Asset Management Plan

Municipality of South Bruce

July 2025

MUNICIPALITY OF South Bruce

psdcitywide

This Asset Management Program was prepared by:

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

Key Statistics

$383.2M	Replacement Cost of 2023 Asset Portfolio
$158k	Replacement Cost of Infrastructure Per Household
54%	Percentage of Assets in Fair or Better Condition
75%	Percentage of Assets with Assessed Condition Data
$5.3M	Annual Capital Infrastructure Deficit
15 Years	Recommended Timeframe to reach Proposed Levels of Service
1.8%	Target Investment Rate to meet Proposed Levels of Service
1.0%	Actual Investment 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 the current 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 Municipality of South Bruce can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

This AMP's asset categories are described in Figure 1.

Core Assets

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

Non-Core Assets

- Buildings
- Land Improvements
- Vehicles
- Machinery & Equipment

Figure 1: Core and Non-core Asset Categories

1.2. Compliance

With the development of this AMP the Municipality of South Bruce 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.

1.3. Findings

The overall replacement cost of the asset categories included in this AMP totals $383.2 million. 54% of all assets analyzed in this AMP are in fair or better condition and assessed condition data was available for 75% of assets. For the remaining 25% 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.

The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP uses a combination of proactive lifecycle strategies (paved roads) and replacement only strategies (all other assets) to determine the lowest cost option to maintain the current level of service.

To maintain current levels of service, the Municipality requires an average annual capital investment of approximately $9.0 million. This estimate, based on available age and condition data, represents the cost of timely asset replacement and serves as a benchmark for long-term capital planning.

To meet the proposed levels of service, the Municipality is targeting an annual capital investment of $6.8 million, reflecting 75% of the full capital need. A historical analysis of sustainable funding sources indicates that approximately $3.7 million is currently committed each year through capital spending and reserve contributions. This includes support from the Ontario Community Infrastructure Fund (OCIF) and the Canada Community-Building Fund (CCBF). To close the remaining $3.1 million annual funding gap, the Municipality has adopted a phased approach over 15 years. This strategy will gradually increase capital reinvestment, helping to address priority infrastructure needs while maintaining fiscal stability.

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

1.4. Recommendations

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

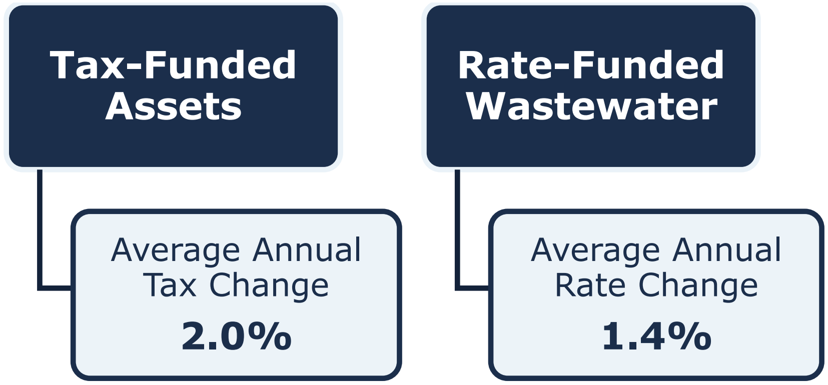


Figure 2: Proposed Tax and Rate Changes

1.5. Limitations and Constraints

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

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

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

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

2. Introduction and Context

2.1. Community Profile

The Municipality of South Bruce is a lower-tier municipality located in Bruce County, in southwestern Ontario, east of Lake Huron. It was incorporated in 1999 as part of province-wide municipal restructuring, which aimed to improve administrative efficiency and reduce costs. The amalgamation combined the former Townships of Carrick and Culross with the Village of Mildmay and the Town of Teeswater.

South Bruce is defined by its predominantly rural landscape, characterized by a mix of productive agricultural land, small-town settlements, and scenic natural features such as forests, rivers, and farmland. The Saugeen River and other waterways contribute to the area's rural charm and recreational appeal. The municipality's cultural heritage, rooted in agriculture and history, supports a strong sense of community and identity.

The local economy is anchored by the agricultural sector, particularly dairy and mixed farming, which continues to drive demand for goods, services, and infrastructure. In recent years, South Bruce has seen growing interest in rural residential development, particularly from those seeking a quieter, community-oriented lifestyle. The area also benefits from seasonal tourism and outdoor recreation, supported by its natural assets and community events.

Municipal planning efforts focus on strengthening service centers, diversifying housing options, supporting commercial hubs, and enhancing community facilities in Mildmay, Teeswater, and Formosa. There is a strong emphasis on preserving the municipality's rural and historic character, promoting sustainable development, and investing in recreational infrastructure. As population trends evolve, South Bruce continues to adapt its infrastructure and asset management strategies to meet changing needs and ensure long-term sustainability.

Table 1: Municipality of South Bruce Census Information

Census Characteristic	Municipality of South Bruce	Ontario
Population 2021	5,880	14,223,942
Population Change 2016-2021	4.3%	5.8%
Total Private Dwellings	2,419	5,929,250
Population Density	12.1/km2	15.9/km^2
Land Area	486.86 km2	892,411.76 km^2

2.2. Climate Change

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

The report revealed that between 1948 and 2016, the average temperature increase across Canada was 1.7°C; moreover, during this 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. South Bruce Climate Profile

The Municipality of South Bruce is located in southern Ontario within Bruce County. The Municipality is expected to experience notable effects of climate change which include higher average annual temperatures, an increase in total annual precipitation, and an increase in the frequency and severity of extreme events. According to Climatedata.ca – a collaboration supported by Environment and Climate Change Canada (ECCC) – the Municipality of South Bruce may experience the following trends:

Higher Average Annual Temperature:

- Between the years 1971 and 2000 the annual average temperature was 6.5 ºC
- Under a high emissions scenario, the annual average temperatures are projected to increase by 4.6 ºC by the year 2050 and over 6.4 ºC by the end of the century.

Increase in Total Annual Precipitation:

- Under a high emissions scenario, South Bruce is projected to experience an 12% increase in precipitation by the year 2051 and a 15% increase by the end of the century.

Increase in Frequency of Extreme Weather Events:

- It is expected that the frequency and severity of extreme weather events will change.
- In some areas, extreme weather events will occur with greater frequency and severity than others especially those impacted by Great Lake winds.

2.2.2. Lake Huron

The Great Lakes are one of the largest sources of fresh water on earth, containing 21 percent of the world’s surface freshwater. There are 35 million people living in the Great Lakes watershed and Lake Huron is the second largest of the Great Lakes. The area of Lake Huron Watershed is approximately 131,100 km^2. The physical impacts of climate change are most noticeable from: flooding, extreme weather events such as windstorms and tornados, and/or rising water levels eroding shorelines and natural spaces. Erosion and flooding pose a threat to the surrounding built infrastructure such as park assets, bridges, and roads. Communities located in the Great Lakes region may experience more severe windstorms or tornados as a result of climate change, causing damage to both the natural and built environment.

Public health and safety depend on the stability and predictability of the ecosystem in the Great Lakes watershed. The quality of water is threatened by anthropogenic climate change as a result of blue-green algae blooms, soil erosion, and agricultural, stormwater, and wastewater runoff. These phenomena put undue stress on regional water filtering and treatment systems. The safety of the public is threatened by the physical impacts of flooding such as flooding and erosion. In some cases, homeowners located near the lakeshore are already at risk of losing their homes.

2.2.3. Integration 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 as a result of climate change impacts such as flooding, high heat, drought, and more frequent and intense storms.

In order 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.

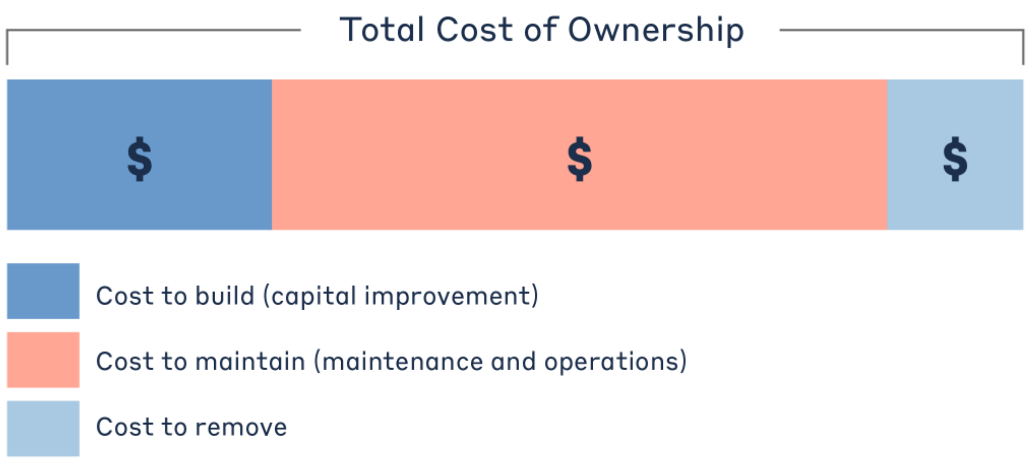


Figure 3: Total Cost of Asset Ownership

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 Documents

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.

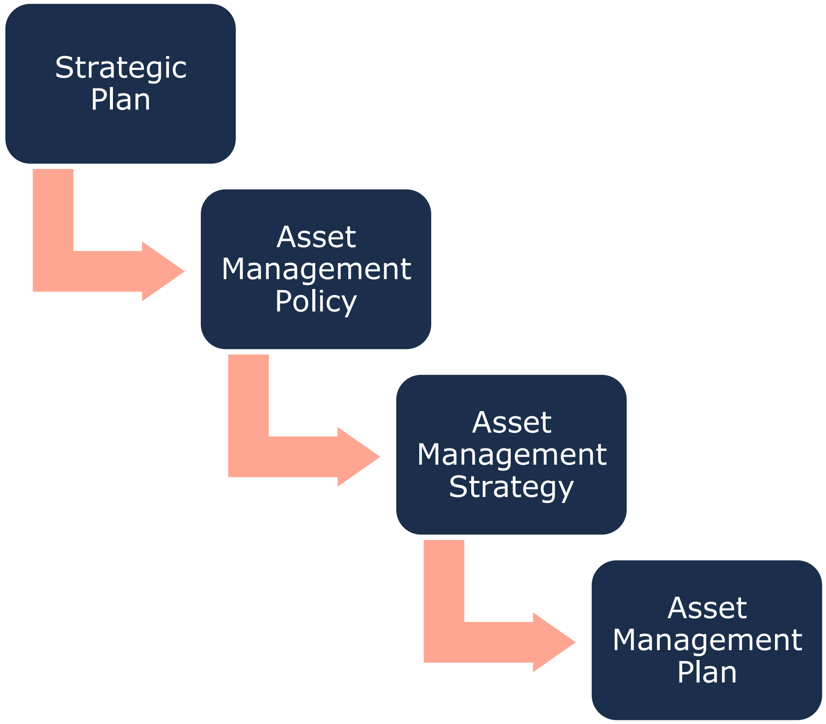


Figure 4: Foundational Asset Management Documents

Strategic Plan

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

Asset Management Policy

An asset management policy represents a statement of the principles guiding the Municipality'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 Policy aims to provide a clear direction for managing the Municipality's infrastructure, aligning asset management with strategic goals, and ensuring that assets are maintained at optimal levels to deliver reliable services to the community.

