacement Costs

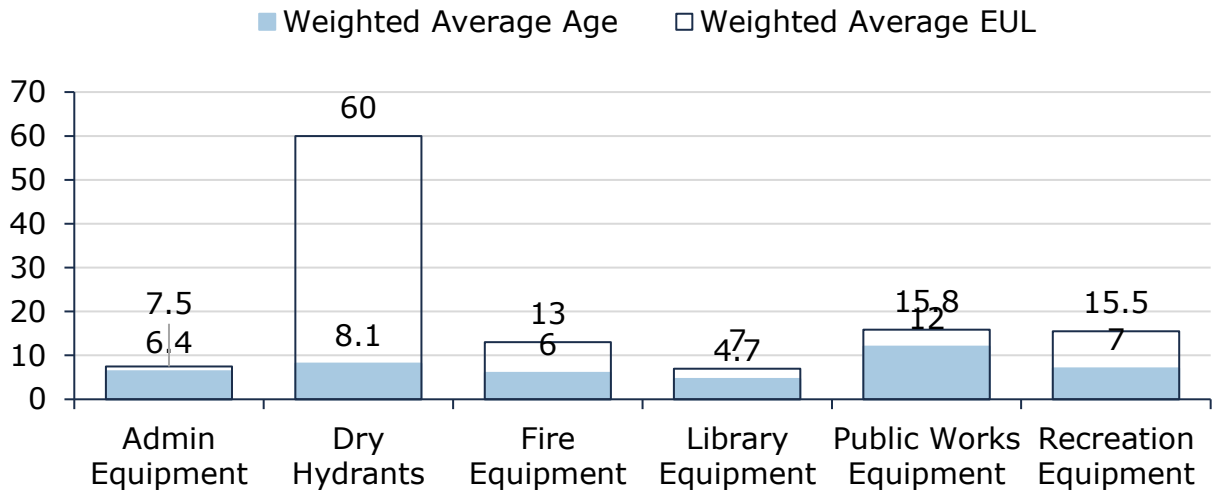


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent capital requirements.

Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment. The values are weighted based on replacement cost.

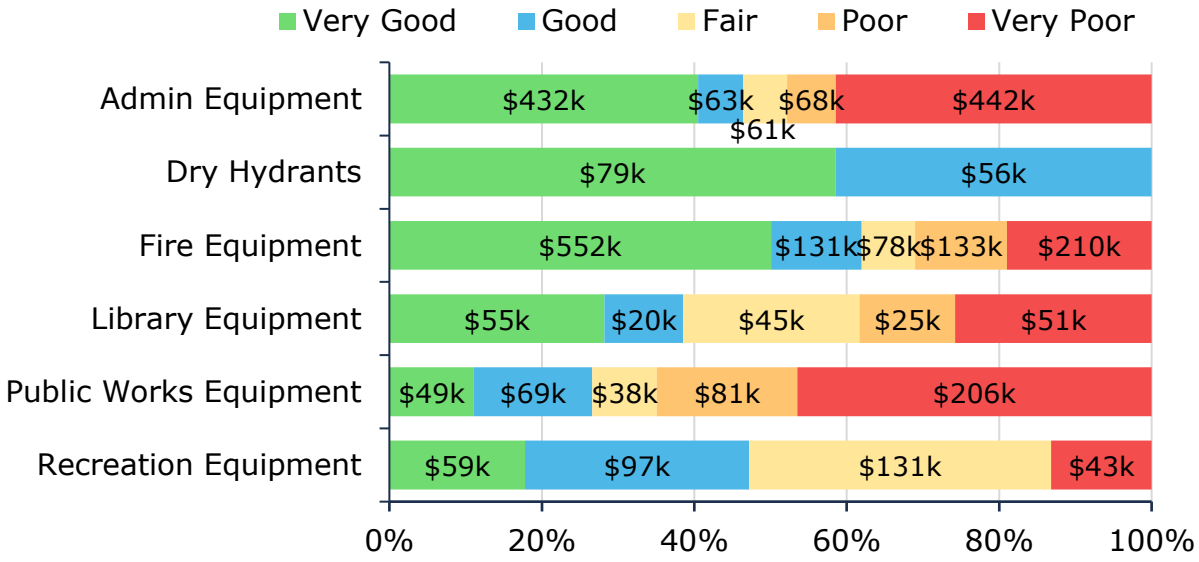
Figure 42: Machinery & Equipment Average Age vs Average EUL



Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 43: Machinery & Equipment Condition Breakdown



Township machinery and equipment are monitored through routine inspections and functional testing. This approach allows staff to identify issues early and maintain assets in serviceable condition.

- SCBAs are subject to annual bench testing to ensure functioning as per National Fire Protection Agency (NFPA) requirements.
- Public Works equipment is generally inspected and maintained on a seasonal, or as-needed basis. Significant equipment, such as plow blades, are managed for functionality as per Maintenance Standards. However, there is no formal condition assessment program in place.

Lifecycle Management Strategy

Lifecycle management for machinery and equipment emphasizes maintaining functionality and safety while optimizing service life. Maintenance is performed according to standards, and replacements are scheduled based on usage, condition, and regulatory requirements.

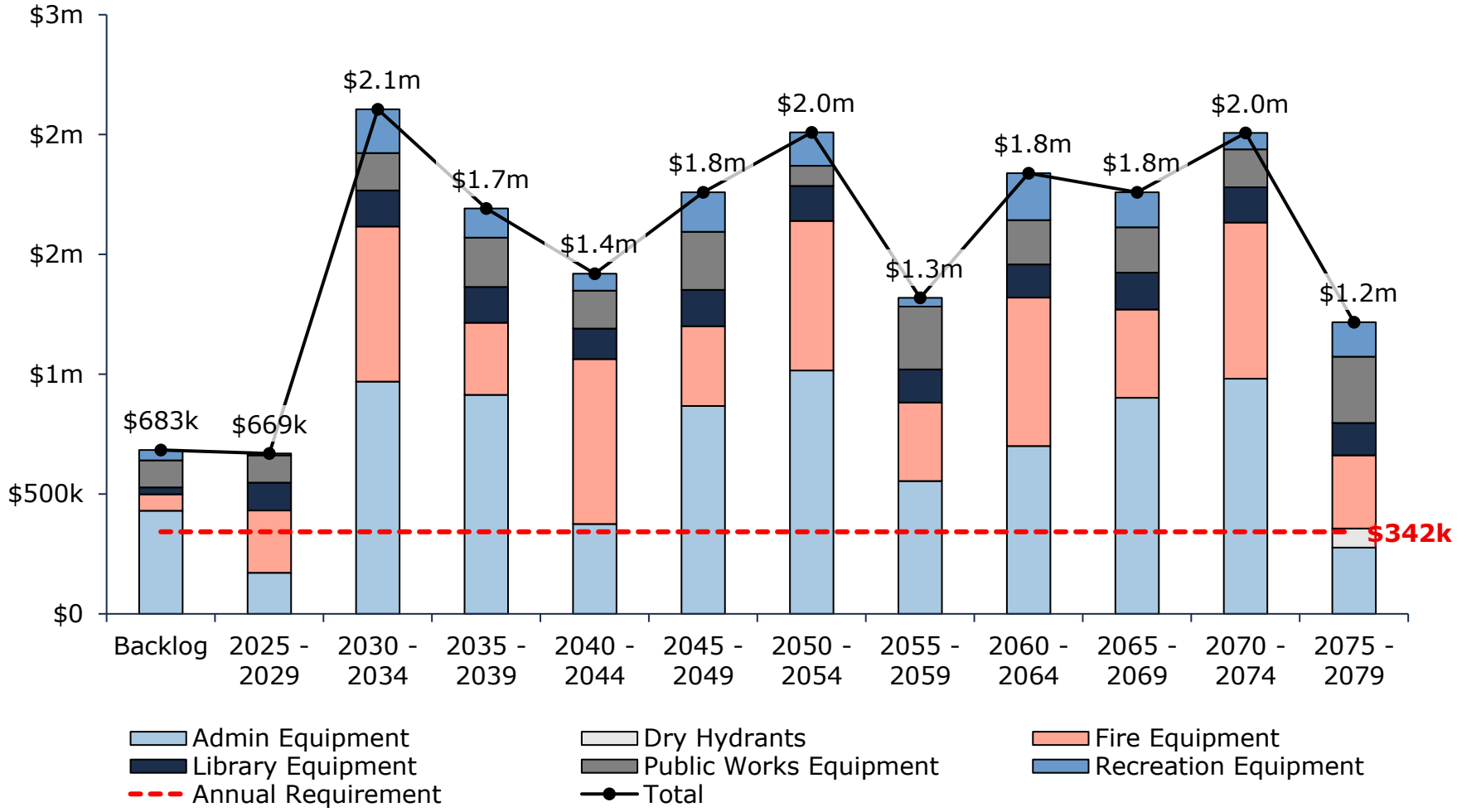
Figure 44: Machinery and Equipment Current Lifecycle Strategy

Activity Type	Description
Maintenance	Machinery and Equipment is maintained according to per Maintenance Standards, manufacturer recommended actions and supplemented by the expertise of municipal staff
Replacement	Fire equipment is replaced on schedules defined by the Health and Safety Act, and manufacturer recommendations. Specifically, Helmets and PPE are replaced on a 10-year schedule for compliance.
	The replacement of Machinery and Equipment depends on its expected useful life, usage and deficiencies identified by operators that may impact their ability to complete required tasks.

Forecasted Capital Requirements

The following graph identifies capital requirements over the next 50 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average annual capital requirements at $342 thousand.

Figure 45: Machinery & Equipment Forecasted Capital Replacement Requirements



The table below summarizes the projected cost of lifecycle activities (capital replacement only) that may need to be undertaken over the next 10 years to support current levels of service. These projections are generated in Citywide and rely on the data available in the asset register.

Table 27 Machinery & Equipment System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Admin Equipment	$431k	$8k	$57k	$33k	$40k	$33k	$94k	$335k	$390k	$72k	$78k
Dry Hydrants	-	-	-	-	-	-	-	-	-	-	-
Fire Equipment	$68k	$86k	$19k	-	$133k	$22k	$23k	$27k	$26k	$539k	$31k
Library Equipment	$28k	$22k	$25k	$23k	$26k	$20k	$29k	$32k	$39k	$25k	$26k
Public Works Equipment	$113k	$93k	-	$10k	-	$10k	$141k	-	$15k	-	-
Recreation Equipment	$43k	-	-	$5k	$2k	-	$1k	-	$145k	$37k	-
Total	**$683k**	**$208k**	**$101k**	**$72k**	**$202k**	**$86k**	**$288k**	**$394k**	**$615k**	**$673k**	**$135k**

Assessed condition data was available for most equipment and was used to determine forthcoming replacement needs. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Township's capital expenditure forecasts.

Vehicles

The Township operates a fleet of vehicles to support municipal operations and public services. Public Works vehicles include trucks, graders, mowers, and specialized attachments, to service the road network, drainage systems, and other infrastructure. Fire Services fleet includes pumpers, tankers, and rescue units, along with trailers and support vehicles, to deliver emergency response and fire protection services. Additional vehicles support recreation, administrative, and by-law functions. Regular lifecycle management ensures reliability, safety, and operational efficiency across all fleet assets.

Inventory & Valuation

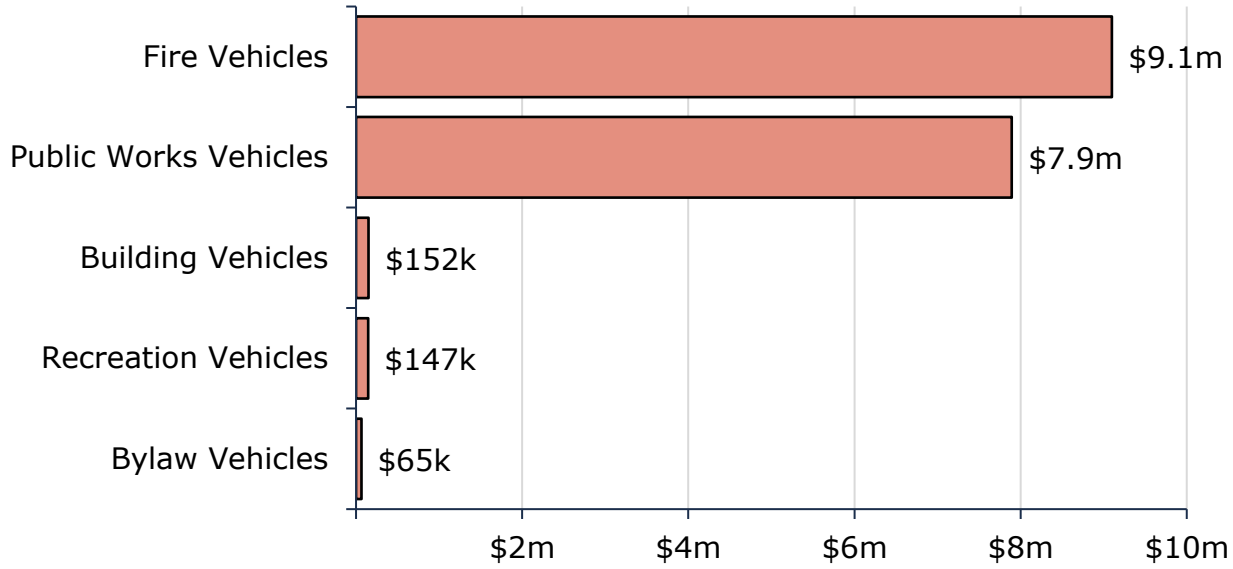
The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Vehicles inventory.

Table 28: Detailed Asset Inventory - Vehicles

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Building Vehicles	4	Assets	CPI	$152,000
Bylaw Vehicles	1	Assets	User-Defined	$65,000
Fire Vehicles	15	Assets	User-Defined	$9,100,430
Public Works Vehicles	40	Assets	User-Defined	$7,894,841
Recreation Vehicles	4	Assets	User-Defined	$146,906
Total	**64**	**Assets**	**User-Defined**	**$17,359,177**

The graph below displays the total replacement cost of each asset segment in the Vehicles inventory.

Figure 46: Vehicles Replacement Costs

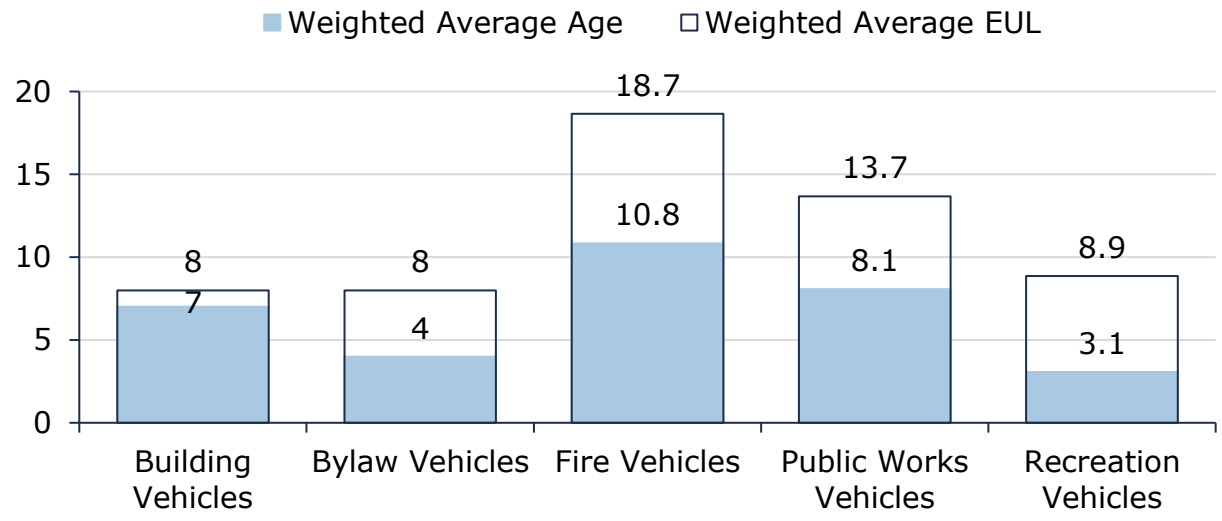


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to represent capital requirements more accurately.

Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment. The values are weighted based on replacement cost.

