Asset Management Plan 2025

TOWN OF SMITHS FALLS

2025

psdcitywide

This Asset Management Plan was prepared by:

psdcitywide

Empowering your organization through advanced asset management, budgeting & GIS solutions

Key Statistics

$381m	Replacement Cost of Asset Portfolio
$84k	Replacement Cost of Infrastructure Per Household
69%	Percentage of Assets in Fair or Better Condition
85%	Percentage of Assets with Assessed Condition Data
$5.9m	Annual Capital Infrastructure Deficit
15 Years	Recommended Timeframe for Eliminating Annual Infrastructure Deficit
2.8%	Target Reinvestment Rate to meet Proposed Levels of Service
1.2%	Actual Reinvestment Rate

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1. Executive Summary

Municipal infrastructure delivers critical services that are foundational to the economic, social, and environmental health and growth of a community. The goal of asset management is to enable infrastructure to deliver an adequate level of service in the most cost-effective manner. This involves the ongoing review and update of infrastructure information and data alongside the development and implementation of asset management strategies and long-term financial planning.

1.1 Scope

This Asset Management Plan (AMP) identifies practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Town can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

This AMP includes the following asset categories:

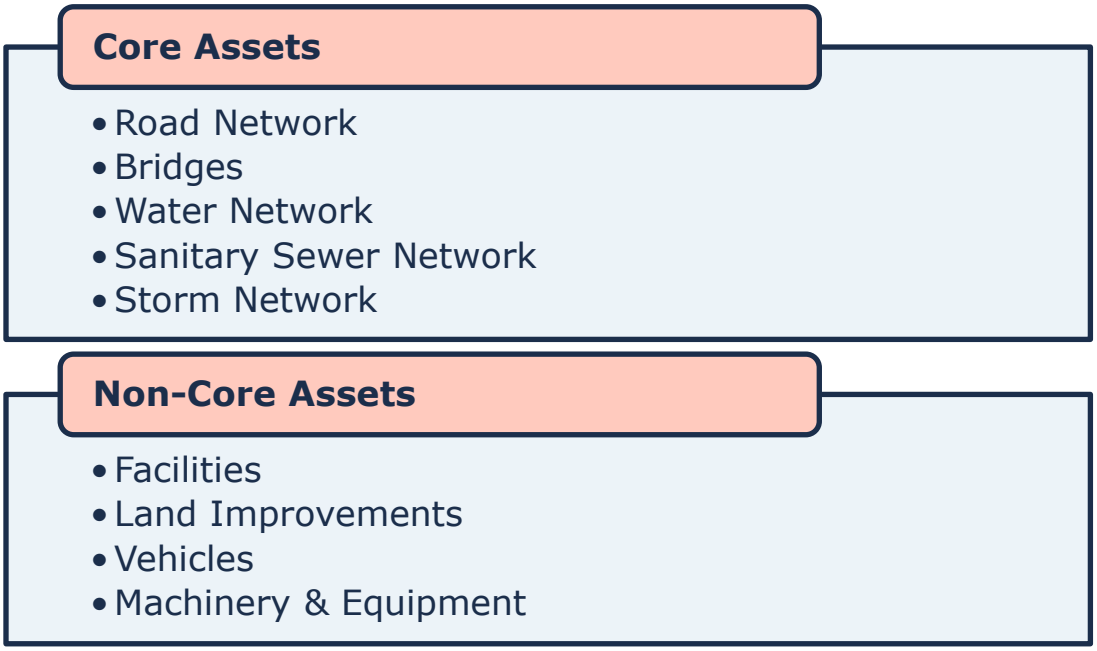


Figure 1 Core and Non-Core Asset Categories

1.2 O. Reg. 588/17 Compliance

With the development of this AMP the Town 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. More detail on compliance can be found in section 2.5.1 O. Reg. 588/17 Compliance Review.

1.3 Findings

The overall replacement cost of the asset categories included in this AMP totals $381 million. 69% of all assets analyzed in this AMP are in fair or better condition and assessed condition data was available for 85% of assets. For the remaining 15% of assets, assessed condition data was unavailable, and asset age was used to approximate condition – a data gap that persists in most municipalities. Generally, age misstates the true condition of assets, making assessments essential to accurate asset management planning, and a recurring recommendation in this AMP.

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, achieve long-term sustainability, and reach the proposed levels of service, the Town's average annual capital requirement totals $10.6 million. Based on a historical analysis of sustainable capital funding sources, the Town is committing approximately $4.7 million towards capital projects or reserves per year. As a result, there is currently an annual funding gap of $5.9 million.

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 Town. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

1.4 Recommendations

A financial strategy was developed to address the annual capital funding gap and to meet the Town's desired proposed levels of service. The following graphic shows the annual tax/rate change required to meet the proposed levels of service based on a 15-year plan:

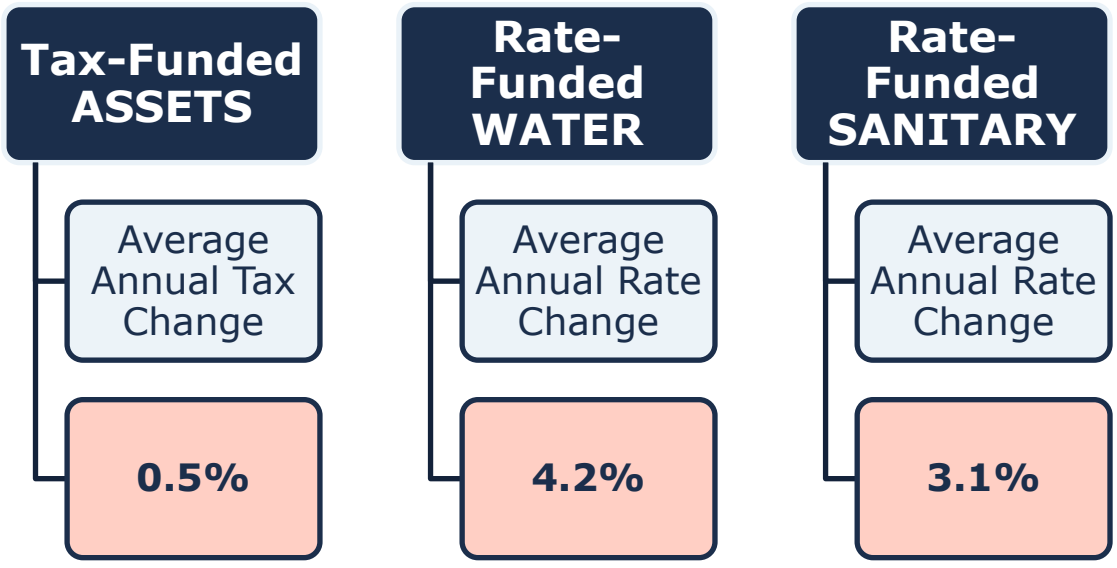


Figure 2 Proposed Tax/Rate Changes

2. Introduction & Context

2.1 Community Profile

Census Characteristic	Town of Smiths Falls	Ontario
Population 2021	9,254	14,223,942
Population Change 2016-2021	5.4%	5.8%
Total Private Dwellings	4,523	5,929,250
Population Density	958.1/km^2	15.9/km^2
Land Area	9.66 km^2	892,411.76 km^2

Table 1 Town of Smiths Falls Community Profile

Smiths Falls is a single-tier municipality located in Eastern Ontario, within the boundaries of Lanark County but administratively independent. Positioned along the historic Rideau Canal and Rideau River, the town offers a scenic and strategic setting just 78 kilometres southwest of Ottawa. Its location makes it a desirable place to live, visit, and invest, balancing small-town character with access to urban amenities.

First incorporated as a village in 1854 and later as a town in 1882, Smiths Falls has a rich heritage rooted in the development of Canada's railway and canal systems. The town's identity is closely tied to these transportation corridors, which facilitated commerce, industry, and population growth throughout the 19th and 20th centuries. Today, heritage sites such as the Railway Museum of Eastern Ontario and multiple Rideau Canal lock stations preserve and celebrate this legacy.

Renowned for its natural beauty, Smiths Falls features a mix of riverfront, forests, and open green spaces. These natural assets support a range of outdoor recreational activities, including boating, hiking, cycling, and trail exploration. The town is also a gateway to the Cataraqui Trail, a 104-kilometre multi-use trail that begins within its boundaries and offers year-round access for residents and tourists.

The town is recognized for its strong civic spirit and inclusive atmosphere. Smiths Falls hosts numerous community events, heritage festivals, and seasonal activities that attract both locals and visitors. Its vibrant arts and culture scene, historic downtown, and family-friendly parks make it an attractive destination for families, seniors, and newcomers alike. Initiatives such as inclusive public programming and active resident engagement reflect the town's commitment to fostering a connected and welcoming community.

Smiths Falls continues to invest in sustainable infrastructure that aligns with long-term growth and development goals. Major projects in recent years include upgrades to the water tower, road improvements, and expanded recreational facilities. The town's 2025 Asset Management Plan guides capital planning and asset renewal, ensuring reliable service delivery. With modern amenities like the Smiths Falls Memorial Community Centre and extensive trail networks, the town supports a high quality of life for current and future residents.

2.2 Climate Change

Climate change can have a severe impact 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 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.

2.2.1 Town of Smiths Falls Climate Profile

Smiths Falls, located in Eastern Ontario within Lanark County, experiences a humid continental climate, characterized by cold, snowy winters and warm, humid summers. This climate type brings distinct seasonal variations, which are expected to shift significantly due to climate change in the coming decades. According to ClimateData.ca, a platform supported by Environment and Climate Change Canada (ECCC), the town is projected to face rising average temperatures, increased annual precipitation, and more frequent extreme weather events under a high-emissions scenario (RCP8.5).

Higher Average Annual Temperature

- For the 1971–2000 baseline period, the annual average temperature in Smiths Falls was 6.3 °C.
- This is projected to increase to 9.2 °C for the 2021–2050 period, 11.2 °C for 2051–2080, and 13.0 °C for 2071–2100.
- These trends represent a projected warming of nearly 7 °C by the end of the century, which will affect seasonal patterns, ecosystems, and energy use.

Increase in Total Annual Precipitation

- The historical average annual precipitation (1971–2000) was 891 mm.
- Precipitation is projected to increase by 12% for the 2051–2080 period and by 17% by the end of the century (2071–2100).

Increase in Frequency of Extreme Weather Events

- Climate projections suggest that extreme weather events such as heatwaves, intense rainfall, ice storms, and freeze-thaw cycles will occur with greater frequency and severity.

2.2.2 Integration of Climate Change and Asset Management

Asset management practices aim to deliver sustainable service delivery - the delivery of services to residents today without compromising the services and well-being of future residents. Climate change threatens sustainable service delivery by reducing the useful life of an asset and increasing the risk of asset failure. Desired levels of service can be more difficult to achieve due to climate change impacts such as flooding, high heat, drought, and more frequent and intense storms.

To achieve the sustainable delivery of services, climate change considerations should be incorporated into asset management practices. The integration of asset management and climate change adaptation observes industry best practices and enables the development of a holistic approach to risk management.

2.3 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 ratepayers receive from the asset portfolio.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% comes from operations and maintenance. This AMP focuses its analysis on the capital costs to maintain, rehabilitate and replace existing municipal infrastructure assets.

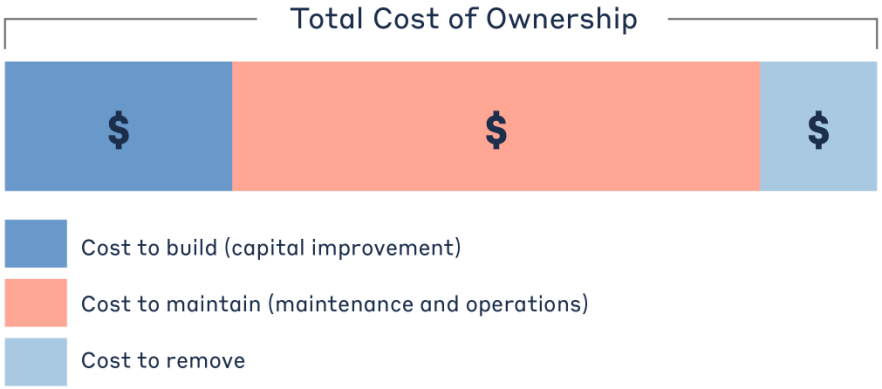


Figure 3 Total Cost of Asset Ownership

These 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 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.

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 strategic plan has a direct, and cascading impact on asset management planning and reporting.

2.3.1 Foundational Asset Management Documentation

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.

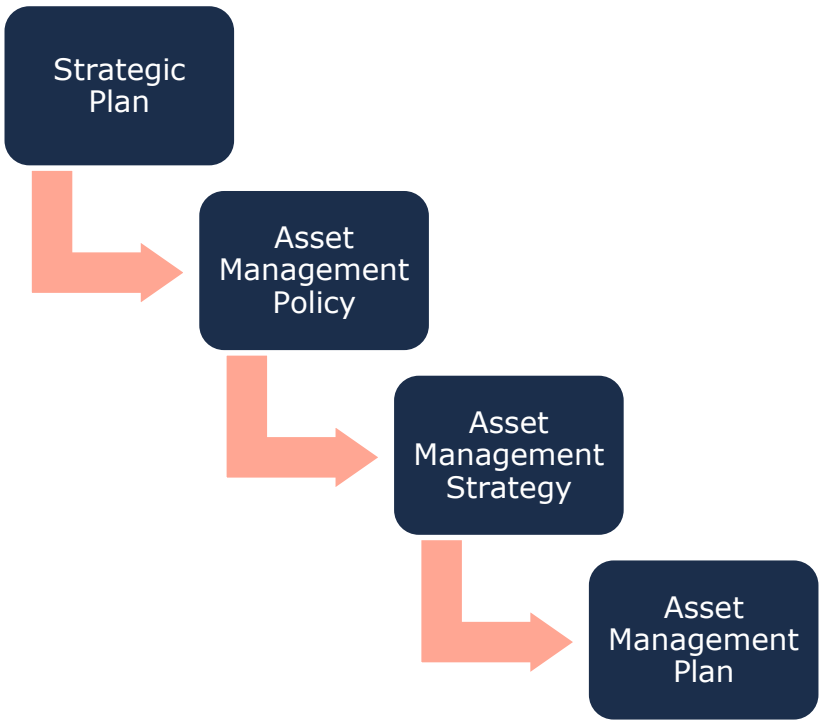


Figure 4 Foundational Asset Management Documents

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 strategic plan has a direct, and cascading impact on asset management planning and reporting.

Asset Management Policy

An asset management policy represents a statement of the principles guiding the Town'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 Town of Smiths Falls adopted By-law No. 10048-2019, "A By-law to Adopt a Strategic Asset Management Policy," on June 17, 2019, in accordance with Ontario Regulation 588/17 under the Infrastructure for Jobs and Prosperity Act, 2015. The policy provides a corporate framework to guide asset-related decision-making and ensure long-term service sustainability. Key objectives of the policy include:

- Promoting coordinated, sustainable, and lifecycle-based asset management across all departments
- Integrating asset management planning with long-term financial planning, budgeting, and municipal decision-making
- Ensuring efficient and effective delivery of municipal services at defined levels of service
- Considering the risks and vulnerabilities of municipal infrastructure to climate change and supporting adaptation and mitigation actions
- Enhancing transparency, accountability, and public engagement in the asset management process
- Aligning asset management activities with the Town's Strategic Plan, Official Plan, and other planning documents
- Supporting continuous improvement through performance tracking, risk-based analysis, and best practices
- Encouraging collaboration with neighboring municipalities and jointly owned service bodies where beneficial

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 Town plans to achieve asset management objectives through planned activities and decision-making criteria.

The Town of Smiths Falls Strategic Plan (2023–2026) identifies Infrastructure Renewal as a key strategic priority to support community growth and ensure the long-term reliability of municipal services. The Town is focused on managing infrastructure proactively, integrating sustainability, and aligning asset management practices with financial planning.

Key initiatives under this priority include:

- Updating the Asset Management Plan (AMP) to incorporate all municipal infrastructure, including buildings and fleet.
- Integrating the updated AMP into the Town's long-term financial planning processes. Developing infrastructure policies that apply environmental and climate sustainability principles.
- Fulfilling commitments as a member of the Partners for Climate Protection program.
- Prioritizing infrastructure projects that reduce liability and enhance service reliability.
- Completing key facility upgrades, such as the planned renovations of the public library.

These initiatives demonstrate the Town's commitment to sustainable infrastructure stewardship. The Asset Management Plan will continue to be a foundational tool in aligning capital investment with strategic goals, including climate adaptation, fiscal responsibility, and the delivery of reliable public services.

Asset Management Plan

The asset management plan (AMP) presents the outcomes of the Town's asset management program and identifies the resource requirements needed to achieve a defined level of service. The AMP typically includes the following content:

- State of Infrastructure

- Asset Management Strategies
- Levels of Service
- Financial Strategies

The AMP is a living document that should be updated regularly as additional asset and financial data becomes available. This will allow the Town to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

2.3.2 Key Concepts in Asset Management

Effective asset management integrates several key components, including lifecycle management, risk & criticality, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail.

Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including 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. The following table provides a description of each type of activity and the general difference in cost.

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.

Lifecycle Activity	Cost	Typical Associated Risks
Maintenance Activities that prevent defects or deteriorations from occurring	**$**	♦ Balancing limited resources between planned maintenance and reactive, emergency repairs and interventions ♦ Diminishing returns associated with excessive maintenance activities, despite added costs ♦ Intervention selected may not be optimal and may not extend the useful life as expected, leading to lower payoff and potential premature asset failure

Lifecycle Activity	Cost	Typical Associated Risks
Rehabilitation/ Renewal Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	**$$$**	♦ Useful life may not be extended as expected ♦ May be costlier in the long run when assessed against full reconstruction or replacement ♦ Loss or disruption of service, particularly for underground assets
Replacement/ Reconstruction Asset end-of-life activities that often involve the complete replacement of assets	**$$$$$**	♦ Incorrect or unsafe disposal of existing assets ♦ Costs associated with asset retirement obligations ♦ Substantial exposure to high inflation and cost overruns ♦ Replacements may not meet capacity needs for a larger population ♦ Loss or disruption of service, particularly for underground assets

Table 2 Lifecycle Management: Typical Lifecycle Interventions

The Town's approach to lifecycle management is described within each asset category outlined in this AMP. Staff will continue to evolve and innovate current practices for developing and implementing proactive lifecycle strategies 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.

Risk & Criticality

Asset risk and criticality are essential building blocks of asset management, integral in prioritizing projects and distributing funds where they are needed most based on a variety of factors. Assets in disrepair may fail to perform their intended function, pose substantial risk to the community, lead to unplanned expenditures, and create liability for the municipality. In addition, some assets are simply more important to the community than others, based on their financial 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.

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, (i.e. low, medium, high) or quantitative measurement (i.e. 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.

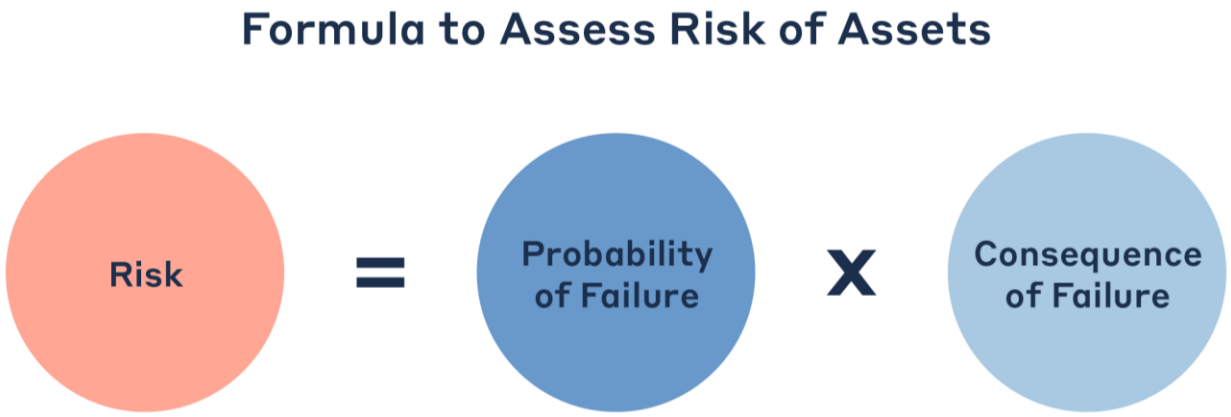


Figure 5 Risk Equations

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

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.

Table 3 illustrates the various types of consequences that can be integrated in developing risk and criticality models for each asset category and segments within. We note that these consequences are common, but not exhaustive.

Type of Consequence	Description
Direct Financial	Direct financial consequences are typically measured as the replacement costs of the asset(s) affected by the failure event, including interdependent infrastructure.
Economic	Economic impacts of asset failure may include disruption to local economic activity and commerce, business closures, service disruptions, etc. Whereas direct financial impacts can be seen immediately or estimated within hours or days, economic impacts can take weeks, months and years to emerge, and may persist for even longer.
Socio-political	Socio-political impacts are more difficult to quantify and may include inconvenience to the public and key community stakeholders, adverse media coverage, and reputational damage to the community and the Municipality.
Environmental	Environmental consequences can include pollution, erosion, sedimentation, habitat damage, etc.
Public Health and Safety	Adverse health and safety impacts may include injury or death, or impeded access to critical services.
Strategic	These include the effects of an asset's failure on the community's long-term strategic objectives, including economic development, business attraction, etc.

Table 3 Risk Analysis: Types of Consequences of Failure

This AMP includes a preliminary evaluation of asset risk and criticality. 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.

These models have been built in Citywide for continued review, updates, and refinements.

Levels of Service

A level of service (LOS) is a measure of the services that the Town provides to the community and the nature and quality of those services. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

The Town measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service. This AMP includes those LOS that are required under O. Reg. 588/17 as well as any additional metrics the Town wishes to track.

Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives. For core asset categories as applicable (Roads, Bridges & Culverts, Storm Water, Water, and Sanitary) the province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP.

Technical Levels of Service

Technical levels of service 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 Town's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories as applicable (Roads, Bridges & Culverts, Storm Water, Water, and Sanitary) the province, through O. Reg. 588/17, has also provided technical metrics that are required to be included in this AMP.

Current and Proposed Levels of Service

Current LOS are the past performance metrics of an asset category up until the 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 municipalities 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 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.

2.4 Scope & Methodology

2.4.1 Asset Categories for this AMP

This asset management plan for the Town of Smiths Falls is produced in compliance with O. Reg. 588/17. The July 2025 deadline under the regulation—the third of three AMPs—requires analysis of core and non-core asset categories, as well as proposed service levels and how to fund them.

The AMP summarizes the state of the infrastructure for the Town's asset portfolio, establishes current/proposed levels of service and the associated technical and customer-oriented key metrics, outlines lifecycle strategies for optimal asset management and performance, and provides financial strategies to reach sustainability for the asset categories listed below.

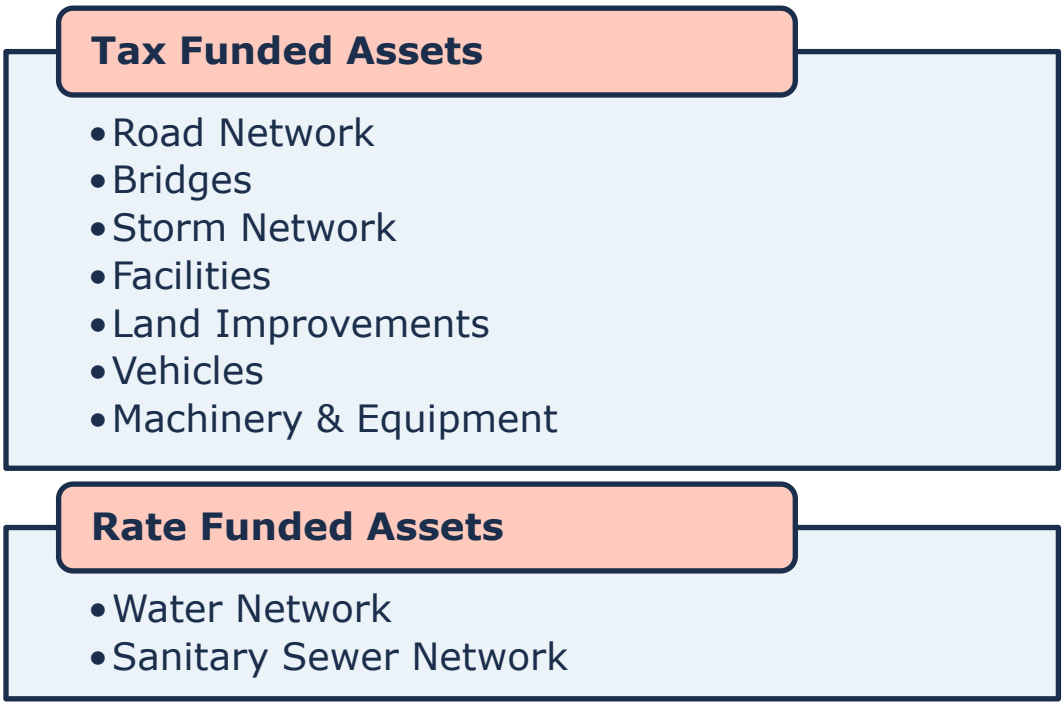


Figure 6 Tax Funded and Rate Funded Asset Categories

2.4.2 Data Effective Date

It is important to note that this plan is based on data as of **December 2024**; therefore, it represents a snapshot in time using the best available processes, data, and information at the Municipality. Strategic asset management planning is an ongoing and dynamic process that requires continuous data updates and dedicated data management resources.

2.4.3 Deriving 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. This AMP relies on two methodologies:

User-Defined Cost and Cost Per Unit

Based on costs provided by municipal staff which can include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience.

Cost Inflation / CPI Tables

Historical costs of the assets are 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 Town incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

2.4.4 Estimated Service Life & Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which the Town expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP 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 data and its EUL, the Town can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, the Town can more accurately forecast when it will require replacement. The SLR is calculated as follows:

Figure 7 Service Life Remaining Calculation

2.4.5 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 Town can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

Figure 8 Target Reinvestment Rate Calculation

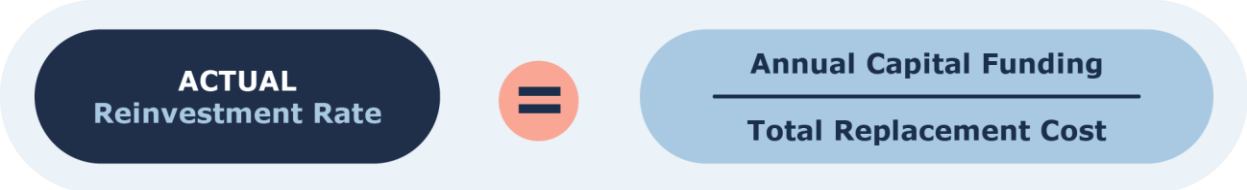


Figure 9 Actual Reinvestment Rate Calculation

2.4.6 Deriving 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 Town's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition.

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	60-80
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-60
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-40
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-20

Table 4 Standard Condition Rating Scale

The analysis in this AMP 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.

2.5 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 (O. Reg 588/17)[1]. 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.

Figure 10 below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.