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

The Municipality of South Bruce's Asset Management Policy contains many of the key components of an asset management strategy and may be expanded in future revisions or as part of a separate strategic document.

Asset Management Plan

The asset management plan presents the outcomes of the Municipality of South Bruce'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 Municipality of South Bruce to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

2.4. 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.

2.4.1. Lifecycle Management Strategies

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

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

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation, and replacement. The table below 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.

Maintenance

- General level of cost is **$**
- All actions necessary for retaining an asset as near as practicable to its original condition, but excluding rehabilitation or renewal. Maintenance does not increase the service potential of the asset
- Slows down deterioration and delays when rehabilitation or replacement is necessary.

Rehabilitation / Renewal

- General level of cost is **$$$**
- Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification.
- Generally involves repairing the asset to deliver its original level of service (i.e. milling and paving of roads) without resorting to significant upgrading or replacement, using available techniques and standards.

Replacement

- General level of cost is **$$$$$**
- The complete replacement of an asset that has reached the end of its life, so as to provide a similar, or agreed alternative, level of service.
- Existing asset disposal is generally included.

Figure 5: Lifecycle Management Typical Lifecycle Interventions

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

2.4.2. Risk and 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.

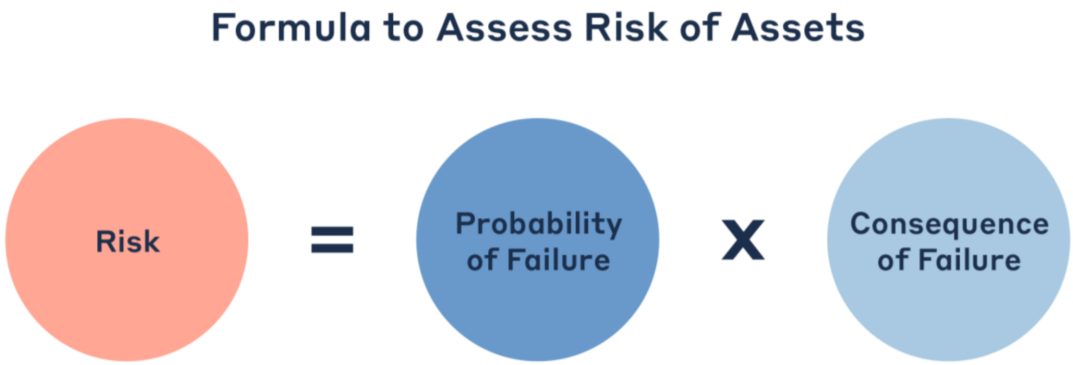


Figure 6: Risk Equations

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. See Appendix D: Risk Rating Criteria for definitions and the developed risk models.

The table below 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.

Table 2: Risk Analysis - Types of Consequences of Failure

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.

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.

2.4.3. Levels of Service

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

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, the province, through O. Reg. 588/17, has provided qualitative descriptions that are required. For non-core asset categories, the Municipality has determined the qualitative descriptions that will be used. The metrics can be found in the levels of service subsection within each asset category.

Technical Levels of Service

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

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

Current and Proposed Levels of Service

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

It is important to note that O. Reg 588/17 does not dictate which proposed LOS metrics municipality's need to strive for. A proposed LOS will be very specific to each community's resident desires, political goals, and financial capacity. This can range from increasing service levels and costs, to maintaining or even reducing current performance 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.

2.5. Scope and Methodology

2.5.1. Asset Categories for this AMP

This asset management plan for the Municipality of South Bruce is produced in compliance with O. Reg. 588/17. The AMP summarizes the state of the infrastructure for South Bruce's asset portfolio, establishes current 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.

Tax-Funded Assets

- Road Network
- Bridges & Culverts
- Buildings
- Storm Network
- Land Improvements
- Vehicles
- Machinery & Equipment

Rate-Funded Assets

- Water Network
- Wastewater Network

Figure 7: Tax- and Rate-Funded Assets

2.5.2. Data Effective Date

It is important to note that this plan is based on the asset inventory as of December 31, 2023; 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.

2.5.3. Replacement Costs

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

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

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

2.5.4. Estimated Useful Life and Service Life Remaining

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

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

Figure 8: Service Life Remaining Calculation

2.5.5. 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 Municipality can determine the extent of any existing funding gap.

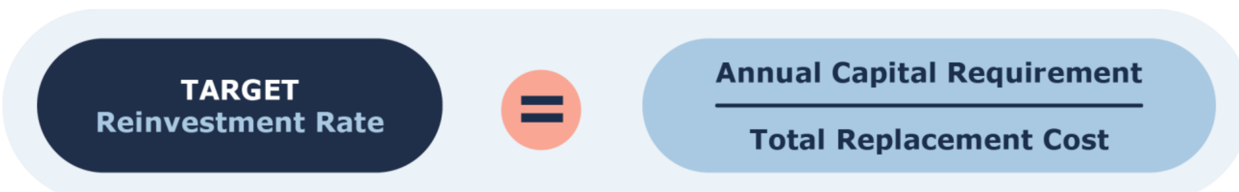


Figure 9: Target Reinvestment Rate Calculation

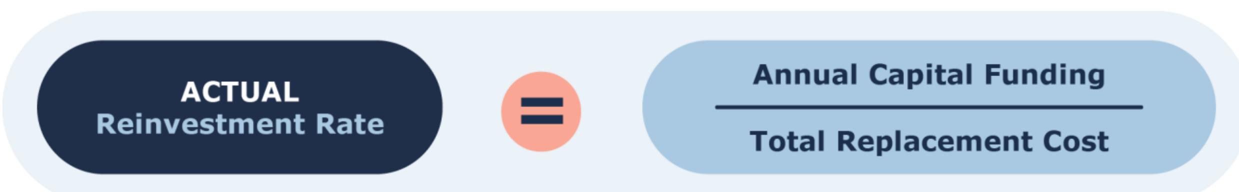


Figure 10: Actual Reinvestment Rate Calculation

2.5.6. 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 Municipality'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.

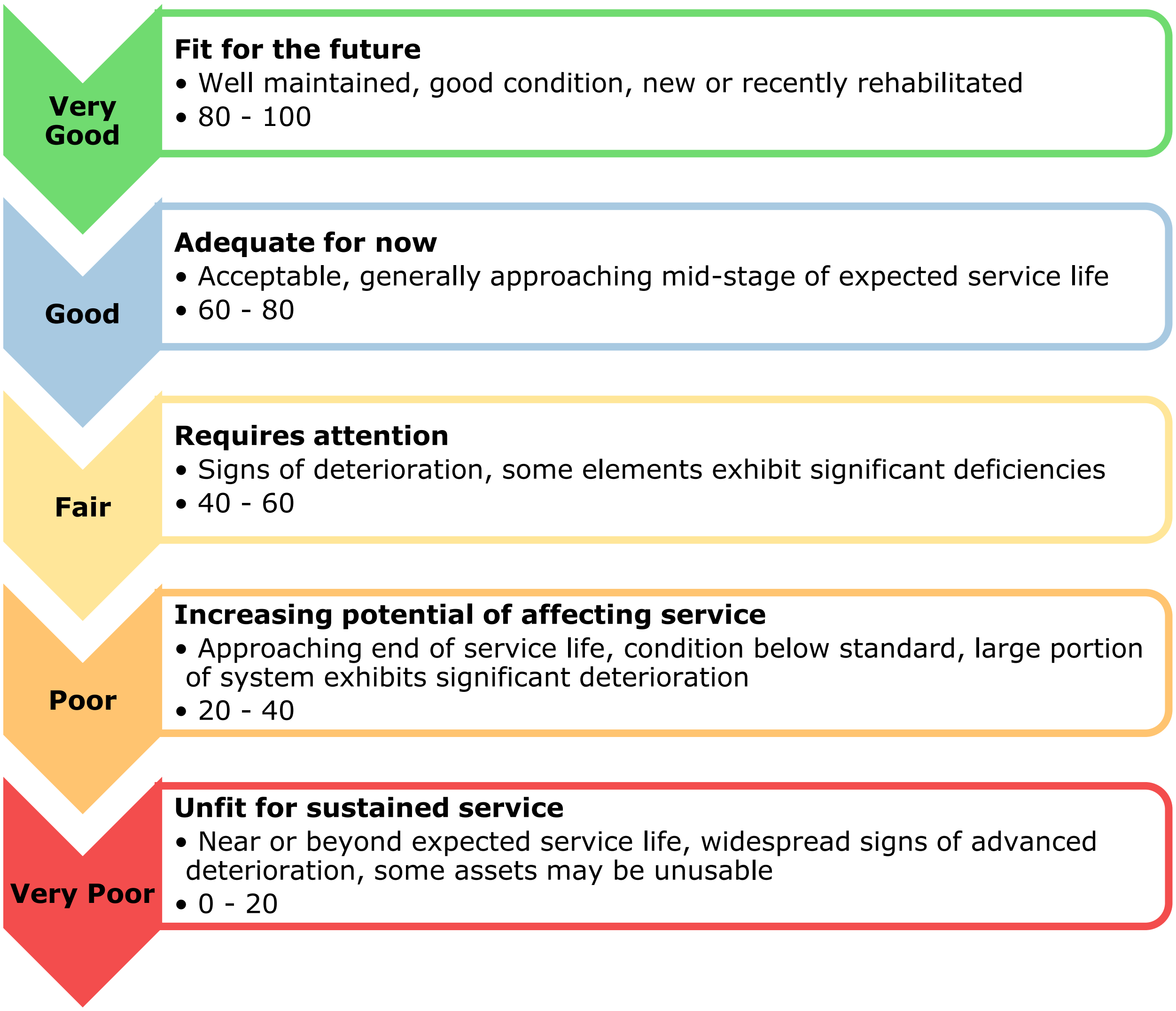


Figure 11: Standard Condition Rating Scale

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

2.5.7. Decision Support

To inform the development of Proposed Levels of Service scenarios, the Municipality utilized the PSD Citywide Decision Support Module, a scenario planning and communication tool that allows for data-driven forecasting of asset needs, funding requirements, and performance outcomes. This tool draws directly from the Municipality's asset inventory database and uses key data inputs such as asset condition, risk profiles, and lifecycle deterioration curves to model multiple capital investment scenarios.

Using Decision Support, the Municipality was able to:

- Automatically test and compare multiple funding and intervention strategies
- Base each scenario on desired levels of service (e.g., average condition rating or risk tolerance)
- Analyze the impact of different capital investment levels on asset performance over time
- Visualize projected outcomes using dynamic mapping and graphing tools, including time-lapse videos of projected condition and risk changes
- Produce a long-term capital forecast to support sustainable planning.