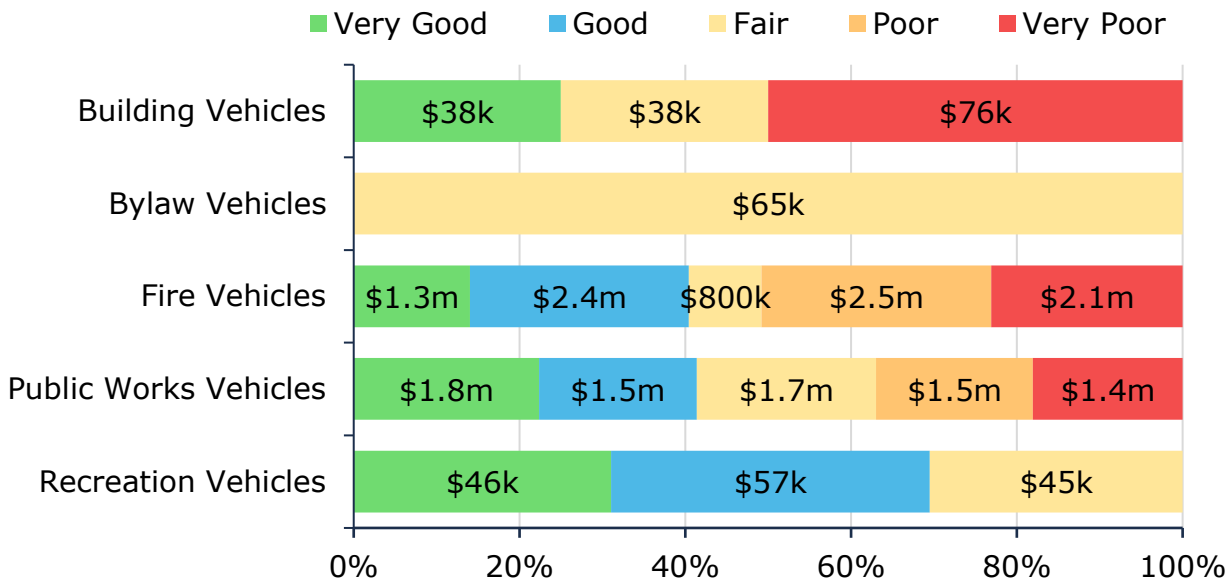
Figure 47: Vehicles Average Age vs Average EUL



Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 48: Vehicles Condition Breakdown



Day-to-day operations and legislated requirements form the foundation of the Township's vehicle condition assessment practices. Through a combination of operator inspections, regulatory safety checks, and targeted reviews, staff monitor fleet condition and identify emerging issues.

- Vehicle inspections are primarily performed by operators as daily circle checks before use, with any defects reported immediately.
- Heavy-duty vehicles over 4,500 kg RGW receive annual safety inspections as required under CVOR licensing, conducted externally.
- There is no formal condition rating system for day-to-day tracking; vehicles are generally considered in service or out of service, with detailed assessments including mechanical condition, repair history, and cost-benefit analysis performed when assets approach the end of their useful life or require major repairs.
- The township plans to implement an annual structured fleet-wide inspection process, which will include condition scoring based on age, mileage/hours, repair history, and safety compliance, supplementing daily operator checks and legislated inspections.
- Condition information, combined with age, mileage, and usage data, is a primary input for replacement planning. The Manager of Roads and Fleet reviews inspection reports, repair histories, and operational needs to prioritize assets for replacement or major repairs within the capital and operating budgets.

Lifecycle Management Strategy

Municipal assets require ongoing maintenance and periodic renewal to remain safe and functional. The Township's lifecycle management strategy outlines how maintenance, rehabilitation, and replacement activities are applied throughout a vehicle's service life.

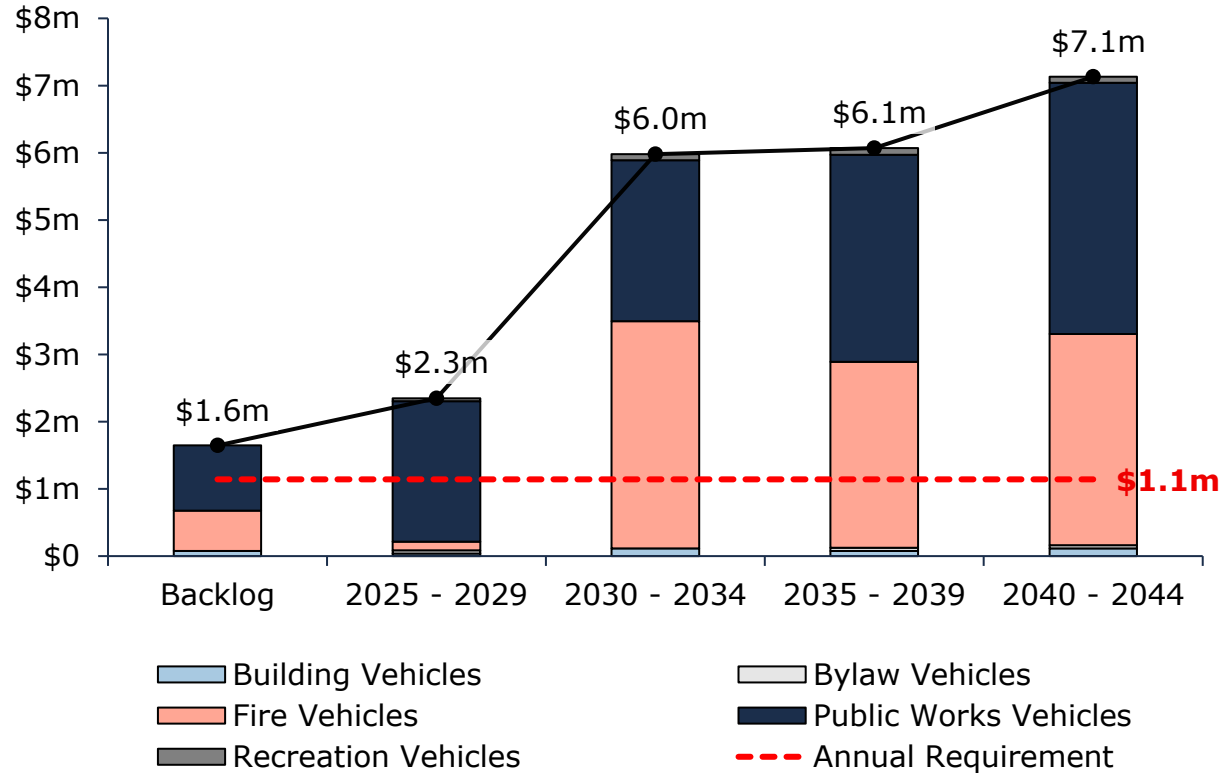
Table 29: Vehicles Current Lifecycle Strategy

Activity Type	Description
Maintenance	• Routine maintenance follows manufacturer-recommended intervals and includes oil changes, tire rotations, brake servicing, fluid flushes, and lubrication, with heavy equipment serviced based on operating hours. • Seasonal maintenance, such as rustproofing, is performed annually. • Maintenance is triggered by mileage/hours, operator inspections, or manufacturer reminders, supported by digital alerts from the telematics system.
Rehabilitation	• Major rehabilitation is generally not performed; vehicles requiring significant component replacement are typically replaced.
Replacement	• Light-duty vehicles are replaced between 8–10 years, heavy-duty trucks around 10 years, and specialized equipment after 3,000–5,000 operating hours if no longer fit for purpose. • Replacement prioritizes vehicles critical to service delivery, such as winter control trucks and heavy equipment, while light-duty vehicles are lower priority. • Funding is allocated based on historical spending and replacement schedules, with contingency funds maintained for emergencies.

Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 20 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average annual capital requirements at $1.1 million.

Figure 49: Vehicles Forecasted Capital Replacement Requirements



The $1.6 million backlog represents vehicles that remain in active service but have exceeded their expected useful life based on age. These assets have not yet been replaced, either due to budget timing, operational priorities, or the absence of formal condition assessments. While still functional, deferring their replacement may increase maintenance costs and operational risk over time.

The table below summarizes the projected cost of lifecycle activities (capital replacement only) that may need to be undertaken over the next 10 years to support current levels of service. These projections are generated in Citywide and rely on the data available in the asset register.

Table 30 Vehicles System-Generated 10-Year Capital Costs

Segment	Backlog	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Building Vehicles	$76k	-	-	-	$38k	-	-	$38k	-	$76k	-
Bylaw Vehicles	-	-	-	-	$65k	-	-	-	-	-	-
Fire Vehicles	$600k	-	-	-	-	$130k	$993k	$1.5m	$87k	-	$600k
Public Works Vehicles	$970k	-	$76k	$584k	$783k	$645k	$437k	$394k	$485k	$288k	$970k
Recreation Vehicles	-	-	-	-	$45k	-	$57k	-	$35k	-	-
Total	**$1.6m**	**-**	**$76k**	**$584k**	**$931k**	**$775k**	**$1.5m**	**$1.9m**	**$608k**	**$364k**	**$1.6m**

Condition assessment data for vehicles was not available, so replacement timing and capital requirements are based on asset age and expected useful life. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Township's capital expenditure forecasts.

Risk Management

The level of risk an asset carries determines how closely it is monitored and maintained, including the frequency of various lifecycle activities, and the investments it requires on an ongoing basis.

Some assets are also more important to the community than others, based on their financial and economic significance, their role in delivering essential services, the impact of their failure on public health and safety, and the extent to which they support a high quality of life for community stakeholders.

A risk-based approach to infrastructure spending can help prioritize capital projects to channel funds where they are needed most. Rather than taking the worst-first approach, a risk-based approach ranks assets based on their condition/performance as well as their criticality, providing a more complete rationale for project selection.

Risk Management Strategies

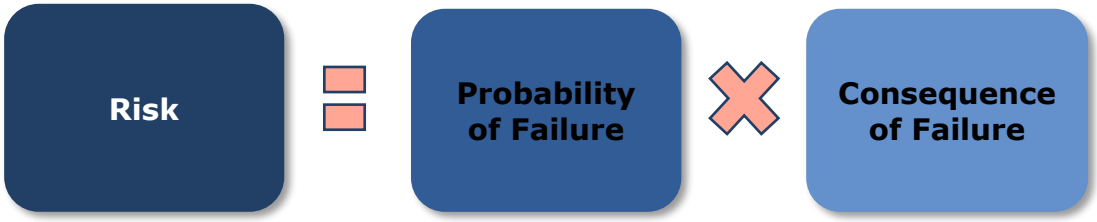
Municipalities generally take a 'worst-first' approach to infrastructure spending. Rather than prioritizing assets based on their importance to service delivery, assets in the worst condition are fixed first, regardless of their criticality. However, not all assets are created equal. Some are more important than others, and their failure or disrepair poses more risk to the community. For example, a road with a high volume of traffic that provides access to critical services poses a higher risk than a low volume rural road. These high-value assets should receive funding before others.

By identifying the various impacts of asset failure and the likelihood that it will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused.

A high-level evaluation of asset risk and criticality was performed. Each asset has been assigned a probability of failure score and consequence of failure score based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation, and replacement strategies for critical assets.

Risk is a product of two variables: the probability that an asset will fail, and the resulting consequences of that failure event. It can be a qualitative measurement, (low, medium, high) or quantitative measurement (1-5), that can be used to rank assets and projects, identify appropriate lifecycle strategies, optimize short- and long-term budgets, minimize service disruptions, and maintain public health and safety.

Figure 50: Risk Equation



Probability of Failure

Several factors can help decision-makers estimate the probability or likelihood of an asset's failure, including its condition, age, previous performance history, and exposure to extreme weather events, such as flooding and ice jams—both a growing concern for municipalities in Canada.

Consequence of Failure

Estimating criticality also requires identifying the types of consequences that the organization and community may face from an asset's failure, and the magnitude of those consequences. Consequences of asset failure will vary across the infrastructure portfolio; the failure of some assets may result primarily in high direct financial cost but may pose limited risk to the community. Other assets may have a relatively minor financial value, but any downtime may pose significant health and safety hazards to residents. See Appendix D: Risk Rating Criteria for definitions and the developed risk models.

Asset-level Risk

Asset-level risk ratings attempt to rank assets based on their criticality and likelihood of failure. This risk rating is a product of two variables: the probability that an asset will fail, and the variety of consequences of that failure event. It can be a qualitative or a quantitative measurement that can be used to rank assets and projects, identify appropriate lifecycle strategies, optimize short and long-term budgets, minimize service disruptions, and maintain public health and safety

Approach to Risk

The approach used in this asset management plan produces a quantitative measurement of risk associated for each asset. The probability and consequence of failure are each scored from 1 to 5, producing a minimum risk rating of 1 for the lowest risk assets, and a maximum risk index of 25 for the highest risk assets.

These calculations incorporate available asset attribute data to produce a risk matrix. For assets lacking detailed attribute information, a more general risk model has been created and applied to all such assets, drawing on common practices employed by municipalities to estimate the probability and consequences of failure.

Table 31: Risk Ratings

Risk Rating	Description
Very Low (1-4)	Assets in excellent condition with minimal risk of failure; failure event may have negligible financial, economic, or social impact.
Low (5-7)	Assets in good condition with low risk of failure; failure event may result in minor financial, economic, or social impact.

Risk Rating	Description
Moderate (8-9)	Assets showing moderate wear with moderate risk of failure; asset failure may result in noticeable, adverse financial, economic, or social consequences.
High (10-14)	Assets needing significant repairs soon with high risk of failure; failure may result in substantial, critical financial, economic, or social consequences.
Very High (15-25)	Assets in poor condition with the highest risk of failure; failure consequences are severe or catastrophic, causing significant financial, economic, or social disruptions, requiring urgent action.

Risk Models

The models used in this AMP have been developed in Citywide Assets, the Township's asset register application and applied to the existing asset base. These models are provisional and intended as a foundational framework. They are expected to evolve over time as new information regarding asset attributes becomes available and is integrated into the analytical process.

For some assets, such as roads, contextual attributes such as AADT values were available. This data was used to further develop consequence of failure ratings and help distinguish one asset from another based on its criticality.

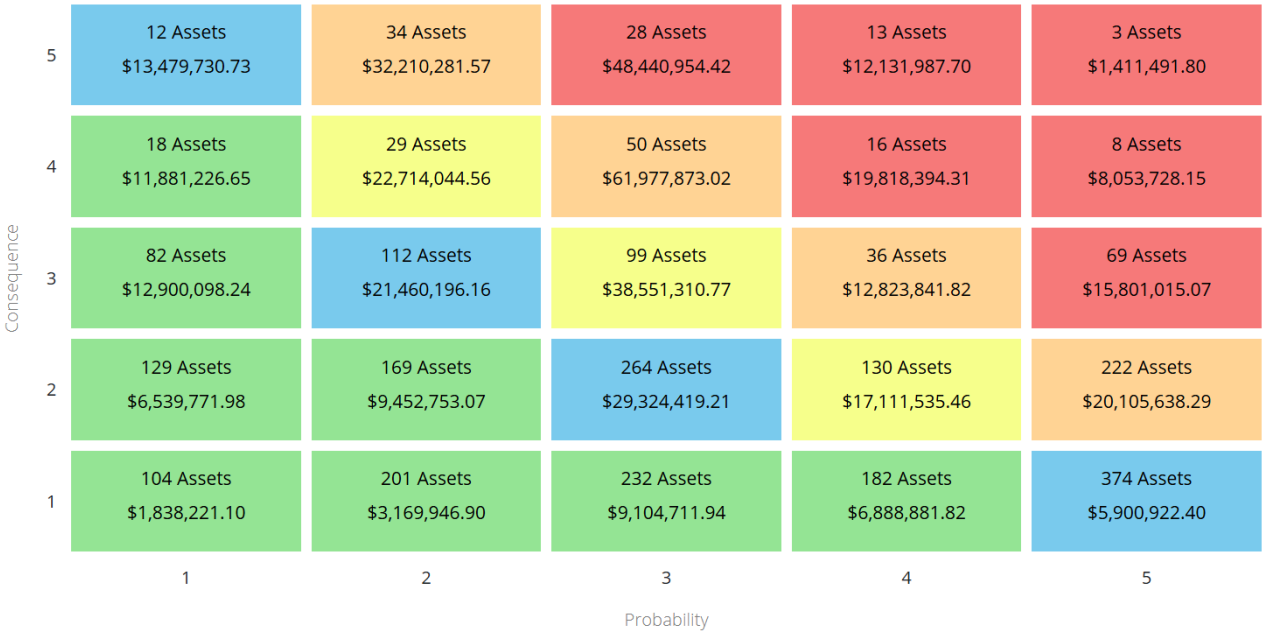
For assets without such additional, contextual information, a more general risk model was developed and applied. For these assets, replacement cost, service area, and asset type were used as the only data fields to approximate the consequence of their failure.

It is important to note that these models are not designed to guide annual capital expenditures at this time. Rather, they serve as an initial step in understanding and managing asset-level risk, providing a basis upon which further refinements and enhancements can be built.

Risk Matrix

The risk matrix below classifies the Township's assets based on their respective risk ratings, as determined by the risk models. The analysis shows that 137 assets, with a combined replacement cost of approximately $132.3 million, carried a very high risk rating, based on both their probability and consequence of failure.

Figure 51: Risk Matrix



Assets in the bottom left boxes, with the lowest risk rating ranging from 1-4, require minimal immediate attention, allowing for routine maintenance and monitoring. Those assets with the highest risk rating ranging from 15-25, should be prioritized for intervention, including preventive measures, repairs, or replacements to mitigate potential impacts.

By systematically addressing assets according to their risk ratings, infrastructure and asset management activities can be effectively prioritized, ensuring resources are allocated to maintain safety, reliability, and performance.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks that may affect the Township's ability to maintain service levels and effectively manage municipal assets.

Bridges and Culverts

- **Funding Reliance:** The Township relies heavily on grants for bridge and culvert projects. Depletion of reserves for priority bridges may limit the ability to address emerging infrastructure needs.
- **Inherited Assets:** Bridges inherited from provincial or county jurisdictions may create unfunded obligations, increasing future financial exposure.

Water System

- **Funding Risk:** Potential future funding gaps may arise for system growth, expansion, and necessary upgrades, impacting long-term service delivery.