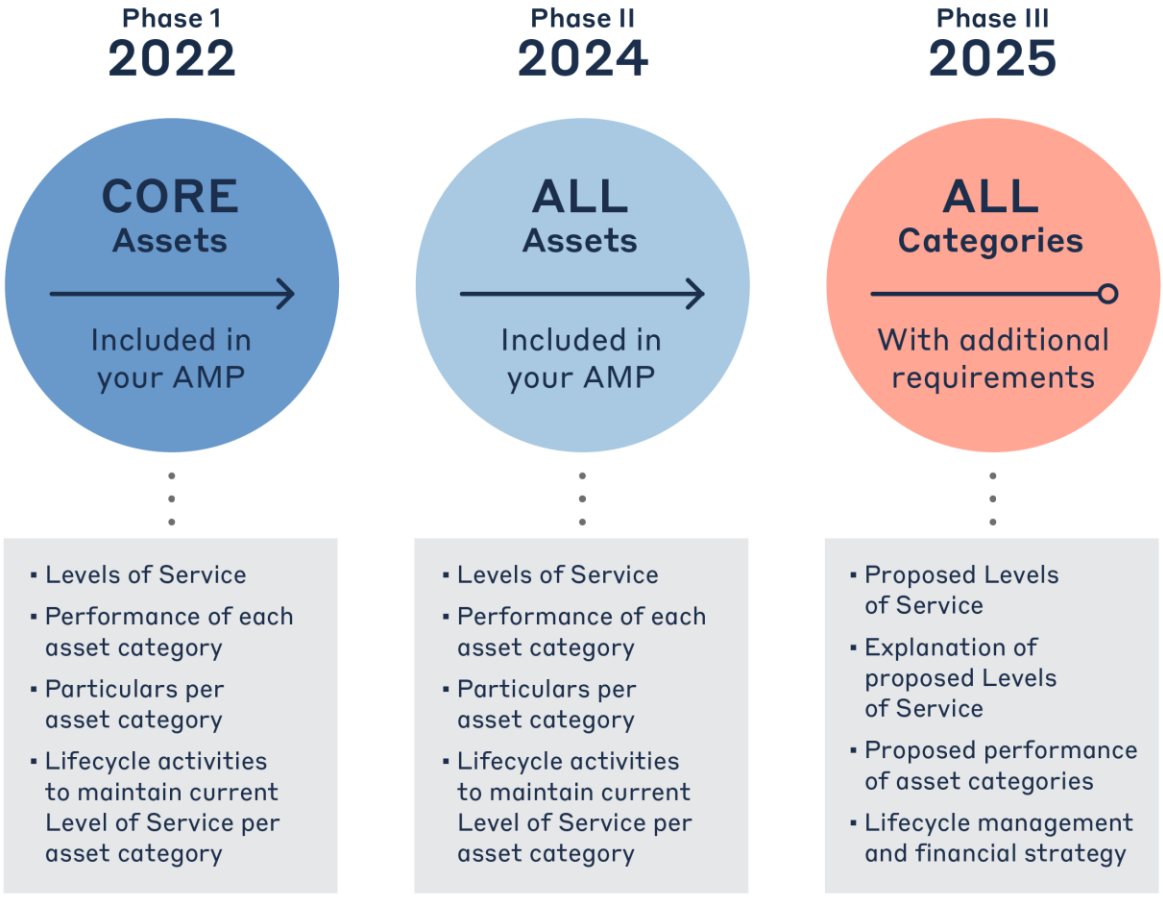


Figure 10 O. Reg. 588/17 Requirements and Reporting Deadlines

[1] O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure https://www.ontario.ca/laws/regulation/170588

2.5.1 O. Reg. 588/17 Compliance Review

Requirement	O. Reg. 588/17 Section	AMP Section Reference	Status
Summary of assets in each category	S.5(2), 3(i)	4.1 – 12.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	4.1 – 12.1	Complete
Average age of assets in each category	S.5(2), 3(iii)	4.3 – 12.3	Complete
Condition of core assets in each category	S.5(2), 3(iv)	4.2 – 12.2	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	4.4 – 12.4	Complete
Current/proposed levels of service in each category and performance measures	S.5(2), 1(i-ii)	4.6/4.7 – 12.6/12.7	Complete
Lifecycle activities needed for proposed levels of service for 10 years	S.5(2), 4	4.4 – 12.4	Complete
Costs of providing lifecycle activities for 10 years (average annual requirements)	S.5(2), 4	14	Complete
Growth considerations	S.6(1), 5	13	Complete
10-year capital costs for proposed levels of service	S.6(1), 4(ii)	Appendix B	Complete

Table 5 O. Reg. 588/17 Compliance Review

Portfolio Overview

3. State of the Infrastructure

The state of the infrastructure (SOTI) summarizes the inventory, condition, age profiles, and other key performance indicators for the Town's infrastructure portfolio. These details are presented for all core and non-core asset categories.

3.1 Asset Hierarchy & Data Classification

Asset hierarchy explains 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. Assets were structured to support meaningful, efficient reporting and analysis. Key category details are summarized at asset segment level.

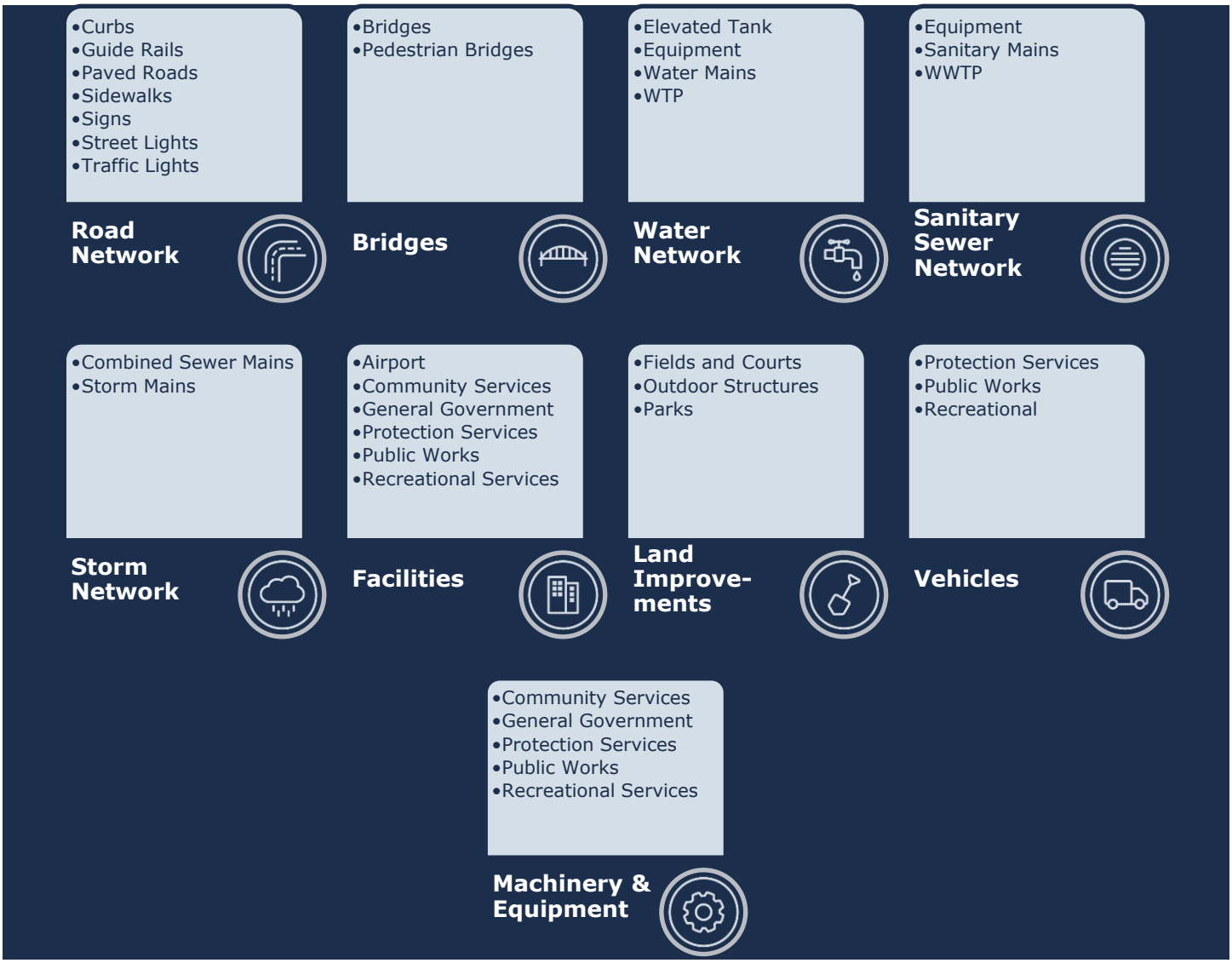


Figure 11 Asset Hierarchy and Data Classification

3.2 Portfolio Overview

3.2.1 Total Replacement Cost of Asset Portfolio

The nine asset categories analyzed in this AMP have a total current replacement cost of approximately $381 million. This estimate was calculated using cost per unit, as well as user defined costing and CPI tables. This estimate reflects the replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

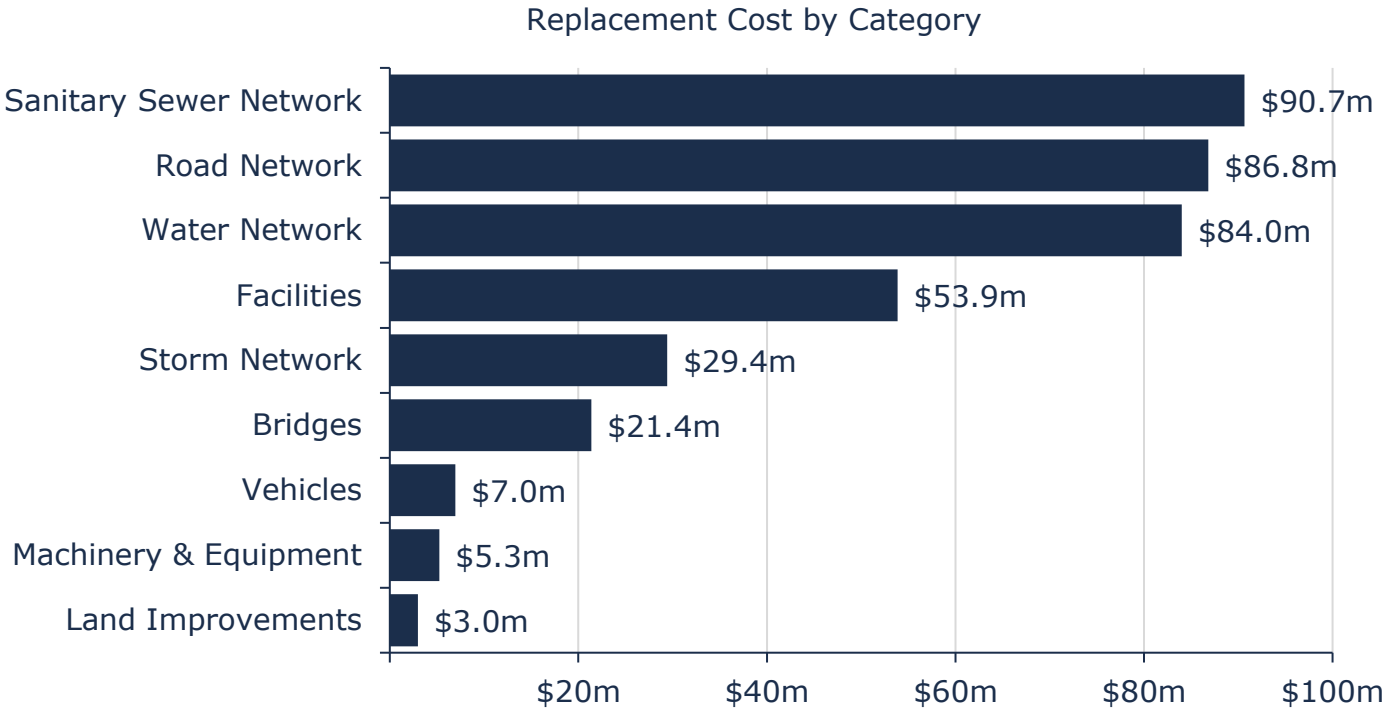


Figure 12 Current Replacement Cost by Asset Category

3.2.2 Target vs. Actual Reinvestment Rate

The graph below depicts funding gaps by comparing the target to the current reinvestment rate.

To meet the proposed long-term capital requirements, the Town requires an annual capital investment of $10.6 million, for a target portfolio reinvestment rate of 2.8%. Currently, the Town's annual investment from sustainable revenue sources is 1.2% Target and current re-investment rates by asset category are detailed below.

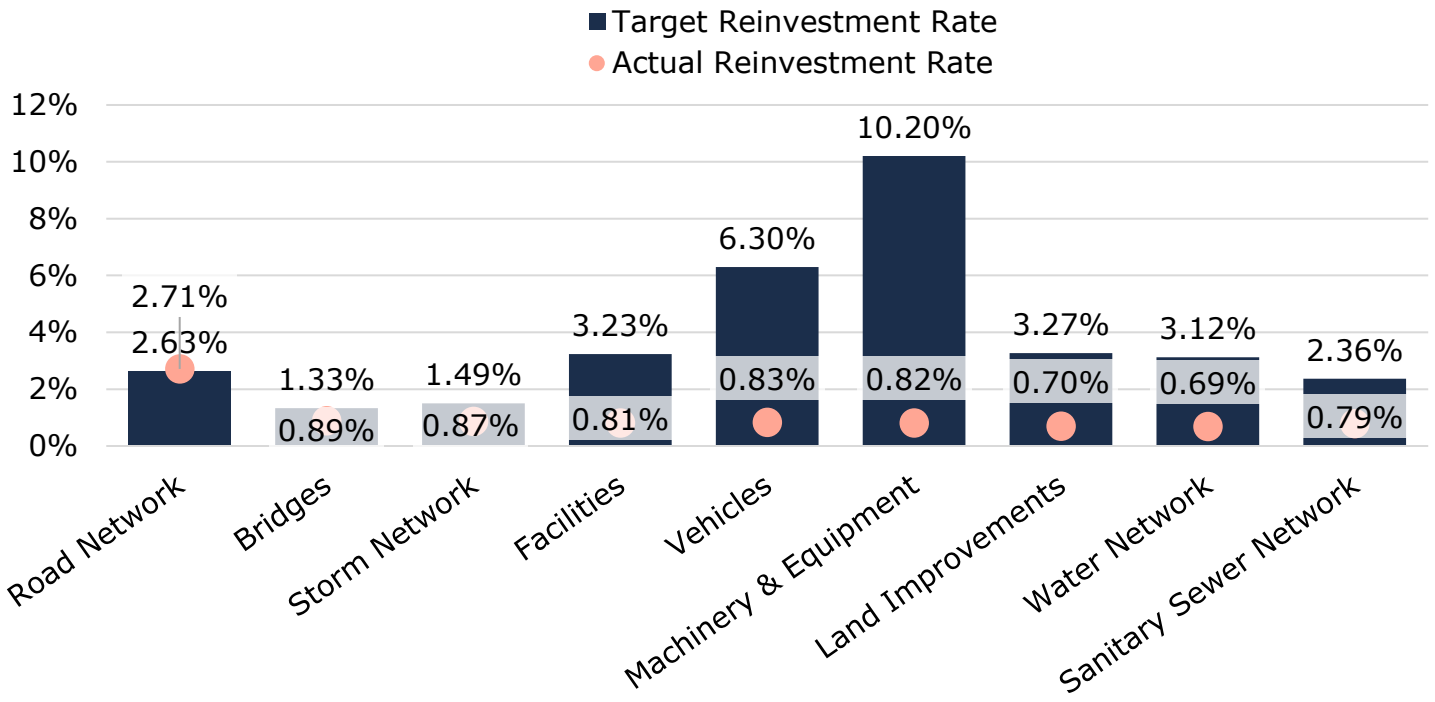


Figure 13 Current Vs. Target Reinvestment Rate

3.2.3 Condition of Asset Portfolio

Figure 14 summarizes asset condition at the portfolio and category levels, respectively. Based on both assessed condition and age-based analysis, 69% of the Town's infrastructure portfolio is in fair or better condition, with the remaining 31% in poor or worse condition. Typically, assets in poor or worse conditions may require replacement or major rehabilitation in the immediate or short-term. Targeted condition assessments may help further refine the list of assets that may be candidates for immediate intervention, including potential replacement or reconstruction.

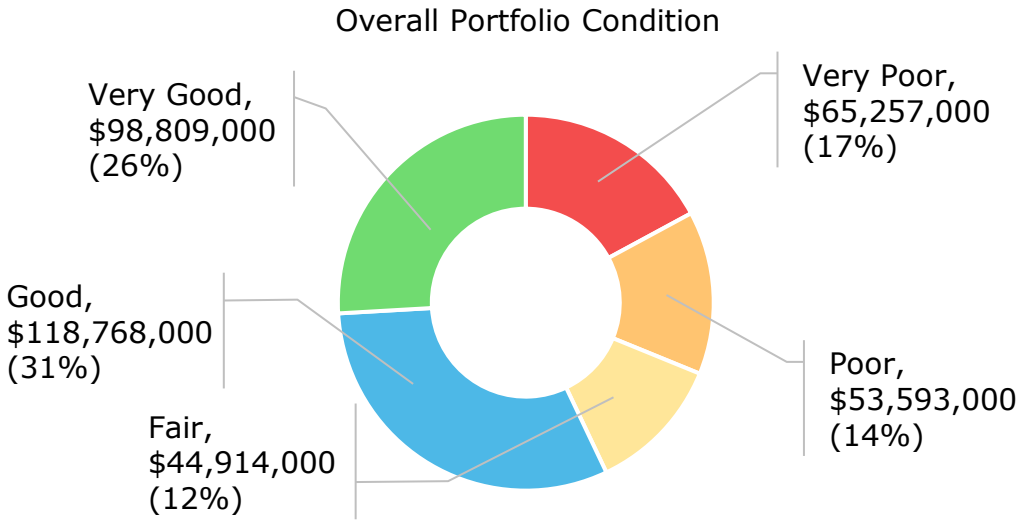


Figure 14 Asset Condition: Portfolio Overview

As further illustrated in Figure 15 at the category level, except for the sanitary sewer network, the majority of other core infrastructure including roads, bridges, water network, and storm water network are in fair or better condition, based on in-field condition assessment data and age-based condition projections. See Table 6 for details on how condition data was derived for each asset segment.

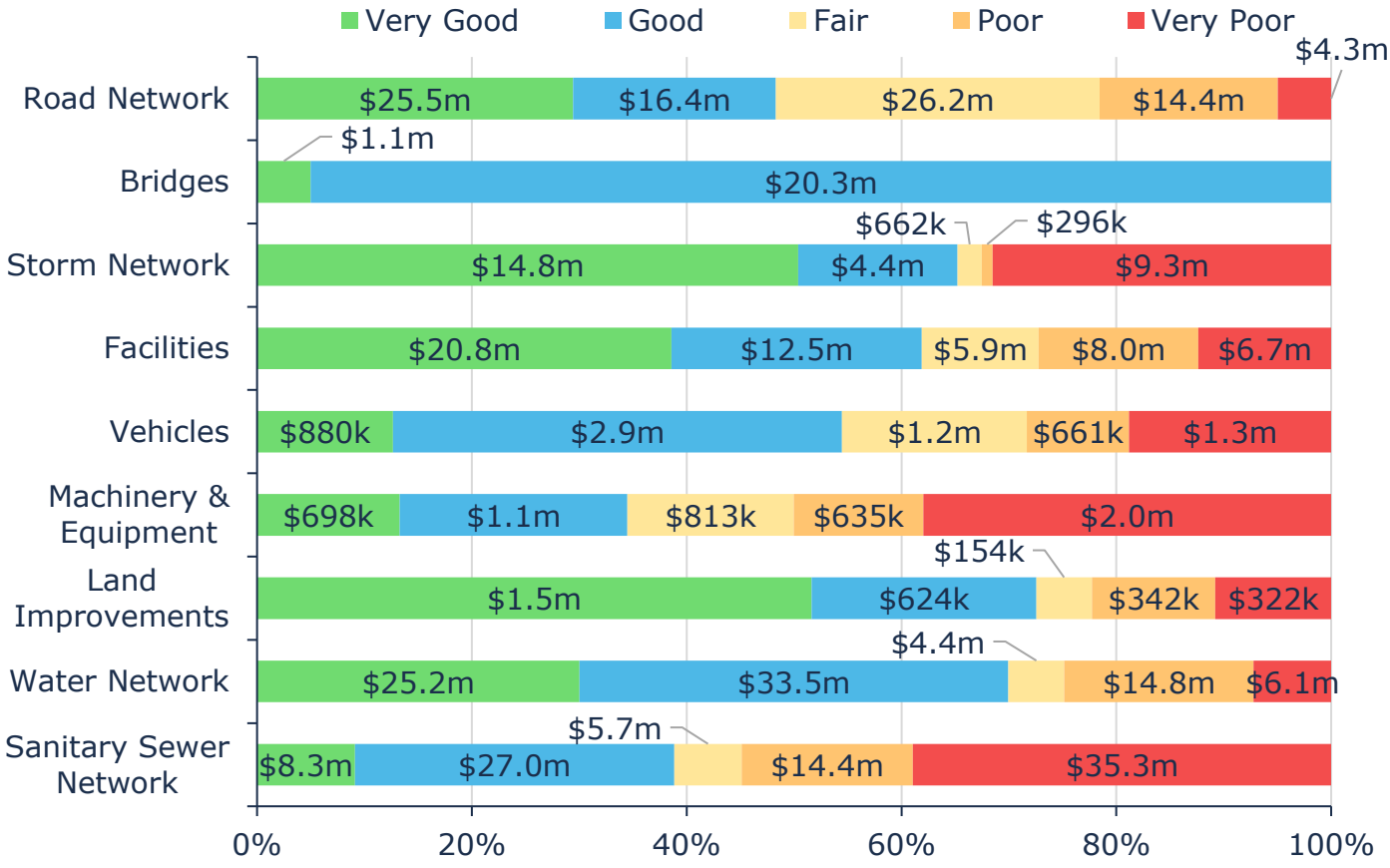


Figure 15 Asset Condition by Asset Category

Source of Condition Data

This AMP relies on assessed condition data for 85% of assets – based on and weighted by replacement cost. For the remaining assets, age is 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. The table below identifies the source of condition data used throughout this AMP.

Asset Category	% of Assets with Assessed Conditions	Source of Condition Data
Road Network	82%	Road Needs Study Staff Assessments
Bridges	100%	OSIM Report
Storm Network	52%	CCTV Inspections Staff Assessments
Facilities	80%	Staff Assessments
Vehicles	74%	Staff Assessments
Machinery & Equipment	60%	Staff Assessments
Land Improvements	62%	Staff Assessments
Water Network	91%	Staff Assessments
Sanitary Sewer Network	96%	CCTV Inspections Staff Assessments

Table 6 Source of Condition Data

3.2.4 Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 27% of the Town's assets will require replacement within the next 10 years (not accounting for asset replacement backlog)

3.2.5 Risk Matrix

Using the risk equation and preliminary risk models, Figure 16 shows how assets across the different asset categories are stratified within a risk matrix.

1 - 4 Very Low	5 - 7 Low	8 - 9 Moderate	10 - 14 High	15 - 25 Very High
$87,820,694 (23%)	$102,590,316 (27%)	$37,920,344 (10%)	$76,142,514 (20%)	$76,867,403 (20%)

Figure 16 Risk Matrix: All Assets

The analysis shows that based on current risk models, approximately 20% of the Town's assets, with a current replacement cost of approximately $77 million, carry a risk rating of 15 or higher out of 25. Assets in this group may have a high probability of failure based on available condition data and age-based estimates.

As new asset attribute information and condition assessment data are integrated with the asset register, asset risk ratings will evolve, resulting in a redistribution of assets within the risk matrix. Staff should also continue to calibrate risk models.

We caution that since risk ratings rely on many factors beyond an asset's physical condition or age, assets in a state of disrepair can sometimes be classified as low risk, despite their poor condition rating. In such cases, although the probability of failure for these assets may be high, their consequences of failure ratings were determined to be low based on the attributes used and the data available.

Similarly, assets with very high condition ratings can receive a moderate to high-risk rating despite a low probability of failure. These assets may be deemed as highly critical to the Town based on their costs, economic importance, social significance, and other factors. Continued calibration of an asset's criticality and regular data updates are needed to ensure these models more accurately reflect an asset's actual risk profile.

3.2.6 Forecasted Capital Requirements

Aging assets require maintenance, rehabilitation, and replacement.

Figure 17 below illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for all asset categories analyzed in this AMP over a 95-year time horizon. On average, **$10.6 million is required each year** to remain current with capital replacement needs for the Town's lifecycle approach for the asset portfolio, represented by the red dotted line.

Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise. This figure relies on age and available condition data.

The chart also illustrates a backlog of approximately $55 million, comprising assets that remain in service beyond their estimated useful life. It is unlikely that all such assets are in a state of disrepair, requiring immediate replacements. This makes continued and expanded targeted and consistent condition assessments integral. Risk frameworks, proactive lifecycle strategies, and levels of service targets can then be used to prioritize projects, continuously refine estimates for both backlogs and ongoing capital needs and help select the right treatment for each asset. In addition, more effective componentization of buildings will improve these projections, including backlog estimates.

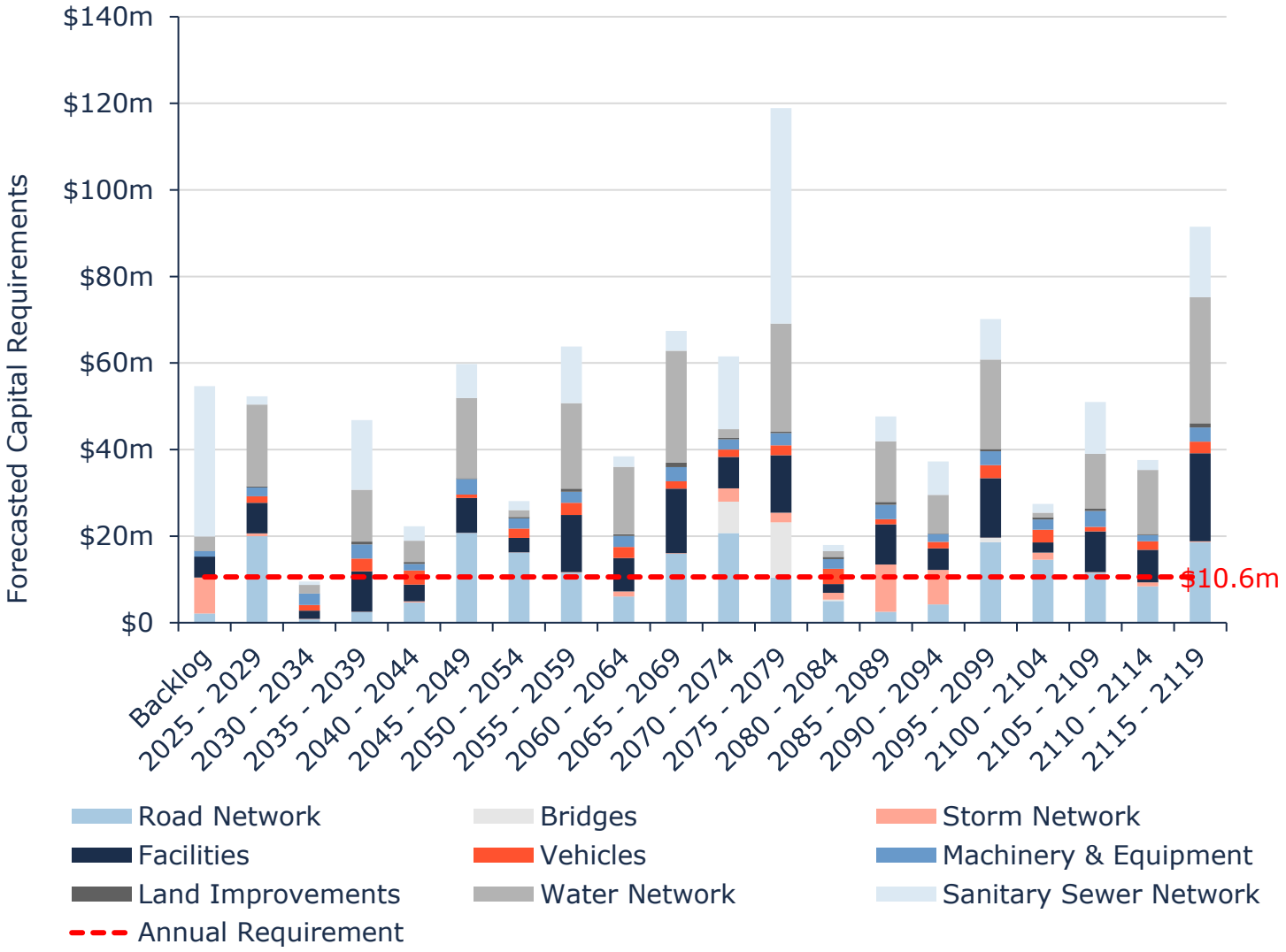


Figure 17 Capital Replacement Needs: Portfolio Overview 2025-2119

Category Analysis: Core Assets

4. Road Network

4.1 Inventory & Valuation

Table 7 summarizes the quantity and current replacement cost of the Town's road network assets as managed in its primary asset management register, Citywide.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Curbs	21,512	Length (m)	$7,732,491	CPI
Guide Rails	322	Length (m)	$50,140	CPI
Paved Roads	554,006	Area (m2)	$56,928,912	User-Defined
Sidewalks	61,857	Length (m)	$15,681,728	CPI
Signs	1,828	Quantity	$609,521	CPI
Street Lights	478	Quantity	$2,372,967	CPI
Traffic Lights	25	Quantity	$3,441,513	CPI
TOTAL			**$86,817,272**	

Table 7 Detailed Asset Inventory: Road Network

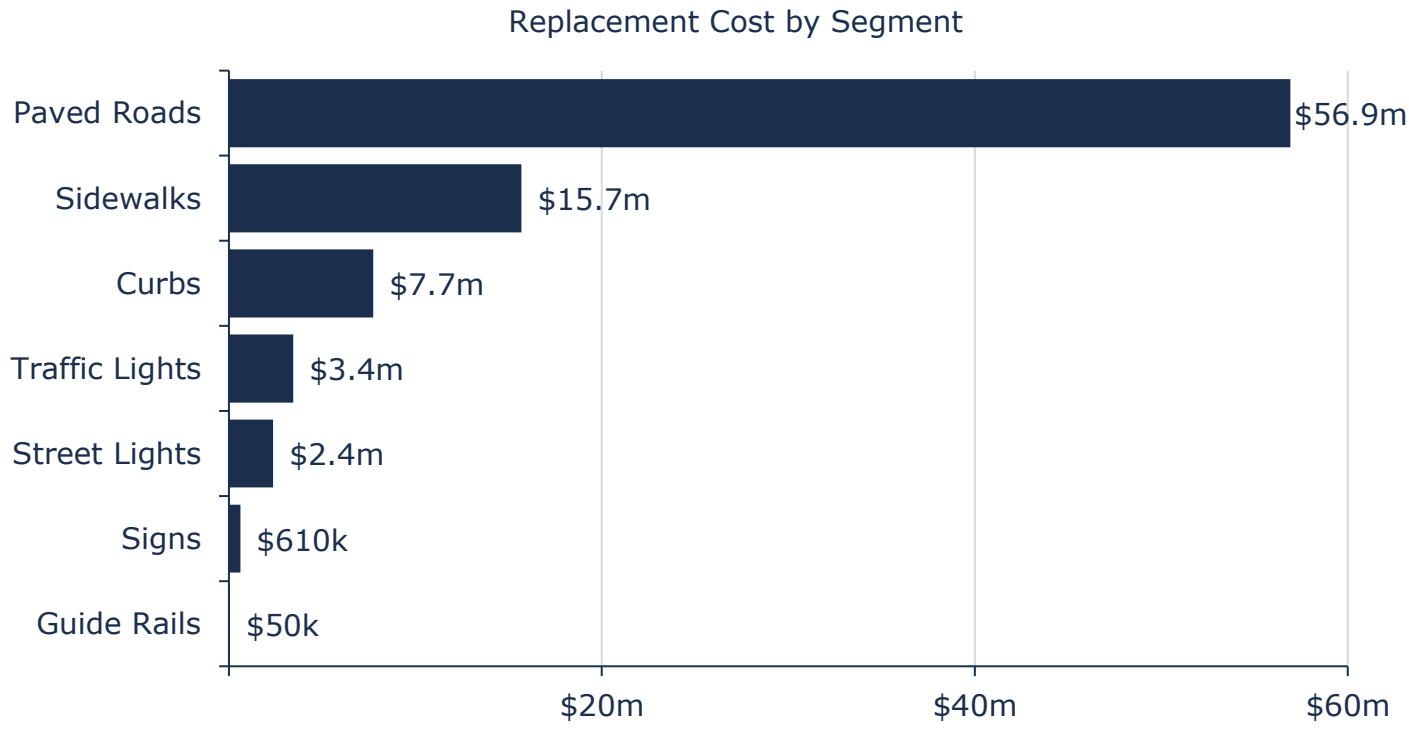


Figure 18 Portfolio Valuation: Road Network

4.2 Asset Condition

Figure 19 summarizes the replacement cost of the Town's Road network. Based on a combination of field inspection data and age, 78% of assets are in fair or better condition; the remaining 22% of assets are in poor to very poor condition. Condition assessments were available for majority of road network assets, based on replacement cost. This condition data was projected from inspection date to current year to estimate their condition today.