Weighing by Replacement Cost

Each scenario modeled within the Decision Support tool includes weighted analysis by replacement cost, ensuring that interventions targeting high-value assets are prioritized. For example, a condition improvement applied to an expensive asset has a greater influence on the scenario results than the same intervention on a lower-cost asset. This weighting supports a more fiscally responsible approach by optimizing the performance of assets that carry higher replacement value.

$$Weighted\ Increase = Normalized\ Increase * (Asset\ Replacement\ Cost / Total\ Replacement\ Cost)$$

Lifecycle deterioration

Lifecycle deterioration was also a key consideration in scenario development. Each asset was modeled to deteriorate over time based on pre-established deterioration curves, graphable equations that simulate how an asset's condition declines relative to age and expected useful life. This allowed for more accurate long-term forecasting and ensured that timing of interventions aligns with real-world asset behaviour.

Age Ratio

A value between 0 and 1, where 1 is the maximum age of the asset

$$Age\ Ratio = a = Asset\ Age / Maximum\ Age$$

Condition Ration

A value between 0 and 1, where 1 is the maximum condition of the asset

$$Condition\ Ratio = c = (Asset\ Cond. - Minimum\ Cond.) / (Maximum\ Cond. - Minimum\ Cond.)$$

By incorporating Decision Support into its methodology, South Bruce developed service level scenarios that align with the community's risk tolerance, performance goals, and funding capacity, enabling Council and staff to make transparent, informed decisions about capital planning and long-term sustainability.

2.6. 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 liveable 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.

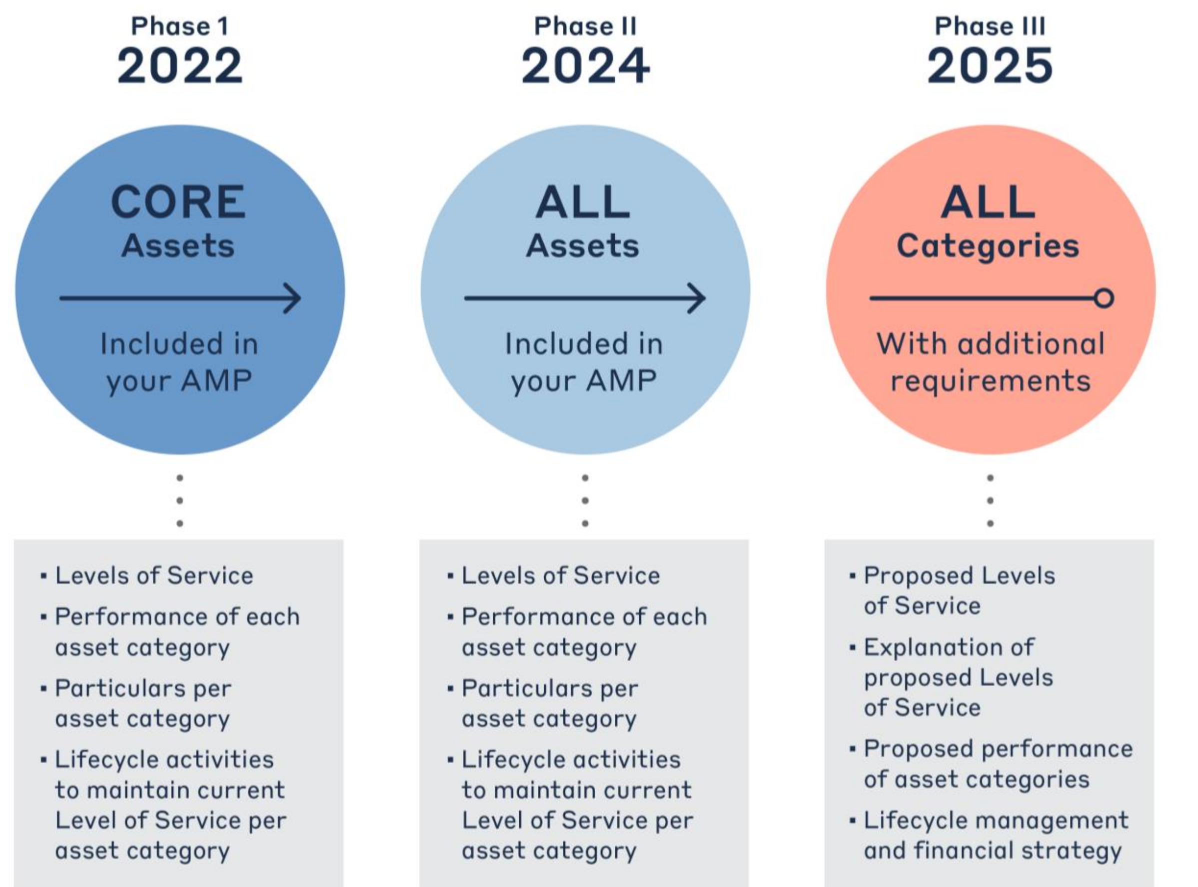


Figure 12: O. Reg. 588/17 Requirements and Reporting Deadlines

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

2.6.1. O. Reg. 588/17 Compliance Review

Table 3: 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)	5.1 – 13.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	5.2 – 13.2	Complete
Average age of assets in each category	S.5(2), 3(iii)	5.3 – 13.3	Complete
Condition of core assets in each category	S.5(2), 3(iv)	5.3 – 13.3	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	5.3.1 – 13.3.1	Complete
Current levels of service in each category	S.5(2), 1(i-ii)	5.7 – 13.7	Complete
Current performance measures in each category	S.5(2), 2	5.7 – 13.7	Complete
Lifecycle activities needed to maintain current levels of service for 10 years	S.5(2), 4	5.4 – 13.4	Complete
Costs of providing lifecycle activities for 10 years	S.5(2), 4	5.5 – 13.5	Complete
Growth considerations	S.6(1), 5	15.5.1	Complete
Proposed levels of service for each category for next 10 years	S.6(1), 1(i-ii)	5.8 – 13.8	Complete
Explanation of appropriateness of proposed levels of service	S.6(1), 2(i-iv)	4.7.1	Complete
Lifecycle management activities for proposed levels of service	S.6(1), 4(i)	4.5.1	Complete
10-year capital costs for proposed levels of service	S.6(1), 4(ii)	Appendix A	Complete
Annual funding availability projections	S.6(1), 4(iii)	4.4.2 - 4.6.2	Complete

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 municipality's infrastructure portfolio. These details are presented for all core and non-core asset categories.

3.1. Asset Hierarchy/Data Classification

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

Figure 13: Asset Hierarchy and Data Classification - Core Assets

Buildings

- General Government
- Protection Services
- Recreation Services
- Transportation Services

Land Improvements

- Fencing & Gates
- Landscaping
- Outdoor Structures
- Parking Lots
- Parks Lighting
- Playground Equipment
- Signage
- Sports Courts

Vehicles

- Protection Services
- Transportation Services

Machinery & Equipment

- General Government
- Health Services
- Protection Services
- Recreation Services
- Transportation Services

Figure 14: Asset Hierarchy and Data Classification - Non-core Assets

3.2. Portfolio Overview

3.2.1. Replacement Cost

South Bruce's asset categories have a total replacement cost of $383.2 million based on available inventory data. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects the replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

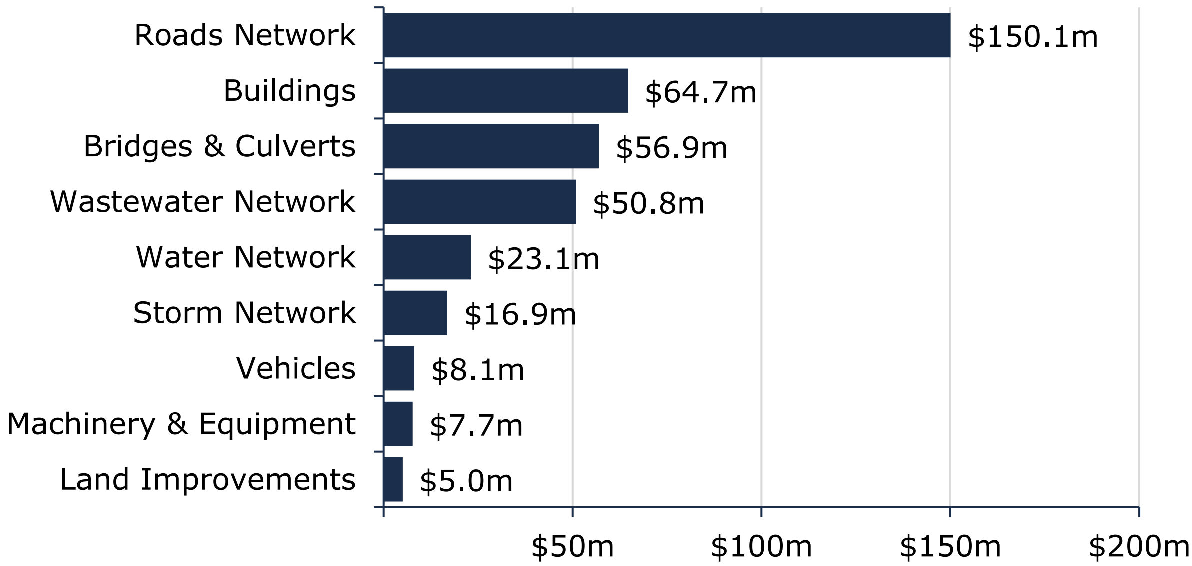


Figure 15: Current Replacement Cost by Asset Category

3.2.2. Target vs. Actual Reinvestment Rate

The graph below illustrates the gap between the Municipality's target and actual reinvestment rates for maintaining current levels of service across all asset categories.

To sustainably maintain existing infrastructure and avoid service deterioration or backlog, the Municipality should be allocating approximately $9.0 million annually, representing a target reinvestment rate of 2.4%. This target is based on lifecycle costing for the continued delivery of current services at existing standards.

In contrast, actual annual spending on capital projects and contributions to capital reserves currently averages $3.7 million, including federal and provincial grants. This results in an actual reinvestment rate of 1.0%. This indicates an annual funding shortfall of approximately $5.3 million, suggesting underinvestment that may lead to higher costs or service disruptions in the future.

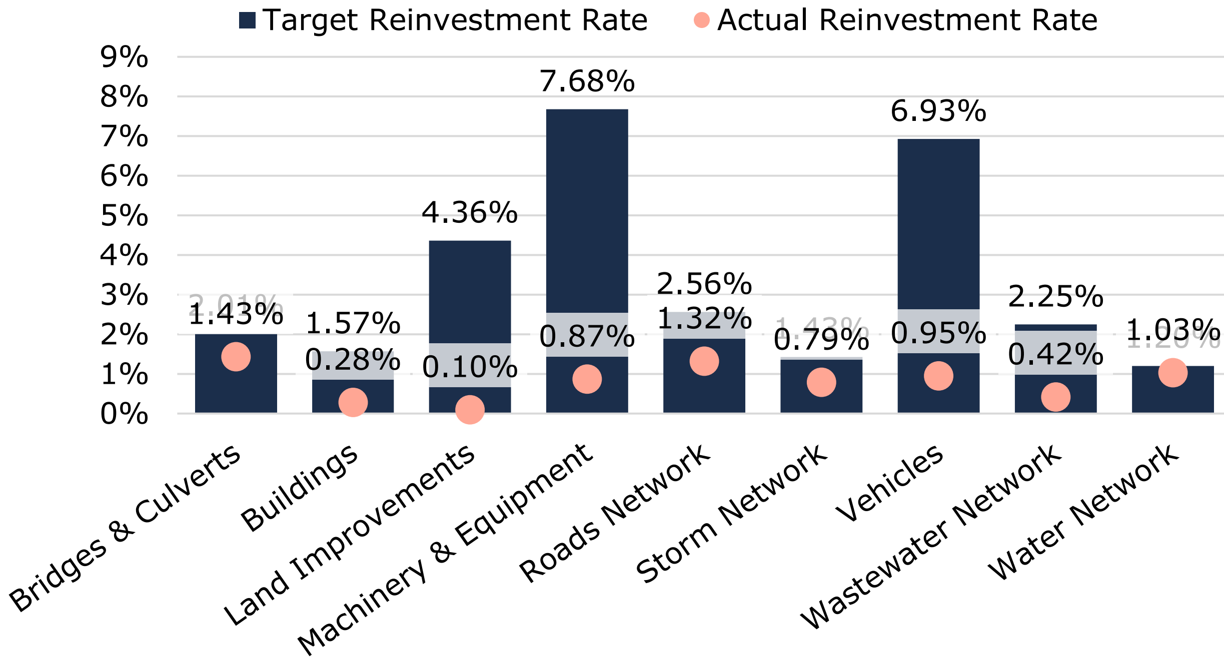


Figure 16: Target vs Actual Reinvestment Rates

3.2.3. Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 54% of assets in South Bruce are in fair or better condition. This estimate relies on both age-based and field condition data.