Wastewater System

- **Climate/Environmental Risk:** Climate change may affect system performance, particularly the treatment capacity of the network.
- **Capital Funding Needs:** Additional investment may be required for treatment capacity, pumping stations, and system rehabilitation.
- **Aging Infrastructure:** Portions of the network dating from the 1970s may require rehabilitation sooner than newer assets, increasing near-term capital requirements.
- **Westshore capacity constraint (SMP):** The 2006 treatment system has reduced capacity, requiring an imminent $8.856M upgrade (headworks, equalization tank, blower capacity, phosphorus dosing) to support growth.

Stormwater System

- **Budget Limitations:** Limited budget allocation for stormwater infrastructure, currently tied to road funding (approximately 10%), may constrain proactive maintenance and upgrades.
- **Flood Risk:** Coldwater lies within a floodplain, and a comprehensive stormwater management study has not yet been completed, introducing uncertainty in long-term planning and flood mitigation.

Buildings and Facilities

- **Aging Assets:** Key facilities, including arenas, municipal offices, shops, and community halls, are aging, with critical repairs anticipated within the next 5–10 years.
- **Funding Reliance:** Heavy reliance on grants and insufficient capital allocation may delay necessary upgrades and lifecycle renewal projects.

Vehicles

- **Procurement Risks:** Long delivery timelines for new vehicles may impact service continuity.
- **Asset Data Confidence:** Vehicle data quality is moderate; while telematics improve real-time tracking, integration with centralized systems is ongoing, and historical records are incomplete.
- **Lifecycle Strategy Limitations:** Current strategies rely on proactive daily inspections, timely repairs, and age-based replacements, but formal documentation of policies is limited.
- **Design and Reliability:** Vehicle design is generally reliable, with light-duty vehicles experiencing typical warranty issues and heavy-duty vehicles performing well under normal conditions.
- **Aging Assets:** Some high-value vehicles, such as motor graders, are approaching end-of-life, increasing risk to operations if replacements are delayed.

- **Climate and Extreme Weather:** Severe weather events, including heavy snowfall and ice storms, increase vehicle usage and accelerate wear. For example, during the Spring 2025 ice storm response, fleet utilization increased by 188 hours compared to baseline periods, highlighting impacts on maintenance and operational planning.

Key Considerations

- Risk ratings are influenced by multiple factors beyond an asset's physical condition or age. As a result, assets in poor condition may be assigned a low overall risk rating where the consequence of failure is assessed as low, even if the probability of failure is relatively high based on the available data and defined attributes.
- Assets in good or very good condition may receive a moderate to high-risk rating due to their criticality to the Town, including considerations such as replacement cost, economic importance, social significance, and service impacts, despite a low probability of failure.
- Ongoing calibration of asset criticality and regular updates to supporting data are necessary to ensure risk models more accurately reflect actual risk profiles. As these models are refined and enhanced with additional contextual information, their integration with capital planning will improve, supporting a more robust risk-based approach to prioritizing maintenance and capital investments.
- Asset-level risk assessments, together with an understanding of broader corporate and strategic risks, provide important inputs to support the prioritization of annual maintenance programs and capital projects. These tools complement more detailed technical studies and program-specific planning processes to help ensure assets continue to deliver safe and reliable service levels to residents.

Levels of Service

Levels of service (LOS) measure the quality and quantity of service provided and offer direction for infrastructure investments. They are necessary for performance tracking and reporting. Many agencies attempt to deliver levels of service that cannot be sustainably funded by the existing tax base. This can lead to an eventual drop in quality of service or increases to tax and utility rates to fund higher service levels.

LOS should be affordable and aligned with the community's long-term vision for itself, and the service attributes it most values for different infrastructure programs.

This section provides a summary of current and anticipated levels of service for each major service area within the Township, developed through departmental workshops and documentation review as part of the Township's 2025 asset management plan. In addition to the metrics required under O. Reg. 588/17, the Township has developed its own performance measures to better reflect local service expectations and operational realities.

The summaries outline how service levels are currently being delivered, identify potential adjustments in response to growth, climate, or community expectations, and highlight key infrastructure or resource pressures that may affect future performance. Together, they establish a clear baseline for service delivery and inform ongoing asset management planning.

Stakeholder Engagement

While no direct public engagement was undertaken as part of this Asset Management Plan update, staff and stakeholder input reflects ongoing interaction with residents through service requests, complaints, and day-to-day operations. The findings also draw on input from staff and stakeholder workshops and existing community engagement from previous Master Plan processes, including the Transportation Master Plan. Stakeholders demonstrated a strong understanding of asset management principles and expressed concern about the growing pressure that aging infrastructure will place on available funding.

Staff and stakeholder workshops were used to review asset performance, condition, service levels, and long-term funding sustainability across the Township's asset portfolio. The information provided through these sessions, combined with historical engagement from the Transportation Master Plan and other strategic planning initiatives, informed the assessment of current performance, emerging challenges, and long-term pressures. Building on this foundation, and to understand the implications of different funding strategies on long-term service delivery, three funding scenarios were developed and evaluated across all asset categories. These scenarios form the basis of the proposed Levels of Service options presented in the following section.

Proposed Levels of Service

To understand the implications of different funding strategies on long-term service delivery, three funding scenarios were evaluated for all asset categories:

Scenario 1: Current Capital Reinvestment Rate

This scenario assumes no tax or rate increases.

- No Annual Tax/Rate Increase (Maintain)

Scenario 2: Partial Funding Targets (85% Tax-Funded/70% Rate-Funded) in 10 Years

This scenario assumes moderate, phased-in tax and rate increases designed to gradually improve funding levels over 10 years, reaching 85% funding for tax-funded assets and 70% funding for rate-funded assets, and then stabilizing at those levels.

- Annual Tax Increase ~0.5%
- Annual Water Rate Increase ~3.4%
- Annual Sanitary Rate Increase ~1.3%

Scenario 3: Achieving 100% Funding in 10 Years

This scenario assumes larger, phased-in tax and rate increases to fully fund all asset needs over 10 years, achieving and maintaining 100% of recommended funding levels.

- Annual Tax Increase ~1.4%
- Annual Water Rate Increase ~5.3%
- Annual Sanitary Rate Increase ~2.6%

Results Summary

Scenario 1: Current Capital Reinvestment Rate

The table below summarizes the results of each asset category and overall.

Table 32: Scenario 1 Results Overview

Asset Category	Current Average Condition	Projected Average Condition	Funding Required
Bridges & Culverts	Good (65%)	Fair (43%)	$578,657
Buildings & Facilities	Fair (49%)	Poor (27%)	$368,750
Land Improvements	Good (76%)	Fair (41%)	$78,868
Machinery & Equipment	Fair (52%)	Poor (32%)	$181,750
Road Network	Fair (57%)	Fair (56%)	$5,210,938
Stormwater System	Good (77%)	Fair (50%)	$99,057
Vehicles	Fair (48%)	Poor (27%)	$496,061
Wastewater System	Fair (57%)	Poor (27%)	$448,496
Water System	Fair (59%)	Poor (22%)	$511,306
Overall	**Fair (58%)**	**Poor (39%)**	**$7,973,883**

Scenario 2: Partial Funding Targets (85% Tax-Funded/70% Rate-Funded) in 15 Years

The table below summarizes the results of each asset category and overall.

Table 33: Scenario 2 Results Overview

Asset Category	Current Average Condition	Projected Average Condition	Funding Required
Bridges & Culverts	Good (65%)	Fair (50%)	$805,180
Buildings & Facilities	Fair (49%)	Fair (43%)	$632,403
Land Improvements	Good (76%)	Fair (49%)	$189,612

Asset Category	Current Average Condition	Projected Average Condition	Funding Required
Machinery & Equipment	Fair (52%)	Poor (39%)	$291,113
Road Network	Fair (57%)	Fair (53%)	$4,845,954
Stormwater System	Good (77%)	Fair (56%)	$132,917
Vehicles	Fair (48%)	Poor (37%)	$877,585
Wastewater System	Fair (57%)	Poor (35%)	$682,657
Water System	Fair (59%)	Poor (35%)	$1,354,812
Overall	**Fair (58%)**	**Fair (45%)**	**$9,812,233**

Scenario 3: Achieving 100% Funding in 15 Years

The table below summarizes the results of each asset category and overall.

Table 34: Scenario 3 Results Overview

Asset Category	Current Average Condition	Projected Average Condition	Funding Required
Bridges & Culverts	Good (65%)	Fair (54%)	$947,271
Buildings & Facilities	Fair (49%)	Fair (48%)	$1,008,119
Land Improvements	Good (76%)	Fair (51%)	$223,073
Machinery & Equipment	Fair (52%)	Fair (43%)	$342,486
Road Network	Fair (57%)	Good (61%)	$5,701,123
Stormwater System	Good (77%)	Fair (57%)	$215,197
Vehicles	Fair (48%)	Fair (41%)	$1,141,764
Wastewater System	Fair (57%)	Fair (46%)	$975,224
Water System	Fair (59%)	Fair (45%)	$1,935,446
Overall	**Fair (58%)**	**Fair (53%)**	**$12,489,702**

Road Network

Current Performance and Outlook

The Township's road network is adequately meeting current traffic demands, with the Transportation Master Plan (TMP) confirming sufficient capacity to accommodate projected growth. Connectivity is generally acceptable; however, settlement areas including Coldwater, Washago, and Westshore have incomplete street networks and limited pedestrian and cycling infrastructure.

The TMP's adoption of Alternative 3 establishes a targeted strategy focused on selective upgrades rather than broad network expansion. This approach prioritizes urbanization of key corridors to support growth and improve safety, enhancements to active transportation infrastructure, operational improvements at select intersections, and continued accommodation of aggregate haul routes.

Implementation of the TMP is phased over the short, medium, and long term to align with achievable funding levels. Development-related projects represent a significant portion of planned improvements, reinforcing the principle that growth should pay for growth.

Overall, the road network is stable and functioning well today. Long-term sustainability will depend on delivering the strategic investments identified in the TMP, with emphasis on safety, urbanization, and active transportation. Progress will be influenced by available capital funding, development-driven cost recovery, and the ability to advance complex projects such as the westerly haul route.

To understand how varying funding strategies may influence long-term road condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 52: Road Network Condition - Scenario Comparison

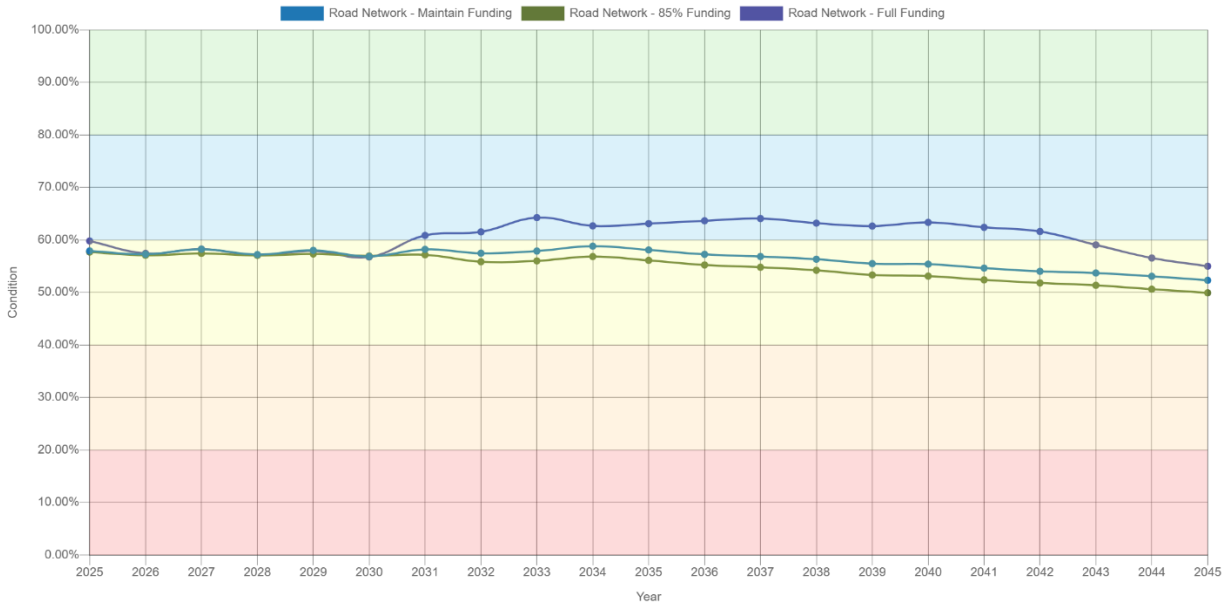


Table 35 summarizes the Community Levels of Service for the road network, while Table 36 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 35: Road Network Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include maps, of the Road Network in the municipality and its level of connectivity	See Figure 53.
Quality	Description or images that illustrate the different levels of road class pavement and sidewalk condition	The Township's recent Road Needs Study (2020) provided a Pavement Condition Index for all road sections. The PCI considers surface distresses and ride conditions, resulting in a rating between 1 and 100. Higher PCI ratings reflect better road conditions. A road in very good condition (PCI: 90-100) is considered well maintained, exhibits few pavement distresses with a low severity and provides a smooth and pleasant ride for drivers. A road in poor condition (PCI: 40-55) exhibits several pavement distresses of increasing severity and is very rough and bumpy for drivers.

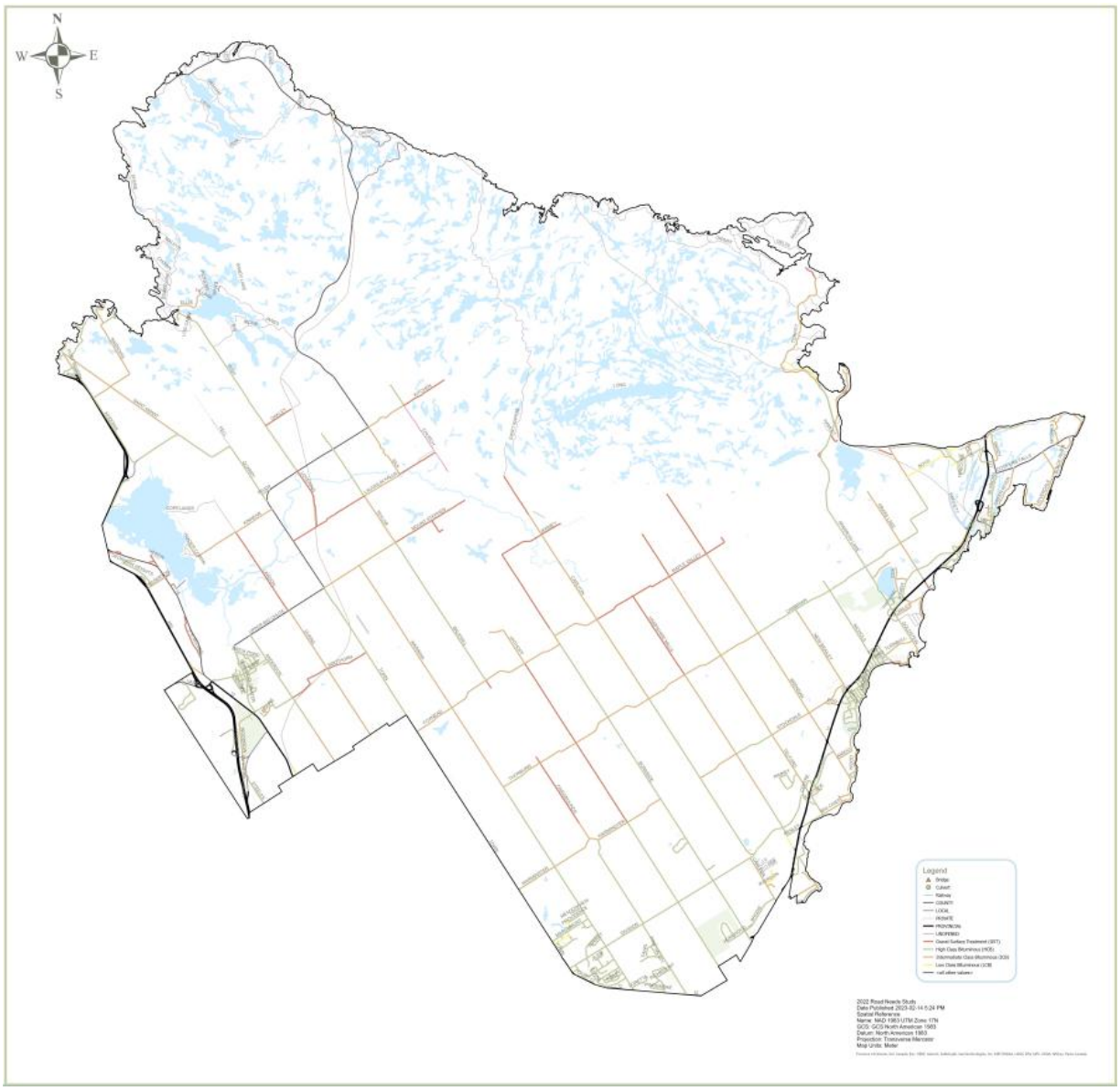
Table 36: Road Network Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km^2)	0 km/km2	Increase
	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km^2)	0.99 km/km2	Increase[3]
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km^2)	0.51 km/km2	Increase
Quality	Average pavement condition index for paved roads in the Township	57	Maintain

[3] Growth in the local and collector network will occur as developers transfer completed assets. The proposed increase reflects the natural growth of the entire road network through roads built for new development, rather than an increase in the levels of service within existing developed areas.