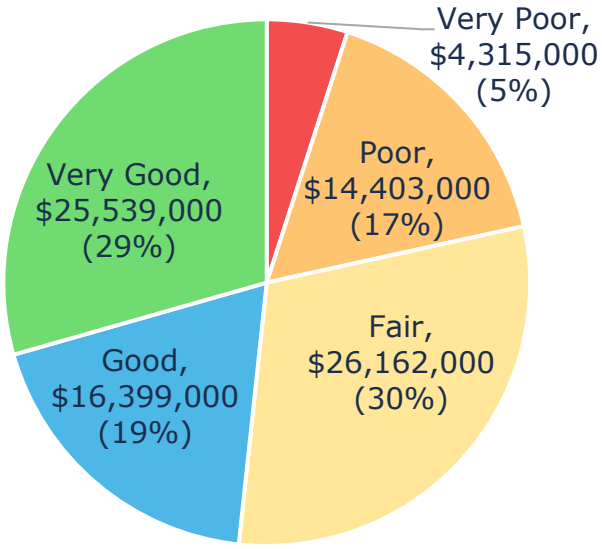


Figure 19 Asset Condition: Road Network Overall Condition

As illustrated in Figure 20, based on condition assessments, except for the signs, most other road assets are in fair or better condition.

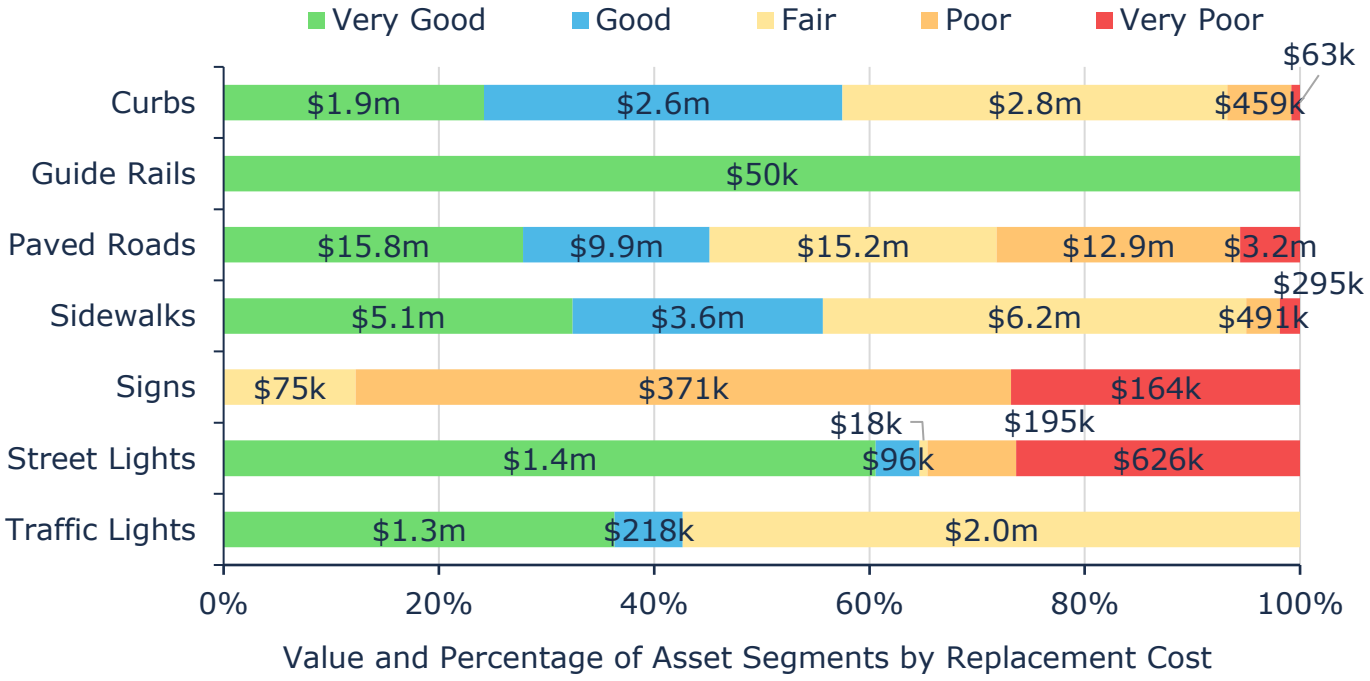


Figure 20 Asset Condition: Road Network by Segment

4.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 21 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

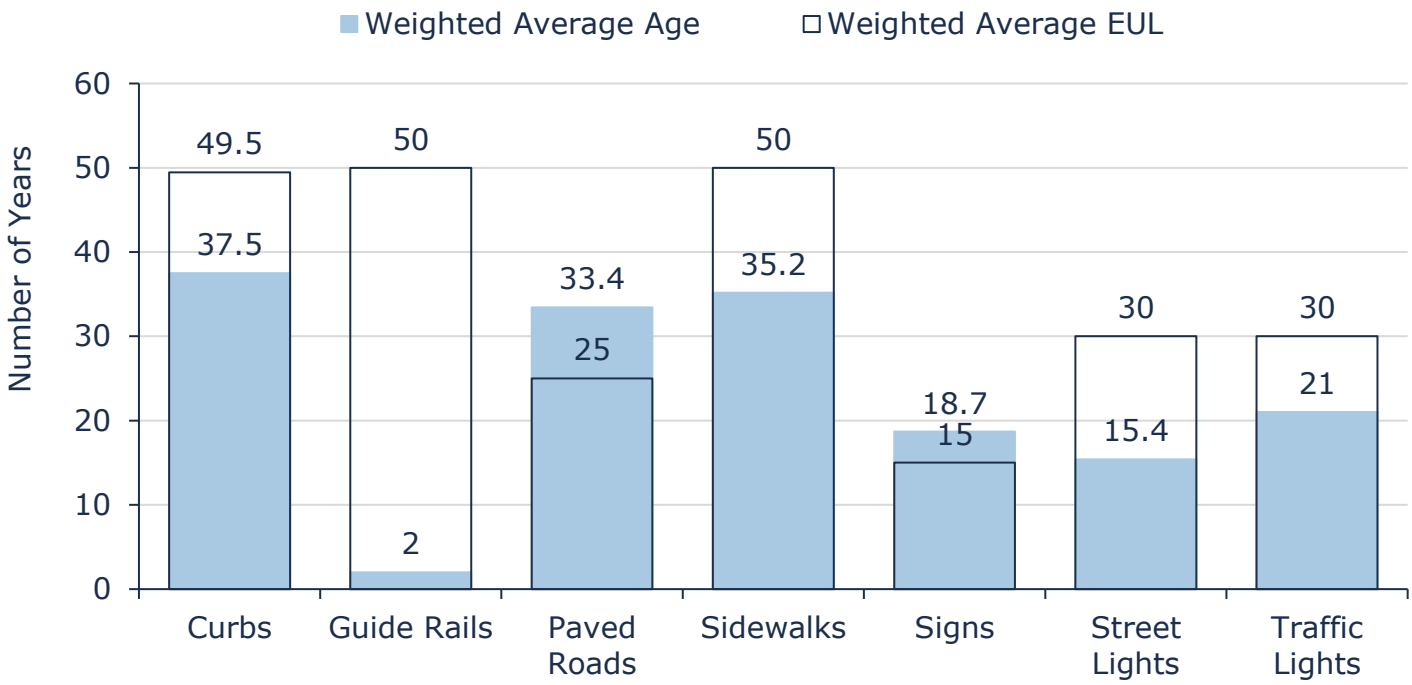


Figure 21 Estimated Useful Life vs. Asset Age: Road Network

Age analysis reveals paved roads and signs are of particular concern, with average ages of 33.4 and 18.7 years compared to useful lives of 25 and 15 years, respectively, indicating overdue replacement needs. Sidewalks and curbs, with average ages of 35.2 and 37.5 years against 50-year lifespans, are also aging and should be considered in near-term planning. Traffic lights and streetlights remain within their useful lives at 21 and 15.4 years, respectively. Guide rails are relatively new assets and not a renewal priority at this time.

Although asset age is an important measurement for long-term planning, condition assessments provide a more accurate indication of actual asset needs. Further, useful life estimates established as part of the PSAB 3150 implementation may not be accurate and may not reflect in-field asset performance.

4.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance	The Town employs lifecycle strategies for gravel road assets to maintain current levels of service to the public. Routine maintenance includes pothole filling and shoulder maintenance.[2]
Rehabilitation	For paved roads, rehabilitation includes crack sealing, surface treatment, and mill & overlay, based on road conditions and road assessments.
Replacement	Assets are considered for replacement when their condition significantly deteriorates or when rehabilitation is no longer cost-effective. Assets nearing the end of their service life or requiring frequent and costly repairs are prioritized for replacement.

The following lifecycle strategies have been developed as a proactive approach to managing Smiths Falls' paved roads. Instead of allowing the roads to deteriorate until replacement is required, strategic rehabilitation is expected to extend the service life of roads at a lower total cost.

Paved Roads		
Event Name	**Event Class**	**Event Trigger**
Crack Sealing	Maintenance	71 to 90 Condition
Single Surface Treatment	Rehabilitation	61 to 70 Condition
Mill & Overlay	Rehabilitation	41 to 60 Condition
Full Reconstruction	Replacement	20 Condition

[2] The Town owns a minimal network of unpaved roads. As these roads are managed via the Town's operating budget, unpaved roads have not been integrated into this asset management plan.

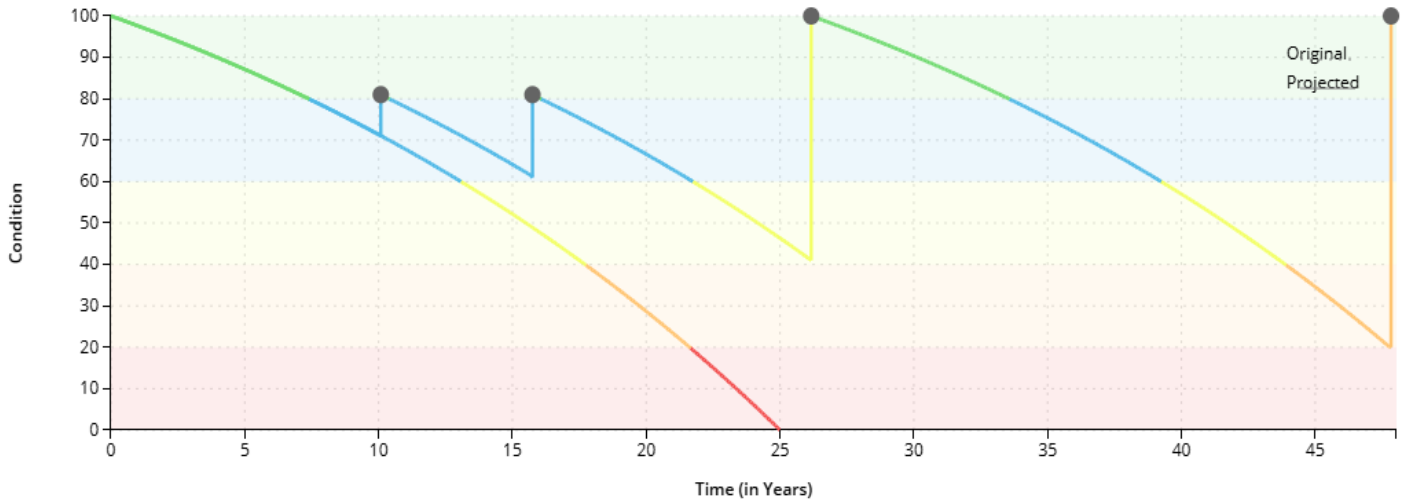


Table 8 Lifecycle Management Strategy: Road Network (Paved Roads)

4.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low**	**5 - 7** **Low**	**8 - 9** **Moderate**	**10 - 14** **High**	**15 - 25** **Very High**
$45,115,174 (52%)	$25,685,533 (30%)	$5,789,199 (7%)	$7,047,164 (8%)	$3,180,202 (4%)

Figure 22 Risk Matrix: Road Network

4.6 Current Levels of Service

The tables that follow summarize the Town's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17, as well as any additional performance measures that the Town selected for this AMP.

4.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description, which may include maps of the road network in the town and its level of connectivity	See Appendix C – Level of Service Maps & Photos
Quality	Description or images that illustrate the different levels of road class pavement condition	A Streetscan Road Condition Assessment was completed in 2021. The rating numbers were assigned on a scale of 1 to 100 with the lower numbers describing those roads with the most structural distress or poorest shaped road cross section. (1-50) Road surface exhibits moderate to significant deterioration and requires improvement. (50-100) Road surface is in generally good condition, with localized deficiencies

Table 9 O. Reg. 588/17 Community Levels of Service: Road Network

4.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km^2)	0.96
	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km^2)	0.93
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km^2)	4.76
Quality	Average pavement condition index for paved roads in the town	58

Table 10 O. Reg. 588/17 Technical Levels of Service: Road Network

4.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Overall condition rating	Good 61	Good 64	Refer to section 13.	Refer to section 14
Average risk rating[3]	Very Low 5	Low 5.5		

Table 11 O. Reg. 588/17 Proposed LOS: Road Network

[3] See *Risk & Criticality*

5. Bridges

5.1 Inventory & Valuation

Table 12 Detailed Asset Inventory: Bridgessummarizes the quantity and current replacement cost of the Town's bridge assets as managed in its primary asset management register, Citywide.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Bridges	5	Quantity	$19,738,000	User-Defined
Pedestrian Bridges	3	Quantity	$1,645,000	User-Defined
TOTAL			**$21,383,000**	

Table 12 Detailed Asset Inventory: Bridges

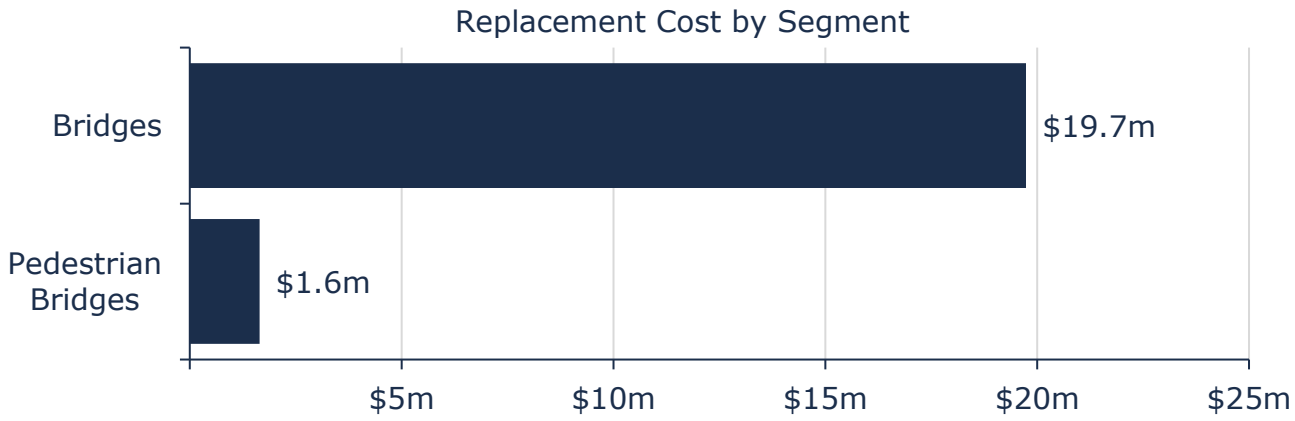


Figure 23 Portfolio Valuation: Bridges

5.2 Asset Condition

Figure 24 Asset Condition: Bridges Overall summarizes the replacement cost-weighted condition of the Town's bridges. Based on field inspection data, 100% of assets are in fair or better condition.

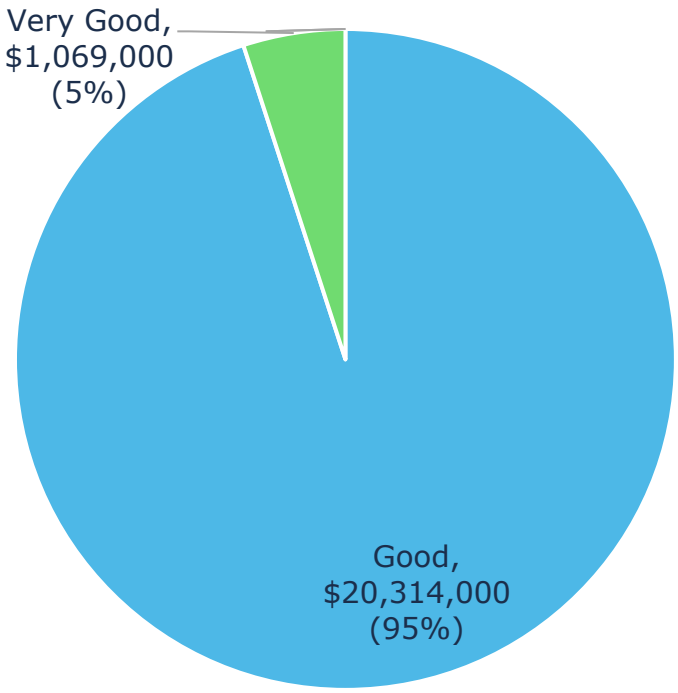


Figure 24 Asset Condition: Bridges Overall

As illustrated in Figure 25 Asset Condition: Bridges by Segment, based on condition assessments, all bridge assets are in fair or better condition.

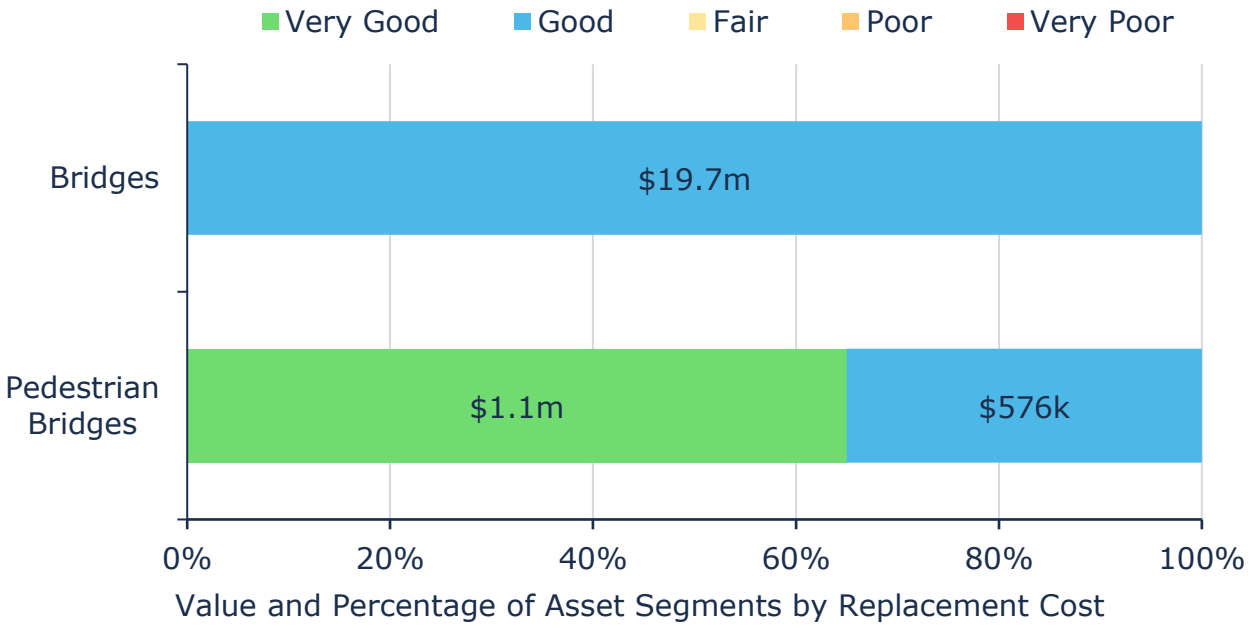


Figure 25 Asset Condition: Bridges by Segment

5.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 26 Estimated Useful Life vs. Asset Age: Bridgesillustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

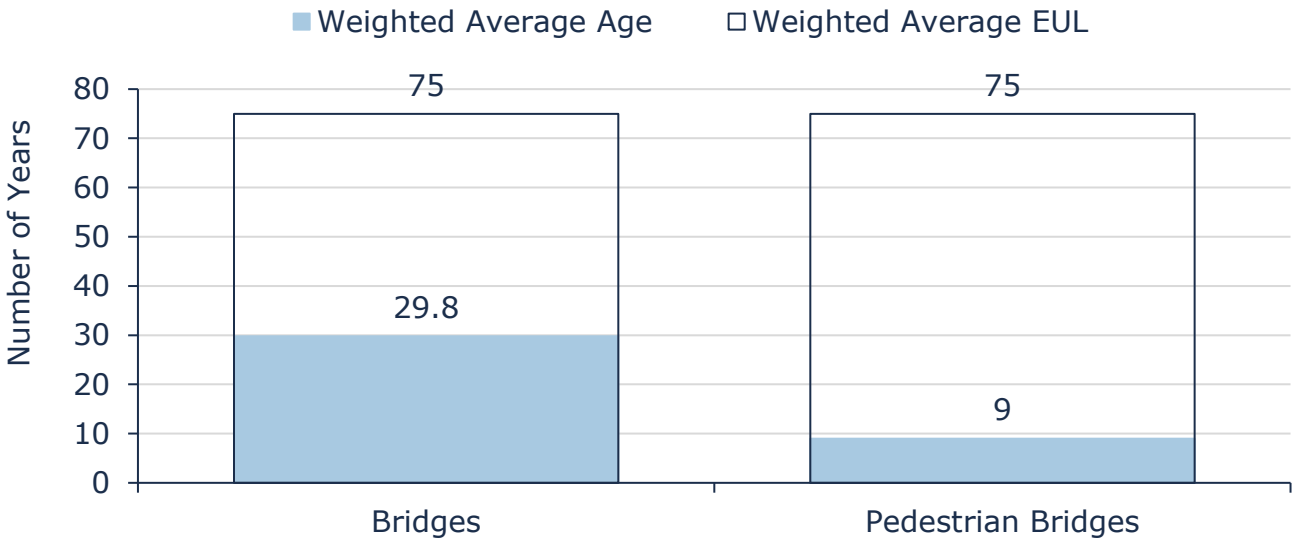


Figure 26 Estimated Useful Life vs. Asset Age: Bridges

5.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance, Rehabilitation and Replacement	All lifecycle activities are driven by the results of mandated structural inspections completed according to the Ontario Structure Inspection Manual (OSIM).

Activity Type	Description of Current Strategy
	These inspections identify maintenance needs, rehabilitation opportunities, and potential replacement considerations based on the structural condition assessments conducted.

Table 13 Lifecycle Management Strategy: Bridges

5.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low** $1,645,000 (8%)	5 - 7 **Low** $9,515,000 (44%)	8 - 9 **Moderate** $7,220,000 (34%)	10 - 14 **High** $3,003,000 (14%)	15 - 25 **Very High** - (0%)

Figure 27 Risk Matrix: Bridges

5.6 Levels of Service

The tables that follow summarize the Town's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Town has selected for this AMP.

5.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport	Bridges are a key component of Smiths Falls' municipal transportation network. No

	vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	bridges in the Town have load or dimensional restriction. Traffic that is supported by municipal bridges includes heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians and cyclists.
Quality	Description or images of the condition of bridges and how this would affect use of the bridges	See Appendix C

Table 14 O. Reg. 588/17 Community Levels of Service: Bridges

5.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	% of bridges in the Town with loading or dimensional restrictions	0
Quality	Average bridge condition index value for bridges in the Town	68
	Average bridge condition index value for pedestrian bridges in the Town	86

Table 15 O. Reg. 588/17 Technical Levels of Service: Bridges

5.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Good 69	Fair 56	Refer to section 13.	Refer to section 14
Average risk rating[4]	Low 7.8	High 10.7		

[4] See *Risk & Criticality*

Table 16 O. Reg. 588/17 Proposed LOS: Bridges

6. Water Network

6.1 Inventory & Valuation

Table 17 summarizes the quantity and current replacement cost of the Town's water network assets as managed in its primary asset management register, Citywide.