Assessed condition data is available for buildings, bridges and culverts, the road network, and a portion of land improvement assets, the water network and the sanitary network; for the remaining portfolio, 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.

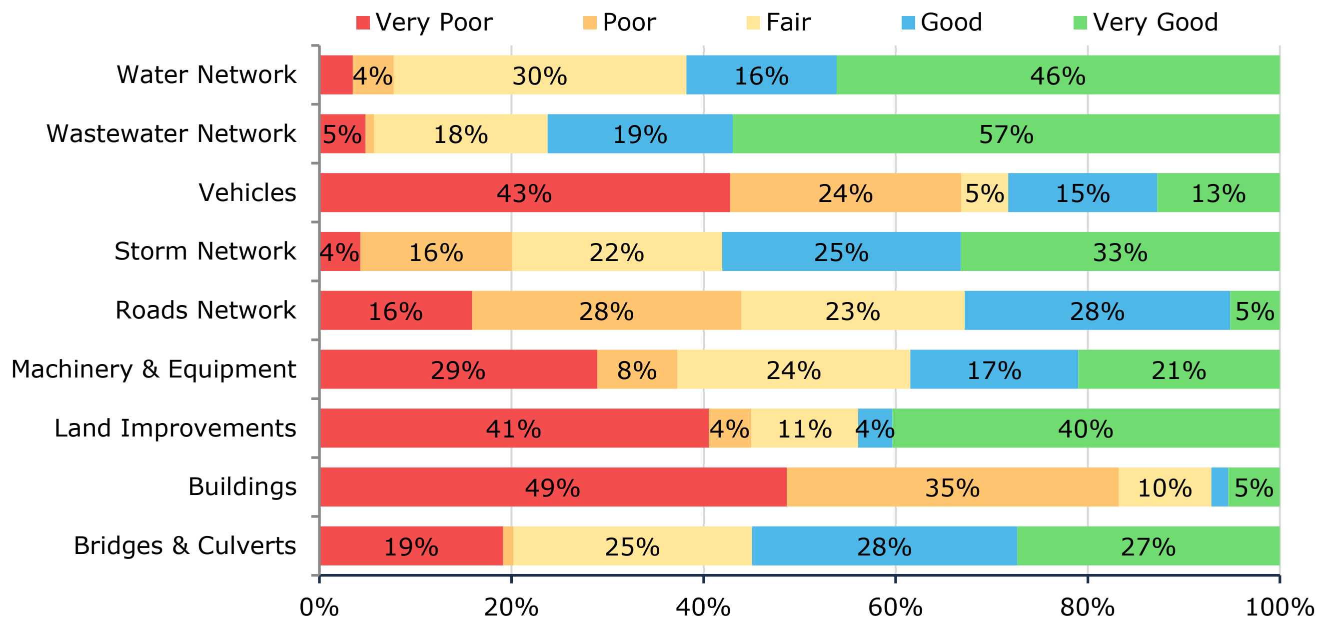


Figure 17: Asset Condition by Asset Category

Source of Condition Data

This AMP relies on assessed condition for 75% 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.

Table 4: Source of Condition Data

Asset Category	Asset Segment(s)	% of Assets with Assessed Conditions	Source of Condition Data
Road Network	Paved Roads	93%	Roads Needs Study (2020)
	Sidewalks	77%	
Bridges & Culverts	All	98%	OSIM Report (2024)
Buildings	All	100%	Staff Assessments (2023)
Land Improvements	Fencing & Gates	21%	Staff Assessments (2020 – 2024)
	Outdoor Structures	98%	
	Parks Lighting	100%	
	Playground Equipment	41%	

	Sports Courts	29%	
Machinery & Equipment	Protection Services	9%	Staff Assessments (2020)
	Recreation Services	12%	
Vehicles	Protection Services	10%	Staff Assessments (2020)
	Transportation Services	2%	
Water Network	Water Equipment	88%	Clearwater Structures (2017)
	Water Towers	100%	
Sanitary Network	Sanitary Mains	23%	Clearwater Structures (2017)

3.2.4. Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 21% of the Municipality's assets will require replacement within the next 10 years. Refer to Appendix B – 10-Year Capital Requirements.

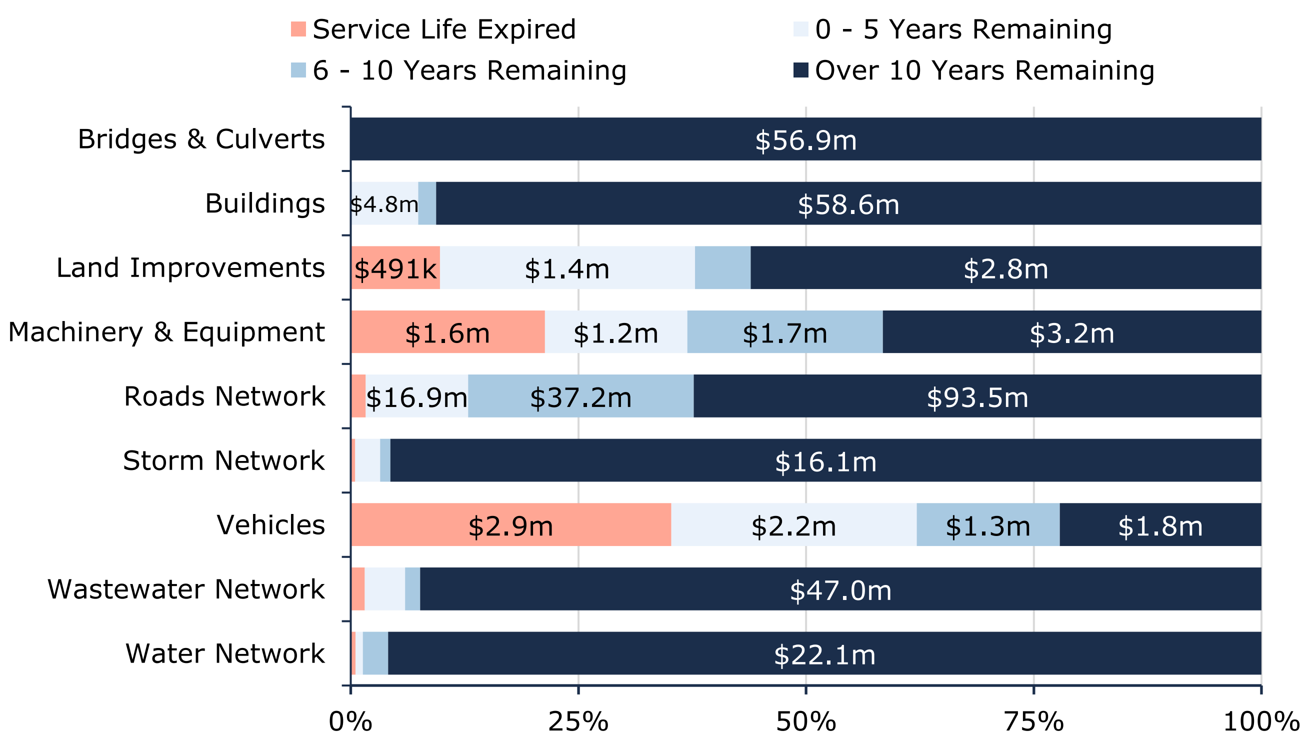


Figure 18: Service Life Remaining by Asset Category

3.2.5. Risk Matrix

Using the risk equation and preliminary risk models, the overall asset risk breakdown for South Bruce's asset inventory is portrayed in the figure below.

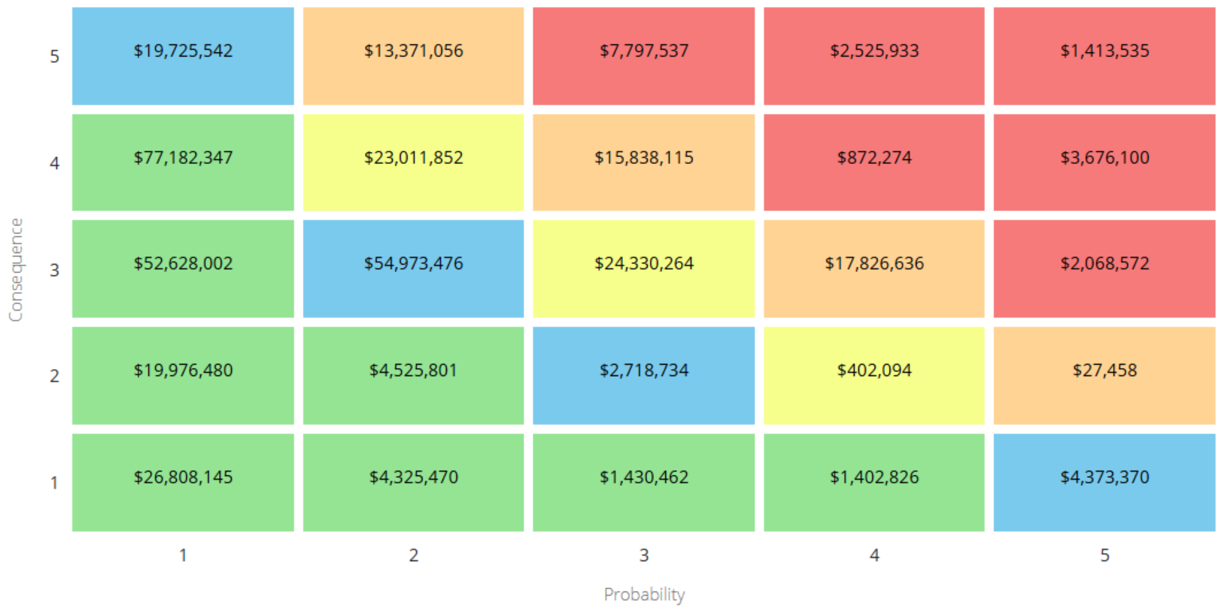


Figure 19: Risk Matrix - All Assets

Reviewing the list of very high-risk assets to evaluate how best to mitigate the level of risk the Municipality is experiencing will help advance South Bruce's asset management program.