Service Attribute	Technical Metric	Current LOS	Proposed LOS
	Average surface condition for unpaved roads in the Township (e.g. excellent, good, fair, poor)	Good	Maintain
Performance	% of signs inspected for reflectivity	100%	Maintain
	% of sidewalks inspected	100%	Maintain
	Average Risk Rating	10.48 (High)	Maintain
	Capital reinvestment rate	3.4%	Increase

Figure 53 Road Inventory and Surface Type Map



Bridges & Culverts

Current Performance and Outlook

The bridge and culvert network is currently functioning but is increasingly constrained by aging structures, deferred rehabilitation, and expanding load restrictions. While routine maintenance is funded and completed, major OSIM-recommended rehabilitation and replacement work has largely been deferred, particularly on low-use bridges. As a result, several structures have deteriorated beyond practical rehabilitation.

The Township prioritizes investment in higher-use bridges while planning for the potential decommissioning of lower-use rural crossings. This approach aligns capital spending with service demand and reflects a modest reinvestment target of 1.0%, recognizing that not all structures will be replaced.

System sustainability is influenced by a growing number of load-restricted structures, heavy reliance on grant funding for major projects, and the presence of inherited provincial and county bridges that are costly to maintain. Reserve pressures are compounded by the need to address a small number of high-priority bridges with significant capital costs, while low-use bridges continue to deteriorate and may require formal decommissioning decisions.

Overall, the bridge and culvert network meets essential service needs today but faces increasing long-term risk from aging assets and funding constraints. Strategic decommissioning will remain a key management tool, while higher-priority bridges will continue to place significant demands on available capital.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 54: B&C Condition - Scenario Comparison

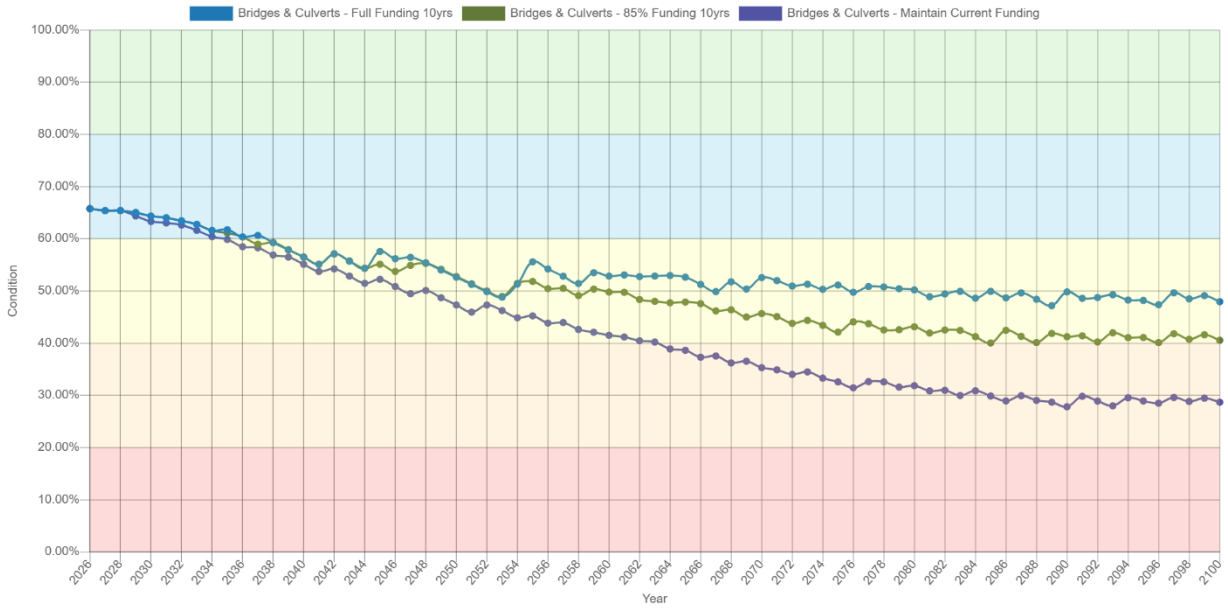


Table 37 summarizes the Community Levels of Service for bridges & culverts, while Table 38 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 37: B&C Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description of the traffic that is supported by municipal bridges (e.g. heavy transport, motor, emergency vehicles, pedestrians, cyclists)	The Township owns 39 bridges and structural culverts that represent a critical component of the transportation network. Many bridges support the passage of diverse traffic including heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians and cyclists. Some bridges have load or dimensional restrictions which may limit the ability of larger or heavier transport vehicles. These limits are clearly posted at relevant bridge approaches.
Quality	Description or images of the condition of bridges and culverts and how this would affect use of the bridges and culverts	See Table 40.

Table 38: B&C Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	% of bridges in the Township with loading or dimensional restrictions	18%	Maintain
Quality	Average bridge condition index value for bridges in the Township	66	Maintain
	Average bridge condition index value for structural culverts in the Township	60	Maintain
Performance	Average Risk Rating	10.6 (High)	Maintain
	Capital Reinvestment Rate	0.8%	Increase

Table 39: Visual Examples of Bridges and Culverts Condition

Bridge Condition Index Score (BCI)	Bridges	Culverts
Very Good BCI Range: 90 – 100	Structure B03 	Structure C37 
Good BCI Range: 65 – 89	Structure B06 	Structure C09 
Fair BCI Range: 50 – 64	Structure B04 	Structure C30 
Poor BCI Range: 40 – 49	Structure B11 	No.: 33 - Wainman Line 
Very Poor BCI Range: <40	Structure B28 	Structure TR-BR-002 

Water System

Current Performance and Outlook

The water system is performing well, supported by a relatively new asset base with minimal condition or reliability concerns. Service disruptions are infrequent and typically result from external factors, such as contractor strikes, rather than systemic issues. Current revenues support ongoing operations, while growth-related expansions are funded through development charges. Several upgrades are underway or planned, including improvements to Coldwater's hardwater treatment system and the Westshore Optimization Project, both supported by grants. The Township is also updating its water rate study to reflect current project costs and long-term financial requirements.

Emerging pressures will require attention, including increasing lifecycle funding needs as newer assets approach renewal, legacy design issues in the Westshore system requiring corrective work, and future rate adjustments based on the updated rate study. Capital funding templates also need refinement to better reflect long-term renewal requirements across water and wastewater systems.

Overall, the water system is stable, reliable, and well-funded short term, with limited near-term risk. Long-term planning will become increasingly important as the system ages and major upgrades progress. Planned growth will require a new elevated water storage tank and a transmission watermain loop to service the north end, timed with development phasing. A $6 million water quality project is proposed to address hardness, iron, manganese, and colour concerns. Alongside the wastewater treatment optimization project, expansion of water and wastewater infrastructure will be needed to support a projected population of up to 5,889 by 2051.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 55: Water System Condition - Scenario Comparison

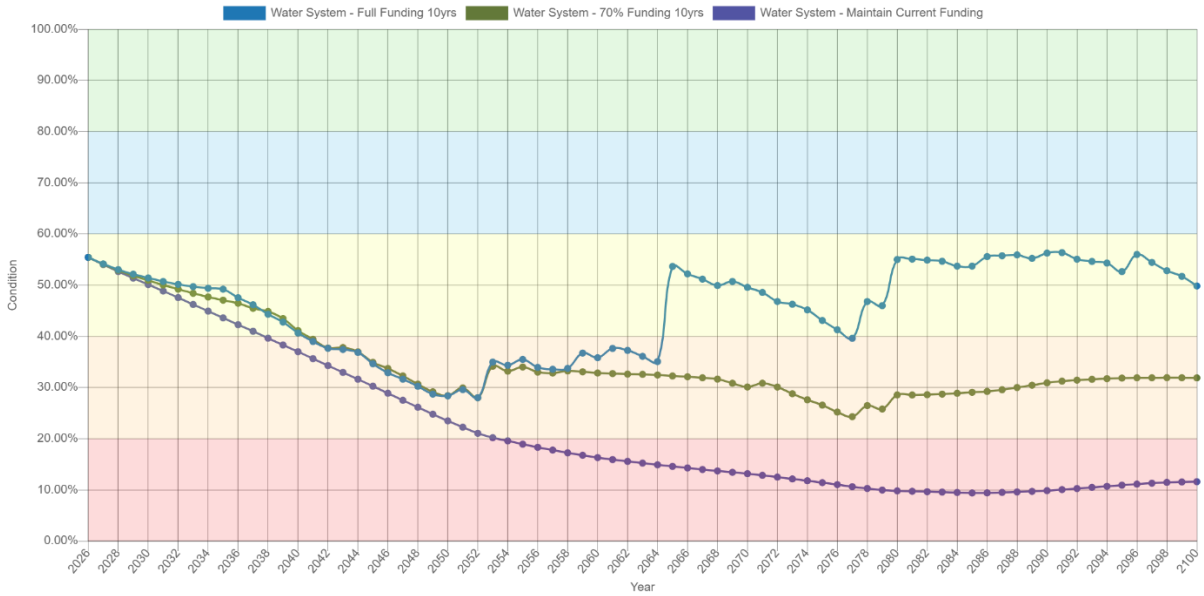


Table 40 summarizes the Community Levels of Service for the water system, while Table 41 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 40: Water Network Community Levels of Service

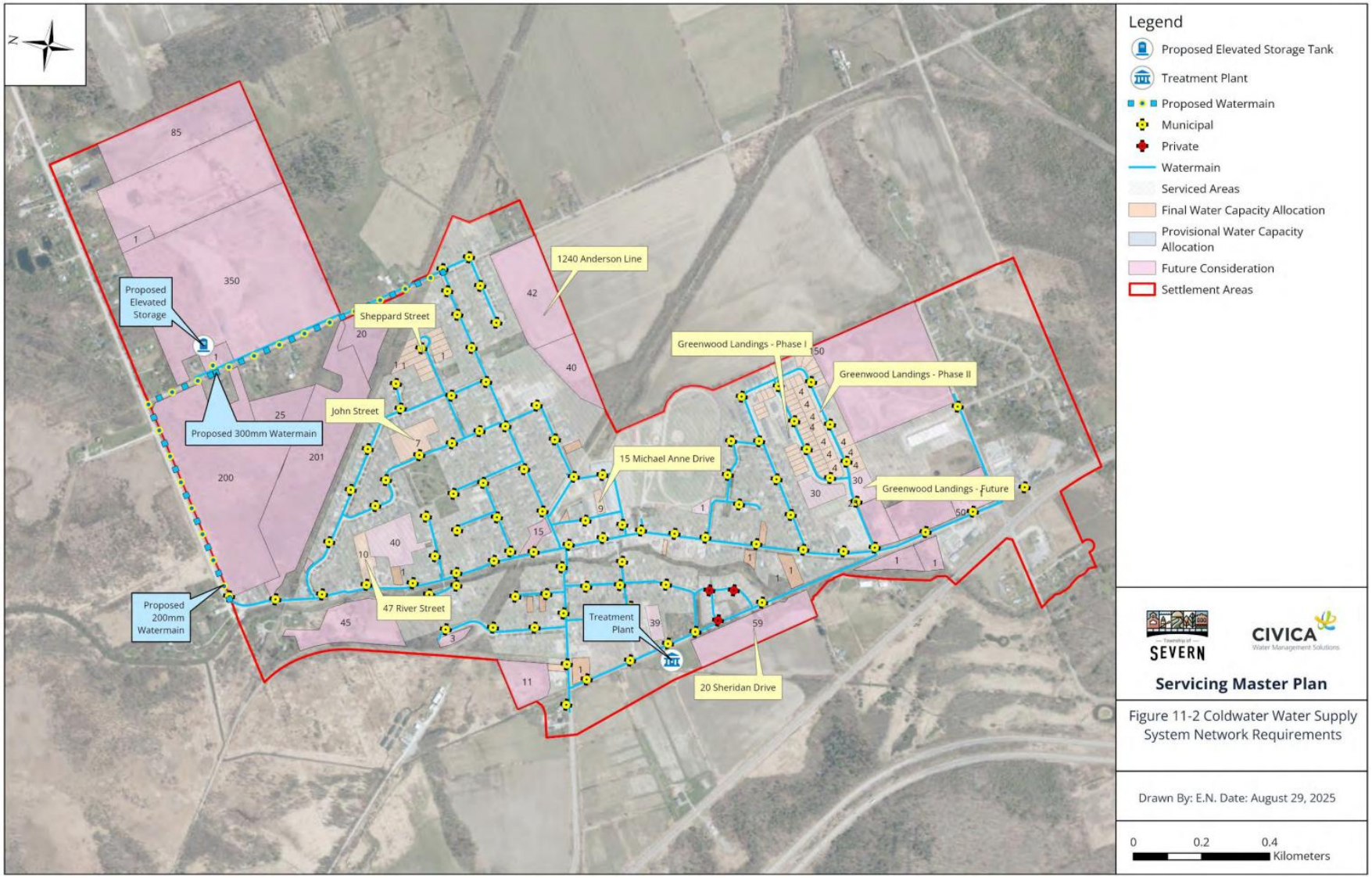
Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	There are 6 separate communities serviced by the municipal water system including: Bass Lake, Coldwater, Sandcastle Estates, Severn Estates, Washago, and Westshore. See Figure 56.
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	33% of the Township are connected to the municipal water system and have access to adequate fire flow.
Reliability	Description of boil water advisories and service interruptions	There were no boil water advisories issued during the reporting period.

Table 41: Water Network Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	Percentage of properties connected to the municipal water system	33%	Increase[4]
	Percentage of properties where fire flow is available	33%	Increase
Reliability	Number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system	0	Maintain
	Number 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	0	Maintain
Performance	Average condition of municipal water assets	59% (Fair)	Maintain
	Average Risk Rating	10.1 (High)	Maintain
	Capital Reinvestment Rate	0.6%	Increase

[4] Growth will remain limited in rural areas. No expansion of the municipal water system is projected outside current serviced settlement boundaries. The proposed increase reflects the natural growth of the water network through new development, rather than an increase in the levels of service within existing developed areas.

Figure 56: Coldwater Water Supply System Network Requirements



Wastewater System

Current Performance and Outlook

The wastewater system provides reliable service within existing serviced areas, with expansions driven by development rather than retrofits to unserviced areas. Regulatory compliance is strong, supported by the absence of combined sewers and a proactive inspection program covering approximately 17% of the network annually, exceeding industry benchmarks.

Aging infrastructure, particularly assets from the 1970s, is becoming a renewal priority. As flows increase with growth, treatment capacity and pumping station performance are emerging pressures, alongside climate-driven inflow and infiltration impacts and operational reliability concerns.

The Servicing Master Plan (2025) findings indicate that wastewater treatment capacity in Coldwater is nearly fully utilized. The system is planned to expand in two phases to support a population of 3,750, aligned with water treatment capacity, with a Municipal Class Environmental Assessment underway. Required upgrades include the Main and Sturgeon Bay Road Pumping Stations, relocation of the Anderson Line Pumping Station, and twinning of the forcemain to the treatment plant.

In Westshore, deficiencies in the 2006 wastewater treatment system have reduced available capacity and are constraining development. An imminent $8.856 million project is required to restore approved capacity, including new headworks with screening and grit removal, a 1,000 m^3 equalization tank, increased SBR blower capacity, and upgraded phosphorus dosing.