Segment	Quantity (components)	Unit of Measure	Replacement Cost	Primary RC Method
Elevated Tank	1	Quantity	$9,800,000	User-Defined
Equipment	26	Quantity	$1,424,802	CPI
Water Mains	61,171	Length (m)	$25,186,768	Cost per Unit
WTP	75	Quantity	$47,583,164	CPI
TOTAL			**$83,994,735**	

Table 17 Detailed Asset Inventory: Water Network

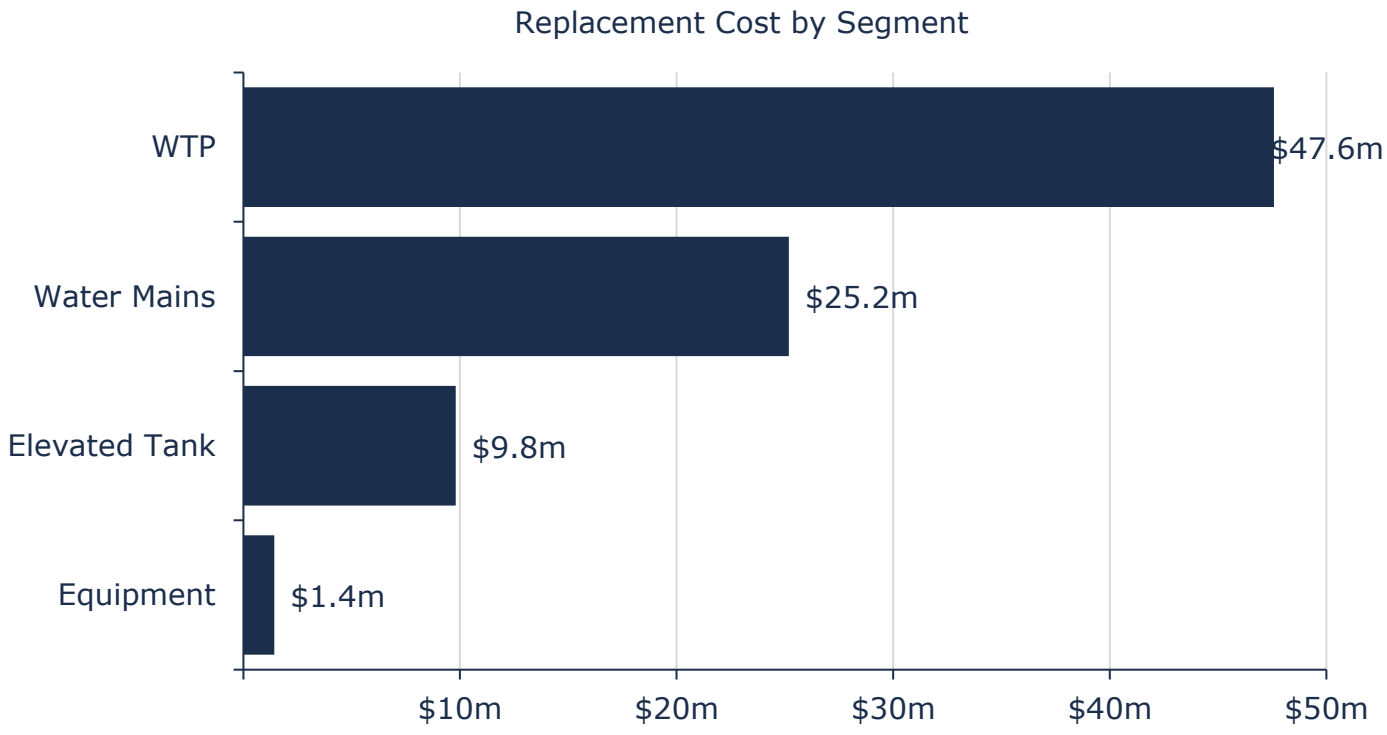


Figure 28 Portfolio Valuation: Water Network

6.2 Asset Condition

Figure 29 summarizes the replacement cost-weighted condition of the Town's water network. Based on field inspection data, 75% of assets are in fair or better condition; the remaining 25% of assets are in poor to very poor condition.

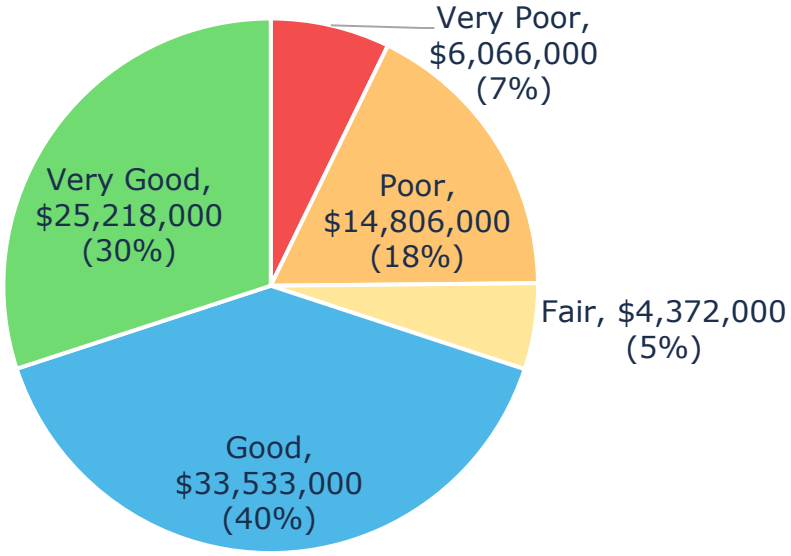


Figure 29 Asset Condition: Water Network Overall

As illustrated in Figure 30, based on condition assessments and age-based conditions, most of the Town's water network assets are in fair or better condition.[5]

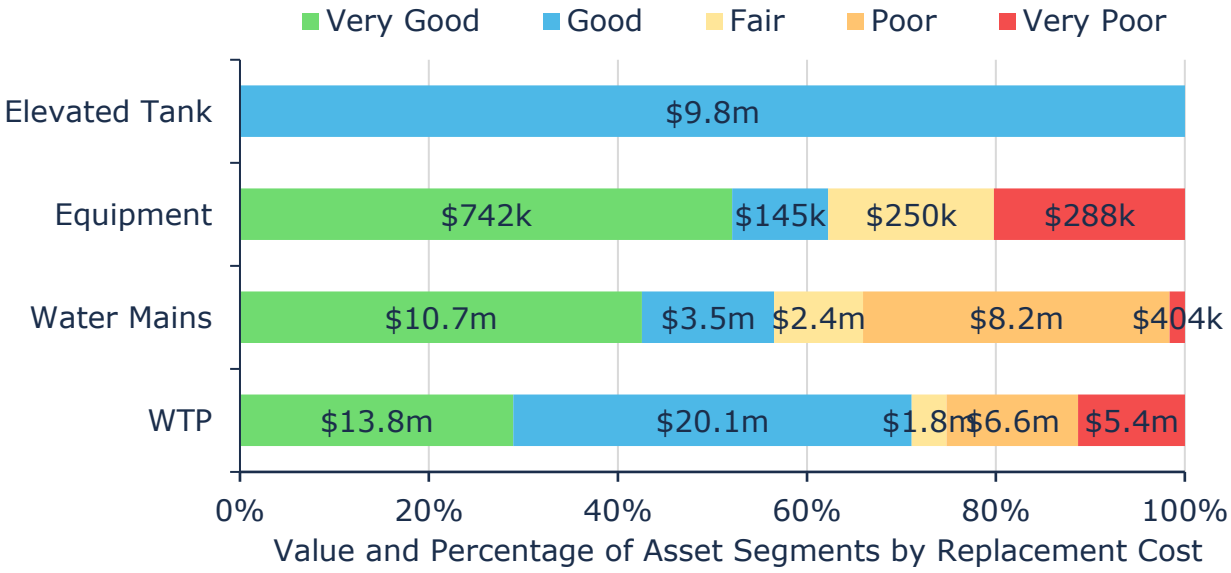


Figure 30 Asset Condition: Water Network by Segment

[5] With the commissioning of the new water tower expected by the end of 2025, condition will be upgraded to very good. Strategic planning will be required to determine the future function of the old tower, including potential repurposing, decommissioning, or ongoing use as a backup or secondary resource. This transition presents an opportunity to optimize asset value and lifecycle cost within the broader water infrastructure portfolio.

6.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 31 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.[6]

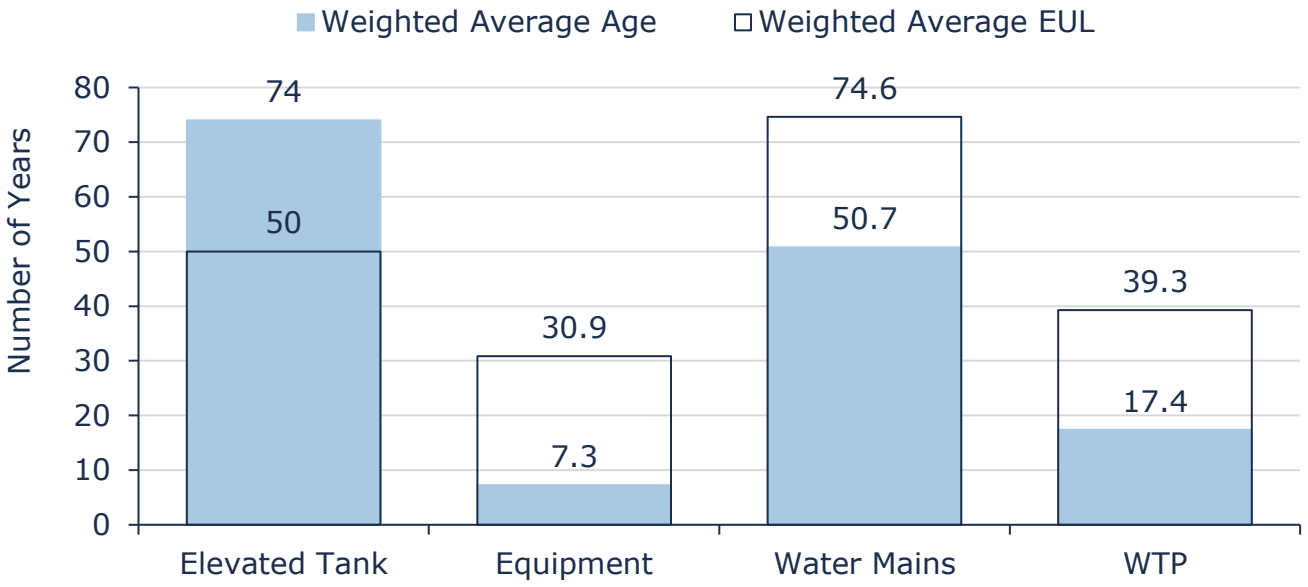


Figure 31 Estimated Useful Life vs. Asset Age: Water Network

[6] The Town's elevated tank is scheduled for replacement in the latter months of 2025. The new elevated tank will be operational by the end of the year. Additionally, the old, elevated tank may be decommissioned/disposed, or potentially repurposed.

6.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance	Routine maintenance activities for water mains and supporting infrastructure include regular inspections, flushing operations, minor repairs, valve maintenance, and leak detection programs.
	Maintenance efforts are triggered by visual inspections, flow increases at water treatment facilities, and customer-reported issues.
Rehabilitation	Rehabilitation activities focus on structural repairs, system upgrades, and replacement of outdated components. These initiatives are typically initiated based on historical performance data and recommendations from maintenance reports.
Replacement	Assets that are nearing the end of their service life or experiencing frequent failures are prioritized for replacement. Replacement decisions are informed by the criticality of each asset to the overall functionality of the water distribution system

Table 18 Lifecycle Management Strategy: Water Network

6.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure; each score was from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 Very Low	5 - 7 Low	8 - 9 Moderate	10 - 14 High	15 - 25 Very High
$7,436,960 (9%)	$25,492,917 (30%)	$8,411,475 (10%)	$31,650,760 (38%)	$11,002,623 (13%)

Figure 32 Risk Matrix: Water Network

6.6 Levels of Service

The tables that follow summarize the Town's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Town has selected for this AMP.

6.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description, which may include maps of the user groups or areas of the town that are connected to the municipal water system	There are 3,558 connections: 3,228 Residential, 299 Commercial, and 31 in the neighboring Town of Montague water system See Appendix C
	Description, which may include maps of the user groups or areas of the town that have fire flow	See Appendix C
Reliability	Description of boil water advisories and service interruptions	Smiths Falls experienced no boil water advisories in 2024. However, water service interruptions may occur due to main breaks, maintenance activities or reconstruction projects. Staff tend to these interruptions and inform residents in a timely manner.

Table 19 O. Reg. 588/17 Community Levels of Service: Water Network

6.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	% Of properties connected to the municipal water system	99%
	% Of properties where fire flow is available	100%
Reliability	# 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

Service Attribute	Technical Metric	Current LOS (2024)
	# Of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	1:3558[7]

Table 20 O. Reg. 588/17 Technical Levels of Service: Water Network

6.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Good 69	Fair 59	Refer to section 13.	Refer to section 14
Average risk rating[8]	Moderate 9.3	High 10.3		

Table 21 O. Reg. 588/17 Proposed LOS: Water Network

[7] As per the Smiths Falls Drinking Water System (2024) annual report, there was 1 watermain break in 2024.
[8] See *Risk & Criticality*

7. Sanitary Sewer Network

7.1 Inventory & Valuation

Table 22 summarizes the quantity and current replacement cost of the Town's various sanitary sewer network assets as managed in its primary asset management register, Citywide Assets.

Segment	Quantity (components)	Unit of Measure	Replacement Cost	Primary RC Method
Equipment	39	Quantity	$21,515,790	CPI
Sanitary Mains	27,831	Length (m), Quantity	$12,482,944	Cost per Unit
WWTP	61	Quantity	$56,665,984	CPI
TOTAL			**$90,664,718**	

Table 22 Detailed Asset Inventory: Sanitary Sewer Network

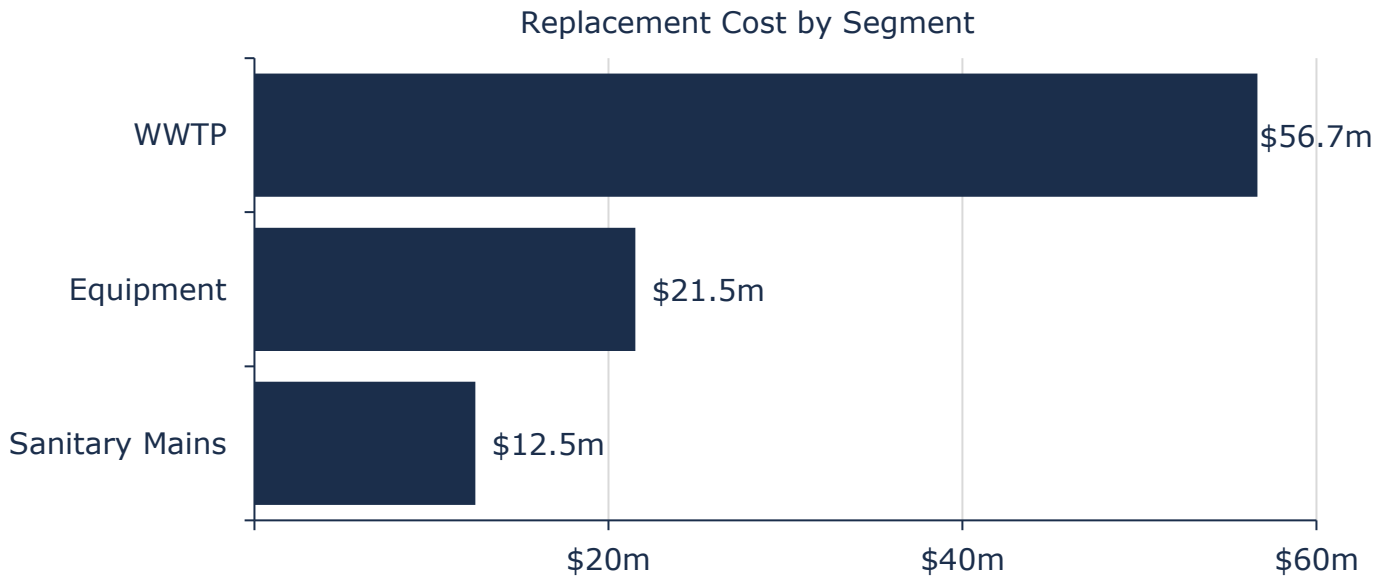


Figure 33 Portfolio Valuation: Sanitary Sewer Network

7.2 Asset Condition

Figure 34 summarizes the replacement cost-weighted condition of the Town's sanitary sewer network. Based on field inspection data, 45% of assets are in fair or better condition; the remaining 55% of assets are in poor to very poor condition. Condition data was available for most sanitary sewer assets.

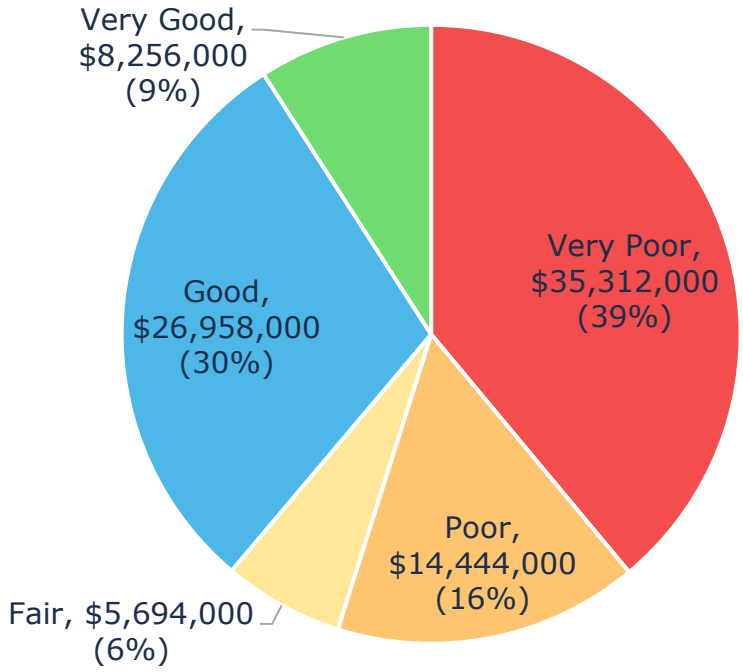


Figure 34 Asset Condition: Sanitary Sewer Network Overall

As illustrated in Figure 35, based on age-based conditions, most the Town's sanitary sewer mains are in fair or better condition.

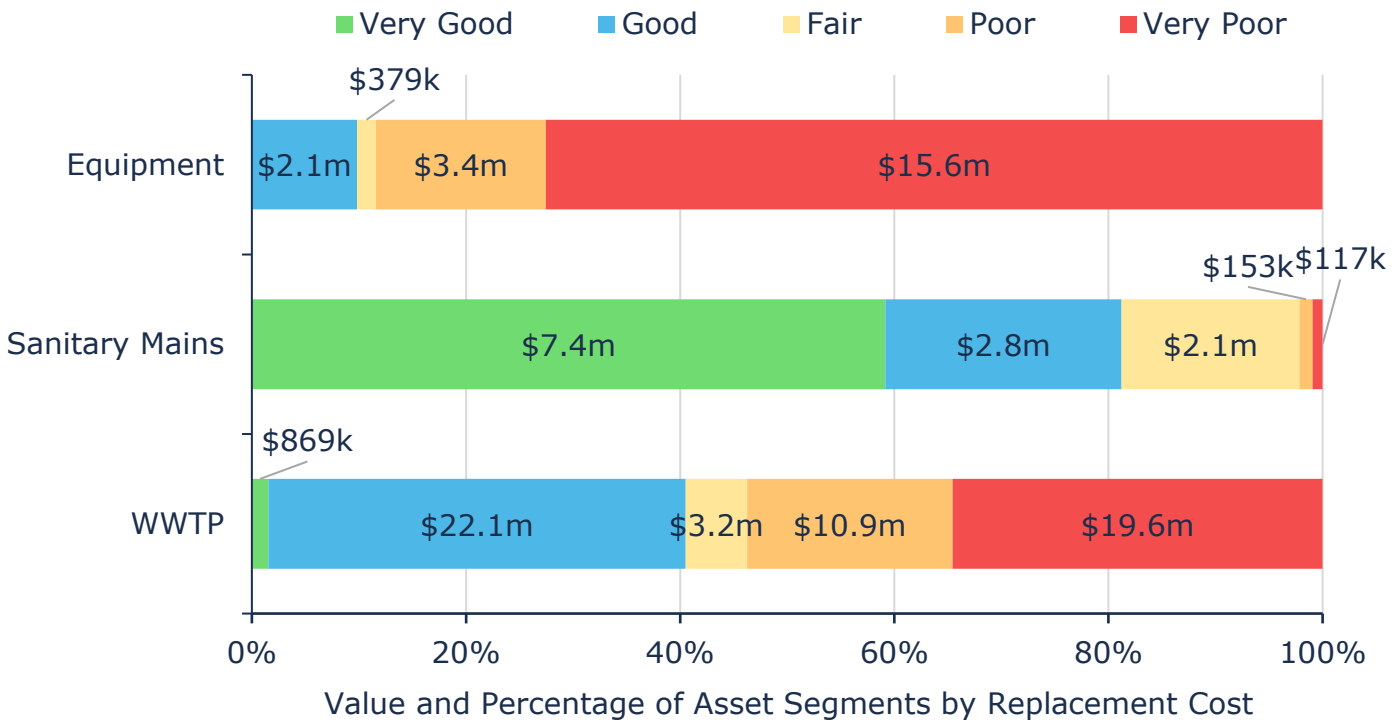


Figure 35 Asset Condition: Sanitary Sewer Network by Segment

7.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential long-term replacement spikes.

Figure 36 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

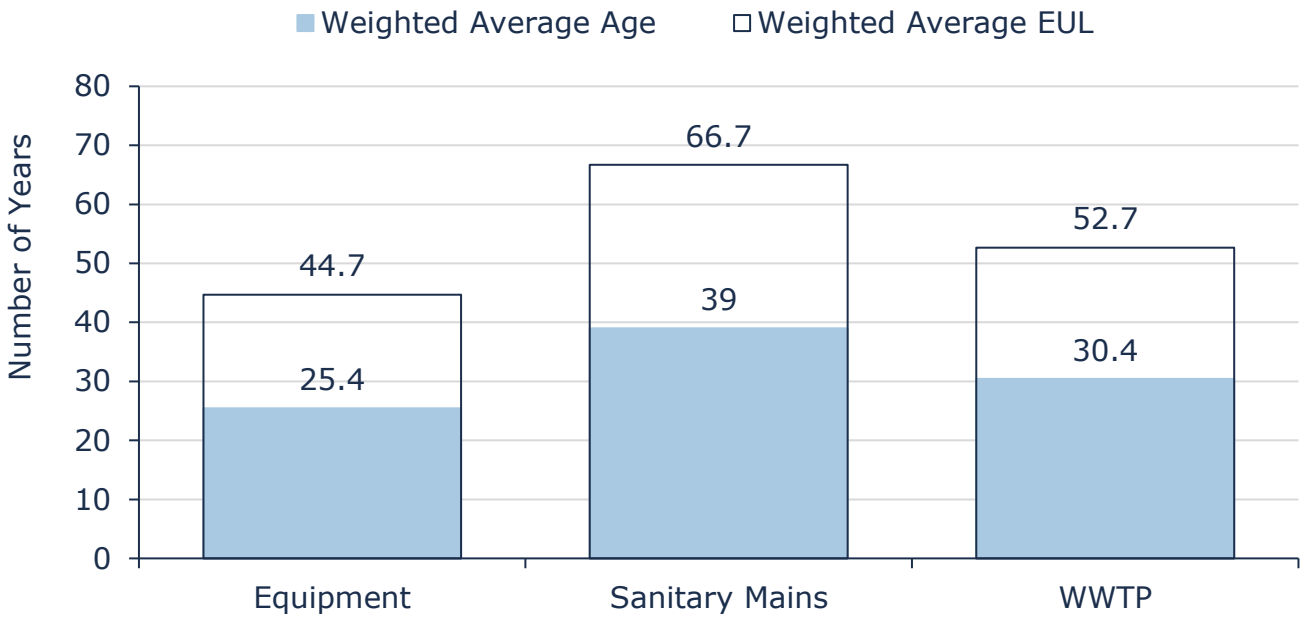


Figure 36 Estimated Useful Life vs. Asset Age: Sanitary Sewer Network

7.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance	Routine maintenance activities include regular inspections of manholes and pumping stations, particularly during inclement weather conditions that may impact system performance. Maintenance efforts focus on preventing sewer surcharges and backups into properties, with daily inspections conducted in designated quadrants of the community to identify and address potential issues promptly.
Rehabilitation	Rehabilitation activities encompass trenchless relining, structural repairs, and upgrades to outdated systems. These initiatives are initiated based on findings from CCTV inspections, visual assessments, and historical performance data. The Town prioritizes rehabilitation projects to enhance system reliability, reduce maintenance costs, and extend the operational lifespan of sewer infrastructure.
Replacement	Assets approaching the end of their service life or experiencing frequent failures are prioritized for replacement. Replacement decisions are informed by condition assessments and the criticality of each asset to the overall functionality of the Sanitary Sewer collection and treatment system.

Activity Type	Description of Current Strategy
	Assets approaching the end of their service life or experiencing frequent failures are prioritized for replacement. Replacement decisions are informed by condition assessments and the criticality of each asset to the overall functionality of the Sanitary Sewer collection and treatment system.

Table 23 Lifecycle Management Strategy: Sanitary Sewer Network

7.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, traffic data, and road class. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$7,823,724	$4,651,283	$3,852,514	$25,004,080	$49,333,117
(9%)	(5%)	(4%)	(28%)	(54%)

Figure 37 Risk Matrix: Sanitary Sewer Network

7.6 Levels of Service

The tables that follow summarize the Town's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Town has selected for this AMP.

7.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description, which may include maps of the user groups or areas of the town that are connected to the municipal sanitary sewer system	See Appendix C
Reliability	Description of how combined sewers in the municipal sanitary sewer system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes	Combined Sewer Overflows (CSO) in Smiths Falls is designed in such a way to act as a relief valve for the system preventing backups in the North End of Town. There is currently one Combined Sewer Overflow (CSO) point within the Town, located on Old Mill Road.
	Description of the frequency and volume of overflows in combined sewers in the municipal sanitary sewer system that occur in habitable areas or beaches	Overflow is monitored for flow, duration, and volume, with information being part of the Town's daily report. An overflow event would trigger an alarm and alert an operator to perform an inspection and sampling. Overflow is discharged to a ditch and into the Rideau River.
	Description of how stormwater can get into sanitary sewers in the municipal sanitary sewer system, causing sewage to overflow into streets or back up into homes	Storm water 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.

Service Attribute	Qualitative Description	Current LOS (2024)
	Description of how sanitary sewers in the municipal sanitary sewer system are designed to be resilient to stormwater infiltration	Smiths Falls follows a series of design standards that integrate servicing requirements and land use considerations when constructing or replacing sanitary sewers. Certain sections of the current system are susceptible to inflow and infiltration issues. To address this, they utilize SDR-PVC pipes with gasketed joints, effectively preventing infiltration. Furthermore, all sections of the manholes are sealed to mitigate any potential infiltration concerns.
	Description of the effluent that is discharged from sewage treatment plants in the municipal sanitary sewer system	Effluent refers to water pollution that is discharged from a Sanitary Sewer treatment plant, and may include suspended solids, total phosphorus and biological oxygen demand. Environmental Compliance Approval (ECA) identifies the effluent criteria for municipal Sanitary Sewer treatment plants.

Table 24 O. Reg. 588/17 Community Levels of Service: Sanitary Sewer Network

7.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	% Of properties connected to the municipal Sanitary Sewer system	99%
Reliability	# Of events per year where combined sewer flow in the municipal Sanitary Sewer system exceeds system capacity compared to the total number of properties connected to the municipal Sanitary Sewer system	4:3557
	# Of connection-days per year having Sanitary Sewer backups compared to the total number of properties connected to the municipal Sanitary Sewer system	21:3557
	# Of effluent violations per year due to Sanitary Sewer discharge compared to the total number of properties connected to the municipal Sanitary Sewer system	21:3557

Table 25 O. Reg. 588/17 Technical Levels of Service: Sanitary Sewer Network

7.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Poor 37	Fair 53	Refer to section 13.	Refer to section 14
Average risk rating[9]	High 15.3	High 12.9		

Table 26 O. Reg. 588/17 Proposed LOS: Sanitary Sewer Network

[9] See *Risk & Criticality*

8. Storm Network

8.1 Inventory & Valuation

Table 27 summarizes the quantity and current replacement cost of all storm water management assets available in the Town's asset register.