3.2.6. Forecasted Capital Requirements

Aging assets require ongoing maintenance, rehabilitation, and eventual replacement. The figure below illustrates the cyclical short-, medium-, and long-term infrastructure replacement requirements for all asset categories analyzed in this AMP. On average, $9.0 million per year is required to remain current with capital replacement needs and to maintain existing levels of service across the Municipality's asset portfolio. This benchmark (red dotted line) is based on asset age and available condition data, and provides a useful long-term planning reference point for capital expenditure or reserve allocation targets.

To support a sustainable and achievable investment approach, the Municipality has adopted a 75% funding strategy, which targets an average annual capital investment of $6.8 million. This reduced level reflects the proposed levels of service, balancing asset needs with financial capacity, while ensuring that critical and high-priority assets are addressed first.

The chart also illustrates a backlog of $8.4 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. strategies.

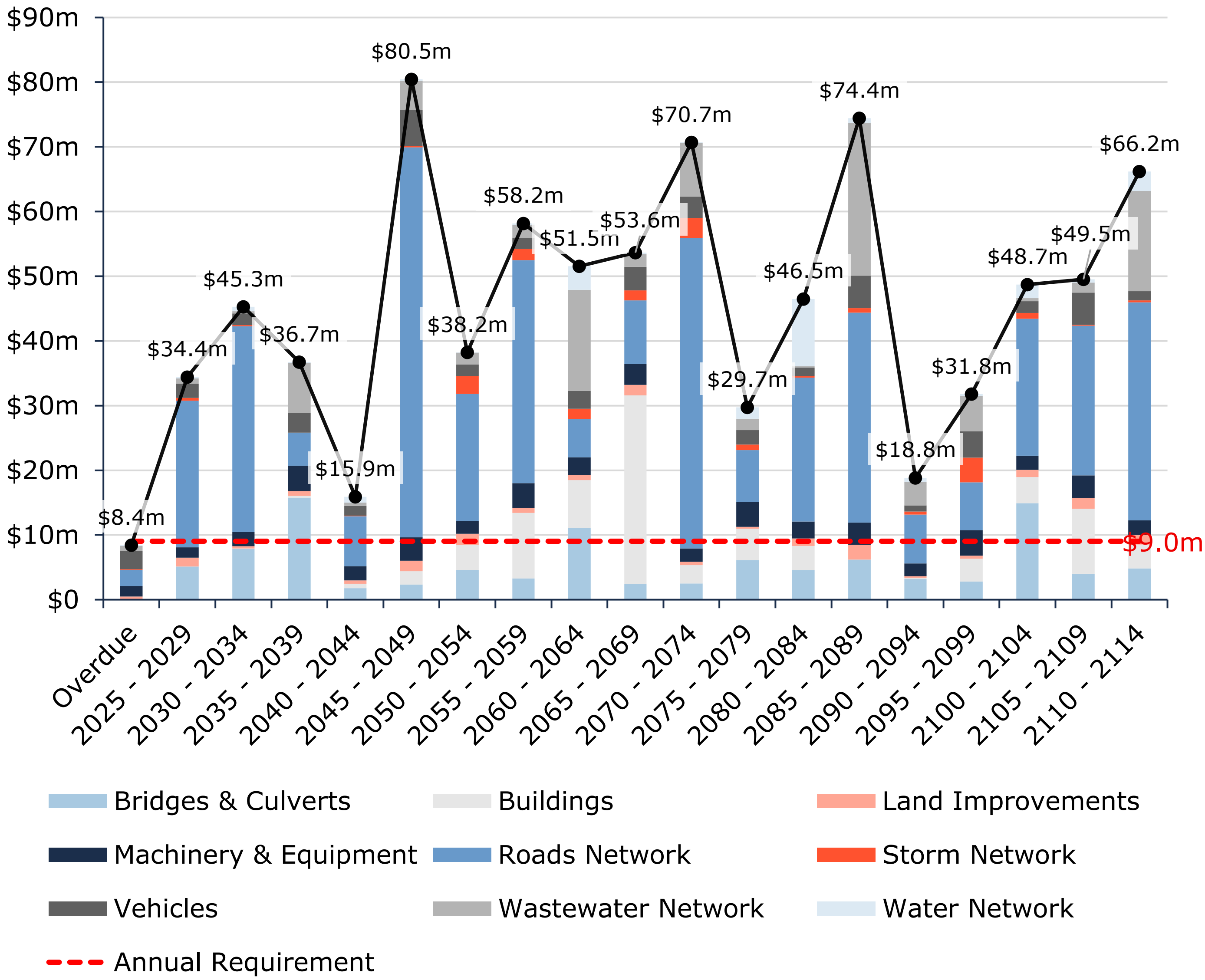


Figure 20: Forecasted Capital Requirements by Asset Category

Proposed Levels of Service

4. Proposed Levels of Service

4.1. Scope

4.1.1. Ontario Regulation 588/17 Proposed Levels of Service

The 2025 deadline requires that proposed Levels of Service (LOS) are demonstrated to be appropriate based on an assessment of:

1. Proposed LOS options and the risks associated with these options (i.e., asset reliability, safety, affordability) when considering the long-term sustainability of the municipality.
2. How proposed LOS may differ from current LOS.
3. Whether proposed LOS are achievable.
4. The municipality's ability to afford proposed LOS.

Additionally, a lifecycle management and financial strategy to support these LOS must be identified, covering a 10-year period and including:

1. Identification of lifecycle activities needed to provide the proposed LOS with consideration for:
    - Full lifecycle of assets.
    - Lifecycle activities options available to meet proposed LOS.
    - Risks associated with the above referenced lifecycle options.
    - Identification of which above referenced lifecycle activity options can be undertaken to achieve the proposed LOS for the lowest cost.
2. An estimate of the annual cost of meeting proposed LOS for a period of 10 years, separated by capital and operating expense.

4.1.2. Methodology

Target levels of service for the Municipality have been developed through comprehensive engagement with Municipality staff and referencing resident satisfaction surveys. To achieve a target level of service goal, careful consideration of the following should be considered.

Financial Impact Assessment

- Assess historical expenditures/budget patterns to gauge feasibility of increasing budgets to achieve LOS targets
- Consider implications of LOS adjustments on other services, and other infrastructure programs (trade-offs)

Infrastructure Condition Assessment

- Regularly assess the condition of critical infrastructure components.
- Use standardized condition indices or metrics to quantify the state of infrastructure.

- Identify non-critical components where maintenance can be deferred without causing severe degradation.
- Adjust condition indices or metrics to reflect the reduced maintenance budget.

Service Metrics

- Measure user satisfaction, response times, and other relevant indicators for the specific service.

Service Impact Assessment

- Evaluate potential impacts on user satisfaction and service delivery due to decreased infrastructure condition.

Risk Management

- Identify potential risks to infrastructure and service quality.
- Develop contingency plans to address unforeseen challenges without compromising service quality.
- Monitor performance closely to ensure that the target investment translates into achieving the desired infrastructure condition.

Service Improvement Metrics

- Analyze the performance of target levels of service regularly and incorporate more ambitious targets based on user satisfaction if required.

Timelines

- Although O. Reg requires identification of expenditures for a 10-year period in pursuit of LOS targets, it does not require municipalities to identify the timeframe to achieve them.
- Careful consideration should be given to setting realistic targets for when LOS targets are to be achieved.

4.1.3. General Considerations for All Scenarios

- **Stakeholder Engagement:**
  - Regularly engage with stakeholders to gather feedback and communicate changes transparently.
- **Data-Driven Decision Making:**
  - Use data analytics to inform decision-making processes and identify areas for improvement.
- **Flexibility and Adaptability:**
  - Design the methodology to be flexible, allowing for adjustments based on evolving conditions and priorities.
- **Continuous Improvement:**
  - Establish a process for continuous review and improvement of the LOS methodology itself.

4.2. Community Engagement Survey

As part of the development of the Asset Management Plan, South Bruce conducted a community engagement survey to gather feedback on current service levels. Community input has been crucial in ensuring that the proposed Levels of Service align with both community expectations and municipal goals. The majority of respondents (83.6%) identified as residents, with 9.0% as business owners and 7.5% as farmers. The results of the survey indicate that most respondents feel municipal services generally meet expectations across all asset categories, with some areas identified for potential improvement.

Overall satisfaction with municipally funded services was moderate to high. Protective services such as fire, police, and building inspection received the strongest support, with approximately 90% of respondents indicating they were somewhat or very satisfied. Library and cultural programs were also well-regarded, with 72% satisfaction, while transportation services (roads, sidewalks, and winter control) saw more mixed feedback, with around 43% expressing some level of dissatisfaction.

When asked about spending priorities, essential services like water, sewer, and stormwater were rated "very important" by 83% of respondents, followed closely by fire services at 89%, and managing tax dollars at 86%. In contrast, only 20% rated community events as very important, and disability transit services received the lowest priority with 25% rating them as very important. Regarding pressing local issues, the top three were property taxes (average rank 4.1), cost of living (4.6), and economic issues (4.9). Environmental concerns and addiction ranked lowest in perceived urgency.

Financial tolerance varied among respondents. A majority (52.4%) stated they would not support any tax increase to improve services. However, 20.6% were open to a 3% increase, 12.7% supported a 1% increase, and 7.9% favored a cost-of-living adjustment. These results underscore a strong community desire to prioritize essential services and maintain infrastructure while balancing affordability and tax stability. The feedback will directly inform asset management strategies to ensure decisions align with resident expectations, fiscal responsibility, and long-term sustainability.

The community engagement survey has provided valuable insights into public satisfaction with municipal services, highlighting areas of strength and opportunities for improvement. While many respondents expressed a desire to maintain current service levels without increasing taxes, the results also highlight the importance of continued investment in essential infrastructure and public services. These results will help guide the development of the Asset Management Plan, ensuring that future investments and decisions are aligned with community needs and priorities.

4.3. Proposed Levels of Service Scenarios

The following three scenarios have been considered for establishing target levels of service for all asset categories included in this Asset Management Plan.

While all three scenarios were reviewed, the Municipality of South Bruce selected Scenario 2 for all assets as their preferred path forward regarding proposed levels of service, which is reflected in the financial strategy and 10-year capital replacement forecasts.

Scenario 1: Achieving Full Funding in 15 Years

Approach: This scenario assumes a phased annual tax increase of approximately 3.3%, 0.3% for water rates, and 2.2% for wastewater rates, achieving full funding in 15 years.

Scenario 2: Achieving 75% Funding in 15 Years

Approach: This scenario assumes a phased annual tax increase of approximately 2.0%, no increase for water rates, and 1.4% for wastewater rates, reaching 75% funding within 15 years.

Scenario 3: Achieving 50% Funding in 15 Years

Approach: This scenario assumes a phased annual tax increase of approximately 0.4%, no increase for water rates, and 0.5% for wastewater rates, reaching 50% funding within 15 years.

This methodology provides a structured approach for managing infrastructure conditions and levels of service under different budget scenarios, emphasizing adaptability and stakeholder communication.