Overall, the system is performing well today, but aging assets, treatment-side constraints, and growth will require sustained long-term reinvestment and capacity planning.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 57: Wastewater System Condition - Scenario Comparison

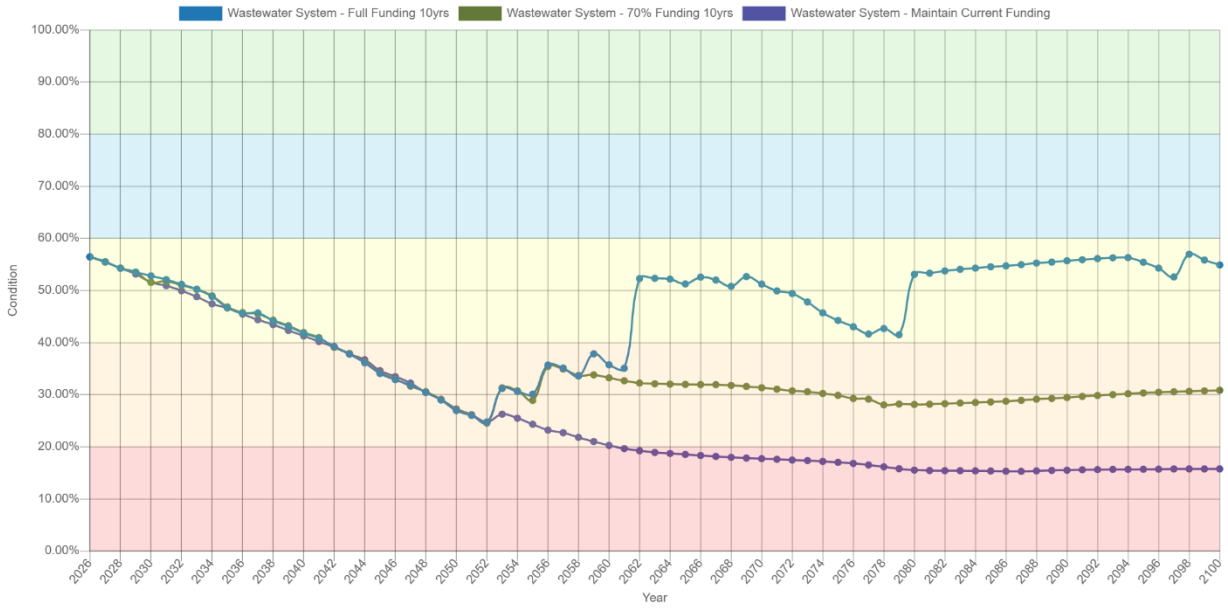


Table 42 summarizes the Community Levels of Service for the wastewater system, while Table 43 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 42: Wastewater System Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system	There are 3 separate communities serviced by the municipal wastewater system including: Westshore, Washago and Coldwater. See Figure 58.
Reliability	Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes	The Township does not own any combined sewers
	Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches	

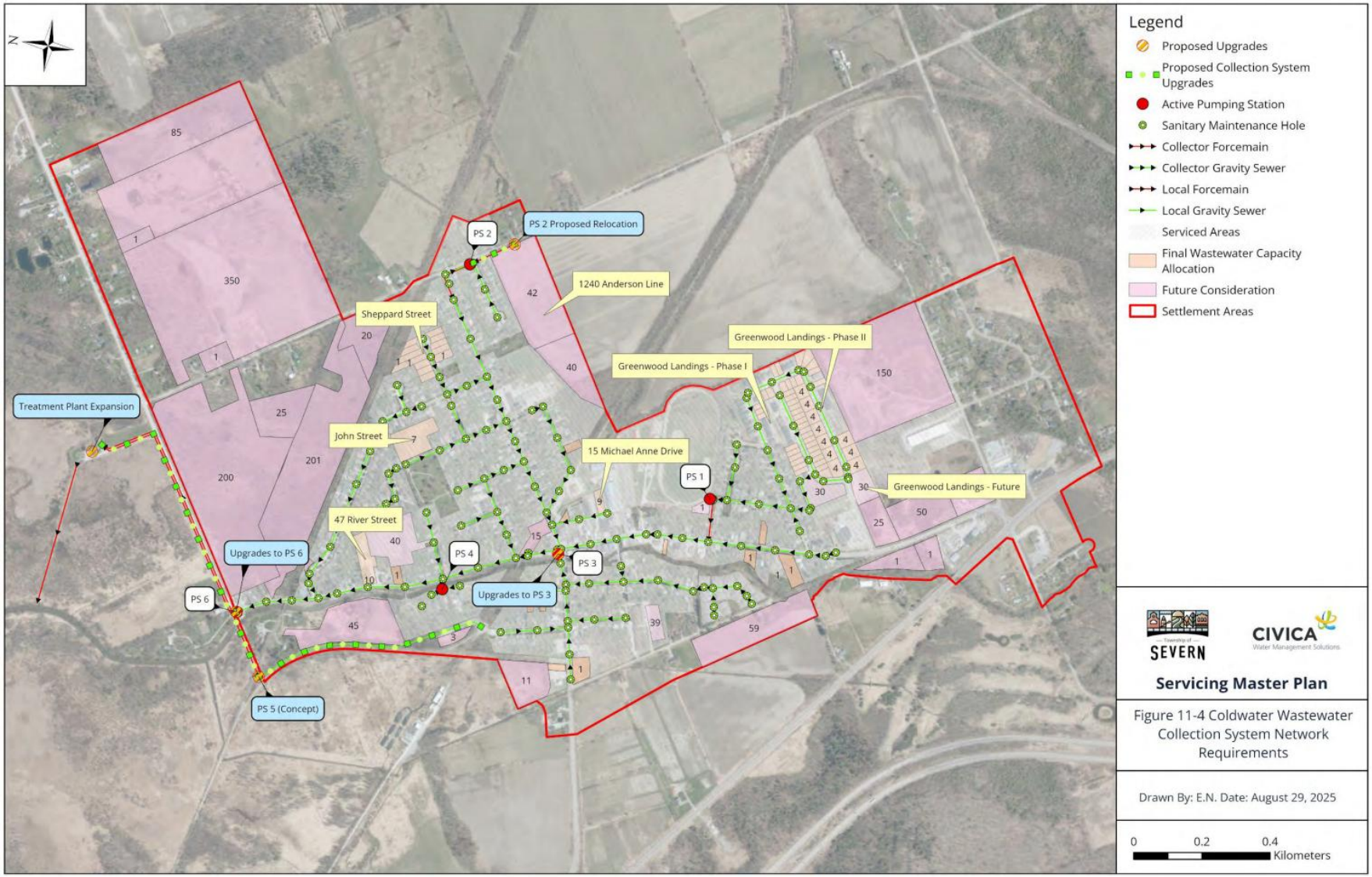
Service Attribute	Qualitative Description	Current LOS
	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes	Stormwater can enter sanitary sewers due to cracks in sanitary mains or through indirect connections (e.g. weeping tiles). In the case of heavy rainfall events, sanitary sewers may experience a volume of water and sewage that exceeds its designed capacity. In some cases, this can cause water and/or sewage to overflow backup into homes. The disconnection of weeping tiles from sanitary mains and the use of sump pumps and pits directing storm water to the storm drain system can help to reduce the chance of this occurring.
	Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to stormwater infiltration	The Township's Engineering Design Criteria outlines design requirements for the sanitary drainage system. Specifications regarding the class of pipe and the type of bedding to be used in construction have been determined to minimize stormwater infiltration.
	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system	Effluent refers to water pollution that is discharged from a wastewater treatment plant, and may include suspended solids, total phosphorous and biological oxygen demand. The Wastewater Systems Effluent Regulation, as established under the Fisheries Act, identifies mandatory minimum effluent quality standards. The Township follows all requirements for monitoring, record-keeping and toxicity testing as specified.

Table 43: Wastewater System Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	% of properties connected to the municipal wastewater system	29%[5]	Increase
	% of sewer network length CCTV inspected	17%	Maintain
Reliability	# of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system	NA	NA
	# of connection-days per year having wastewater backups compared to the total number of properties connected to the municipal wastewater system	0	Maintain
	# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system	0	Maintain
Performance	Average condition of municipal sanitary assets	57% (Fair)	Maintain
	Average Risk Rating	11.17 (High)	Maintain
	Capital reinvestment rate	0.97%	Increase

[5] Growth will remain limited in rural areas. No expansion of the municipal wastewater system is projected outside current serviced settlement boundaries. The proposed increase reflects the natural growth of the Sanitary Sewer Network through new development, rather than an increase in the levels of service within existing developed areas.

Figure 58: Coldwater Wastewater Collection System Network Requirements



Stormwater System

Current Performance and Outlook

The stormwater system provides strong service levels in newer subdivisions, supported by modern infrastructure and full drainage coverage. Storm ponds are maintained on established 30-year cleanout cycles, and recent Environmental Compliance Approvals support regulatory compliance. Road reconstruction projects routinely incorporate storm system upgrades, allowing for incremental improvements in older neighbourhoods.

Coldwater remains the primary exception due to its location within a natural floodplain. While the drainage system generally functions as intended, there are limited practical options to significantly reduce flood risk in this area.

Ongoing pressures include the inherent flooding vulnerability of the Coldwater Basin, significant long-term investment requirements for storm pond rehabilitation, and growing future replacement needs for storm mains and ponds as the system ages. Historical underfunding of stormwater infrastructure is being addressed through a shift toward allocating approximately 10% of road-related taxation to stormwater assets.

Overall, the stormwater system provides reliable drainage across most of the Township, with strong performance in newer developments. However, floodplain constraints in Coldwater and increasing lifecycle costs will require sustained capital investment and ongoing refinement of the stormwater funding strategy to support long-term resilience.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 59: Stormwater System Condition - Scenario Comparison

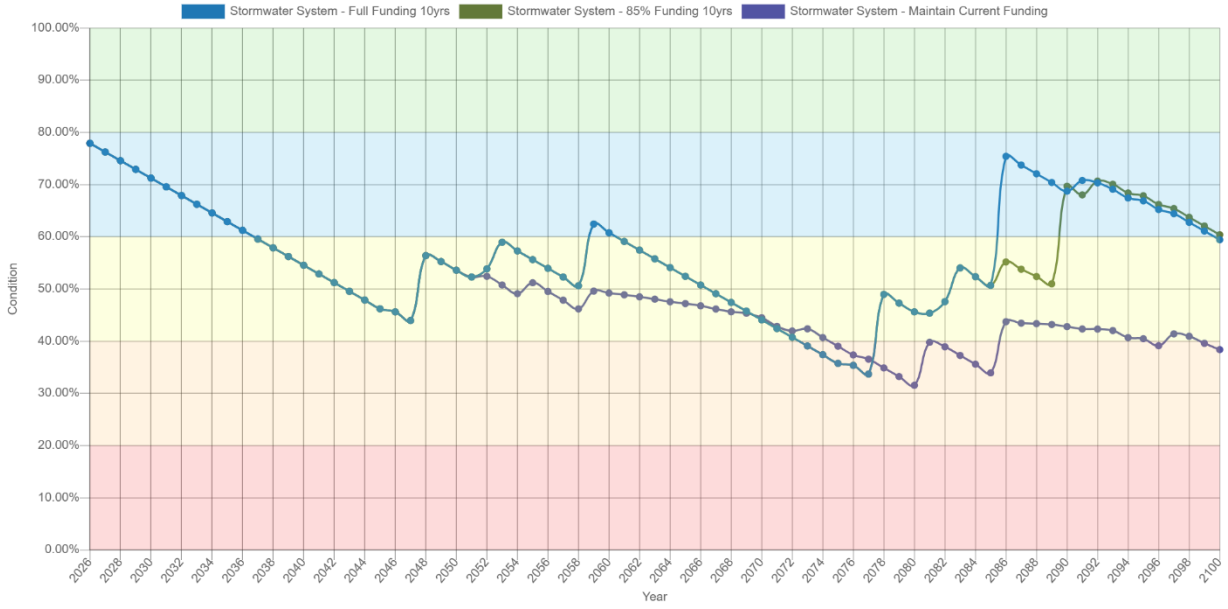


Table 44 summarizes the Community Levels of Service for the stormwater system, while Table 45 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 44 Stormwater System Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include map, of the user groups or areas of the municipality that are protected from flooding, including the extent of protection provided by the municipal Storm Sewer Network	Storm sewers are generally designed to accommodate 1:5-year storm flows. The Township does not currently have hydraulic modelling or floodplain mapping to confidently determine the extent of protection provided by the municipal stormwater system. See Figure 60 for Coldwater flood proofing areas.

Table 45 Stormwater System Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	% of properties in municipality designed to be resilient to a 100-year storm	TBD[6]	Maintain
	% of the municipal stormwater management system designed to be resilient to a 5-year storm	TBD[7]	Maintain
Performance	% of catch basins cleaned	100%	Maintain
	Km of channel maintenance per year	7km	Maintain
	Average condition of stormwater assets	77 (Good)	Maintain
	Average Risk Rating	4.02 (Very Low)	Maintain
	Capital reinvestment rate	1.07%	Increase

[6] The Township currently lacks the data and technical assessments required to quantify the percentage of properties that are resilient to a 100-year storm. These measures may be addressed in future updates to the Asset Management Plan as additional information and resources become available.

[7] The Township currently lacks the data and technical assessments required to quantify the percentage of the municipal stormwater management system designed to be resilient to a 5-year storm. These measures may be addressed in future updates to the Asset Management Plan as additional information and resources become available.

Figure 60: Coldwater Flood Proofing Areas

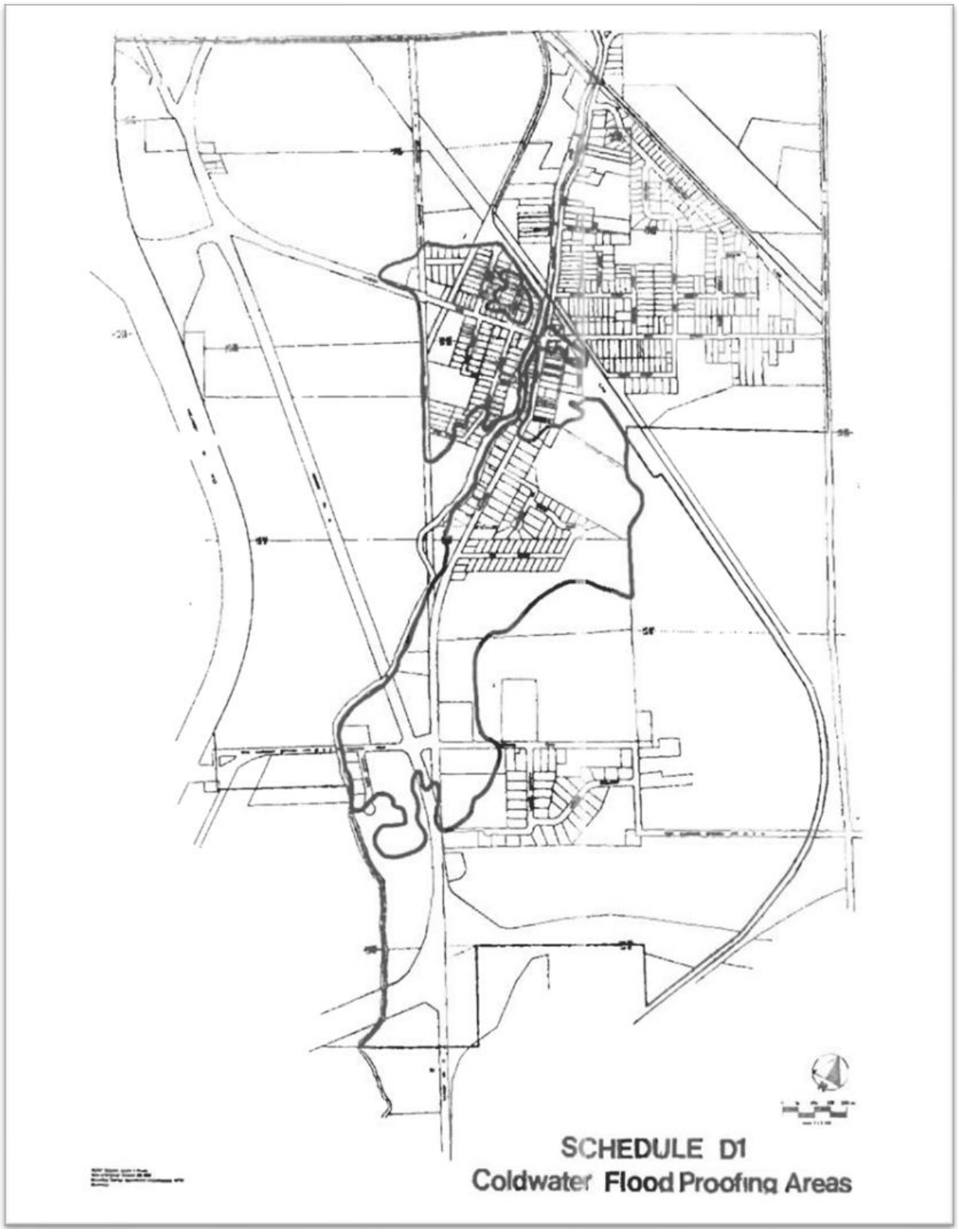
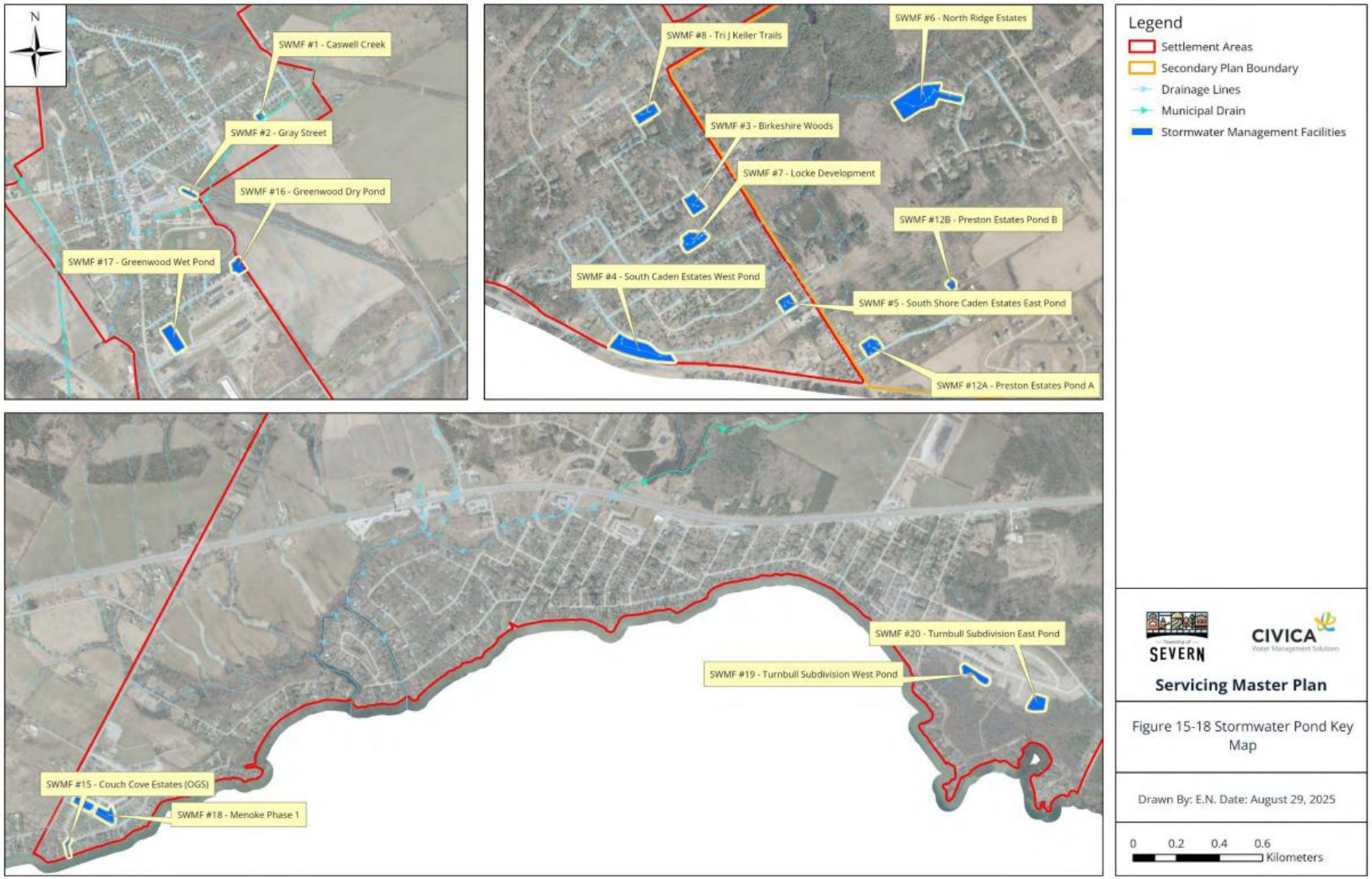


Figure 61: Stormwater Pond Key Map



Buildings & Facilities

Current Performance and Outlook

The Township's building portfolio includes several aging and undersized facilities that no longer meet operational or community needs. The municipal office lacks adequate space and accessibility, the arena (constructed in 1964) will require significant reinvestment within the next decade, and fire stations are undersized and missing key features such as showers and appropriate transition zones.