Segment	Quantity (components)	Unit of Measure	Replacement Cost	Primary RC Method
Combined Sewer Mains	26,024	Length (m), Quantity	$11,129,030	Cost per Unit
Storm Mains	24,647	Length (m), Quantity	$18,287,800	Cost per Unit
TOTAL			**$29,416,830**	

Table 27 Detailed Asset Inventory: Storm Network

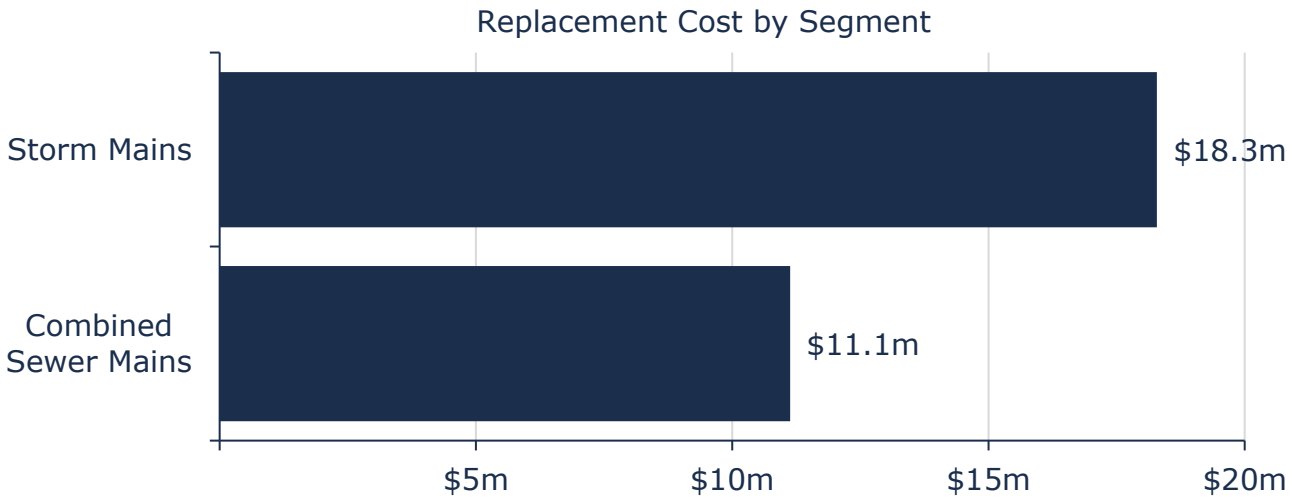


Figure 38 Portfolio Valuation: Storm Network

8.2 Asset Condition

Figure 39 summarizes the replacement cost-weighted condition of the Town's storm network assets. Based on both field inspection and age data, approximately 67% of assets are in good to better condition. The remaining 33% are poor to very poor condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

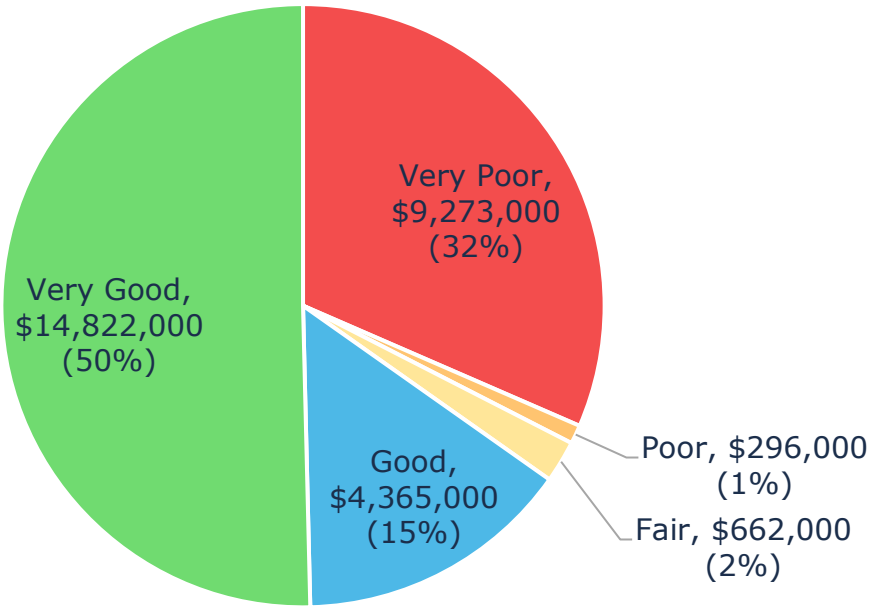


Figure 39 Asset Condition: Storm Overall

Figure 40 summarizes the age-based condition of storm network assets. The analysis illustrates that most storm mains are in fair or better condition.

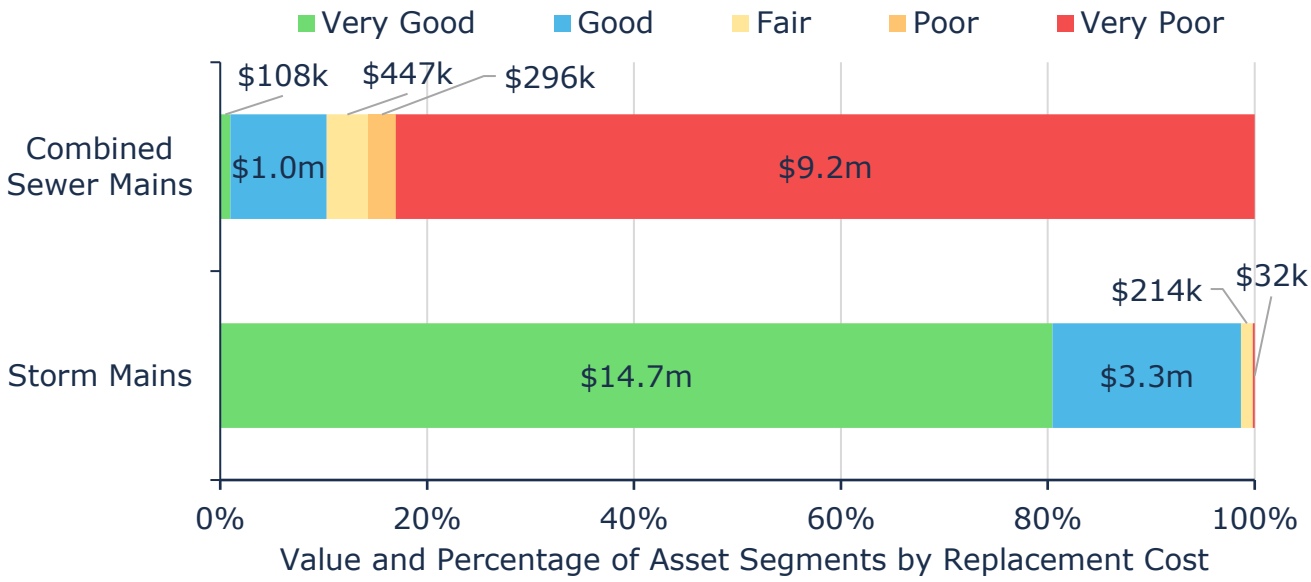


Figure 40 Asset Condition: Storm Network by Segment

8.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 41 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

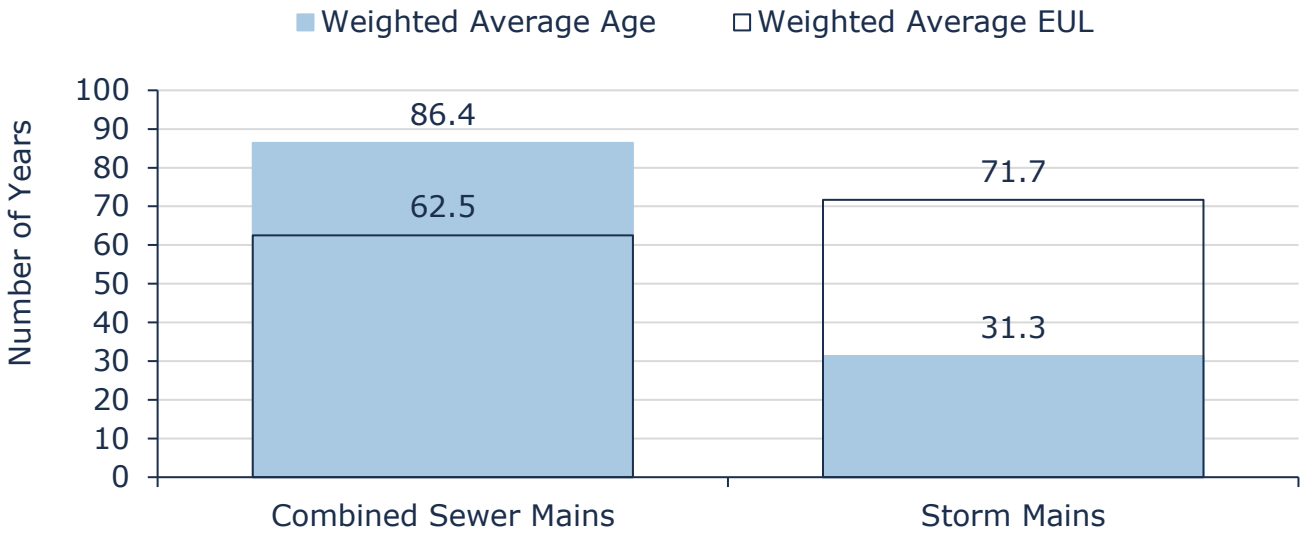


Figure 41 Estimated Useful Life vs. Asset Age: Storm Network

Age analysis reveals that, on average, combined sewer mains are well beyond their expected lifecycle, indicating a high priority for renewal. In contrast, storm mains are in a moderate stage of their lifecycle, with less than half of their useful life consumed. The expected useful life varies between the two, with combined sewer mains at 62.5 years and storm mains at 71.7 years.

8.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance	Regular cleaning of sewer lines based on findings from CCTV inspection reports to prevent blockages and maintain optimal flow.
	Routine maintenance to ensure catch basins remain clear and functional, minimizing the risk of flooding.
Rehabilitation	Rehabilitation activities encompass trenchless relining, structural repairs, and upgrades to outdated systems. Rehabilitation decisions are prompted by CCTV inspections identifying defects and structural assessments indicating deterioration.
Replacement	Combined sewers are prioritized for replacement to separate storm and sanitary flows, contingent on available budgetary resources.

Table 28 Lifecycle Management Strategy: Storm Network

8.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. As no attribute data was available for storm assets, the risk ratings for assets were calculated using only these required, minimum asset fields.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low** $8,292,625 (28%)	5 - 7 **Low** $12,874,605 (44%)	8 - 9 **Moderate** $2,244,961 (8%)	10 - 14 **High** $4,794,393 (16%)	15 - 25 **Very High** $1,210,247 (4%)

Figure 42 Risk Matrix: Storm Network

8.6 Levels of Service

The tables that follow summarize the Town's current levels of service with respect to prescribed KPIs under Ontario Regulation 588/17 as well as any additional performance measures that the Town has selected for this AMP.

8.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description, which may include map, of the user groups or areas of the town that are protected from flooding, including the extent of protection provided by the municipal storm system	See Appendix C

Table 29 O. Reg. 588/17 Community Levels of Service: Storm Network

8.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)

Scope	% of properties in town resilient to 100-year storm	TBD[10]
	% of the municipal storm network resilient to a 5-year storm	90%[11]

Table 30 O. Reg. 588/17 Technical Levels of Service: Storm Network

8.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Fair 58	Good 67	Refer to section 13.	Refer to section 14
Average risk rating[12]	Low 7	Low 7.4		

Table 31 O. Reg. 588/17 Proposed LOS: Storm Network

[10] There is currently not enough sufficient data to accurately track this metric
[11] An estimate based on historical trends and internal subject matter expertise
[12] See *Risk & Criticality*

Category Analysis: Non-Core Assets

9. Facilities

9.1 Inventory & Valuation

Table 32 summarizes the quantity and current replacement cost of all facility assets available in the Town's asset register.

Segment	Quantity (Components)	Unit of Measure	Replacement Cost	Primary RC Method
Airport	9	Quantity	$2,496,626	CPI
Community Services	95	Quantity	$20,383,868	CPI
General Government	17	Quantity	$6,156,437	CPI
Protection Services	39	Quantity	$9,922,805	CPI
Public Works	34	Quantity	$2,127,592	CPI
Recreational Services	64	Quantity	$12,777,515	CPI
TOTAL			**$53,864,843**	

Table 32 Detailed Asset Inventory: Facilities

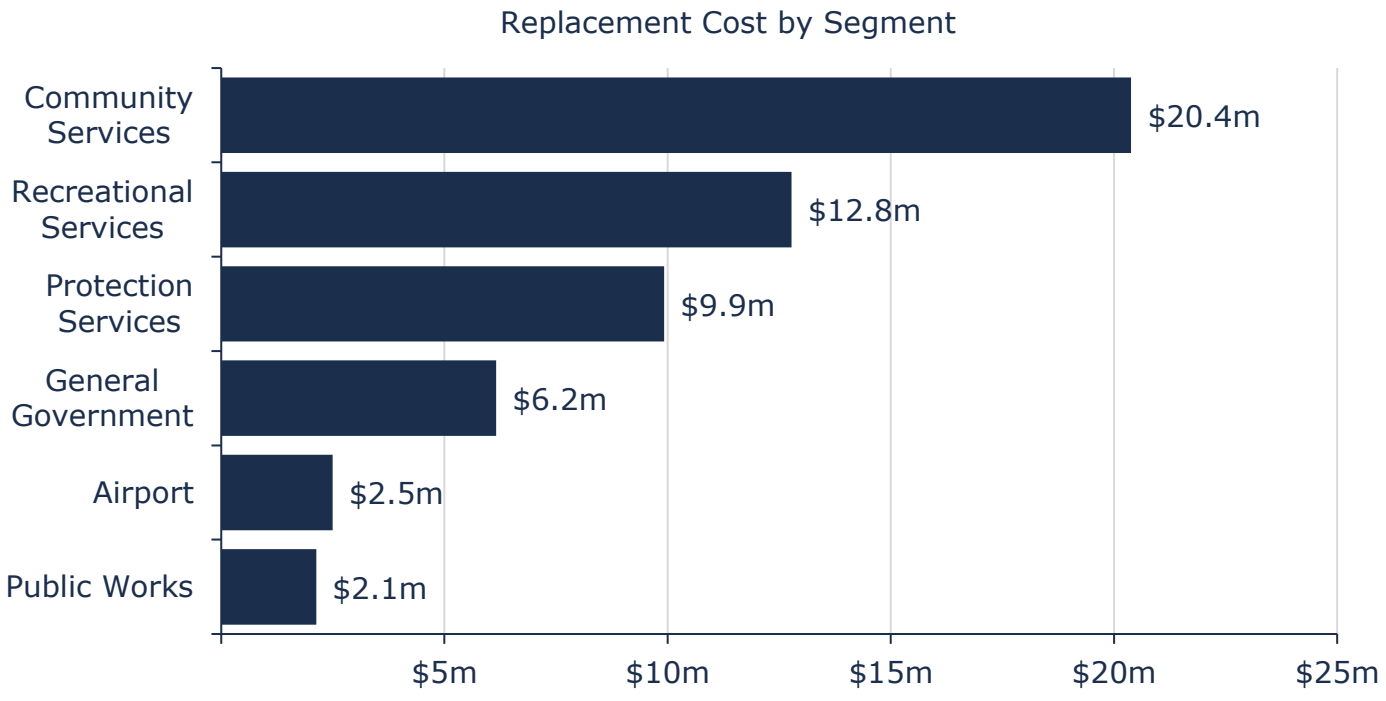


Figure 43 Portfolio Valuation: Facilities

9.2 Asset Condition

Figure 44 summarizes the replacement cost-weighted condition of the Town's buildings portfolio. Based on both field inspection and age data, 73% of facility assets are in fair or better condition; however, 27%, with a current replacement cost of more than $14.6 million are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As buildings are not componentized, condition data is presented only at the site level, rather than at the individual element or component level within each building. This drawback is further compounded by the lack of assessed condition data, requiring the use of age-based estimates.

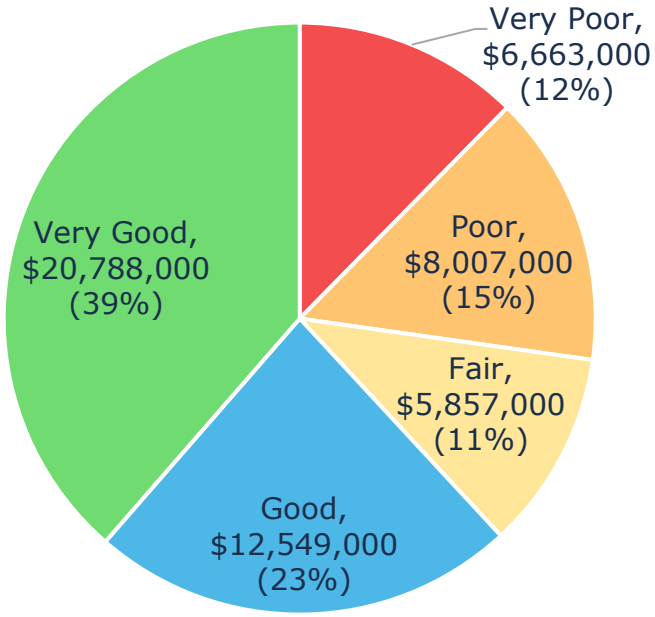


Figure 44 Asset Condition: Facilities Overall

Figure 45 summarizes the condition of buildings by each department. A substantial portion of airport and public works assets are in poor to worse condition. However, in the absence of componentization, this data has limited value. Componentization of assets and integration of condition assessments will provide a more accurate and reliable estimation of the condition of various facilities.

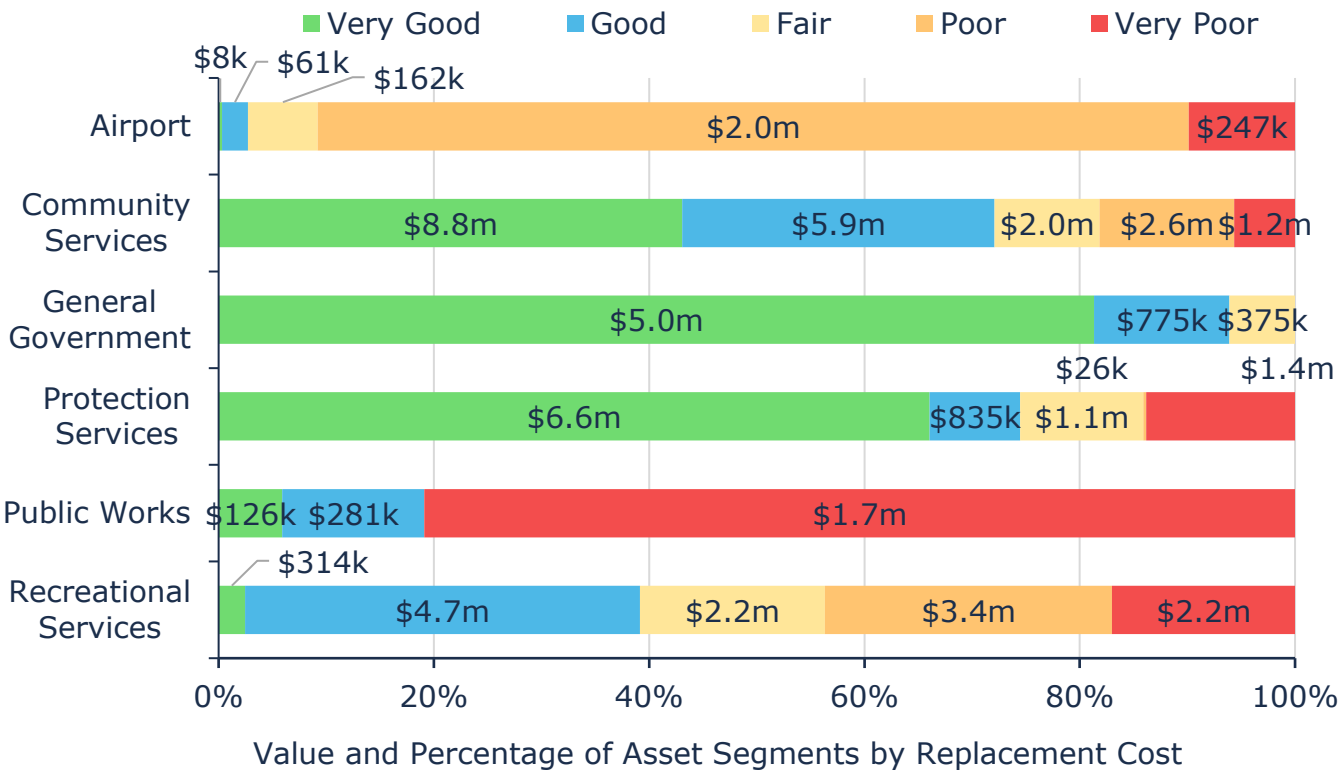


Figure 45 Asset Condition: Facilities by Segment

Facilities assets are unique in that they rarely require the need for replacement based solely on condition. It is typical that, in addition to condition, other factors, such as capacity, will impact on the asset's ability to serve the purpose originally intended.

9.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 46 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

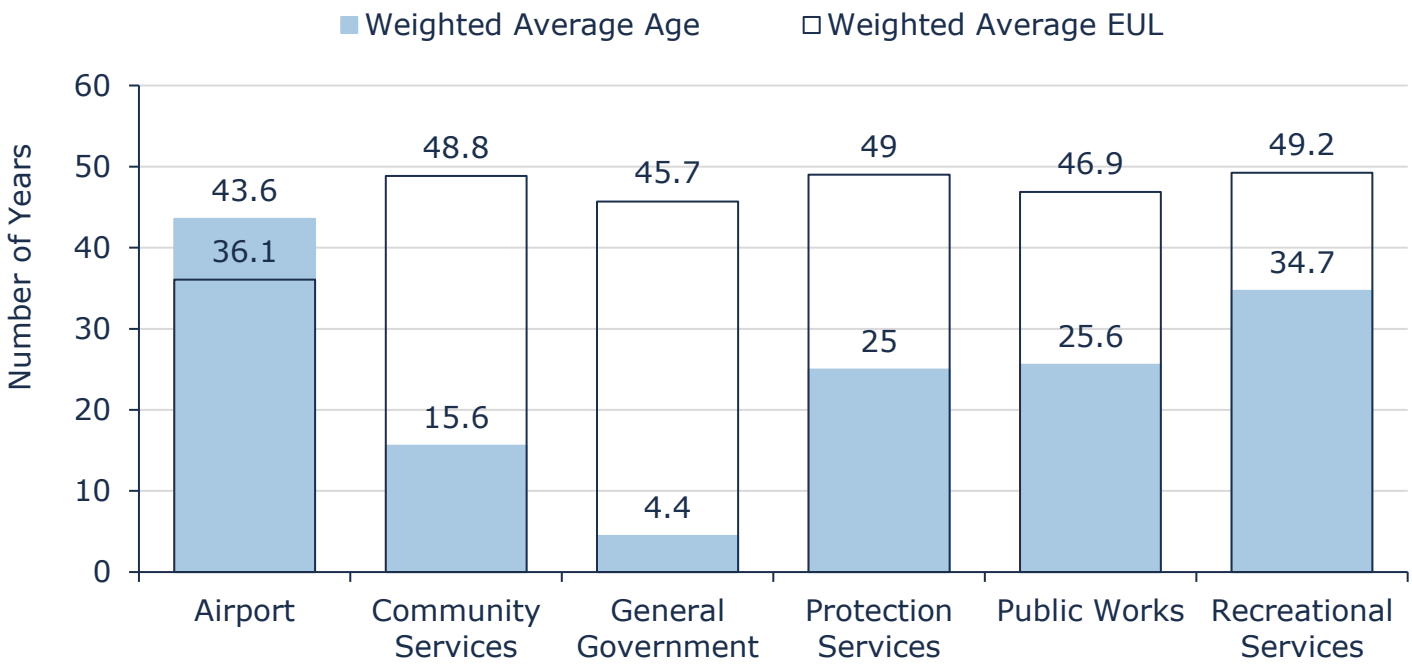


Figure 46 Estimated Useful Life vs. Asset Age: Facilities

Age analysis reveals that Airport assets are, on average, well beyond their expected lifecycle, with an average age of 43.6 years compared to a useful life of just 36.1 years—indicating an urgent need for renewal. Recreational Services assets are also approaching the end of their lifecycle, having consumed over 70% of their expected lifespan. In contrast, Community Services and General Government assets are relatively new, with less than one-third and one-tenth of their useful life consumed, respectively. Protection Services and Public Works assets fall in the mid-range, with approximately 50–55% of their lifecycle used. Once again, this analysis presented only at the site level, rather than at the individual element or component level. Useful and meaningful age analysis for buildings is entirely predicated on effective componentization.

9.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

Table 33 outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Regular maintenance encompasses HVAC servicing, fire suppression system inspections, specialized equipment assessments, water line evaluations, and overall building condition checks. Minor and major repairs are promptly addressed as needed. Maintenance actions are typically prompted by identified safety issues or structural/infrastructural deficiencies.
Rehabilitation	Rehabilitation efforts entail tasks such as replacing hot water heaters/boilers, repairing windows, and upgrading HVAC systems. These actions are undertaken based on the findings of inspections conducted.
Replacement	Replacement becomes necessary when a facility's condition has significantly deteriorated, rendering continued maintenance and rehabilitation impractical from a cost perspective. Assets nearing the end of their expected service life or experiencing frequent and costly repairs are given priority for replacement.

Table 33 Lifecycle Management Strategy: Facilities

9.5 Risk Analysis

The risk matrix below is generated using available asset data, including service life remaining, replacement costs, and building department. The risk ratings for assets without useful attribute data were calculated using only age, service life remaining, and their replacement costs.

The matrix classifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$14,465,848	$20,559,302	$6,286,641	$3,214,340	$9,338,712
(27%)	(38%)	(12%)	(6%)	(17%)

Figure 47 Risk Matrix: Facilities

9.6 Levels of Service

The tables that follow summarize the Town's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Town has selected for this AMP.

9.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Types of facility assets that the Town operates and maintains	• Airport • Cemetery • Community & Recreation Centres • Library • Police Services • Town Hall
Quality	Description of criteria for rehabilitation and replacement decisions	See section 9.4Current Approach to Lifecycle Management

Table 34 Community Levels of Service: Facilities

9.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	Average condition rating	65
Quality	Average risk rating	7.7

Table 35 Technical Levels of Service: Facilities

9.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Good 65	Fair 59	Refer to section 13.	Refer to section 14
Average risk rating[13]	Low 7.7	Moderate 8.8		

Table 36 O. Reg. 588/17 Proposed LOS: Facilities

[13] See *Risk & Criticality*

10. Land Improvements

10.1 Inventory & Valuation

Table 37 summarizes the quantity and current replacement cost of all land improvement assets available in the Town's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Fields and Courts	5	Quantity	$228,622	CPI
Outdoor Structures	22	Quantity	$1,420,165	CPI
Parks	15	Quantity	$1,332,757	CPI
TOTAL			**$2,981,544**	

Table 37 Detailed Asset Inventory: Land Improvements

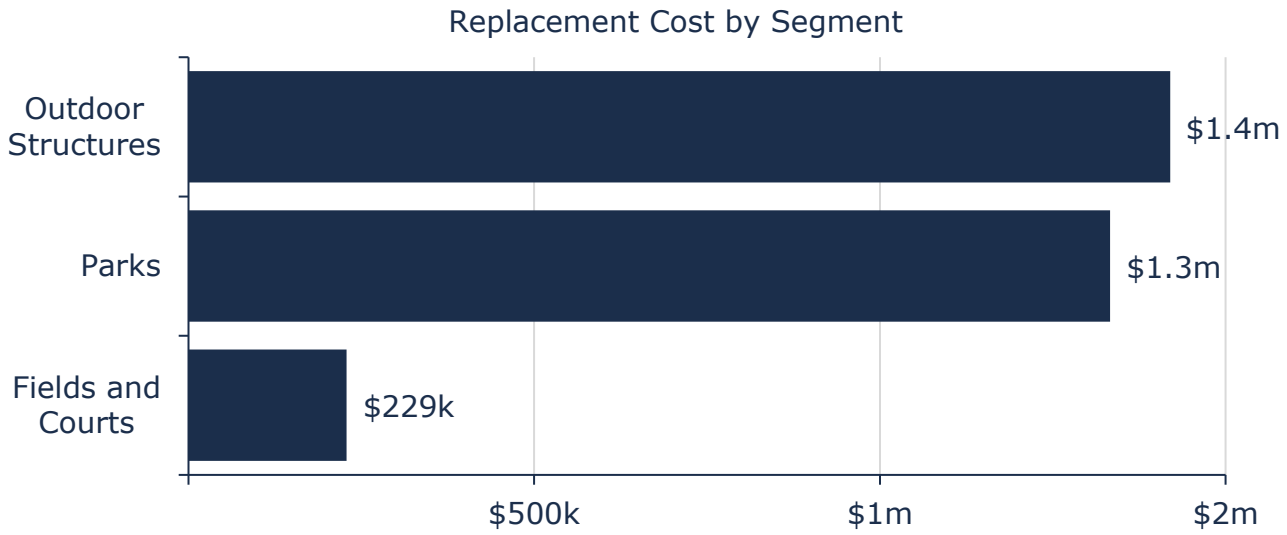


Figure 48 Portfolio Valuation: Land Improvements

10.2 Asset Condition

Figure 49 summarizes the replacement cost-weighted condition of the Town's land improvement portfolio. Based on a combination of field inspection data and age, 78% of assets are in fair or better condition, the remaining 22% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

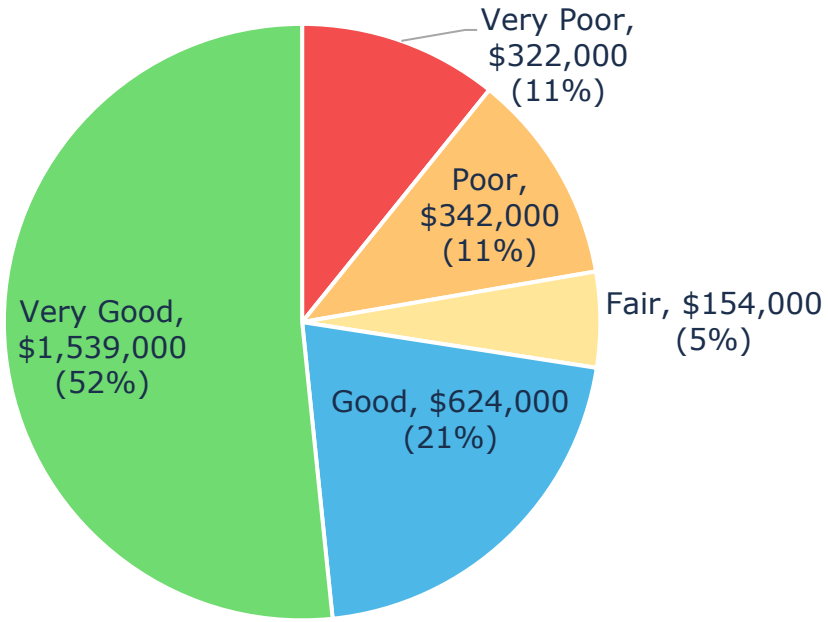


Figure 49 Asset Condition: Land Improvements Overall

Figure 50 summarizes the condition of land improvements by each asset type. Assets in poor or worse condition are primarily concentrated in fields and courts.