Through a comprehensive assessment, the following levels of service for 9 asset categories have been developed, aligning with the long-term interests of the Municipality. Achievability is the key consideration, with measures in place to ensure realistic targets. The Municipality's financial capacity was thoroughly reviewed, confirming its ability to sustain the proposed service levels. Complementing this, a detailed lifecycle management and financial strategy was developed, delineating necessary activities for each asset category. This strategy outlines the full lifecycle of assets, presents viable options for lifecycle activities, evaluates associated risks, and prioritizes cost-effective measures to maintain the proposed service standards.

These funding strategies reflect the Municipality's consideration of long-term service levels, financial capacity, and the risks of underinvestment, as outlined in Section 6.2 of Ontario Regulation 588/17.

4.4. Scenario 1: Achieving Full Funding in 15 Years

This scenario outlines a phased funding approach, with an annual tax increase of approximately 3.3%, along with 0.3% increases in water rates and 2.2% increases in wastewater rates, aiming to achieve full funding within 15 years. These increases apply exclusively to capital investment and do not account for operational expenses or inflationary adjustments. The approach focuses on ensuring the municipality can fully fund its infrastructure needs over a set period.

The following analysis considers the affordability, achievability, and associated risks of this scenario, evaluating how the proposed funding strategy aligns with both community expectations and long-term infrastructure sustainability.

4.4.1. Lifecycle Changes Required

Increasing capital investment to achieve full funding over 15 years would significantly improve the municipality's ability to manage its infrastructure assets. This phased approach would allow for incremental funding increases, enabling proactive maintenance, timely upgrades, and early replacements, which would reduce the need for emergency repairs and extend asset lifecycles. The following lifecycle activities would be undertaken:

- Paved Roads
    - Increased capacity to enhance the current paved road lifecycle strategy by enabling more frequent repaving, which is currently limited by available funding.
- Bridges and Culverts
    - Timely implementation of all OSIM report recommendations to maintain functionality and extend lifespan, without deferring critical repairs or upgrades.
- Water and Wastewater Systems
    - Funding to support the full implementation of Veolia's capital recommendations, including replacement and rehabilitation
    - Initiate a proactive CCTV inspection program
    - Address infiltration and capacity issues.
- Stormwater Systems
    - Upgrade older urban stormwater systems to 100-year storm design standards to prevent overflows and improve flood resilience.
- Buildings
    - Execute full BCA recommendations, including replacing arena and townhall roofs and flooring.
    - Shift from a reactive to a proactive building maintenance strategy to better preserve municipal facilities.
- Land Improvements
    - Undertake replacement and rehabilitation of land improvement assets on a 20-year cycle.
    - Fully fund accessibility upgrades and related infrastructure improvements.

- Machinery & Equipment and Vehicles
  - Enable timely replacement of machinery, equipment, and vehicles, avoiding extended operation past their expected lifecycle.

4.4.2. Sustainability and Feasibility of Proposed Service Levels

Of the three scenarios analyzed, Scenario 1 requires the highest tax increase. Reaching full funding immediately would require an increase of 64.2% in tax revenue, 4.6% increase in water rates, and 52.6% increase in wastewater rates. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 15 years, tax revenue would be increased gradually from $6.8 million to $14.5 million, water revenue would be increased gradually for 5 years from $873 thousand to $913 thousand, and wastewater revenue from $1.8 million to $2.4 million.

Based on maintaining current funding levels and existing sustainable grant funding, which includes the Canada Community Building Fund (CCBF, formerly known as the Gas Tax Fund) and the Ontario Community Infrastructure Fund (OCIF), the available capital funding over the next 10 years for Scenario 1 is indicated in the table below:

Table 5: Scenario 1 Capital Funding Source Over Next 10 Years

Source	Available Capital Funding									
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tax Revenue	$3.5m	$3.7m	$4.0m	$4.2m	$4.5m	$4.7m	$5.0m	$5.3m	$5.6m	$5.9m
Water Rates	$240k	$243k	$245k	$248k	$251k	$253k	$256k	$259k	$261k	$264k
Waste-water Rates	$250k	$290k	$480k	$522k	$564k	$607k	$652k	$697k	$793k	$840k

The above table accounts for both current and future expenditures to achieve and maintain the service level option. This requires a combination of capital spending and saving (i.e. reserves) to ensure future large expenditures can be financed.

4.4.3. Risk Analysis

Evaluating the risks associated with each service level option is essential for balancing infrastructure needs, financial sustainability, and community expectations. By identifying and assessing these risks, the municipality can make informed decisions that support long-term service reliability.

Scenario 1 Risks

- Delayed Improvement: Improvements in overall asset condition and service levels may be limited in the short term, as funding increases are spread out over a longer timeline. However, incremental gains will be made as investment gradually ramps up.
- Infrastructure Backlog: The existing infrastructure backlog may grow during the early years of the phase-in, particularly if asset deterioration outpaces funding increases. This could lead to elevated future costs and greater risk of service disruption.
- Resource Constraints: Scaling up to full funding will require the Municipality to increase internal capacity for planning, procurement, and project delivery. Without sufficient resources, the effectiveness of increased investment may be reduced.
- Public Perception: Although the required tax or rate increases are technically feasible, sustained support from the community may be difficult to maintain over the full 15-year period, particularly if residents do not see immediate improvements or are sensitive to cost-of-living concerns.

4.5. Scenario 2: Achieving 75% Funding in 15 Years

This scenario outlines a phased funding approach, with an annual tax increase of approximately 2.0%, along with no increase in water rates, and 1.4% increases in wastewater rates, aiming to achieve 75% funding within 15 years.

The following analysis considers the affordability, achievability, and associated risks of this scenario, evaluating how the proposed funding strategy aligns with both community expectations and long-term infrastructure sustainability.

4.5.1. Lifecycle Changes Required

Increasing capital investment to achieve 75% funding over 15 years would improve the municipality's ability to manage its infrastructure assets. This phased approach would allow for incremental funding increases, enabling proactive maintenance, timely upgrades, and early replacements, which would reduce the need for emergency repairs and extend asset lifecycles. The following lifecycle activities would be undertaken:

- Paved Roads
    - Improve repaving frequency where most needed, but continue to defer some lifecycle work due to partial funding constraints.
- Bridges and Culverts
    - Prioritize high-risk OSIM recommendations, completing critical repairs while deferring lower-priority upgrades as needed.
- Water and Wastewater Systems
    - Implement the most urgent capital recommendations from Veolia, with phased replacement and rehabilitation.
    - Begin a limited CCTV inspection program focused on high-risk areas.
    - Address key infiltration and capacity concerns through targeted projects.
- Stormwater Systems
    - Upgrade priority stormwater systems toward 100-year storm standards, focusing on areas with the highest flood risk.
- Buildings
    - Address the most critical BCA recommendations, such as roof replacements, while deferring lower-priority items.
      Begin transitioning to a proactive maintenance approach through partial implementation.
- Land Improvements
    - Maintain a 20-year replacement cycle for essential assets, while staging accessibility and enhancement upgrades over time.
- Machinery & Equipment and Vehicles
    - Replace high-use or high-priority assets at end-of-life; continue operating some lower-priority assets beyond optimal lifecycle.

4.5.2. Sustainability and Feasibility of Proposed Service Levels

Of the three scenarios analyzed, Scenario 2 requires a moderate tax increase. Reaching 75% of full funding immediately would require an increase of 36.1% in tax revenue, no increase in water rates, and 36.4% increase in wastewater rates. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 15 years, tax revenue would be increased gradually from $6.8 million to $9.1 million, water revenue would remain constant at $873 thousand, and wastewater revenue would be increased gradually from $1.8 million to $2.2 million.

Based on maintaining current funding levels and existing sustainable grant funding, which includes the Canada Community Building Fund (CCBF, formerly known as the Gas Tax Fund) and the Ontario Community Infrastructure Fund (OCIF), the available capital funding over the next 10 years for Scenario 1 is indicated in the table below:

Table 6: Capital Funding Source Over Next 10 Years

Source	Available Capital Funding									
	2026	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Tax Revenue	$3.4m	$3.5m	$3.7m	$3.8m	$4.0m	$4.1m	$4.3m	$4.4m	$4.6m	$4.7m
Water Rates	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k
Waste-water Rates	$236k	$261k	$436k	$462k	$488k	$515k	$541k	$569k	$646k	$674k

The above table accounts for both current and future expenditures to achieve and maintain the service level option. This requires a combination of capital spending and saving (i.e. reserves) to ensure future large expenditures can be financed.

4.5.3. Risk Analysis

Evaluating the risks associated with each service level option is essential for balancing infrastructure needs, financial sustainability, and community expectations. By identifying and assessing these risks, the municipality can make informed decisions that support long-term service reliability.

Scenario 2 Risks

- Incomplete Improvement: Because the Municipality is targeting 75% of full lifecycle funding, it may not be able to achieve optimal asset condition or service levels, even after the phase-in period is complete. While gradual improvements will occur over time, certain non-critical assets may continue to degrade or be deferred beyond ideal timelines.
- Ongoing Infrastructure Backlog: At 75% funding, there is a risk that the infrastructure backlog will not be fully addressed. While the gap may narrow, some long-term funding pressure will remain, potentially leading to higher future rehabilitation costs or reduced flexibility to respond to emerging needs.
- Resource Constraints: Scaling operations to deliver on increased funding and manage backlog reduction may stretch existing municipal capacity, particularly if internal staff or contracting resources are limited. This may impact the ability to fully execute planned lifecycle activities on schedule.
- Public Acceptance: While the 75% target helps balance service needs with financial feasibility, the phased tax or rate increases required may still face public resistance, especially in a municipality with relatively stable service expectations and a strong desire for affordability.

4.6. Scenario 3: Achieving 50% Funding in 15 Years

This scenario involves a phased tax increase of approximately 0.4% annually, no increase in water rates and 0.5% increases in wastewater rates, aiming to achieve 50% funding within 15 years. The goal of this scenario is to provide a lower tax burden while making incremental progress toward meeting the municipality's infrastructure funding needs.

The following analysis considers the affordability, achievability, and associated risks of this scenario, evaluating how the proposed funding strategy aligns with both community expectations and long-term infrastructure sustainability.

4.6.1. Lifecycle Changes Required

Increasing capital investment to achieve 50% funding would lead to gradual improvements in managing infrastructure assets. This level of investment would support some proactive maintenance and early replacements but may not fully address aging infrastructure as effectively. Overall, this scenario would maintain infrastructure reliability, but service delivery improvements would be less significant. The following lifecycle activities would be undertaken:

- Paved Roads
    - Continue with existing repaving schedules based strictly on available funding.
- Bridges and Culverts
    - Address only the most critical OSIM recommendations, with many upgrades and lower-risk repairs deferred.
- Water and Wastewater Systems
    - Implement only the most urgent capital recommendations from Veolia.
    - Reactive approach to CCTV inspections and infiltration issues.
    - Capacity upgrades delayed except in emergency situations.
- Stormwater Systems
    - Focus on maintenance and emergency response in problem areas.
- Buildings
    - Reactive maintenance remains the primary approach.
    - Address only critical BCA items where failure risk is high.
- Land Improvements
    - Replacement and accessibility upgrades done only as required or when funding allows.
- Machinery & Equipment and Vehicles
    - Replace only the most essential equipment at failure or beyond service life.