While community halls are not Township-operated, the Township remains responsible for capital renewal. Some upgrades have been completed, including improvements to the Washago Community Centre, and select accessibility enhancements are underway, though funding remains limited.

Key pressures include growing staffing needs and demand for modern administrative space, substantial capital requirements for the arena, fire stations, and the proposed Westshore facility, increasing AODA compliance obligations, and heavy reliance on grant funding, with recent applications denied or uncertain. Community expectations for improved recreational and emergency service facilities further compound these pressures.

Overall, the building portfolio is under significant strain from aging assets, accessibility requirements, and expanding service demands. Without sustained capital investment, the Township faces increasing operational constraints and declining service levels across administrative, recreational, and emergency facilities.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 62: Buildings & Facilities Condition - Scenario Comparison

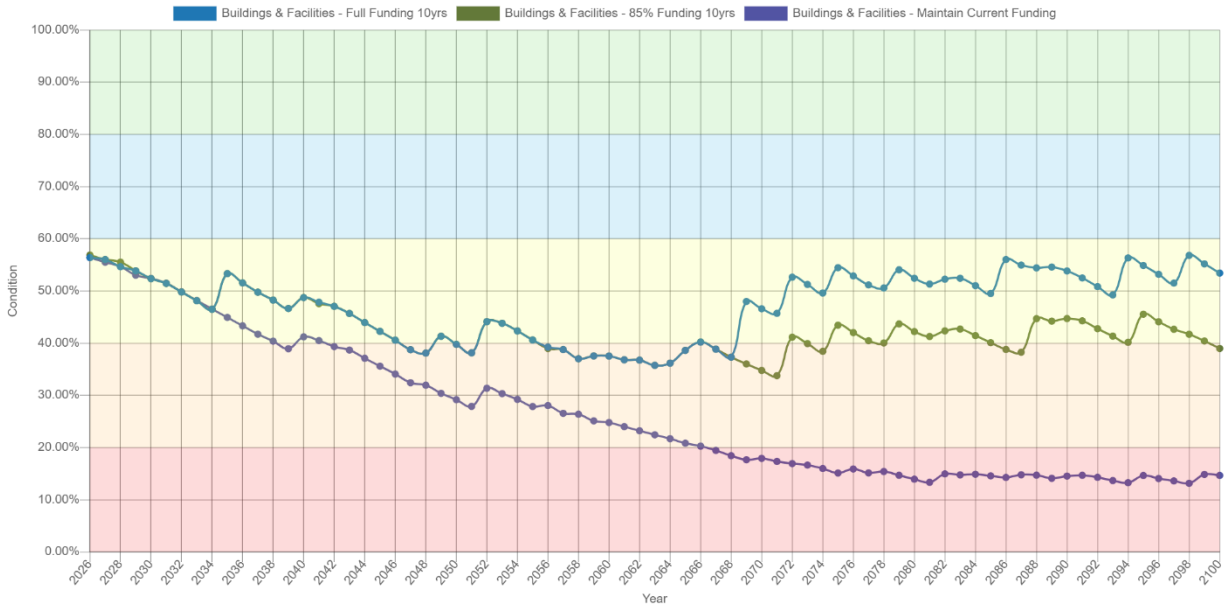


Table 46 summarizes the Community Levels of Service for municipal buildings, while Table 47 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 46: Buildings & Facilities Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description of the current condition of municipal buildings and the plans that are in place to maintain or improve the provided level of service.	The Township's municipal buildings are in Fair (50%) condition, indicating they remain functional but are aging and limited by space, accessibility, and outdated systems. The current level of service is maintained through routine maintenance and targeted repairs focused on safety and compliance, with longer-term plans to fund major renewals and accessibility improvements to prevent further deterioration and support future community needs.

Table 47 Buildings and Facilities Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Quality	Average condition of municipal buildings	50% (Fair)	Maintain
Performance	Average Risk Rating	11.7 (High)	Maintain
	Capital reinvestment rate	0.67%	Increase

Land Improvements

Current Performance and Outlook

The Township's parks, playgrounds, and open spaces generally meet current community needs, with 11 existing parks and a new park planned in Port Severn. Pathway upgrades are underway, and long-term direction is provided through the Parks & Recreation Master Plan. A study is also in progress for the Bass Lake Woodlands to identify required infrastructure improvements.

Key pressures include multiple playgrounds approaching end-of-life, limited funding for long-term renewal and expansion, low community willingness to pay for enhanced amenities, and reliance on annual capital approvals that slow progress on the 15-year master plan.

Overall, land improvements are adequate today but face increasing lifecycle and funding pressures. Without stronger capital commitments, playground replacements, pathway upgrades, and implementation of master plan objectives are likely to be delayed or deferred.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 63: Land Improvements Condition - Scenario Comparison

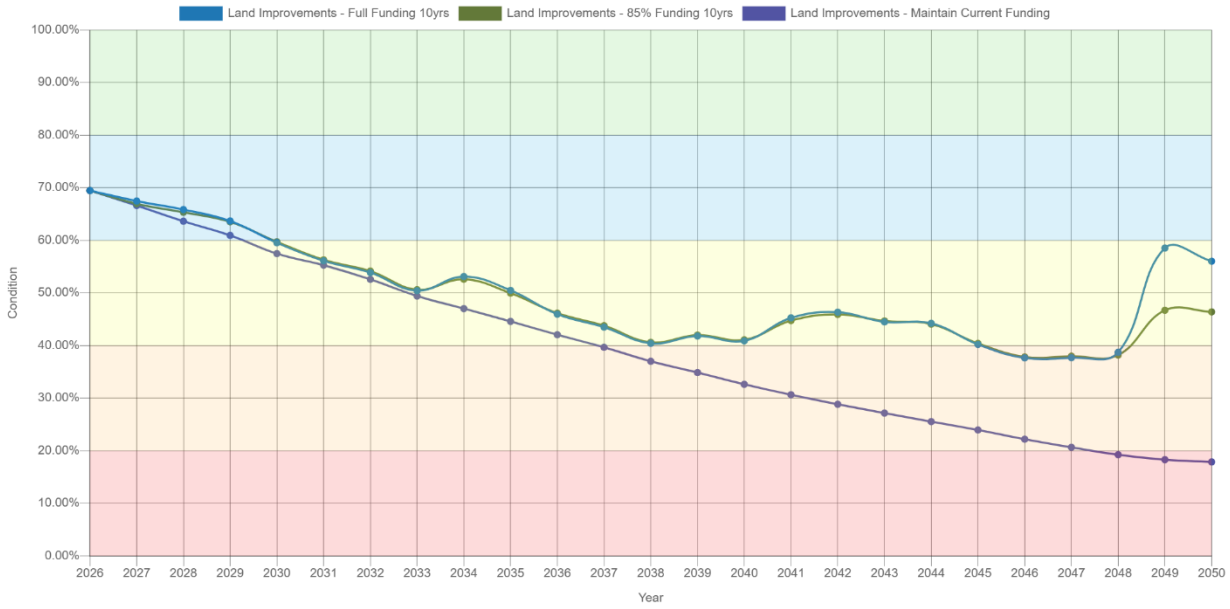


Table 48 summarizes the Community Levels of Service for land improvement assets, while Table 49 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 48: Land Improvements Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include maps, of the outdoor recreational facilities that the municipality operates and maintains	The Township maintains a network of outdoor recreational facilities and land improvements across its communities, as shown on the parks and open space maps. Major parks include Washago Centennial Park, Timberline Creek Park, Marchmont Community Park, Ian Crichton Memorial Park, the Coldwater Fairgrounds, Bass Lake Woodlands Park, and Ardtrea Park, which together provide playgrounds, sports fields and courts, pavilions, picnic areas, washrooms, and park furnishings. Larger destination parks offer additional amenities such as beaches, trails, outdoor fitness equipment, skate and pump track features, and boat launch facilities. The Township also maintains parking lots, lighting, fencing, public docks and boat launches, and an interconnected trail and pathway system, including the Uhthoff Trail, supporting a wide range of recreational activities and community needs.

Table 49 Land Improvements Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Quality	Average condition of playgrounds and land improvements in the municipality	76% (Good)	Maintain
Performance	Average Risk Rating	6.11 (Low)	Maintain
	Capital reinvestment rate	1.60%	Increase

Machinery & Equipment

Current Performance and Outlook

Machinery and equipment for Public Works and Recreation currently support operational needs, with replacements made incrementally to address wear and functionality. Fire Services maintain appropriate equipment inventories, including hoses, nozzles, pumps, and protective gear, supported by annual replacement programs and a planned SCBA fill station upgrade in 2026.

Emerging pressures include rising costs for specialized fire equipment, significant investment needs for communications equipment such as pagers and portable radios, and ongoing recreation equipment renewal aligned with the Parks & Recreation Master Plan, which will require consistent long-term funding.

Overall, equipment levels are adequate for current service delivery; however, sustained incremental investment will be necessary to maintain safety, regulatory compliance, and operational reliability across all departments.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 64: Machinery & Equipment Condition - Scenario Comparison

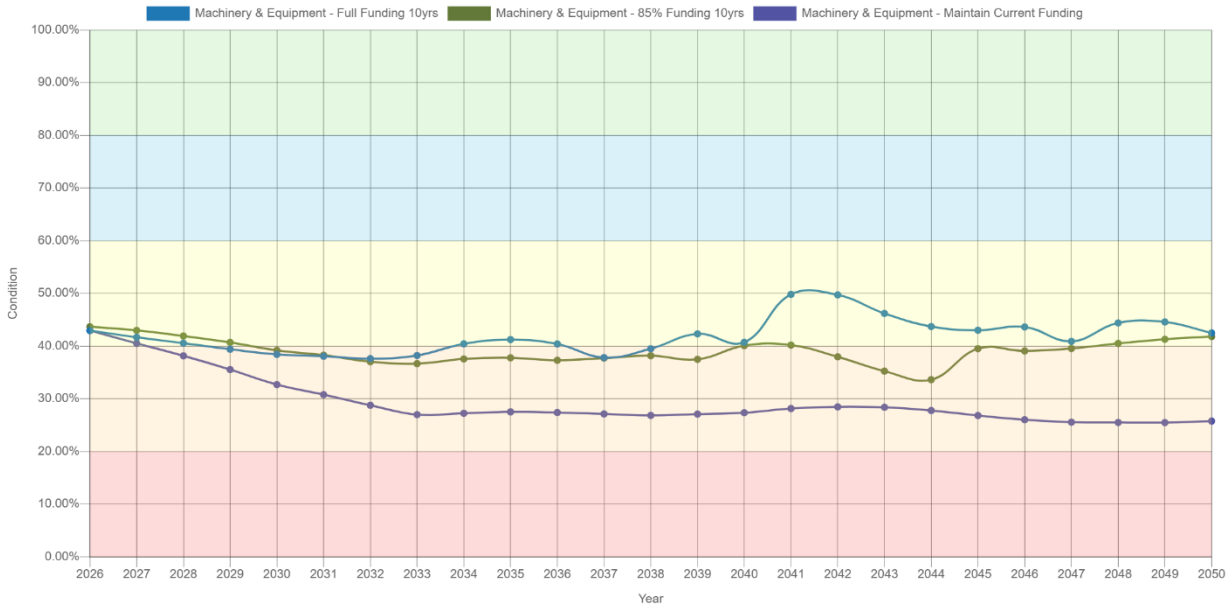


Table 50 summarizes the Community Levels of Service for machinery & equipment assets, while Table 51 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 50 Machinery & Equipment Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include images, of the types of equipment that the municipality operates and the services that they help to provide to the community	The Township operates a variety of equipment to support administration, emergency services, public works, recreation, and library operations. This includes IT systems, office furnishings, and software for municipal services; life-safety gear, radios, and rescue tools for fire and emergency response; tractors, chippers, signage, and road maintenance equipment for Public Works; and arena, park, and library equipment to ensure safe, reliable, and accessible services for the community.

Table 51 Machinery & Equipment Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	Average condition of Machinery & Equipment	52 (Fair)	Maintain
	% of construction equipment exceeding expected run-time hours	12.5%	Maintain
Performance	Average Risk Rating	6.93 (Low)	Maintain
	Capital reinvestment rate	5.65%	Increase

Vehicles

Current Performance and Outlook

The Township's vehicle fleet generally meets operational needs across Public Works, Fire Services, and Recreation. Replacement cycles are in place, and several new vehicles, including a development-charge funded aerial truck, are currently on order. Fire apparatus is procured proactively due to long delivery timelines, and hybrid vehicles are increasingly used for administrative and light-duty functions.

Key pressures include multi-year delivery delays for fire apparatus and heavy equipment, increased wear on older vehicles, gaps in the recreation fleet that rely on shared administrative vehicles, and a need to transition procurement toward climate-conscious technologies.

Overall, the fleet is functioning adequately but remains sensitive to procurement delays and rising usage demands. Continued reinvestment and long-term planning will be essential to maintain service levels across departments.

To understand how varying funding strategies may influence long-term condition and service outcomes, three funding scenarios were evaluated. The chart below compares projected condition performance under each scenario.

Figure 65: Vehicles Condition - Scenario Comparison

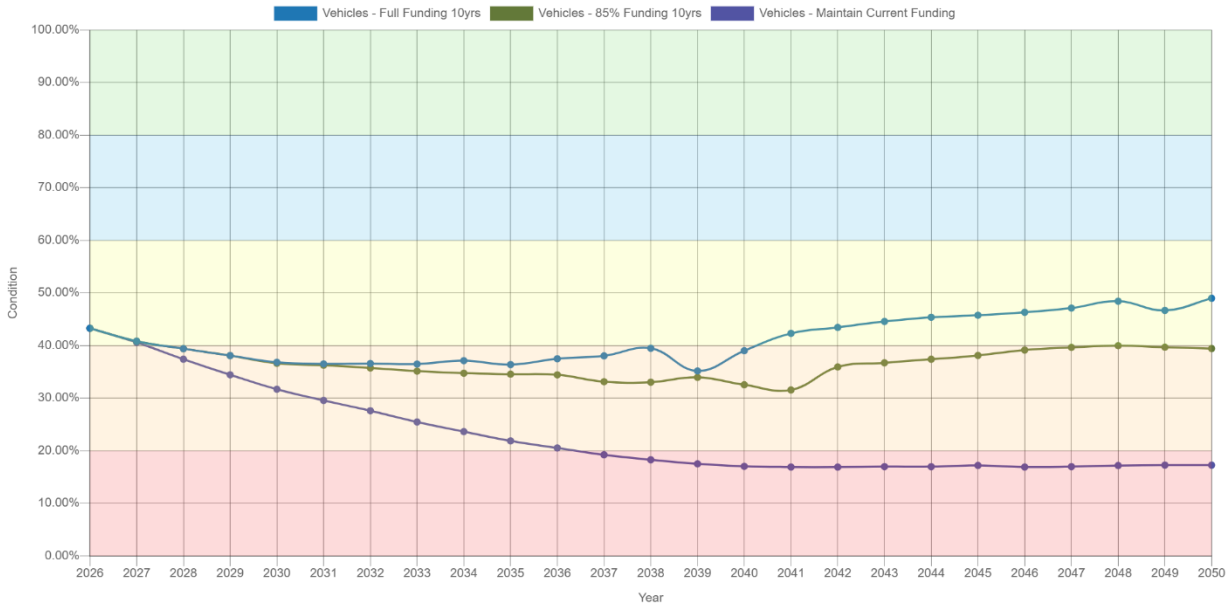


Table 52 summarizes the Community Levels of Service for municipal vehicles, while Table 53 outlines the corresponding Technical Levels of Service and proposed performance targets.