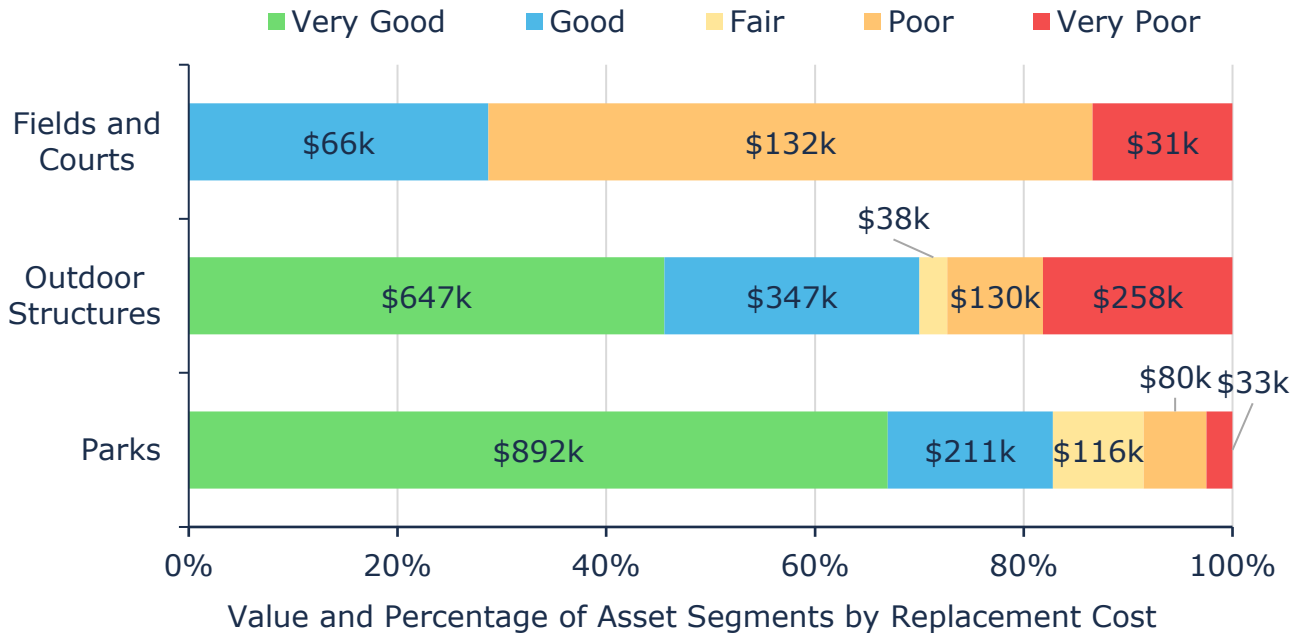


Figure 50 Asset Condition: Land Improvements by Segment

10.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 51 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

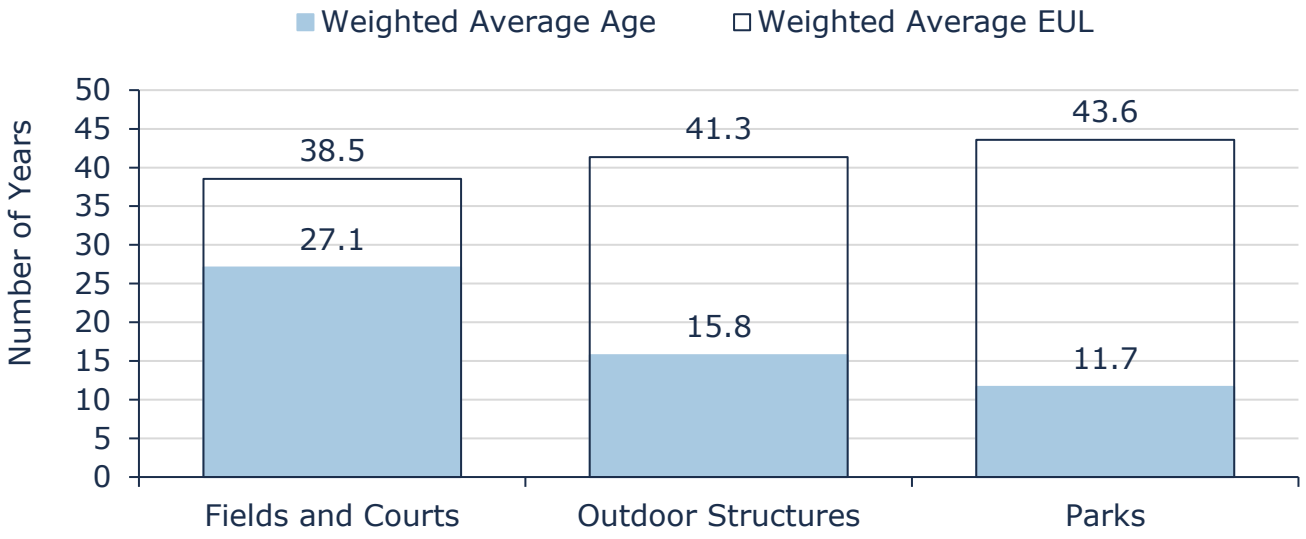


Figure 51 Estimated Useful Life vs. Asset Age: Land Improvements

Age analysis reveals that Fields and Courts are the most aged assets, with an average age of 27.1 years, about 70% of their expected useful life of 38.5 years. Outdoor Structures and Parks are in earlier stages of their lifecycle, with average ages of 15.8 and 11.7 years respectively, representing roughly 38% and 27% of their expected lives.

10.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

Table 38 outlines the Town's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Regular inspections and minor repairs are conducted weekly, and vegetation management activities are performed to upkeep the areas. Maintenance actions are prompted by customer complaints and staff observations.
Rehabilitation	Rehabilitation occurs as needed, particularly when regular safe use of the area is compromised.
Replacement	Replacement follows industry standards, with priority given to assets with the highest usage and those approaching the end of their life cycle.

Table 38 Lifecycle Management Strategy: Land Improvements

10.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low** $1,104,929 (37%)	5 - 7 **Low** $1,055,192 (35%)	8 - 9 **Moderate** $244,779 (8%)	10 - 14 **High** $260,173 (9%)	15 - 25 **Very High** $316,471 (11%)

Figure 52 Risk Matrix: Land Improvements

10.6 Levels of Service

The tables that follow summarize the Town's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Town has selected for this AMP.

10.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description, which may include maps, of the types of land improvements that the Town operates and maintains.	• Fields and Courts • Outdoor Structures • Parks
Quality	Description of criteria for rehabilitation and replacement decisions	See Section 10.4

Table 39 Community Levels of Service: Land Improvements

10.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	Average condition rating	70
Quality	Average risk rating	7

Table 40 Technical Levels of Service: Land Improvements

10.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Good 70	Fair 50	Refer to section 13.	Refer to section 14
Average risk rating[14]	Low 7	Moderate 9.5		

Table 41 O. Reg. 588/17 Proposed LOS: Land Improvements

[14] See *Risk & Criticality*

11. Vehicles

11.1 Inventory & Valuation

Table 42 summarizes the quantity and current replacement cost of all vehicle assets available in the Town's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Protection Services	13	Quantity	$5,332,492	User-Defined
Public Works	15	Quantity	$1,540,009	CPI
Recreational	2	Quantity	$89,578	CPI
TOTAL			**$6,962,079**	

Table 42 Detailed Asset Inventory: Vehicles

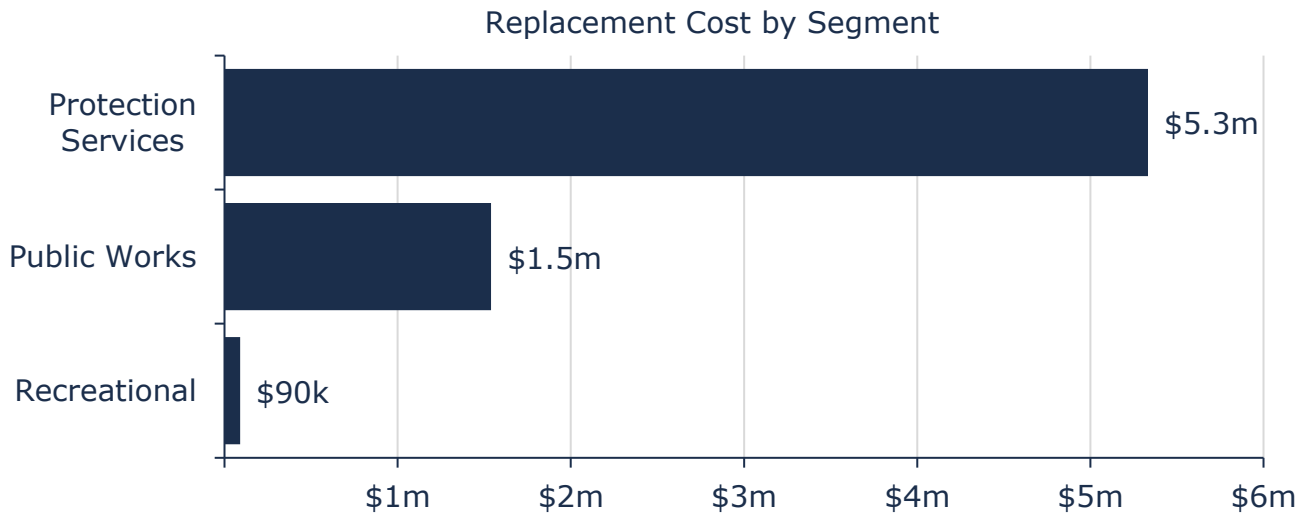


Figure 53 Portfolio Valuation: Vehicles

11.2 Asset Condition

Figure 54 summarizes the replacement cost-weighted condition of the Town's vehicles portfolio. Based on a combination of field inspection data and age, 72% of vehicles are in fair or better condition, with the remaining 28% in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

Condition data was available for 74% of vehicles, based on replacement costs; age was used to estimate condition for the remaining 26% of assets.

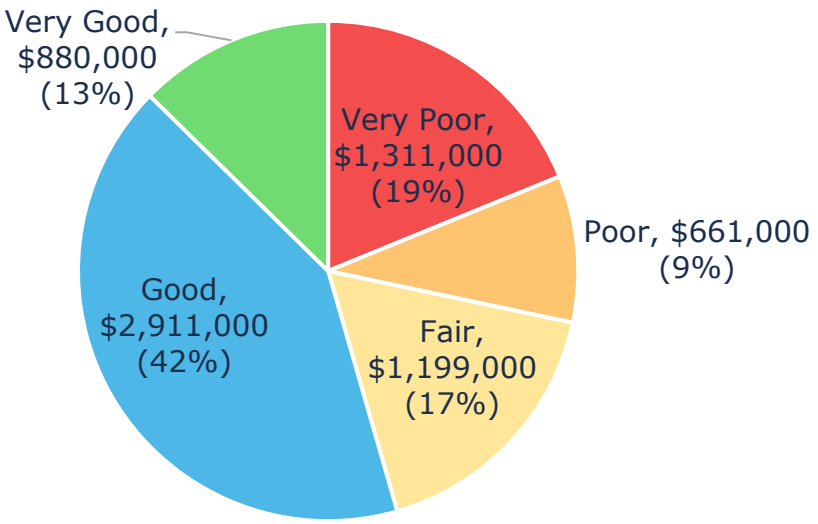


Figure 54 Asset Condition: Vehicles Overall

Figure 55 summarizes the condition of vehicles by each department. Most protection services and public works vehicles are in fair or better condition.

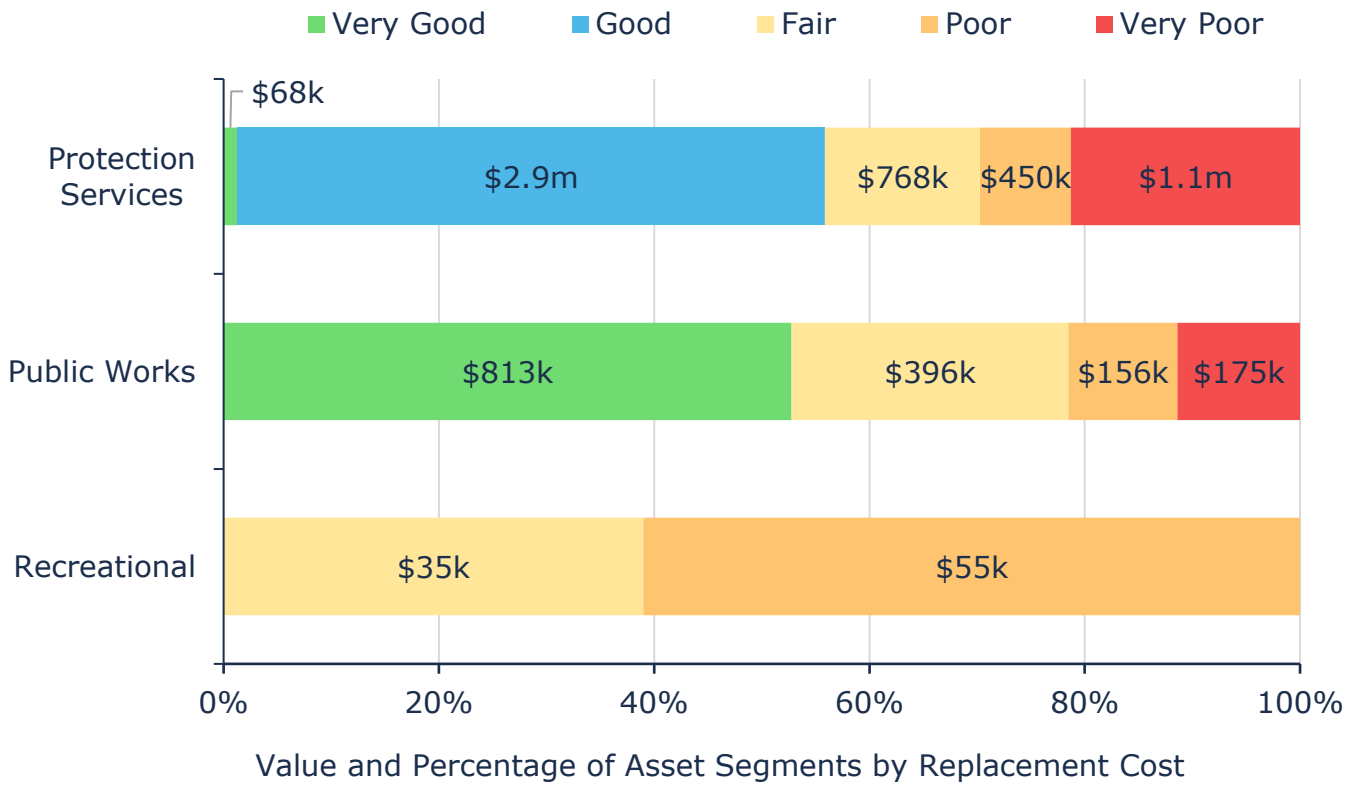


Figure 55 Asset Condition: Vehicles by Segment

11.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 56 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

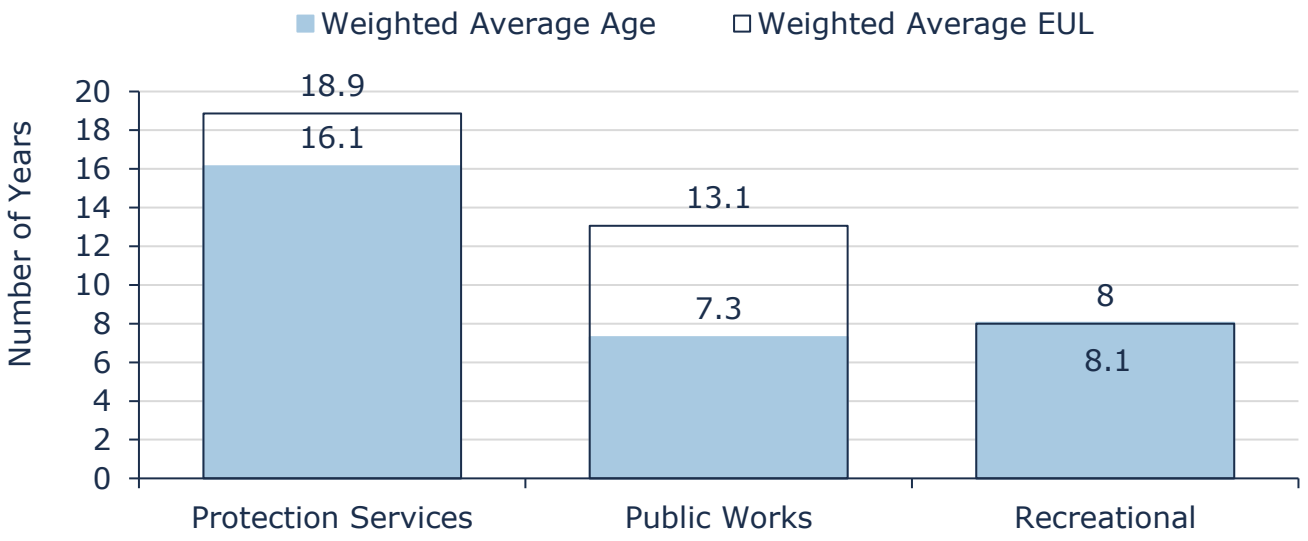


Figure 56 Estimated Useful Life vs. Asset Age: Vehicles

Age analysis indicates that Protection Services assets are nearing the end of their lifecycle, with 85% (16.1 of 18.9 years) of their expected useful life consumed. Public Works assets are at the mid-life stage, with 56% of their lifecycle used. Recreational assets, however, appear to have exceeded their estimated useful life, with an average age of 8.1 years compared to an expected life of 8 years.

11.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance / Rehabilitation	Maintenance tasks such as oil changes are performed according to manufacturers' recommendations. Police vehicles are equipped with winter tires, and tire replacements are scheduled during annual inspections. Geotab systems in Police vehicles provide notifications for necessary maintenance. Daily inspection sheets are completed prior to vehicle usage, with weekly inspection reports for Police vehicles. Maintenance activities are initiated based on inspection findings, addressing safety and mechanical issues identified, such as engine lights and abnormal noises.
Replacement	Smaller vehicles are replaced entirely, while larger vehicles such as construction equipment and fire apparatuses are considered for replacement based on their condition and available budget resources.
	Replacement decisions are guided by Estimated Useful Life (EUL) assessments conducted during annual inspections, in addition to repair costs and overall vehicle condition.

Table 43 Lifecycle Management Strategy: Vehicles

11.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, replacement costs, and department or service area. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low**	5 - 7 **Low**	8 - 9 **Moderate**	10 - 14 **High**	15 - 25 **Very High**
$1,086,599 (16%)	$1,329,322 (19%)	$3,357,236 (48%)	$88,922 (1%)	$1,100,000 (16%)

Figure 57 Risk Matrix: Vehicles

11.6 Levels of Service

The tables that follow summarize the Town's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Town has selected for this AMP.

11.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description of the types of vehicles assets that the Town operates and maintains	• Protection Services • Public Works • Recreational
Quality	Description of criteria for rehabilitation and replacement decisions and any related long-term forecasts	See section 11.4

Table 44 Community Levels of Service: Vehicles

11.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	Average condition rating	52
Quality	Average risk rating	9

Table 45 Technical Levels of Service: Vehicles

11.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Fair 52	Fair 42	Refer to section 13.	Refer to section 14
Average risk rating[15]	Moderate 9	High 13		

Table 46 O. Reg. 588/17 Proposed LOS: Vehicles

[15] See *Risk & Criticality*

12. Machinery & Equipment

12.1 Inventory & Valuation

Table 47 summarizes the quantity and current replacement cost of all machinery & equipment available in the Town's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Community Services	27	Quantity	$719,792	CPI
General Government	4	Quantity	$267,102	CPI
Protection Services	29	Quantity	$1,827,131	CPI
Public Works	20	Quantity	$981,282	CPI
Recreational Services	32	Quantity	$1,460,945	CPI
TOTAL			**$5,256,252**	

Table 47 Detailed Asset Inventory: Machinery & Equipment

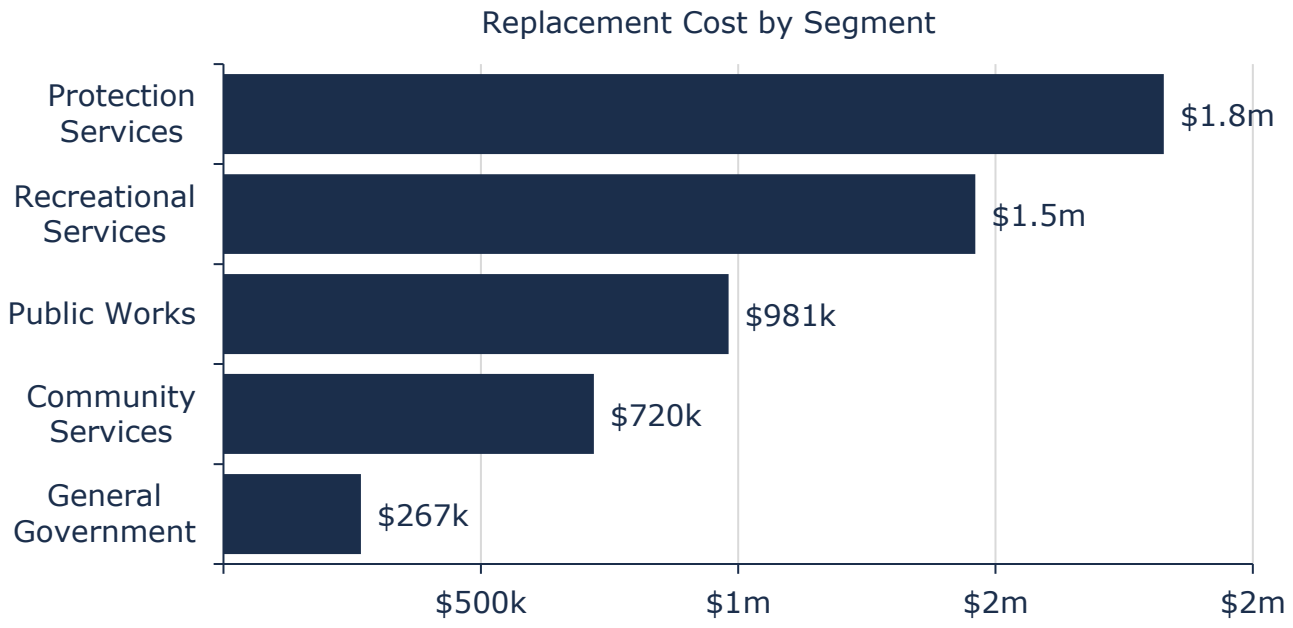


Figure 58 Portfolio Valuation: Machinery & Equipment

12.2 Asset Condition

Figure 59 summarizes the replacement cost-weighted condition of the Town's machinery and equipment portfolio. Based on a combination of assessed conditions and age data, 50% of assets are in fair or better condition; the remaining 50% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

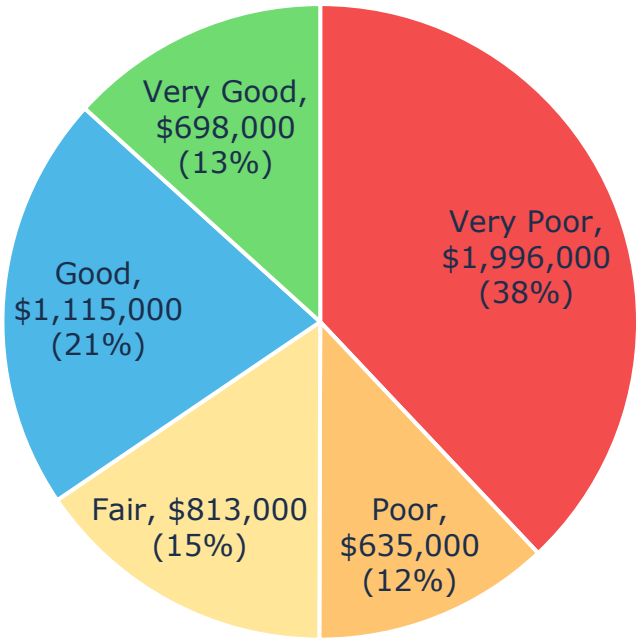


Figure 59 Asset Condition: Machinery & Equipment Overall

Figure 60 summarizes the condition of machinery & equipment by each department.