4.6.2. Sustainability and Feasibility of Proposed Service Levels

Scenario 3 requires a conservative tax increase, requiring the lowest increase of the three scenarios analyzed. Reaching 50% of full funding immediately would require an increase of 8.0% in tax revenue, no increase in water rates, and 24.9% increase in wastewater rates. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 15 years, tax revenue would be increased gradually from $6.8 million to $7.2 million, water revenue would remain constant at $873 thousand, and wastewater revenue would be increased gradually from $1.8 million to $1.9 million.

Based on maintaining current funding levels and existing sustainable grant funding, which includes the Canada Community Building Fund (CCBF, formerly known as the Gas Tax Fund) and the Ontario Community Infrastructure Fund (OCIF), the available capital funding over the next 10 years for Scenario 1 is indicated in the table below:

Table 7: Capital Funding Source Over Next 10 Years

Source	Available Capital Funding									
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tax Revenue	$3.3m	$3.3m	$3.3m	$3.4m	$3.4m	$3.4m	$3.5m	$3.5m	$3.5m	$3.5m
Water Rates	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k	$238k
Waste-water Rates	$220k	$229k	$388k	$397k	$406k	$415k	$424k	$433k	$492k	$501k

The above table accounts for both current and future expenditures to achieve and maintain the proposed levels of service. This requires a combination of capital spending and saving (i.e. reserves) to ensure future large expenditures can be financed.

4.6.3. Risk Analysis

Evaluating the risks associated with each service level option is essential for balancing infrastructure needs, financial sustainability, and community expectations. By identifying and assessing these risks, the municipality can make informed decisions that support long-term service reliability.

Scenario 3 Risks

- Slow Improvement: While this investment level will address some maintenance needs, progress may be limited, leading to ongoing challenges in infrastructure management.
- Persistent Infrastructure Backlog: A 50% investment level is significantly below full lifecycle funding needs, meaning the existing infrastructure backlog is unlikely to be reduced and may continue to grow. Over time, this can lead to more frequent service disruptions, emergency repairs, and higher long-term capital costs.
- Long-Term Sustainability: Although this approach minimizes short-term financial impact on ratepayers, it may be insufficient to meet future service demands, especially as infrastructure ages or new regulatory requirements emerge. Without adjustments, the scenario may become unsustainable, placing future councils in a difficult financial position.
- Increased Reliance on Reserves: To manage emerging infrastructure failures or unplanned replacements, the Municipality may need to rely more heavily on its Asset Management Reserve. This could erode reserve balances, limiting flexibility and resilience in future years.
- Deferred Strategic Goals: Lower investment levels could delay or prevent the achievement of key asset management goals, such as improving service equity, meeting climate resilience targets, or expanding infrastructure capacity to support growth.

4.7. Proposed Levels of Service Analysis

4.7.1. Preferred Approach and Rationale

The Municipality of South Bruce has selected a Proposed Level of Service scenario that targets 75% funding of annual infrastructure requirements within the next 15 years. This approach reflects a practical and financially responsible path forward that considers the community's tolerance for tax and rate increases, while still supporting the Municipality's critical asset management objectives.

Achieving 75% funding over a 15-year period allows South Bruce to meaningfully reduce its infrastructure funding gap, prioritize key lifecycle interventions, and maintain essential service levels, without imposing an immediate or unsustainable financial burden on residents and users. This phased approach also creates space for scaling up internal capacity and financial resources over time, aligning with available staffing, tools, and funding mechanisms as they develop.

Importantly, the strategy provides flexibility. As new infrastructure is added and community needs evolve, the Municipality will revisit and refine this approach in future updates to the Asset Management Plan. This ensures ongoing alignment between funding strategies, service expectations, and long-term sustainability goals.

Categorical Analysis

5. Road Network

5.1. State of the Infrastructure

The Road Network is a critical component of the provision of safe and efficient transportation services and represents the highest value asset category in the Municipality's asset portfolio. It includes all municipally owned and maintained roadways in addition to supporting roadside infrastructure including sidewalks, streetlights, guardrails, and drainage.

The Municipality's roads and sidewalks are maintained by the Public Works department who is also responsible for winter snow clearing, ice control and snow removal operations.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$150,071,707

Replacement Cost

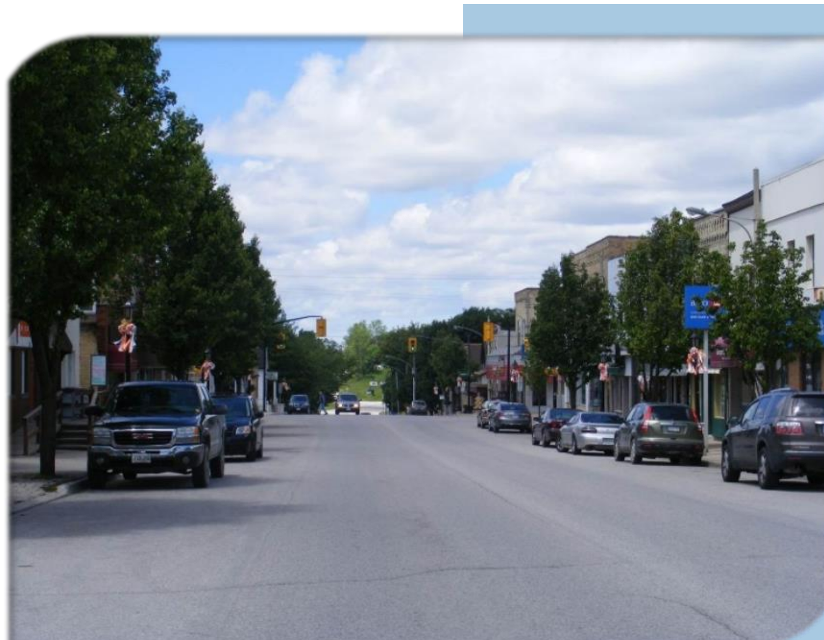
45% (Fair)

Condition

Annual Target:
$2,885,350
Funding Available:
$1,984,154
Annual Deficit:
$901,196

Financial Capacity

Figure 21: Road Network State of the Infrastructure



5.2. Inventory & Valuation

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

Table 8: Road Network Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Gravel Roads	174	Length (km)	CPI	$45,420,315
Paved Roads	239	Length (km)	CPI	$100,747,963
Retaining Walls	2	Quantity	CPI	$30,512
Sidewalks	13.3	Length (km)	CPI	$2,735,881
Streetlights & Traffic Systems	539	Quantity	CPI	$1,137,036
Total				**$150,071,707**

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

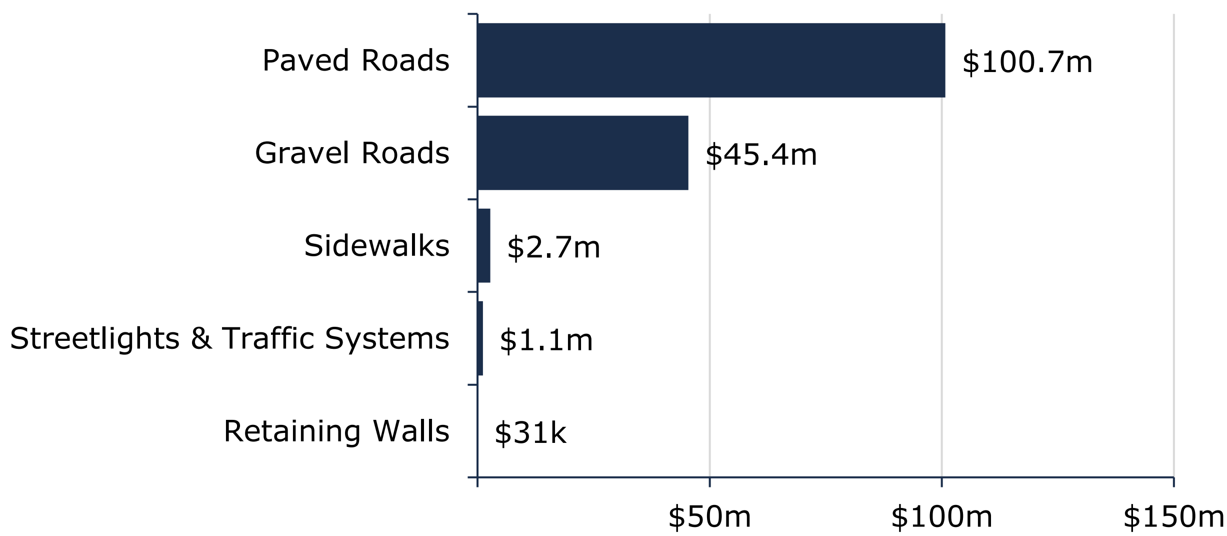


Figure 22: Road Network Replacement Value

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

5.3. Asset Condition & Age

The graph below identifies the average age, and the estimated useful life for each asset segment[2].