Table 52 Vehicles Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Scope	Description, which may include images, of the types of vehicles (i.e. light, medium, and heavy duty) that the municipality operates and the services that they help to provide to the community	The Township operates a diverse fleet of vehicles and heavy equipment to support municipal services, emergency response, and public works operations. Passenger and administrative vehicles include sedans, trucks, and SUVs used for staff mobility and service delivery. Fire and emergency services maintain a range of specialized vehicles, including pumpers, tankers, rescues, and utility vehicles, equipped to respond safely and efficiently to emergencies. Public Works relies on heavy trucks, graders, backhoes, loaders, plow and sander trucks, tractors, trailers, and other attachments to maintain roads, manage snow and ice, and support construction and maintenance projects.

Table 53 Vehicles Technical Levels of Service

Service Attribute	Technical Metric	Current LOS	Proposed LOS
Scope	Average condition of municipal vehicles	48% (Fair)	Maintain
	% of vehicles that have exceeded expected mileage thresholds	10%	Maintain
Performance	Average Risk Rating	10.99 (High)	Maintain
	Capital reinvestment rate	2.86%	Increase

Funding Strategy Summary

Based on stakeholder input, asset condition and risk analysis, and long-term risk projections, Scenario 3 has been identified as the preferred financial strategy. While Scenario 1 results in continued asset deterioration and a decline to an overall Poor average condition, and Scenario 2 stabilizes some assets but leaves ongoing funding gaps, Scenario 3 is the only option that maintains assets in overall Fair to Good condition while preventing backlog growth and reducing long-term risk exposure.

Under Scenario 3, the Township will implement phased annual tax and rate increases over a 10-year period to achieve and sustain 100% of recommended lifecycle funding. This approach eliminates the funding gap, stabilizes asset conditions across service areas, and positions the Township to proactively address aging infrastructure, regulatory requirements, and growth-related pressures.

By gradually increasing capital reinvestment rates across all asset categories, the Township of Severn aims to reach full funding by Year 10 and maintain that level thereafter, ensuring long-term service reliability, financial sustainability, and infrastructure resilience.

Proposed LOS 10-Year Capital Requirements

The table below outlines the capital cost requirements for recommended lifecycle activities, as determined through the Township's asset management software. These projections are based on annual budgets starting at current funding levels, with a gradual increase over a 10-year period to achieve full recommended funding for all assets. This strategy follows Scenario 3 to ensure the Township can sustain current service levels over the long term. For further details, please refer to the Financial Strategy.

Table 54: Proposed Levels of Service 10-Year Capital Requirements - All Asset Categories

Asset Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Road Network	$4.2m	$3.4m	$7.1m	$5.3m	$5.7m	$4.9m	$6.0m	$5.9m	$7.0m	$8.7m
Machinery & Equipment	$239k	$272k	$181k	$224k	$255k	$282k	$298k	$339k	$326k	$323k
Land Improvements	$140k	$18k	$78k	$115k	$115k	$54k	$113k	$356k	$53k	$93k
Buildings & Facilities	$163k	$96k	$205k	$698k	$482k	$406k	-	$18k	-	$2.8m
Bridges & Culverts	$619k	$786k	$113k	$985k	$780k	$927k	$805k	$578k	$780k	$1.3m
Vehicles	$828k	$843k	$378k	$644k	$829k	$906k	$1.0m	$1.1m	$1.0m	$906k
Stormwater System	-	-	-	-	-	-	-	-	-	-
Water System	$746k	$1.0m	$511k	$625k	$872k	$945k	$1.3m	$1.6m	$1.4m	$1.8m
Wastewater System	$382k	$649k	$448k	$495k	$603k	$636k	$559k	$358k	$535k	$19k
Total Capital Requirement	**$7.3m**	**$7.1m**	**$9.0m**	**$9.1m**	**$9.6m**	**$9.0m**	**$10.1m**	**$10.4m**	**$11.2m**	**$15.8m**

Financial Strategy

Financial Strategy Overview

Each year, the Township of Severn makes important investments in its infrastructure's maintenance, renewal, rehabilitation, and replacement to ensure assets remain in a state of good repair. However, spending needs typically exceed fiscal capacity. In fact, most municipalities continue to struggle with annual infrastructure deficits. Achieving the proposed levels of service for infrastructure programs will take many years and should be phased-in gradually to reduce burden on the community.

This plan identifies the financial requirements necessary to meet the identified proposed levels of service. These requirements are based on the financial requirements for existing assets as of December 31, 2024. However, the required funding is based on meeting the proposed levels of service, with consideration for any additional financial impacts from economic and population growth. The financial plan considers and accounts for traditional and non-traditional sources of municipal funding.

The annual funding typically available is determined by averaging historical capital expenditures on infrastructure, inclusive of any allocations to reserves for capital purposes. For Severn, an average of capital allocations for 2022-2025 was used to project available funding.

Only reliable and predictable sources of capital funding are used to benchmark funds that may be available on any given year. The funding sources include:

- Revenue from taxation allocated for capital purposes
- Revenue from taxation budgeted and allocated to capital reserves
- Revenue from water and wastewater rates allocated to capital reserves
- The Canada Community Benefits Fund (CCBF), formerly the Federal Gas Tax Fund
- The Ontario Community Infrastructure Fund (OCIF)
- The Ontario Municipal Partnership Fund (OMPF)

Although provincial and federal infrastructure programs can change with evolving policy, CCBF and OCIF are considered as permanent and predictable. OMPF funding is also considered reliable and predictable, though it should be noted that its use on a year-to-year basis between capital projects and operations is discretionary.

Annual Capital Requirements

The annual requirements represent the amount the Township should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs, and achieve long-term sustainability. For most asset categories the annual requirement has been calculated based on a "replacement only" scenario, in which capital costs are only incurred at the construction and replacement of each asset.

However, for the road network, lifecycle management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal. The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented.

The following table compares two scenarios for the road network:

Replacement Only Scenario: Based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life.

Lifecycle Strategy Scenario: Based on the assumption that lifecycle activities are performed at strategic intervals to extend the service life of assets until replacement is required.

Table 55 Annual Requirement Comparison

Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Lifecycle Strategy)	Difference
Road Network	$6,540,799	$5,701,123	($839,676)

The implementation of a proactive lifecycle strategy for paved roads leads to a potential annual cost avoidance of approximately $840 thousand. This represents an overall reduction of the annual requirements by 13%.

As the lifecycle strategy scenario represents the lowest cost option available to the Township, we have used this annual requirement in the development of the financial strategy.

The table below presents the system-generated average annual capital requirements for existing assets across each asset category. These figures are based on a total replacement value of $443.1 million, resulting in an estimated annual capital need of approximately $12.5 million for all analyzed assets.

Table 56 Average Annual Capital Requirements

Asset Category	Replacement Cost	Annual Capital Requirements	Target Reinvestment Rate
Road Network	$69,009,580	$5,701,123	3.74%
Bridges & Culverts	$57,324,419	$947,271	1.38%
Buildings & Facilities	$5,526,747	$1,008,119	1.83%
Land Improvements	$3,272,552	$223,073	4.51%
Machinery & Equipment	$152,458,359	$342,486	10.65%
Stormwater System	$9,231,134	$215,197	2.33%
Vehicles	$17,342,182	$1,141,764	6.58%
Wastewater System	$46,220,214	$975,224	2.11%
Water System	$82,707,792	$1,935,446	2.39%
Total	**$443,092,977**	**$12,489,702**	**2.82%**

Although there is no industry standard guide on optimal annual investment in infrastructure, the TRRs above provide a useful benchmark for organizations. In 2016, the Canadian Infrastructure Report Card (CIRC) produced an assessment of the health of municipal infrastructure as reported by cities and communities across Canada. The CIRC remains a joint project produced by several organizations, including the Federation of Canadian Municipalities (FCM), the Canadian Society of Civil Engineers (CSCE), the Canadian Network of Asset Managers (CNAM), and the Canadian Public Works Association (CPWA).

The 2016 version of the report card also contained recommended reinvestment rates that can also serve as benchmarks for municipalities. The CIRC suggest that, if increased, these reinvestment rates can "stop the deterioration of municipal infrastructure." The report card contains both a range for reinvestment rates that outlines the lower and upper recommended levels, as well as current municipal averages.

Financial Profile: Tax Funded Assets

Current Funding Levels

The table below outlines how current funding levels compare to the investment required to achieve the proposed levels of service for each asset category. Under existing funding, the Township is meeting approximately 73% of the annual capital investment needed to maintain the proposed service levels, resulting in an estimated annual funding shortfall of $2.6 million.

Table 57 Current Funding Levels

Asset Category	Annual Capital Requirements	Annual Funding Available	Annual Infrastructure Deficit	Funding Level
Road Network	$5,701,123	$5,210,938	$490,185	91.4%
Bridges & Culverts	$947,271	$578,657	$368,614	61.1%
Buildings & Facilities	$1,008,119	$368,750	$639,369	36.6%
Land Improvements	$223,073	$78,868	$144,205	43.4%
Machinery & Equipment	$342,486	$181,750	$160,736	53.1%
Stormwater System	$215,197	$99,057	$116,140	46.0%
Vehicles	$1,141,764	$496,061	$645,703	43.4%
Total	**$9,579,032**	**$7,014,081**	**$2,564,951**	**73.2%**

Table 58: Taxes: Required Funding vs Current Funding Position

Asset Category	Avg. Annual Requirement	Annual Funding Available						Annual Deficit
		Taxes	Reserves	OCIF	CCBF	OMPF	Total Available	
Road Network	$5,701,123	$891,515	$2,076,267	$559,690	$477,366	$1,206,100	$5,210,938	$490,185
Stormwater System	$215,197	$99,057					$99,057	$116,140
Bridges & Culverts	$947,271	$140,680	$344,983	$92,995			$578,657	$368,614
Buildings & Facilities	$1,008,119	$63,750	$305,000				$368,750	$639,369
Machinery & Equipment	$342,486	$169,250	$12,500				$181,750	$160,736
Land Improvements	$223,073	$37,500	$41,368				$78,868	$144,205
Vehicles	$1,141,764	$52,625	$443,436				$496,061	$645,703
Total	**$9,579,032**	**$1,454,376**	**$3,223,554**	**$652,685**	**$477,366**	**$1,206,100**	**$7,014,081**	**$2,564,951**

The average annual investment requirement for the proposed levels of service is $9,579,032. Annual revenue currently allocated to these assets for capital purposes is $7,014,081 leaving an annual deficit of $2,564,951. Put differently, these infrastructure categories are currently funded at 73.2% of their long-term requirements.

Closing the Gap

Eliminating annual infrastructure funding shortfalls is a difficult and long-term endeavor for municipalities. Achieving recommended funding levels to support the proposed levels of service, while maintaining affordability for residents, will require time and deliberate financial planning.

This section outlines how Severn can gradually work toward closing the annual capital funding shortfall using its own-source revenues, such as property taxes and utility rates. This approach avoids the use of additional debt for existing assets and supports the Township's goal of sustainably increasing investment to maintain service delivery at the chosen targets. By phasing in additional funding as financial capacity allows, Severn can begin to align infrastructure spending with service level expectations and the priorities identified through community and stakeholder engagement.

Funding Requirements Tax Revenues

In 2025, Severn had budgeted annual tax revenues of $17,396,256. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, achieving the target levels of service would require a 14.7% tax change over time.

To achieve this increase, several scenarios have been developed using phase-in periods ranging from five to twenty years. Shorter phase-in periods may place too high a burden on taxpayers, whereas a phase-in period beyond 20 years may see a continued deterioration of infrastructure, leading to larger backlogs.

Table 59 Phasing in Annual Tax Increases

Asset Category	Tax Change Required
Road Network	2.8%
Stormwater System	0.7%
Bridges & Culverts	2.1%
Buildings & Facilities	3.7%
Machinery & Equipment	0.9%
Land Improvements	0.8%
Vehicles	3.7%

The selected full funding strategy is designed to fully close the annual capital funding gap over time, ensuring that all infrastructure needs are met as they arise. This approach enables the Township to proactively invest in asset rehabilitation and replacement, supporting long-term service reliability and sustainability. By aligning funding with actual capital requirements, the strategy reduces reliance on deferrals, minimizes long-term risk, and enhances the ability to plan and deliver infrastructure projects on schedule. While reserves and external grants will continue to play a supportive role, this approach prioritizes financial self-sufficiency and provides a stable foundation for maintaining asset performance and managing service expectations into the future.

Our recommendations include capturing the above changes and allocating them to the infrastructure deficit outlined above.

Table 60: Phase-in Period for proposed LOS

	Phase-in Period			
	5 Years	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	$2,564,951	$2,564,951	$2,564,951	$2,564,951
Tax Increase Required	14.7%	14.7%	14.7%	14.7%
Annually:	**2.8%**	**1.4%**	**1.0%**	**0.7%**

Proposed levels of service play a role in the development of the Annual Average Requirement discussed above. For comparison, the taxation impact for achieving each service level option is provided below:

Table 61: Scenarios Annual Impact on Taxation

Annual Impact on Taxation				
Change in Levels of Service	**5 Year**	**10 Year**	**15 Year**	**20 Year**
Scenario 1	0.0%	0.0%	0.0%	0.0%
Scenario 2	0.9%	0.5%	0.3%	0.3%
Scenario 3	2.8%	1.4%	1.0%	0.7%
Recommended	2.8%	1.4%	1.0%	0.7%

Financial Strategy Recommendations

Considering all the above information, we recommend the 10-year option to achieve the proposed levels of service:

a) Increasing tax revenues by 1.4% each year for the next 10 years to gradually implement the funding strategy outlined in the selected scenario for the asset categories covered in this section of the AMP.
b) Allocating the current Canada Community-Building Fund (Formerly known as Gas Tax Fund), OCIF, and OMPF revenue as outlined previously.
c) Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
d) Leveraging additional, non-sustainable revenue sources such as one-time grants, surpluses, and reserves, as supplementary funding to advance asset management goals.

Notes:

1. While OMPF funding is treated as a sustainable funding source for the purposes of this financial strategy, the Municipality retains flexibility in its use, and annual allocations between operating and capital expenditures may be adjusted at the discretion of the Municipality's Chief Financial Officer in

response to evolving financial and operational needs. As a result, actual contributions to capital in future years may be lower than those assumed in this strategy.

2. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. We have included OCIF formula-based funding, if applicable, since this funding is a multi-year commitment[8].
3. We realize that raising tax revenues by the amounts recommended above for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.

Although this option achieves the proposed levels of service and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of $2.1m for the road network, $6.0m for buildings & facilities, $683k for machinery & equipment, $195k for land improvement assets, and $1.6m for vehicles.

Financial Profile: Rate Funded Assets

Current Funding Levels

The table below summarizes how current funding levels compare with funding required for the proposed levels of service. At existing levels, the Township is meeting approximately 33.0% of the annual capital needs associated with these service levels, resulting in an annual funding shortfall of $1.9 million.

Table 62: Rates - Required Funding vs Current Funding Position

Asset Category	Avg. Annual Requirement	Annual Funding Available			Annual Deficit
		Rates	Reserves	Total Available	
Water System	$1,935,446	$202,797	$308,509	$511,306	$1,424,140
Wastewater System	$975,224	$214,705	$233,791	$448,496	$526,728
	$2,910,670	**$417,502**	**$542,300**	**$959,802**	**$1,950,868**

[8] The Township should take advantage of all available grant funding programs and transfers from other levels of government. While OCIF has historically been considered a sustainable source of funding, the program is currently undergoing review by the provincial government. Depending on the outcome of this review, there may be changes that impact its availability.

The average annual investment requirement for the above categories is $2,910,670. Annual revenue currently allocated to these assets for capital purposes is $959,802 leaving an annual deficit of $1,950,868.

Closing the Gap

Eliminating annual infrastructure funding shortfalls is a difficult and long-term endeavor for municipalities. Considering the Township's current funding position, it will require many years to achieve the proposed levels of service.

This section outlines how the Township of Severn can close the annual funding deficits using own-source revenue streams, i.e., utility rates, and without the use of additional debt for existing assets.

Funding Requirements Rate Revenues

In 2024, Severn had annual water revenues of $2,515,895, and annual wastewater revenues of $557,500. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, achieving the target levels of service would require a 22.5% rate change over time.

Table 10: Phasing in Annual Rate Increases

Asset Category	Rate Change Required
Water Network	66.2%
Sanitary Sewer Network	29.2%

The selected full funding strategy for rate-supported assets is designed to fully address the annual capital requirements necessary to sustain system performance and service levels over the long term. By aligning user rates with the actual cost of maintaining and replacing infrastructure, the strategy ensures the continued reliability, safety, and compliance of essential services. This proactive approach reduces reliance on deferred investment, lowers long-term risk, and allows for more predictable capital planning. While reserves and external funding (such as grants) will continue to supplement where available, the strategy emphasizes financial self-reliance within the rate base, ensuring the utility systems remain sustainable, resilient, and responsive to community needs.

Our recommendations include capturing the above changes and allocating them to the infrastructure deficit outlined above.