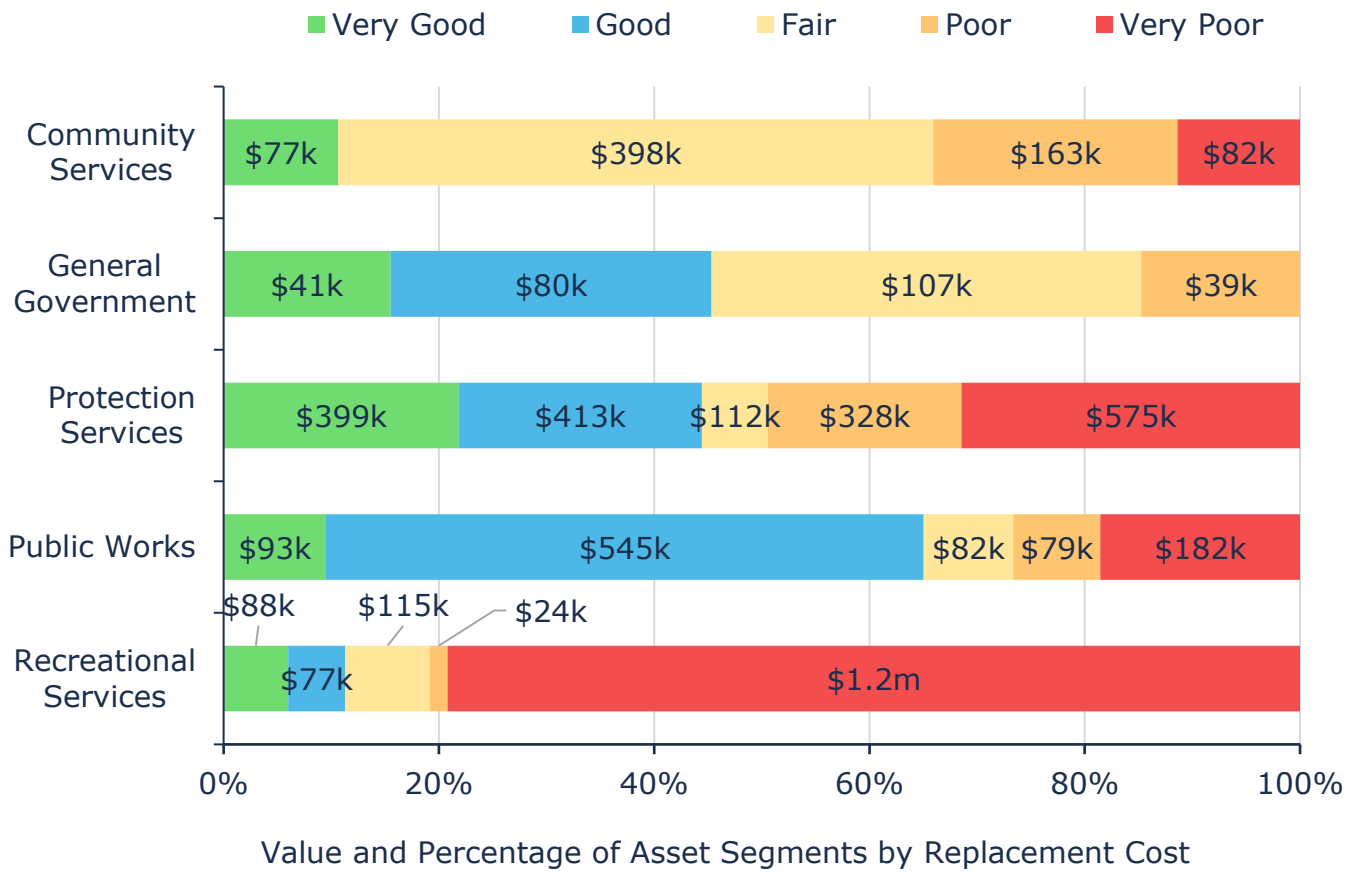


Figure 60 Asset Condition: Machinery & Equipment by Segment

12.3 Age Profile

An asset's age profile comprises two key values: estimated useful life (EUL), or design life; and the percentage of EUL consumed. The EUL is the serviceable lifespan of an asset during which it can continue to fulfil its intended purpose and provide value to users, safely and efficiently. As assets age, their performance diminishes, often more rapidly as they approach the end of their design life.

In conjunction with condition data, an asset's age profile provides a more complete summary of the state of infrastructure. It can help identify assets that may be candidates for further review through condition assessment programs; inform the selection of optimal lifecycle strategies; and improve planning for potential replacement spikes.

Figure 61 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

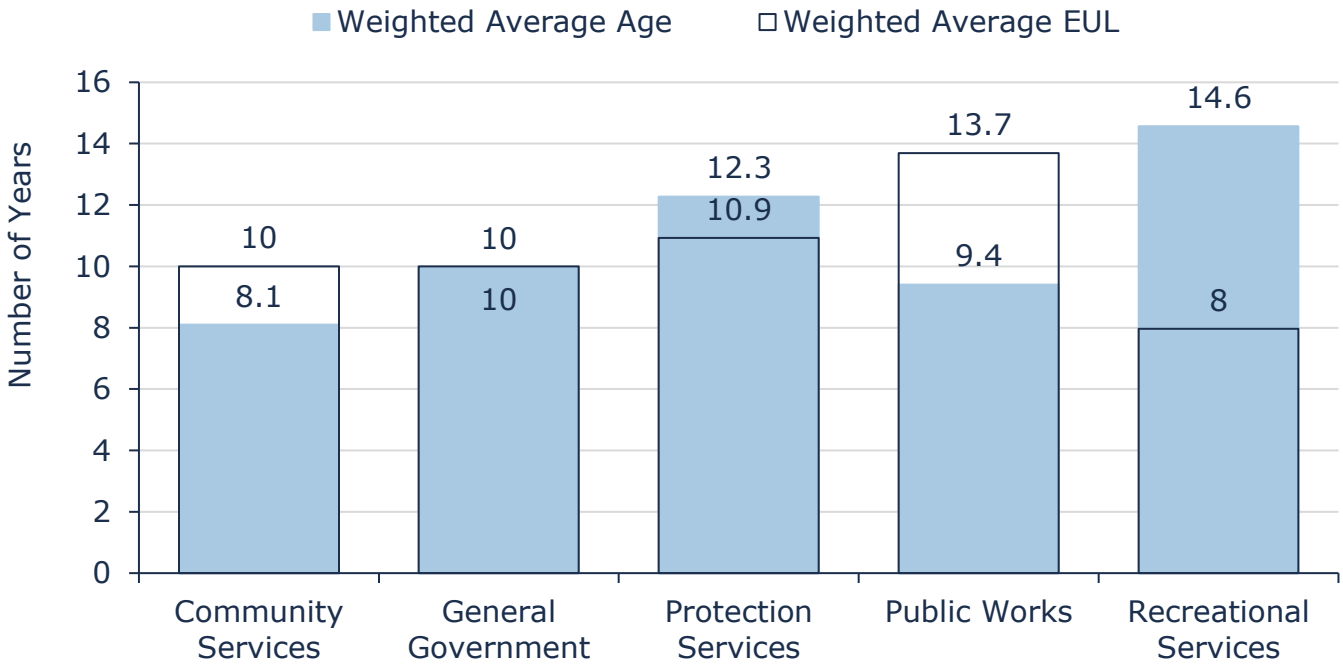


Figure 61 Estimated Useful Life vs. Asset Age: Machinery & Equipment

Age analysis indicates that Recreation and Protection Services assets are significantly beyond their expected service life. Recreational Services assets average 14.6 years in age compared to an 8-year expected useful life, while Protection Services assets are 12.3 years old versus a 10.9-year EUL. General Government assets have reached their full expected lifespan of 10 years. Community Services and Public Works assets remain within their lifecycle, with average ages of 8.1 and 9.4 years against EULs of 10 and 13.7 years, respectively.

12.4 Current Approach to Lifecycle Management

The condition or performance of most assets will deteriorate over time. 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.

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

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Maintenance activities, such as fluid changes and blade sharpening, are performed annually. Daily or yearly inspections are conducted, with triggers including breakdowns or, for recreational equipment, seasonal changes.
Replacement	Police and Fire equipment are replaced in accordance with legislative requirements, particularly for Personal Protective Equipment (PPE), which is replaced preventatively based on mandated schedules.

Table 48 Lifecycle Management Strategy: Machinery & Equipment

12.5 Risk Analysis

The risk matrix below is generated using available asset data, including condition, service life remaining, and replacement costs. The risk ratings for assets without useful attribute data were calculated using only condition, service life remaining, and their replacement costs.

The matrix stratifies assets based on their individual probability and consequence of failure, each scored from 1 to 5. Their product generates a risk index ranging from 1-25. Assets with the highest criticality and likelihood of failure receive a risk rating of 25; those with lowest probability of failure and lowest criticality carry a risk rating of 1. As new data and information is gathered, the Town may consider integrating relevant information that improves confidence in the criteria used to assess asset risk and criticality.

These risk models have been built into the Town's Asset Management Database (Citywide Assets). See *Risk & Criticality* section for further details on approach used to determine asset risk ratings and classifications.

1 - 4 **Very Low**	5 - 7 **Low**	8 - 9 **Moderate**	10 - 14 **High**	15 - 25 **Very High**
$849,836 (16%)	$1,427,163 (27%)	$513,539 (10%)	$1,079,683 (21%)	$1,386,031 (26%)

Figure 62 Risk Matrix: Machinery & Equipment

12.6 Levels of Service

The tables that follow summarize the Town's current levels of service. There are no specifically prescribed KPIs under Ontario Regulation 588/17 for non-core assets, therefore the KPIs below represent performance measures that the Town has selected for this AMP.

12.6.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2024)
Scope	Description of the types of machinery & equipment assets that the Town operates and maintains	• Community Services • General Government • Protection Services • Public Works • Recreational Services

Service Attribute	Qualitative Description	Current LOS (2024)
Quality	Description of criteria for rehabilitation and replacement decisions and any related long-term forecasts	See section 12.4

Table 49 Community Levels of Service: Machinery & Equipment

12.6.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2024)
Scope	Average condition rating	40
Quality	Average risk rating	10.2

Table 50 Technical Levels of Service: Machinery & Equipment

12.7 Proposed Levels of Service

As per O. Reg. 588/17, by July 1, 2025, municipalities are required to consider proposed levels of service (PLOS), discuss the associated risks and long-term sustainability of these service levels, and explain the Town's ability to afford the PLOS.

LOS Metric	Current KPI	Proposed KPI (2034)	Growth	Achievability & Affordability
Average condition rating	Fair 40	Fair 55	Refer to section 13.	Refer to section 14
Average risk rating[16]	High 10.2	Moderate 9.2		

Table 51 O. Reg. 588/17 Proposed LOS: Machinery & Equipment

[16] See *Risk & Criticality*

Strategies

Growth

Financial Strategy

13. Growth

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Town to plan for new infrastructure more effectively, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

13.1 Smiths Falls Official Plan (2014)

The Official Plan of the Town of Smiths Falls was adopted in October 2014. The Official Plan is the cornerstone document essential for the management of future growth, development, and change in Smiths Falls. It provides the policy framework which will guide land use decisions within the Town until the year 2034. The Town estimated growth capacity for a population of approximately 10,100, the development of up to 250 new jobs, and up to 517 new dwelling units through 2034. Since the 2014 forecast, the Town has experienced more than 750 housing starts and significant expansions in industrial and commercial development since 2014.

The Town plans to focus on new growth and intensification of land uses in 'Targeted Growth Areas', while preserving the general character and density of other areas of the Town that are predominantly established detached dwelling neighborhoods. This approach focuses on new growth into relatively compact and centralized locations, thereby reducing fiscal and environmental impacts, fostering walkability and preserving the character of Smiths Falls' established neighborhoods.

Historically, commercial and industrial areas were segregated from residential areas, apart from the downtown area. Land use policy promotes a gradual shift away from the historic pattern of land use separations and allows for more mixing of uses, particularly residential and commercial areas. In particular, lands adjacent to a possible commuter rail station are planned for re-development into a mixed-used area promoting housing and development.

The Town is currently in the process of updating its Official Plan. The updated plan will guide the growth and development of the town for the next 25 years. The proposed updates place importance on five major growth and improvement initiatives including: Downtown Revitalization, Housing, Sustainability, Community Spaces and Transportation & Connections.

13.1.1 Land Needs Analysis Report (2023)

In 2023, Dillon Consulting Ltd prepared a Land Needs Analysis report, incorporating a forecast of population, employment, and housing growth developed by Metroeconomics Inc. The results of the report will be used to inform the Town's update to its Official Plan.

The report projects significant growth in population, employment, and housing. As of 2021, Smiths Falls had a population of approximately 9,500 and 5,300 jobs. Recent investments and increased remote work due to COVID-19 have rejuvenated the town's growth, which had previously stagnated. The town's economic base includes key sectors like manufacturing, health services, and tourism, which constitute 44% of the total workforce.

By 2046, Smiths Falls is projected to see its population rise to around 13,100, an increase of 3,600 people, and its employment to grow by 1,800 jobs, reaching 7,100. Notable job growth is anticipated in sectors such as health care, education, and tourism. Housing demand will also rise, with a forecast need for 1,380 new units, expanding from 4,310 in 2021 to 5,690 by 2046. The housing forecast reflects a shift towards higher density housing, including more townhouses and apartments, in response to changing market trends and demographic shifts. This growth will require careful planning and development to meet the evolving needs of the community.

13.2 Impact of Growth on Lifecycle Activities

As the municipality's population is expected to increase in the coming years, demand will evolve, and it is likely that funding will need to be reprioritized.

As growth-related assets are constructed, retired, or acquired, they should be integrated into the AMP. Furthermore, the municipality will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to achieve the municipality's proposed levels of service.

14. Financial Strategy

For an asset management plan to be effective and meaningful, it must be integrated with financial planning and long-term budgeting. The development of a comprehensive financial plan will allow the Town of Smiths Falls to identify the financial resources required for sustainable asset management based on existing asset inventories, desired levels of service, and projected growth requirements.

This report develops such a financial plan by presenting several scenarios for consideration and culminating with final recommendations. As outlined below, the scenarios presented model different combinations of the following components:

1. The financial requirements for:
    a. Existing assets
    b. Existing/proposed service levels
    c. Requirements of contemplated changes in service
    d. Requirements of anticipated growth
2. Use of traditional sources of municipal funds:
    a. Tax levies
    b. User fees
    c. Debt
    d. Development charges
3. Use of non-traditional sources of municipal funds:
    a. Reallocated budgets
    b. Partnerships
    c. Procurement methods
4. Use of Senior Government Funds:
    a. Canada Community-Building Fund (CCBF)
    b. Annual grants

Note: Periodic grants are normally not included due to Provincial requirements for firm commitments. However, if moving a specific project forward is wholly dependent on receiving a one-time grant, the replacement cost included in the financial strategy is the net of such grant being received.

If the financial plan component results in a funding shortfall, the province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the legitimacy of a funding shortfall, the province may evaluate a Town's approach to the following:

1. To reduce financial requirements, consideration has been given to revising service levels downward.
2. All asset management and financial strategies have been considered. For example:
    a. If a zero-debt policy is in place, is it warranted? If not the use of debt should be considered.
    b. Do user fees reflect the cost of the applicable service? If not, increased user fees should be considered.

14.1 Annual Requirements & Capital Funding

14.1.1 Annual Requirements

The annual requirements represent the amount the Town should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs and achieve long-term sustainability. In total, the Town must allocate approximately $10.6 million annually to address capital requirements for the assets included in this AMP.

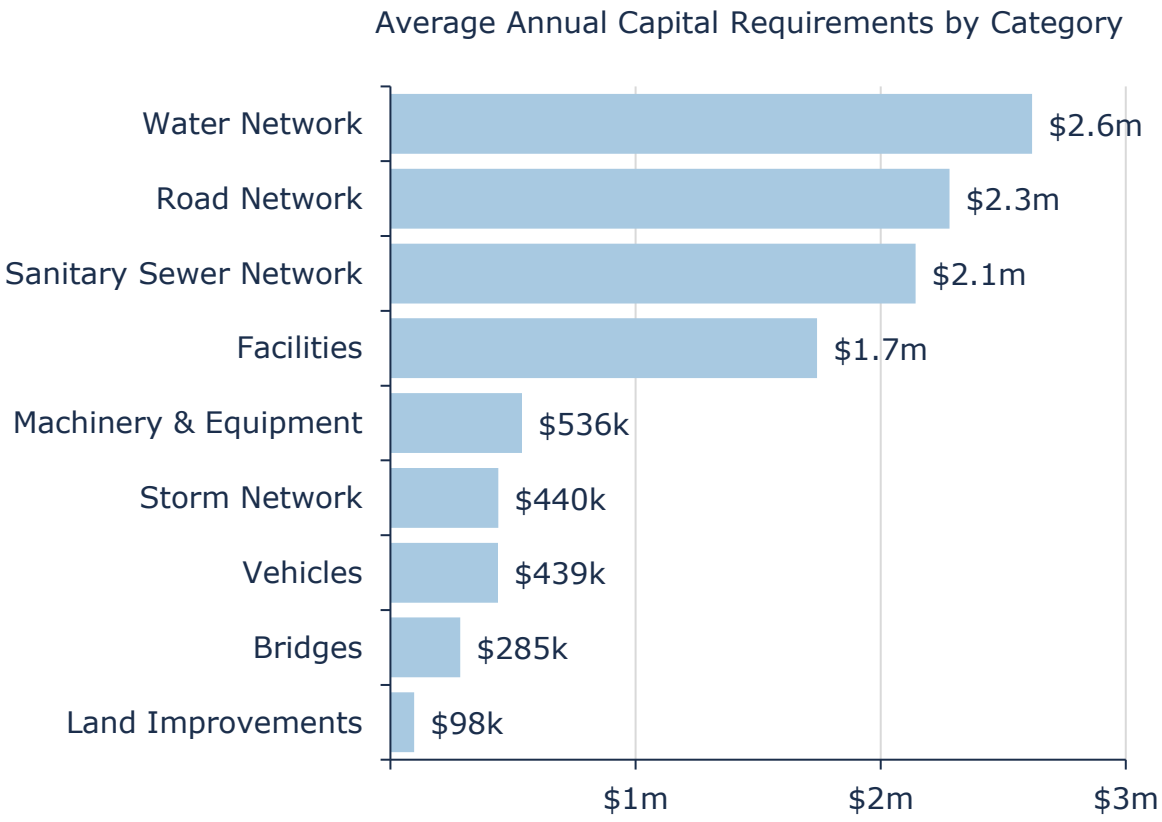


Figure 63 Annual Capital Funding Requirements by Asset Category

Where applicable, lifecycle management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal of some of the main assets in these categories. The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented. The following compares the two different strategies:

1. **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.
2. **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.

The implementation of a proactive lifecycle strategy leads to potential annual cost avoidance and better overall performance. As the lifecycle strategy scenario represents the lowest cost option available to the Town, we have used these annual requirements in the development of the financial strategy.

14.1.2 Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the Town commits $4.7 million in sustainable funding toward capital projects. Given the annual capital requirement of $10.6 million to meet the selected proposed levels of service, this results in a funding gap of $5.9 million per year.

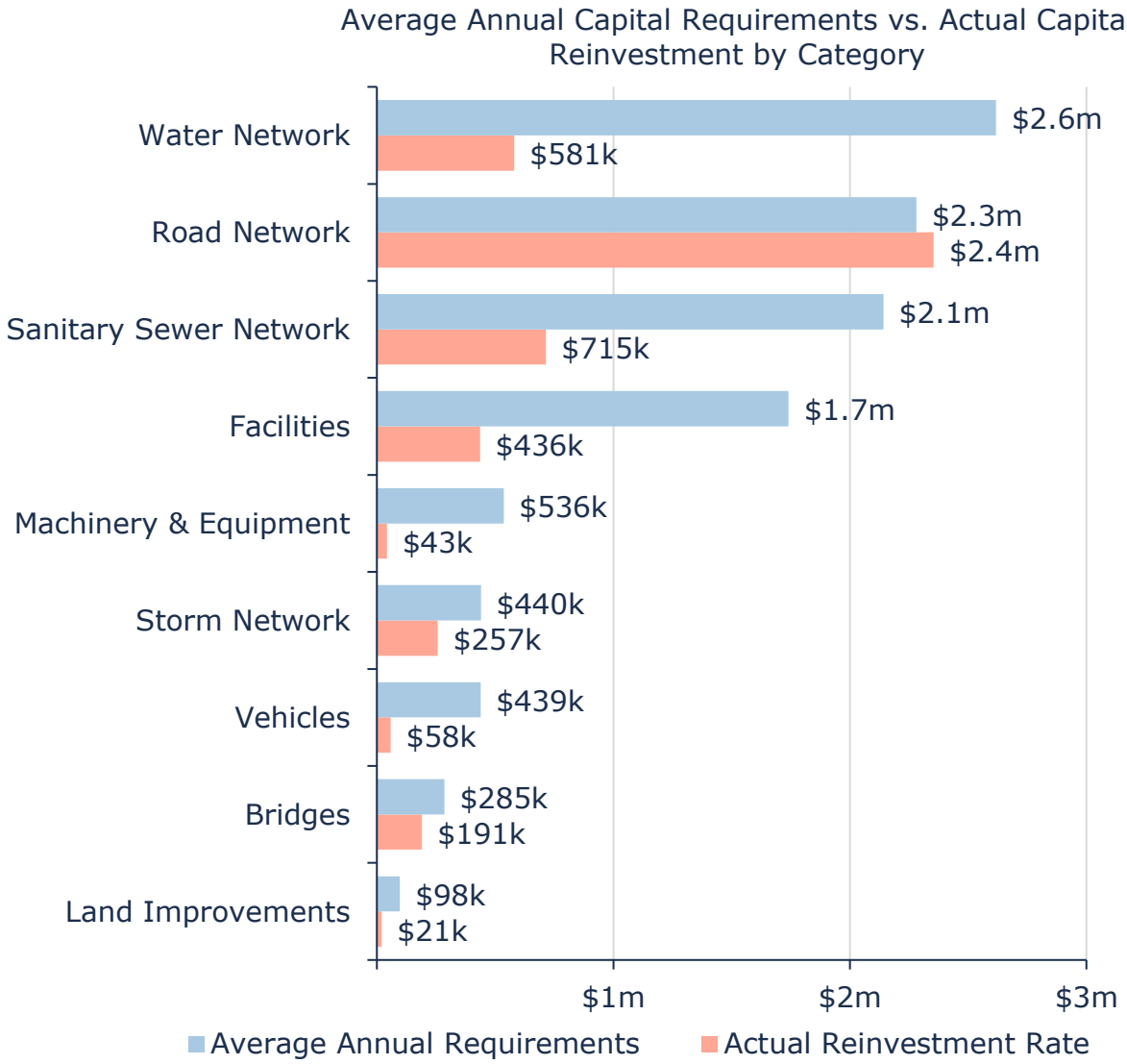


Figure 64 Annual Requirements vs. Capital Funding Available

14.2 Funding Objective

We have developed a scenario that would enable Smiths Falls to achieve the proposed levels of service within 1 to 20 years for the following assets:

1. **Tax Funded Assets:** road network, bridges, storm network, facilities, land improvements, vehicles, and machinery & equipment
2. **Rate-Funded Assets:** water network and sanitary sewer network

Note: For the purposes of this AMP, we have excluded gravel roads since they are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life.

For each financial scenario developed we have included strategies, where applicable, regarding the use of cost containment and funding opportunities.

14.3 Financial Profile: Tax Funded Assets

14.3.1 Current Funding Position

The following tables show, by asset category, Smiths Falls's average annual asset investment requirements, current funding positions, and funding increases required to achieve the proposed levels of service on assets funded by taxes.

Asset Category	Avg. Annual Require-ment	Annual Funding Available				Annual Deficit
		Taxes to Reserves	CCBF	OCIF	Total Available	
Road Network	2,281,000	783,000	606,000	965,000	2,354,000	-73,000
Bridges	285,000	191,000	0	0	191,000	94,000
Storm Network	440,000	257,000	0	0	257,000	183,000
Facilities	1,741,000	436,000	0	0	436,000	1,305,000
Vehicles	439,000	58,000	0	0	58,000	381,000
Machinery & Equipment	536,000	43,000	0	0	43,000	493,000
Land Improvements	98,000	21,000	0	0	21,000	77,000
	5,820,000	**1,789,000**	**606,000**	**965,000**	**3,360,000**	**2,460,000**

Table 52 Annual Available Funding for Tax Funded Assets

The average annual investment requirement for the above categories is $5.8 million. Annual revenue currently allocated to these assets for capital purposes is $3.4 million leaving an annual deficit of $2.4 million. Put differently, these infrastructure categories are currently funded at 57.7% of their long-term requirements.

14.3.2 Proposed Levels of Service Funding Requirements

In 2024, Smiths Falls had annual tax revenues of $19.0 million. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding
Road Network	-0.4%
Bridges	0.5%
Storm Network	1.0%
Facilities	6.9%
Vehicles	2.0%
Machinery & Equipment	2.6%
Land Improvements	0.4%
Total	**13.0%**[17]

Table 53 Tax Increase Requirements for Proposed Levels of Service

Our recommendations include capturing the above changes and allocating them to the infrastructure deficit outlined above. The table below outlines this concept and presents several options:

	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	2,445,000	2,445,000	2,445,000	2,445,000
Change in Debt Costs	-168,000	-287,000	-1,046,000	-1,046,000
Resulting Infrastructure Deficit:	**2,277,000**	**2,158,000**	**1,399,000**	**1,399,000**
Tax Increase Required	12.1%	11.5%	7.5%	7.5%
Annually:	**2.4%**	**1.2%**	**0.5%**	**0.4%**

Table 54 Tax Increase Options 5-20 Years

[17] A negative funding figure (road network) for an asset category does not inherently mean it is overfunded; rather, it reflects a reallocation of resources within a shared property tax pool to better align with overall asset management priorities in any given year

14.3.3 Financial Strategy Recommendations

Considering all the above information, we recommend the 15-year option. This involves full funding being achieved over 15 years by:

a) reallocating the debt cost reductions to the infrastructure deficit as outlined above
b) increasing tax revenues by 0.5% each year for the next 15 years solely for the purpose of phasing in the proposed levels of service for asset categories covered in this section of the AMP
c) adjusting tax revenue increases in future year(s) when allocations to capital expenditure exceed or fail to meet budgeted amounts
d) allocating the current CCBF and OCIF revenue as outlined previously.
e) reallocating appropriate revenue from categories in a surplus position to those in a deficit position, when applicable
f) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

1. 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[18].
2. 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 full funding of the proposed levels of service on an annual basis in 15 years, 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 $16.6 million for tax-funded 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 be required otherwise.

14.4 Financial Profile: Rate Funded Assets

14.4.1 Current Funding Position

The following tables show, by asset category, Smiths Falls's average annual asset investment requirements, current funding positions, and funding increases required to achieve proposed levels of service on assets funded by rates.

[18] The Town 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.

Asset Category	Avg. Annual Require-ment	Annual Funding Available				Annual Deficit
		Rates	To Operations	Grants	Total Available	
Water Network	2,618,000	3,210,000	-2,629,000	0	581,000	2,037,000
Sanitary Sewer Network	2,142,000	3,064,000	-2,349,000	0	715,000	1,427,000
Total	**4,760,000**	**6,274,000**	**-4,978,000**	**0**	**1,296,000**	**3,464,000**

Table 55 Annual Available Funding for Rate Funded Assets

The average annual investment requirement for the above categories is $4.8 million. The annual revenue currently allocated to these assets for capital purposes is $1.3 leaving an annual deficit of $3.5 million. Put differently, these infrastructure categories are currently funded at 27.2% of their long-term requirements.

14.4.2 Proposed Levels of Service Funding Requirements

In 2024, Smiths Falls had annual water network revenues of $581 thousand and annual sanitary sewer revenues of $715 thousand. As illustrated in the table below, without consideration of any other sources of revenue, the proposed levels of service would require the following changes over time:

Asset Category	Rate Change Required for Full Funding
Water Network	63.5%
Sanitary Sewer Network	46.6%

Table 56 Rate Increase Requirements for Full Funding

Our recommendations include capturing the above changes and allocating them to the infrastructure deficit outlined above. The table below outlines this concept and presents several options:

	Water Network			
	5 Years	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	2,037,000	2,037,000	2,037,000	2,037,000
Rate Increase Required	63.5%	63.5%	63.5%	63.5%
Annually:	**12.7%**	**6.4%**	**4.2%**	**3.2%**

Table 57 Water Rate Increase Options 5-20 Years

	Sanitary Sewer Network			
	5 Years	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	1,427,000	1,427,000	1,427,000	1,427,000
Rate Increase Required	46.6%	46.6%	46.6%	46.6%
Annually:	**9.3%**	**4.7%**	**3.1%**	**2.3%**

Table 58 Sanitary Rate Increase Options 5-20 Years

14.4.3 Financial Strategy Recommendations

Considering all the above information, we recommend the 15-year option. This involves the proposed levels of service being achieved over 15 years by:

a) increasing rate revenues by 4.2% for water services and 3.1% for sanitary sewer services each year for the next 15 years solely for the purpose of phasing the proposed levels of service for 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.

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 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 full funding of the proposed levels of service on an annual basis in 15 years 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 $38.1 million.

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 be necessary.

14.5 Use of Debt

The following tables outline how Smiths Falls has historically used debt for investing in the asset categories as listed. There is currently $15.4 million debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of $1.4 million (2024), well within its provincially prescribed maximum of $5.4 million.

Asset Category	Current Debt Outstanding	Use of Debt in the Last Five Years				
		2019	2020	2021	2022	2023
Road Network	0	0	0	0	0	0
Bridges	0	0	0	0	0	0
Storm Network	0	0	0	0	0	0
Facilities	11,564,000	0	0	0	0	0
Vehicles	2,305,000	0	0	0	0	0
Machinery & Equipment	1,483,000	0	0	0	0	0
Land Improvements	0	0	0	0	0	0
Total Tax Funded	**15,352,000**	**0**	**0**	**0**	**0**	**0**
Water Network	0	0	0	0	0	0
Sanitary Sewer Network	0	0	0	0	0	0
Total Rate Funded	**0**	**0**	**0**	**0**	**0**	**0**

Table 59 Smiths Falls Use of Debt 2019-2023

Asset Category	Principal & Interest Payments in the Next Ten Years						
	2024	2025	2026	2027	2028	2029	2034
Road Network	0	0	0	0	0	0	0
Bridges	0	0	0	0	0	0	0
Storm Network	0	0	0	0	0	0	0
Facilities	923,000	859,000	861,000	860,000	864,000	865,000	751,000
Vehicles	295,000	295,000	295,000	295,000	295,000	295,000	295,000
Machinery & Equipment	211,000	205,000	158,000	101,000	101,000	101,000	96,000
Land Improvements	0	0	0	0	0	0	0
Total Tax Funded	**1,429,000**	**1,359,000**	**1,314,000**	**1,256,000**	**1,260,000**	**1,261,000**	**1,142,000**
Water Network	0	0	0	0	0	0	0
Sanitary Sewer Network	0	0	0	0	0	0	0
Total Rate Funded	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 60 Smiths Falls Principal and Interest Payments

The revenue options outlined in this plan allow Smiths Falls to fully fund its long-term infrastructure requirements without further use of debt.

14.6 Use of Reserves

14.6.1 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 Smiths Falls.

Asset Category	Reserve Balances
Road Network	1,062,000
Bridges	422,000
Storm Network	478,000
Facilities	919,000
Vehicles	271,000
Machinery & Equipment	295,000
Land Improvements	249,000
Total Tax Funded:	**3,696,000**
Water Network	2,273,000
Sanitary Sewer Network	1,946,000
Total Rate Funded:	**4,219,000**

Table 61 Smiths Falls Reserve Balances

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Town should have on hand. There is no clear guideline that has gained wide acceptance. Factors that municipalities should consider 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 fully funding. This coupled with Smiths Falls's judicious use of debt in the past, 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.

Appendices

Appendix A – Infrastructure Report Card

Appendix B – 10-Year Capital Requirements

Appendix C – Level of Service Maps

Appendix A – Infrastructure Report Card

Asset Category	Replacement Cost	Average Condition	Financial Capacity	
Road Network	**$86.8 m**	**Good**	Annual Requirement:	$2,281,000
			Funding Available:	$2,354,000
			Annual Surplus:	**$73,000**
Bridges	**$21.4 m**	**Good**	Annual Requirement:	$285,000
			Funding Available:	$191,000
			Annual Deficit:	**$94,000**
Water Network	**$83.9 m**	**Good**	Annual Requirement:	$2,618,000
			Funding Available:	$581,000
			Annual Deficit:	**$2,037,000**
Sanitary Sewer Network	**$90.7 m**	**Poor**	Annual Requirement:	$2,142,000
			Funding Available:	$715,000
			Annual Deficit:	**$1,427,000**
Storm Network	**$29.4 m**	**Fair**	Annual Requirement:	$440,000
			Funding Available:	$257,000
			Annual Deficit:	**183,000**
Facilities	**$53.8 m**	**Good**	Annual Requirement:	$1,741,000
			Funding Available:	$436,000
			Annual Deficit:	**$1,305,000**
Land Improvements	**$3.0 m**	**Good**	Annual Requirement:	$98,000
			Funding Available:	$21,000
			Annual Deficit:	**$77,000**
Vehicles	**$7.0 m**	**Fair**	Annual Requirement:	$439,000
			Funding Available:	$58,000
			Annual Deficit:	**$381,000**
Machinery & Equipment	**$5.3 m**	**Fair**	Annual Requirement:	$536,000
			Funding Available:	$43,000
			Annual Deficit:	**$493,000**

Appendix B – 10-Year Capital Requirements

Road Network

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Curbs	$63k	-	-	-	-	-	-	-	-	-	-
Guide Rails	-	-	-	-	-	-	-	-	-	-	-
Paved Roads	$1.4m	$1.9m	$3.6m	$4.9m	$9.3m	-	-	$38k	-	-	-
Sidewalks	$207k	$21k	-	-	-	-	$67k	-	-	-	-
Signs	$62k	-	-	$102k	-	-	$371k	-	-	$75k	-
Street Lights	$400k	$121k	-	-	$104k	-	-	$52k	-	-	$143k
Traffic Lights	-	-	-	-	-	-	-	-	-	-	-
Total	**$2.1m**	**$2.0m**	**$3.6m**	**$5.0m**	**$9.4m**	**-**	**$439k**	**$90k**	**-**	**$75k**	**$143k**

Table 62 System Generated 10-Year Capital Replacement Forecast: Road Network

Bridges

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Bridges	-	-	-	-	-	-	-	-	-	-	-
Pedestrian Bridges	-	-	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Table 63 System Generated 10-Year Capital Replacement Forecast: Bridges

Water Network

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Elevated Tank	-	$9.8m	-	-	-	-	-	-	-	-	-
Equipment	$54k	$58k	$176k	-	-	$59k	$22k	$145k	-	$313k	$73k
Water Mains	$20k	-	$68k	$27k	-	-	-	-	-	-	$291k
WTP	$3.2m	-	$2.1m	$2.7m	$2.1m	$1.8m	-	$299k	-	$493k	$366k
Total	**$3.3m**	**$9.9m**	**$2.4m**	**$2.8m**	**$2.1m**	**$1.8m**	**$22k**	**$443k**	**-**	**$806k**	**$730k**

Table 64 System Generated 10-Year Capital Replacement Forecast: Water Network

Sanitary Sewer Network

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Equipment	$15.3m	$16k	$328k	$60k	$823k	$355k	$37k	$51k	-	-	$82k
Sanitary Mains	$117k	-	-	-	-	-	-	-	-	-	-
WWTP	$19.4m	$13k	$170k	$39k	-	$129k	-	-	-	$633k	-
Total	**$34.7m**	**$29k**	**$498k**	**$99k**	**$823k**	**$484k**	**$37k**	**$51k**	**-**	**$633k**	**$82k**

Table 65 System Generated 10-Year Capital Replacement Forecast: Sanitary Sewer Network

Storm Network

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Combined Sewer Mains	$8.3m	-	$389k	-	-	$315k	$76k	$35k	$13k	$50k	-
Storm Mains	$32k	-	-	-	-	-	-	-	-	-	-
Total	**$8.3m**	**-**	**$389k**	**-**	**-**	**$315k**	**$76k**	**$35k**	**$13k**	**$50k**	**-**

Table 66 System Generated 10-Year Capital Replacement Forecast: Storm Network

Facilities

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Airport	$215k	-	-	-	$1.8m	-	-	-	-	-	$32k
Community Services	$736k	$31k	$385k	$1.9m	$323k	$586k	$104k	$50k	-	$147k	$34k
General Government	-	-	-	-	-	$38k	$337k	$9k	-	-	-
Protection Services	$665k	-	-	$26k	-	$887k	$195k	-	-	$54k	$762k
Public Works	$1.7m	-	-	-	-	-	-	-	-	-	-
Recreational Services	$1.5m	$53k	$587k	$10k	$328k	$67k	$97k	-	-	-	$21k
Total	**$4.9m**	**$84k**	**$971k**	**$2.0m**	**$2.5m**	**$1.6m**	**$733k**	**$59k**	**-**	**$201k**	**$849k**

Table 67 System Generated 10-Year Capital Replacement Forecast: Facilities

Land Improvements

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Fields and Courts	$31k	-	-	-	-	-	-	$66k	-	-	-
Outdoor Structures	-	$186k	-	-	-	$72k	-	-	-	-	-
Parks	-	$33k	-	-	-	-	-	-	-	-	-
Total	**$31k**	**$220k**	**-**	**-**	**-**	**$72k**	**-**	**$66k**	**-**	**-**	**-**

Table 68 System Generated 10-Year Capital Replacement Forecast: Land Improvements

Vehicles

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Protection Services	-	-	$89k	-	$54k	$514k	$111k	-	$114k	$650k	$89k
Public Works	-	$37k	$534k	$156k	-	-	-	-	-	$226k	$138k
Recreational	-	-	-	$55k	$35k	-	-	-	-	-	-
Total	**-**	**$37k**	**$623k**	**$211k**	**$89k**	**$514k**	**$111k**	**-**	**$114k**	**$876k**	**$227k**

Table 69 System Generated 10-Year Capital Replacement Forecast: Vehicles

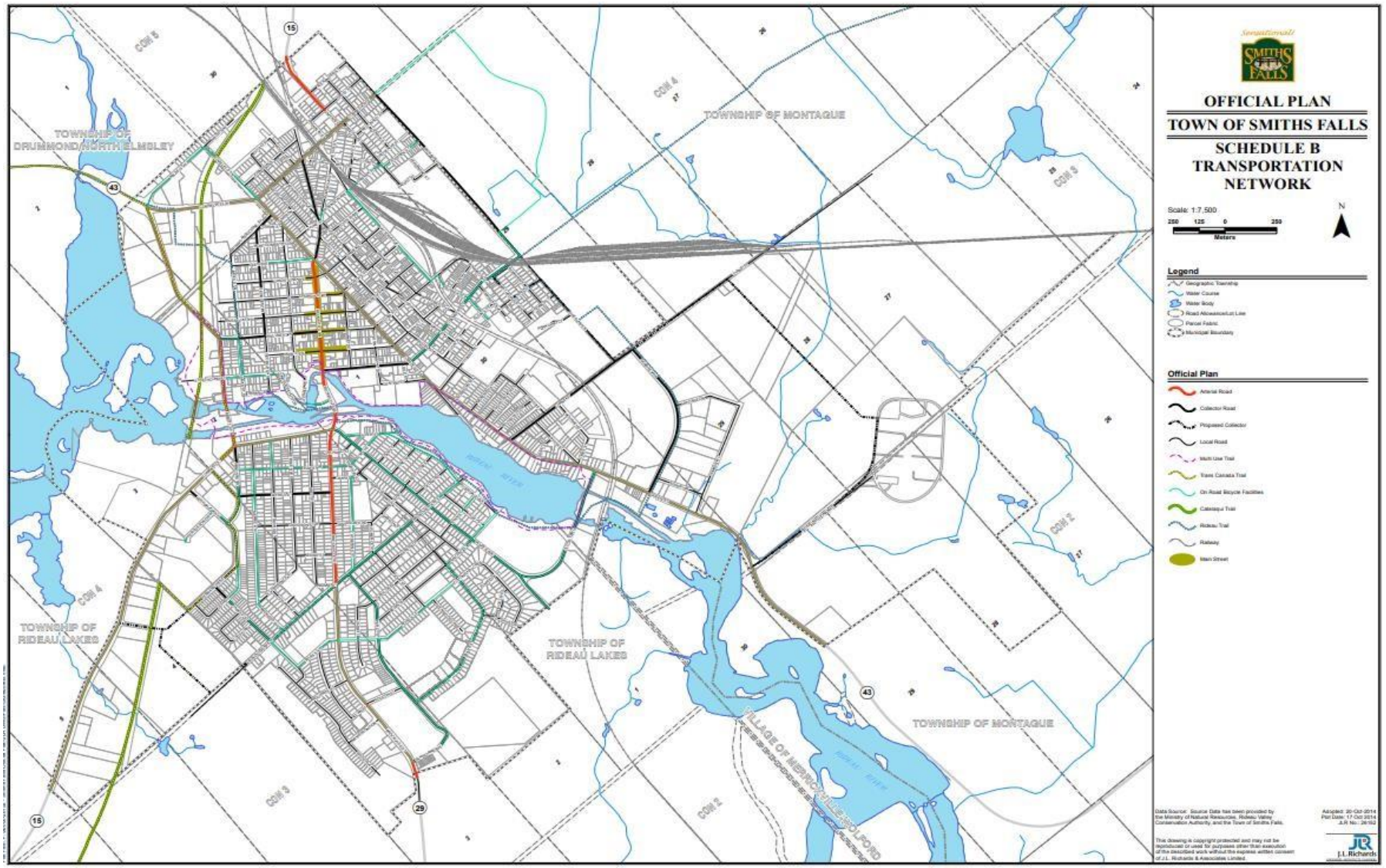
Machinery & Equipment

Segment	Back-log	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Community Services	-	-	$82k	$42k	$121k	$398k	-	-	-	$77k	-
General Government	-	-	-	-	$39k	-	$107k	-	$80k	-	$41k
Protection Services	$194k	-	$381k	$199k	$130k	-	$112k	$101k	$139k	$388k	$11k
Public Works	$137k	-	$187k	-	-	$76k	$6k	-	-	$62k	$507k
Recreational Services	$949k	$193k	$39k	-	$30k	$99k	$64k	$79k	$782k	$24k	$9k
Total	**$1.3m**	**$193k**	**$688k**	**$241k**	**$320k**	**$572k**	**$289k**	**$180k**	**$1.0m**	**$551k**	**$568k**

Table 70 System Generated 10-Year Capital Replacement Forecast: Machinery & Equipment

Appendix C – Level of Service Maps & Photos

Road Network Map

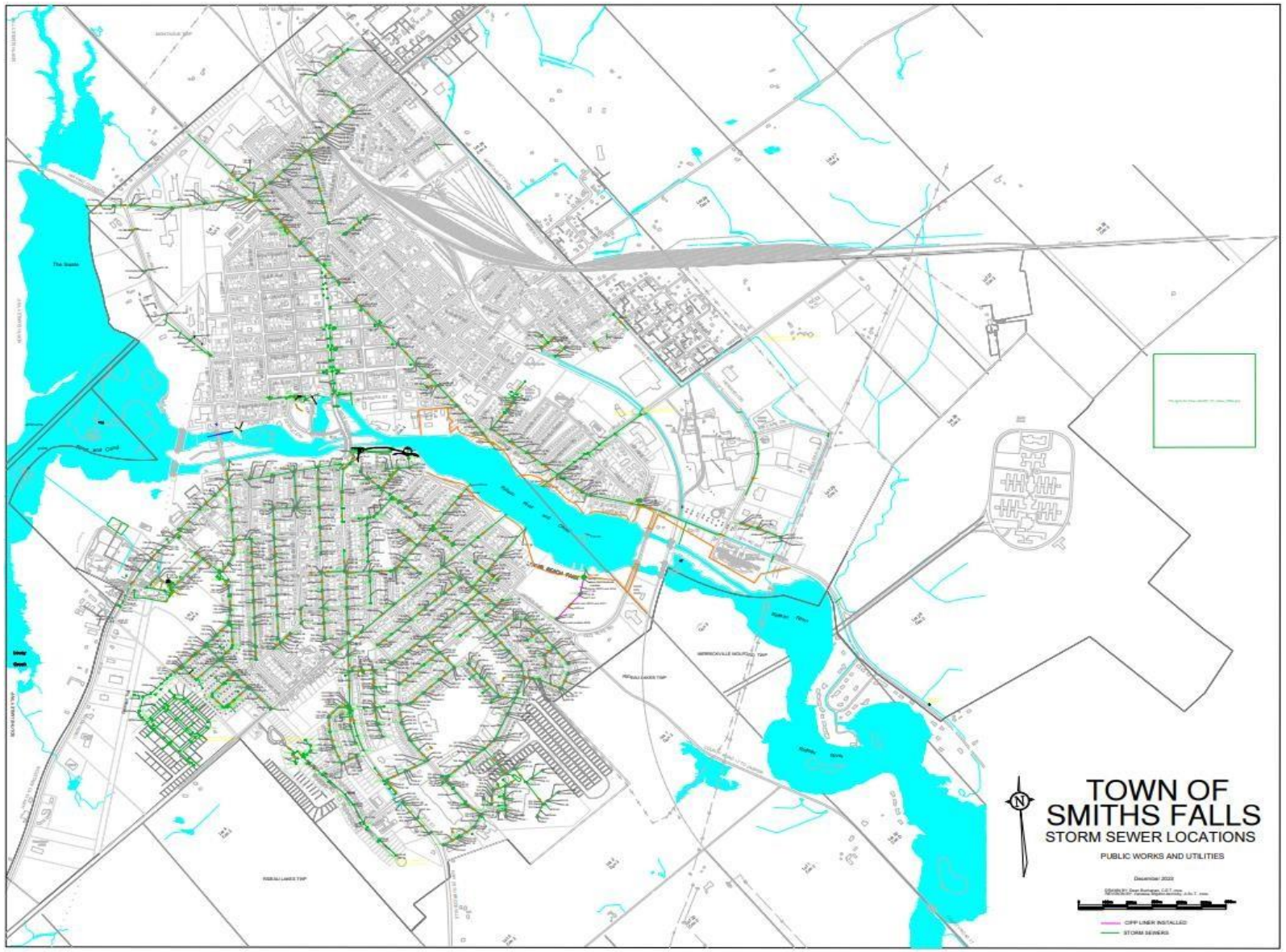


Bridge Images

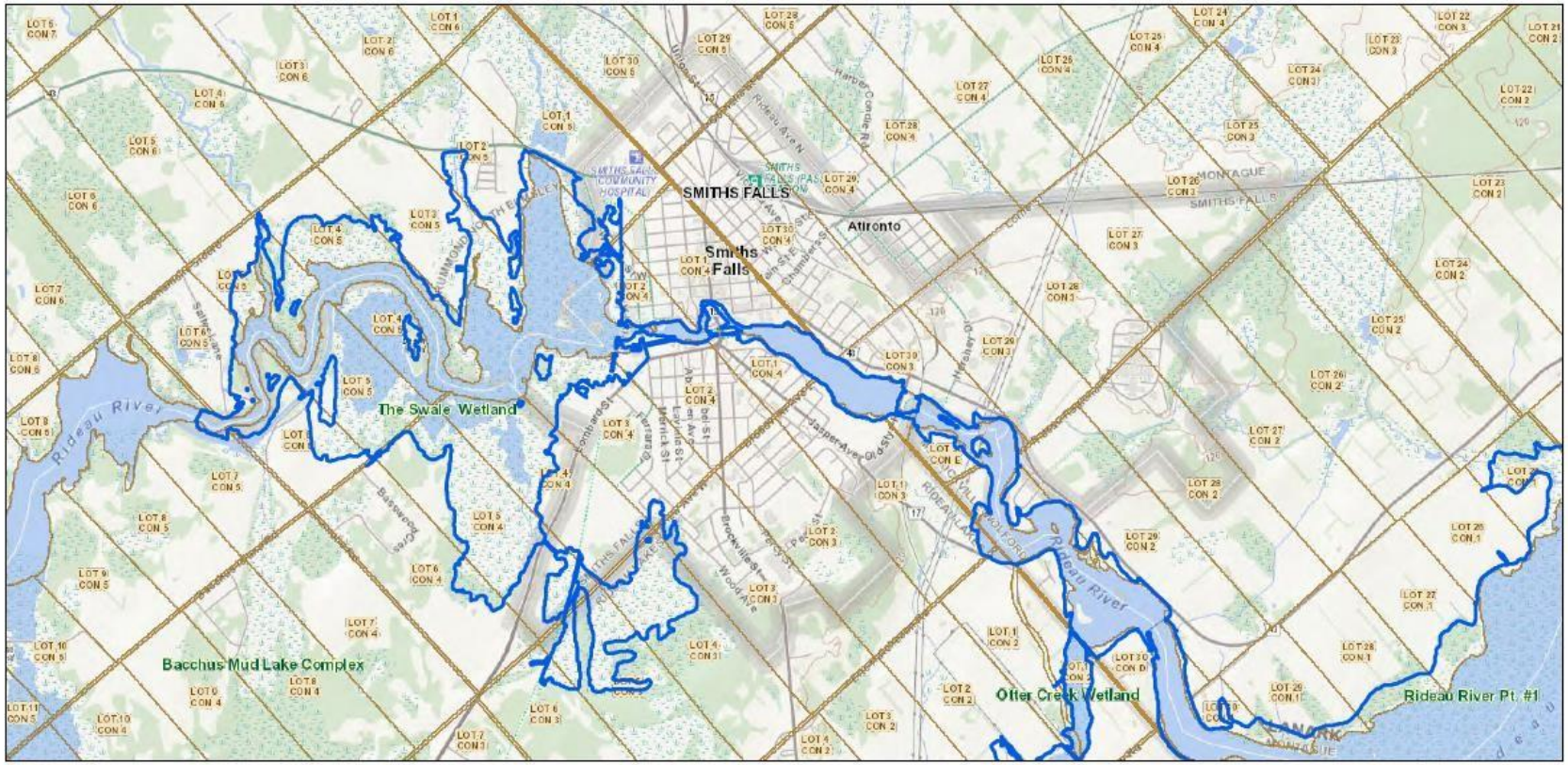
The condition scale for bridges utilized is from 0 to 100 from Very Poor to Very Good. See the following images as examples of a bridge in good condition.

Beckwith Street New Lock Overpass Bridge (BCI = 67.2)

Storm Network Maps



RVCA Regulations Mapping



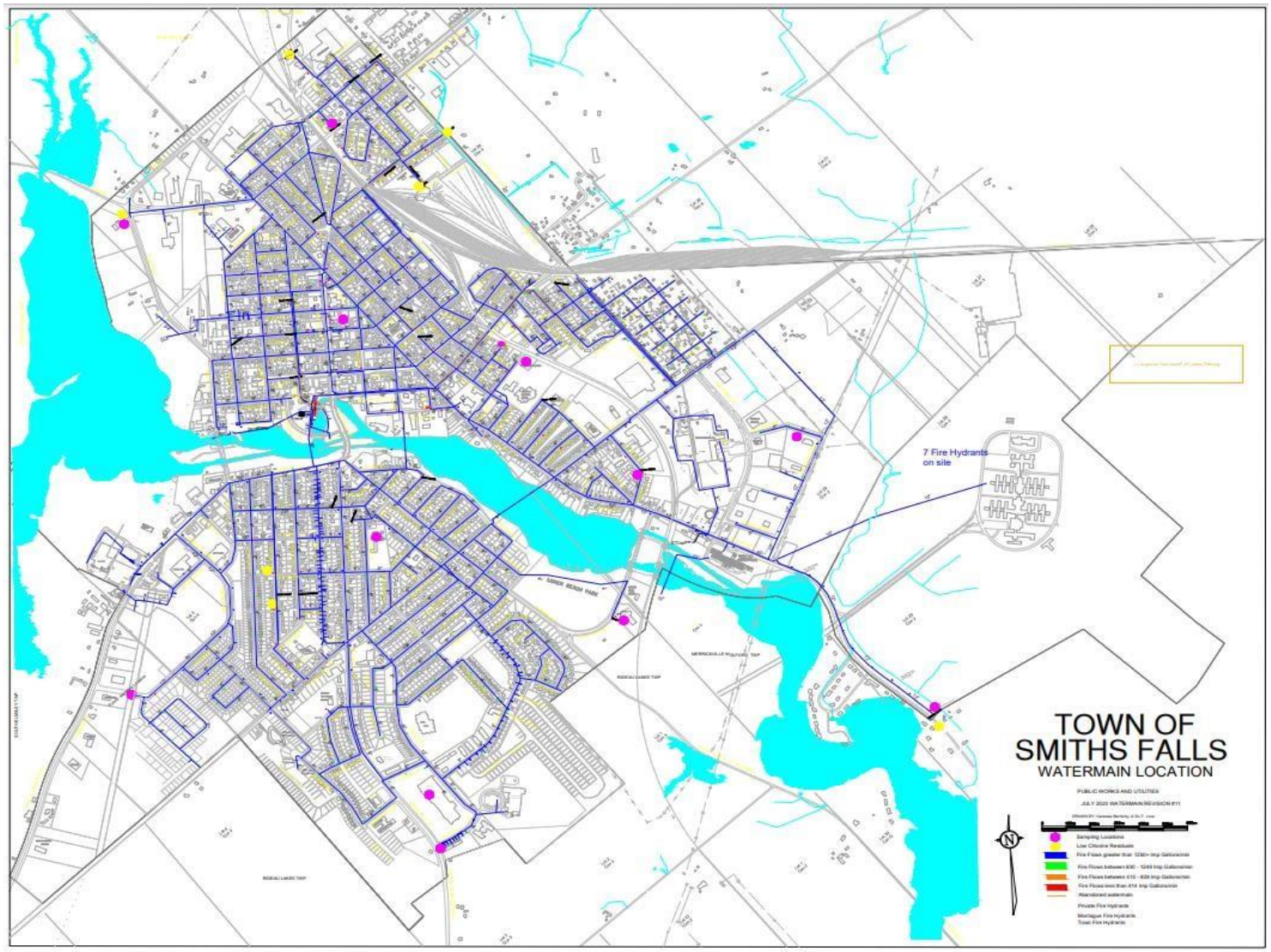
7/11/2022, 3:12:45 PM
RVCA Regulatory Flood (100yr)
Floodplain
Lot
Township Municipal

1:36,112
0 0.3 0.6 1.2 mi
0 0.5 1 2 km

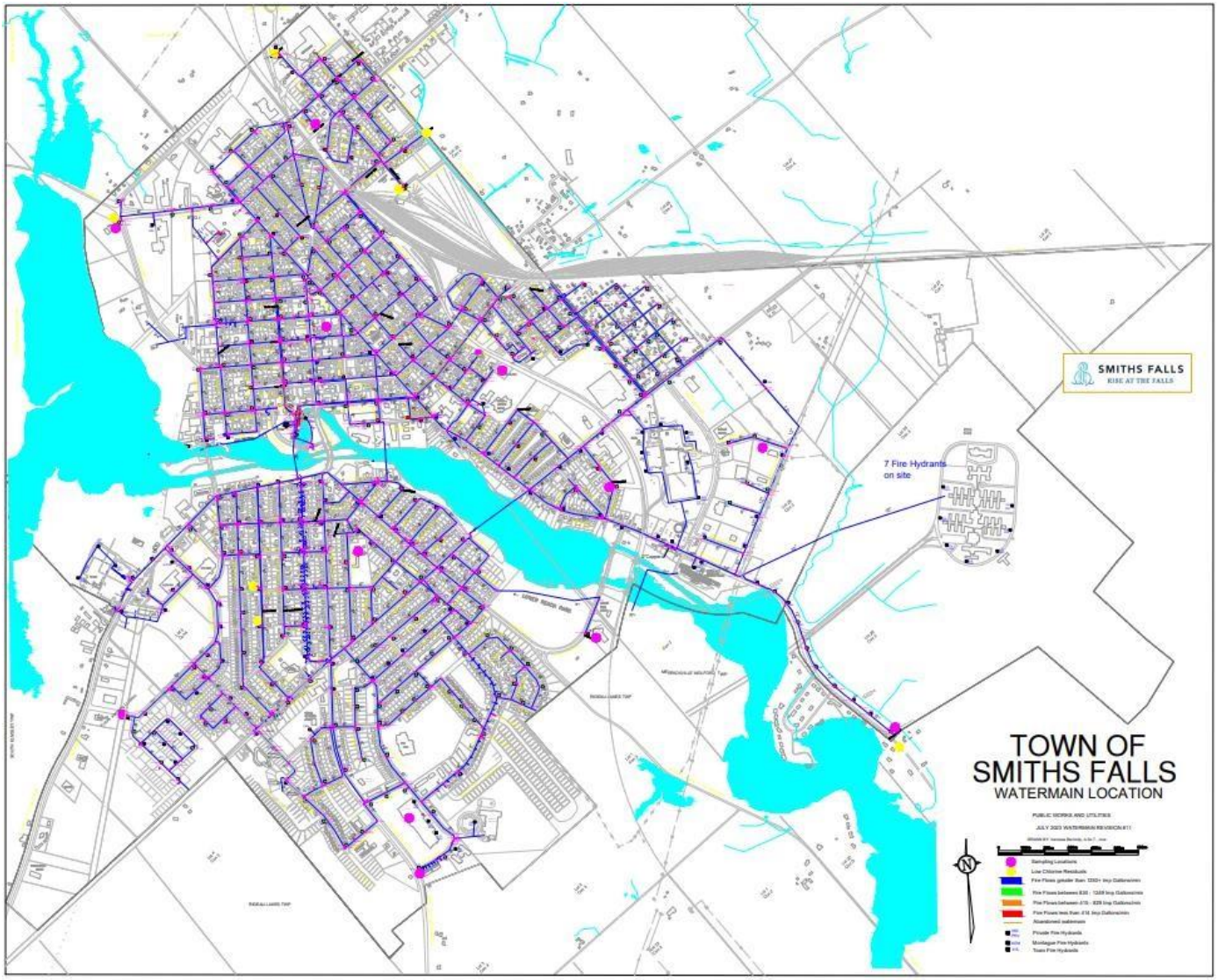
Rideau Valley Conservation Authority (RVCA), Leeds and Grenville, UC of Leeds and Grenville, Province of Ontario, Esri Canada, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, AAFC, NRCan

RVCA Regulations Mapping - Online Mapping
Rideau Valley Conservation Authority (RVCA)

Water Network Map



Fire Flow Map



Sanitary Network Map