Table 63: Phasing in Annual Water and Wastewater Rates

	Water System				Wastewater System			
	5 Years	10 Years	15 Years	20 Years	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit:	$1.4m	$1.4m	$1.4m	$1.4m	$527k	$527k	$527k	$527k

Total Rate Increase Required	66.2%	66.2%	66.2%	66.2%	29.2%	29.2%	29.2%	29.2%
Annually:	**10.7%**	**5.3%**	**3.5%**	**2.6%**	**5.3%**	**2.6%**	**1.8%**	**1.3%**

Similarly to Tax Funded assets, the proposed levels of service play a role in the development of the Annual Average Requirement discussed above. For comparison, the taxation impact for achieving each service level option is provided below:

Table 64: Scenarios Annual Impact on Rates

Annual Impact on Rates					
	Changes in Levels of Service	**5 year**	**10 Year**	**15 Year**	**20 Year**
Water	Scenario 1	0.0%	0.0%	0.0%	0.0%
	Scenario 2	6.9%	3.4%	2.3%	1.7%
	Scenario 3	10.7%	5.3%	3.5%	2.6%
	Recommended	10.7%	5.3%	3.5%	2.6%
	Changes in Levels of Service	**5 year**	**10 Year**	**15 Year**	**20 Year**
Waste-water	Scenario 1	0.0%	0.0%	0.0%	0.0%
	Scenario 2	2.5%	1.3%	0.9%	0.7%
	Scenario 3	5.3%	2.6%	1.8%	1.3%
	Recommended	5.3%	2.6%	1.8%	1.3%

Financial Strategy Recommendations

Considering all the above information, we recommend the 10-year option to achieve the proposed levels of service:

a) increasing rate revenues by 5.3% for water services and 2.6% for wastewater services each year for the next 10 years to gradually implement the funding strategy outlined in the selected scenario for the asset categories covered in this section of the AMP.
b) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
c) The rate adjustments identified in this AMP are intended to address lifecycle funding requirements for existing infrastructure based on capital replacement needs only. This AMP reflects asset data and financial information updated to year-end 2024.

The Township's Rate Study (Watson & Associates), completed in 2021, recommends annual increases of 3.5% for water and 4.5% for wastewater over a 10-year period. The Rate Study incorporates a broader financial framework, including operating costs, inflationary impacts, growth-related capital, reserve balances, and overall system cash flow considerations.

While the recommended increases differ, they reflect different scopes, assumptions, and planning horizons. The AMP focuses specifically on long-term capital lifecycle funding for existing assets, whereas the Rate Study establishes a holistic rate-setting strategy to ensure overall system financial sustainability. The Township should consider both analyses in tandem when making future rate decisions, recognizing that the Rate Study provides the broader financial context within which asset management funding requirements must be addressed.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. This periodic funding should not be incorporated into an AMP unless there are firm commitments in place.
2. We realize that raising rate revenues for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.
3. Any increase in rates required for operations would be in addition to the above recommendations.

Although this option achieves the proposed levels of service and provides financial sustainability over 10 years for both systems, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of $1.1 million for water system assets, and $3.1 million for wastewater system assets.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

Use of Reserves

Available Reserves

Reserves play a critical role in long-term financial planning. The benefits of having reserves available for infrastructure planning include:

a) the ability to stabilize tax rates when dealing with variable and sometimes uncontrollable factors
b) financing one-time or short-term investments
c) accumulating the funding for significant future infrastructure investments
d) managing the use of debt
e) normalizing infrastructure funding requirement

By asset category, the table below outlines the details of the reserves currently available to Severn.

Table 65: Township of Severn Reserve Balances

Asset Category	Balance at December 31, 2024
Road Network	$7,776,593
Bridges & Culverts	$2,926,044
Buildings & Facilities	$4,530,061
Land Improvements	$497,780
Machinery & Equipment	$1,850,909
Stormwater System	$576,751
Vehicles	$3,897,662
Total Tax Funded:	**$22,055,799**
Water System	$2,041,624
Wastewater System	$987,872
Total Rate Funded:	**$3,029,496**

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Township should have on hand. There is no clear guideline that has gained wide acceptance. Factors that municipalities should take into account when determining their capital reserve requirements include:

a) breadth of services provided
b) age and condition of infrastructure
c) use and level of debt
d) economic conditions and outlook
e) internal reserve and debt policies.

These reserves are available for use by applicable asset categories during the phase-in period to achieve proposed levels of service. This allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

Growth

Growth Assumptions

The demand for infrastructure and municipal services will evolve over time in response to population growth, development patterns, and broader economic and environmental factors.

Understanding these drivers allows the Township to plan for new infrastructure while managing the upgrade, renewal, and eventual disposal of existing assets. Changes in demand directly influence the types of assets required and the level of service needed to meet community expectations in a financially sustainable manner.

Severn Official Plan – June 2024

The Township of Severn Official Plan establishes a long-term vision for sustainable growth to 2051, emphasizing protection of the Township's rural character, natural heritage features, and agricultural lands while accommodating managed development in designated settlement areas. Coldwater and Westshore are identified as the primary serviced settlement areas and are expected to accommodate the majority of future population and employment growth. Limited infill is anticipated in Washago due to servicing constraints, while smaller rural settlements such as Ardtrea, Fesserton, Marchmont/Bass Lake, Severn Falls, and Port Severn are expected to experience modest, context-appropriate growth.

Infrastructure policies within the Official Plan emphasize aligning new development with the Township's financial capacity and Asset Management Plan. Growth is directed to areas with existing municipal servicing to minimize costly infrastructure extensions and long-term lifecycle burdens.

The Plan highlights the importance of coordinated transportation planning, active transportation networks, broadband expansion, and climate-resilient infrastructure as foundational elements of sustainable servicing. The Plan also promotes housing diversity, economic development through tourism and rural enterprise, and expansion of employment lands within settlement areas. These policies collectively support asset management principles by encouraging efficient service delivery, environmental stewardship, and long-term financial sustainability.

County of Simcoe Official Plan – February 2023

The County Official Plan supports growth in fully serviced settlement areas at densities that support compact, complete communities and efficient infrastructure investment. Growth allocations align with provincial forecasts, with the County projected to reach over 416,000 residents by 2031. The Plan reinforces protection of agricultural and natural heritage areas and limits development outside settlement areas to avoid infrastructure sprawl.

2024 Development Charges Background Study

The 2024 Development Charges Background Study links growth forecasts to infrastructure planning. The Township anticipates approximately 473 new residential water connections, primarily in Westshore and Coldwater. Growth-related infrastructure is projected to generate about $811,000 per year in incremental operating costs across eligible services once new assets are in service, with the largest impacts in transportation, followed by water and wastewater.

Development charges fund the growth-related share of eligible projects, while renewal and non-growth capital remain funded through taxation, user rates, and reserves.

Impact of Growth on Lifecycle Activities

In accordance with O. Reg. 588/17, growth assumptions are incorporated into lifecycle and financial strategies. Severn's population is expected to increase from about 14,600 in 2021 to nearly 24,000 by 2051, concentrated in Coldwater and Westshore. This structure is intended to align development with existing infrastructure capacity and support long-term sustainability.

Growth will increase demand across all asset classes, including transportation, water and wastewater, stormwater, and community services. New growth-related assets will be added to the Township's inventory at assumption, and lifecycle planning will capture future operations, maintenance, rehabilitation, and replacement costs. While growth expands the tax base and rate revenues, it also introduces long-term financial obligations that must be reflected in reserve strategies and rate-supported funding models to maintain service levels.

SMP Growth Requirements and Implementation

The Servicing Master Plan is based on projected population growth to approximately 17,790 by 2051, with development concentrated in Coldwater and Westshore, while Washago remains constrained. Growth will be accommodated within existing settlement boundaries. In Coldwater, wastewater capacity is nearly fully utilized, requiring phased expansion of treatment facilities, upgrades to pumping stations and forcemains, and additional water infrastructure including a new elevated storage tank and transmission looping.

In Westshore, existing wastewater system deficiencies are limiting available capacity, requiring immediate upgrades followed by long-term expansion of both water and wastewater systems, along with new servicing corridors to support future development. Washago is not expected to accommodate significant growth due to lagoon constraints, while the South of Division Road area presents longer-term potential subject to further study.

These growth-related infrastructure requirements are informed by supporting studies and will be funded through a mix of development charges, user rates, and reserves. The Township also anticipates the future assumption of subdivision infrastructure, which will be incorporated into the Asset Management Plan upon transfer. Growth planning aligns with environmental considerations by directing development to serviced areas, with future operating and lifecycle costs incorporated into financial forecasts as projects advance.

Climate Change

Climate change can cause severe impacts on human and natural systems around the world. The effects of climate change include increasing temperatures, higher levels of precipitation, droughts, and extreme weather events. In 2019, Canada's Changing Climate Report (CCCR 2019) was released by Environment and Climate Change Canada (ECCC).

The report revealed that between 1948 and 2016, the average temperature increase across Canada was 1.7°C; moreover, during this time period, Northern Canada experienced a 2.3°C increase. The temperature increase in Canada has doubled that of the global average. If emissions are not significantly reduced, the temperature could increase by 6.3°C in Canada by the year 2100 compared to 2005 levels. Observed precipitation changes in Canada include an increase of approximately 20% between 1948 and 2012. By the late 21st century, the projected increase could reach an additional 24%. During the summer months, some regions in Southern Canada are expected to experience periods of drought at a higher rate. Extreme weather events and climate conditions are more common across Canada. Recorded events include droughts, flooding, cold extremes, warm extremes, wildfires, and record minimum arctic sea ice extent.

The changing climate poses a significant risk to the Canadian economy, society, environment, and infrastructure. The impacts on infrastructure are often a result of climate-related extremes such as droughts, floods, higher frequency of freeze-thaw cycles, extended periods of high temperatures, high winds, and wildfires. Physical infrastructure is vulnerable to damage and increased wear when exposed to these extreme events and climate variabilities. Canadian Municipalities are faced with the responsibility to protect their local economy, citizens, environment, and physical assets.

Severn Climate Profile

The Township of Severn, located in Simcoe County in Central Ontario, is expected to experience significant impacts from climate change. Projections indicate rising average annual temperatures, greater total precipitation, and more frequent and severe extreme weather events, all of which will influence local infrastructure, natural systems, and community resilience. According to Climatedata.ca – a collaboration supported by Environment and Climate Change Canada (ECCC) – the Township of Severn may experience the following trends:

Higher Average Annual Temperature:

- Between the years 1971 and 2000 the annual average temperature was 6.1 ºC
- Under a high emissions scenario, the annual average temperatures are projected to increase to 8.9 ºC by the year 2050 and to approximately 12.8 ºC by the end of the century.

Increase in Total Annual Precipitation:

- During the period of 1971-2000, the average annual precipitation was 989mm.
- Under a high emissions scenario, Severn is projected to experience a 12% increase in precipitation by the year 2051 and a 16% increase by the end of the century.

Increase in Frequency of Extreme Weather Events:

- It is expected that the frequency and severity of extreme weather events will change.

Integrating Climate change and Asset Management

Asset management practices aim to support sustainable service delivery by providing services to residents today without compromising the services and well-being of future residents. Climate change poses a risk to sustainable service delivery by reducing the useful life of assets and increasing the likelihood of asset failure. Achieving desired Levels of Service may become more challenging as a result of climate change impacts such as flooding, extreme heat, drought, and more frequent and intense storm events.

To support sustainable service delivery, the anticipated impacts of climate change have been incorporated into the Township's asset management practices. Integrating asset management and climate change adaptation aligns with industry best practices and supports a more holistic, risk-based approach to infrastructure planning and decision-making.

The most prominent climate-related factor affecting the Township's infrastructure is outlined below:

Climate Factor 1: Severe Wet Weather Events

Severe wet weather and flooding risks were identified in flood-prone areas, including Coldwater, one of the Township's main urban centres, which lies within the Severn Sound watershed. Township staff noted challenges related to storm system resilience, limited mitigation options due to watershed constraints, gaps in floodplain mapping, and funding pressures affecting stormwater reinvestment. Collectively, these factors influence the Township's ability to manage increased rainfall intensity and flooding associated with severe weather events.

Severe wet weather may also impact the wastewater system, particularly where older infrastructure is present. Increased rainfall intensity can contribute to higher inflow and infiltration, placing additional pressure on pumping stations and treatment capacity during peak wet weather periods. These conditions may increase operational risk and accelerate asset deterioration if not proactively managed.

To manage the risk associated with severe wet weather events, the Township should:

- Continue to monitor and document areas experiencing localized flooding during severe rainfall and spring flood events to improve understanding of system performance and recurring vulnerabilities.
- Develop a strategy to better quantify the costs and benefits of potential mitigation measures aimed at reducing the frequency of road overtopping and managing wet weather impacts on storm and wastewater infrastructure.
- Require future development to consider climate change impacts in stormwater management design, which may result in larger stormwater management facilities or other infrastructure design adjustments to improve system resilience and limit downstream impacts on the wastewater system.

Climate Change Factor 2: Freeze/Thaw Cycles

Freeze/thaw cycles were identified as a key factor affecting road infrastructure performance and longevity. Repeated freezing and thawing can accelerate pavement deterioration, causing cracking, potholes, and rutting, particularly on higher-traffic roads and areas with older or marginal pavement structures. These cycles increase maintenance requirements and can shorten the useful life of roads, placing additional pressure on capital and operating budgets.

To manage the risks associated with freeze/thaw cycles, the Township should:

- Continue to monitor pavement condition, particularly on roads prone to freeze/thaw damage, to identify emerging issues early.
- Incorporate preventative maintenance strategies, such as timely crack sealing and surface treatments, to slow deterioration.
- Consider climate-informed design and material selection for new and reconstructed roads to improve resilience to repeated freeze/thaw cycles.
- Integrate freeze/thaw considerations into lifecycle cost analyses and long-term capital planning to ensure sustainable road performance.

Recommendations

Financial Strategy & Forecasting

- Review the feasibility of adopting a full funding approach for the asset categories analyzed. This includes:
    - Increasing taxes by 1.4% per year over a period of 10 years.
    - Increasing rate revenues by 5.3% for water services and 2.6% for wastewater services each year for the next 10 years.
    - Continued allocation of OCIF and CCBF funding as previously outlined.
    - Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
- Continue to apply for project specific grant funding to supplement sustainable funding sources.
- Ten-year capital forecasts generated in Citywide rely heavily on available asset data, which currently includes asset age, replacement cost, and useful life. In the absence of assessed condition data for certain asset categories, age-based condition assumptions were used. As a result, system-generated projections may differ from actual capital plans.

Lifecycle & Data Improvement

- Develop and implement a formal Asset Data Governance framework to improve consistency, accuracy, and long-term sustainability of asset information across Finance and Public Works. This includes:
    - Establishing a standardized corporate asset hierarchy that aligns financial reporting requirements with operational asset management needs, enabling consistent classification and reporting across systems;
    - Clearly defining roles and responsibilities for data entry, validation, maintenance, and approval to ensure accountability and reduce inconsistencies;
    - Implementing formal version control and change management procedures to track updates, maintain data integrity, and ensure transparency over time;
    - Reconciling financial and operational asset inventories on a regular basis to address discrepancies and maintain alignment between systems.
- Address existing asset data and TCA-related issues as part of a structured data improvement initiative. Based on current observations, this includes:
    - Resolving duplicate asset records and inconsistencies within the asset inventory

    - Reconciling TCA and AMP inventories, including alignment of in-service dates, quantities, and replacement cost methodologies
    - Improving alignment between asset records, additions, and disposals to support accurate financial reporting and lifecycle tracking
    - Coordinating between Finance and Public Works to ensure data structures support both accounting requirements and operational use
- Continuously review, refine, and calibrate lifecycle and risk profiles to better reflect actual practices and improve capital projections. In particular:
    - the timing of various lifecycle events, the triggers for treatment, anticipated impacts of each treatment, and costs
    - the various attributes used to estimate the likelihood and consequence of asset failures, and their respective weightings
- Periodically update replacement costs based on recent projects, invoices, or estimates, as well as condition assessments, or any other technical reports and studies. Material and labour costs can fluctuate due to local, regional, and broader market trends, and substantially so during major world events. Accurately estimating the replacement cost of like-for-like assets can be challenging. Ideally, several recent projects over multiple years should be used. Staff judgement and historical data can help attenuate extreme and temporary fluctuations in cost estimates and keep them realistic.
- An asset's established serviceable life can have dramatic impacts on all projections and analyses, including condition, long-range forecasting, and financial recommendations. Periodically reviewing and updating these values to better reflect infield performance and staff judgement is recommended.
- Establish a condition assessment framework to support consistent data collection across asset categories. Regular updates to condition data will improve alignment between system-generated expenditure requirements and the Township's capital forecasts.

Risk & Levels of Service

- Risk models and matrices support the identification of critical assets and enable more strategic and objective capital planning. The high-level risk models currently implemented in Citywide reflect limited available data and should be reviewed and refined as additional attribute and condition information becomes available.
- The identification of critical assets allows the Township to determine appropriate risk mitigation strategies, which may include asset-specific lifecycle treatments, targeted condition assessments, or improved data collection.
- Available performance data should be centralized and tracked to support ongoing calibration of levels of service and to meet O. Reg. 588/17 requirements related to proposed levels of service.

- Staff should monitor evolving local, regional, and environmental trends such as population growth, climate change, extreme weather events, and economic conditions, to assess their potential impacts on infrastructure demand and service delivery. This information can also inform periodic reviews of service level targets.