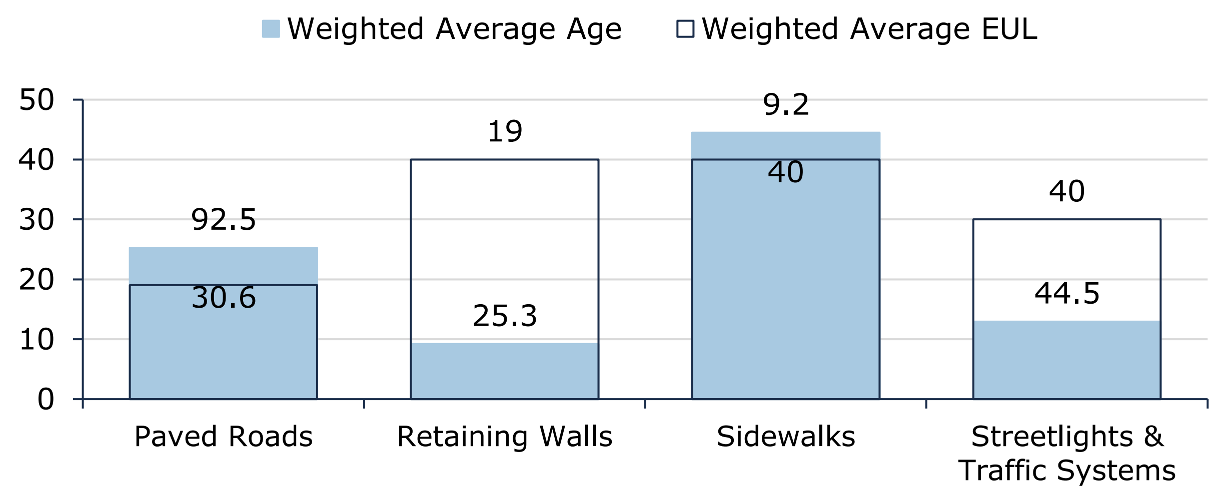


Figure 23: Road Network Average Age vs Average EUL

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

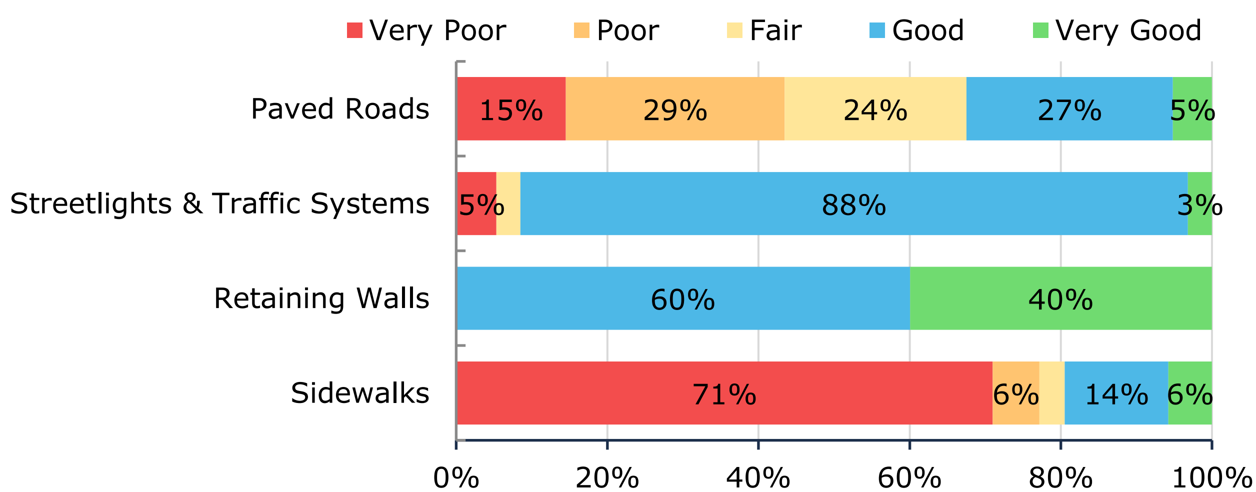


Figure 24: Road Network Condition Breakdown

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

[2] Gravel roads undergo perpetual operating and maintenance activities. If maintained properly, they can theoretically have a limitless service life.

5.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Municipality's current approach:

- A Road Needs Study was completed in 2020 that included a detailed condition assessment of each road segment. Between studies, Staff asses their roads on a regular basis during patrols
- Sidewalks and regulatory signs are inspected on an annual basis in accordance with Minimum Maintenance Standards (MMS).
- Other road appurtenances are visually inspected by Staff, as needed.

5.4. Lifecycle Management Strategy

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

The following lifecycle strategies shown in the Figures below have been developed as a proactive approach to managing the lifecycle of municipally owned 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.

HCB Roads		
Event Name	**Event Class**	**Event Trigger**
Crack Sealing	Maintenance	5 Years (repeated)
Pulverize and Pave (Rural or Semi-Urban)	Rehabilitation	30%-50% Condition
Mill and Pave (Urban roads)	Rehabilitation	30%-50% Condition
Reconstruction	Replacement	<30% Condition

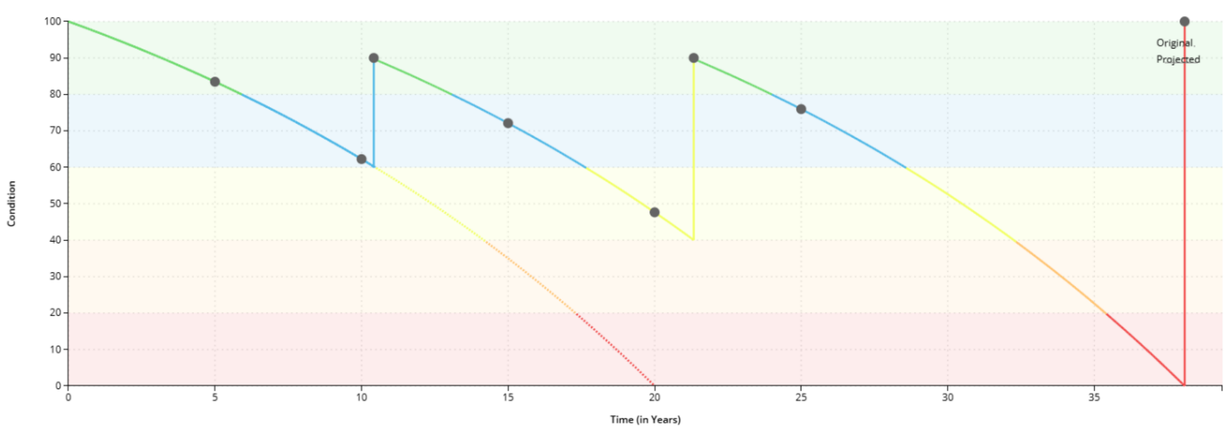


Figure 25: HCB Road Strategy

LCB Roads		
Event Description	**Event Class**	**Event Trigger**
Double Surface Treatment	Rehabilitation	30%-50% Condition
Single Surface Treatment	Rehabilitation	70%-80% Condition
Reconstruction	Replacement	<30% Condition

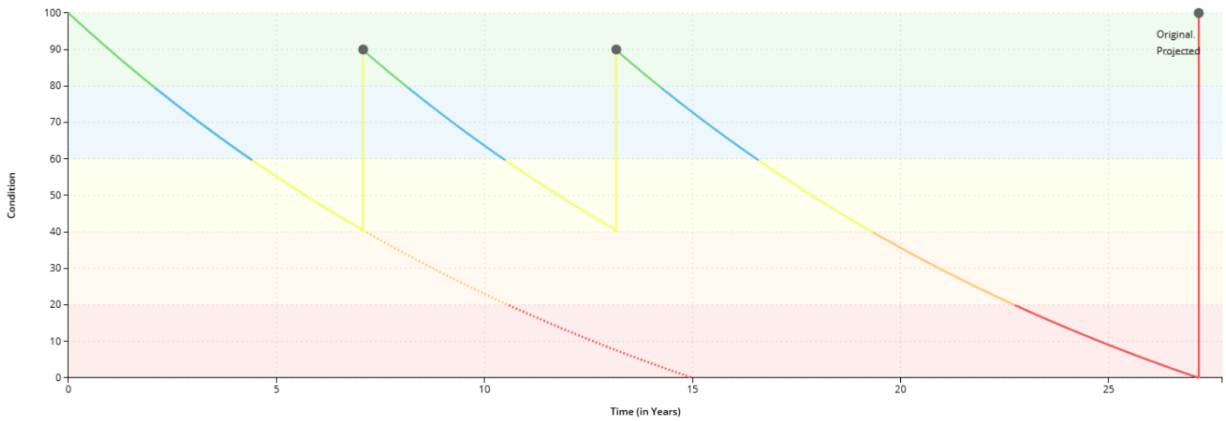


Figure 26: LCB Roads Strategy

5.5. Forecasted Capital Requirements

The Figure below illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the Municipality's Road Network. This analysis was run until 2079 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the Municipality's primary asset management system and asset register. The Municipality's average annual requirements (red dotted line) total $3.8 million for all assets in the road network. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service.

The chart illustrates substantial capital needs through the forecast period. It also shows $2.5 million in overdue infrastructure needs. These projections are based on asset replacement costs, age analysis, and condition data when available, as well as lifecycle modeling (roads only). They are designed to provide a long-term, portfolio-level overview of capital needs and should be used to support improved financial planning over several decades.

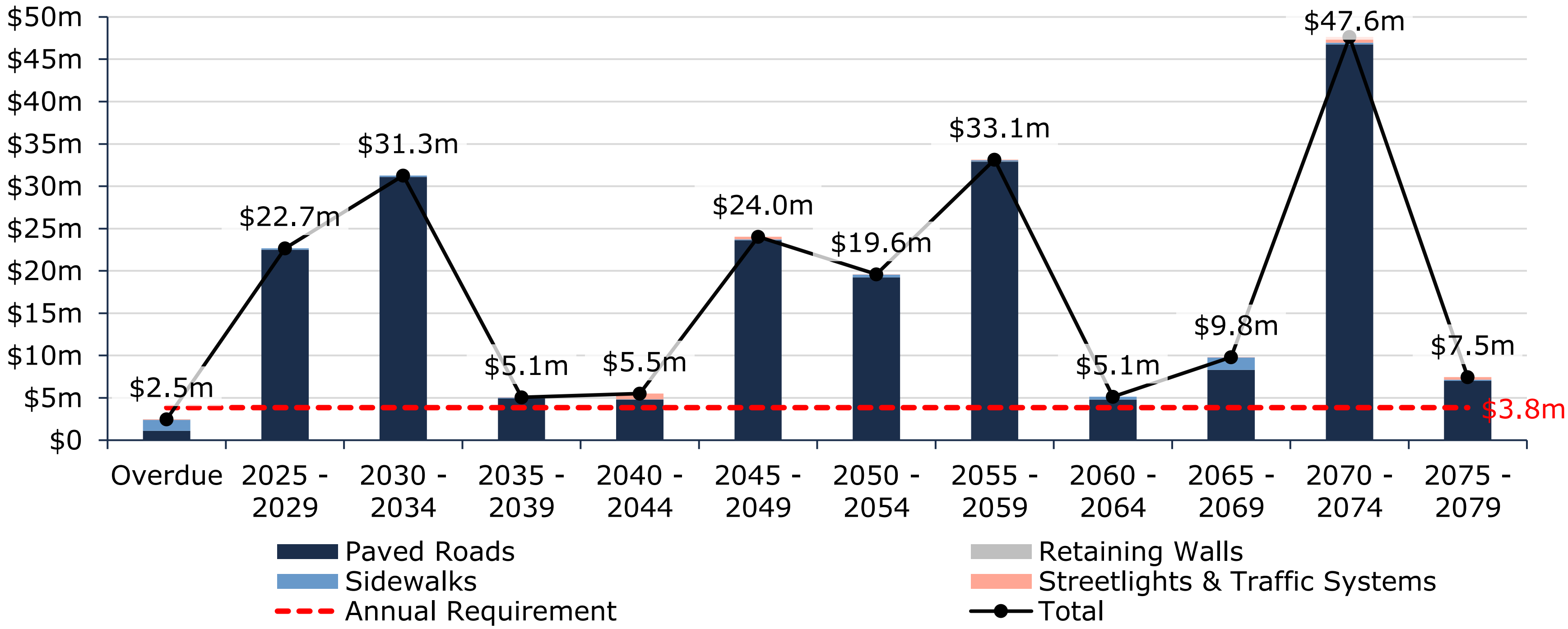


Figure 27: Road Network Forecasted Capital Replacement Requirements

The Table below summarizes the projected cost of lifecycle activities (rehabilitation and replacement) that may need to be undertaken over the next 10 years to support current levels of service. These projections are generated in Citywide and rely on the data available in the asset register. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Municipality's capital expenditure forecasts.

Table 9: Road Network System-generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Paved Roads	$1.1m	$4.4m	$5.0m	$7.0m	$3.1m	$3.1m	$5.7m	$9.6m	$12.4m	$1.2m	$2.1m
Retaining Walls	-	-	-	-	-	-	-	-	-	-	-
Sidewalks	$1.3m	$108k	$63k	-	-	-	$161k	-	-	$22k	-
Streetlights & Traffic Systems	$61k	-	-	-	-	-	-	-	-	-	-
Total	**$2.5m**	**$4.5m**	**$5.0m**	**$7.0m**	**$3.1m**	**$3.1m**	**$5.9m**	**$9.6m**	**$12.4m**	**$1.2m**	**$2.1m**

5.6. Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria. for the criteria used to determine the risk rating of each asset.

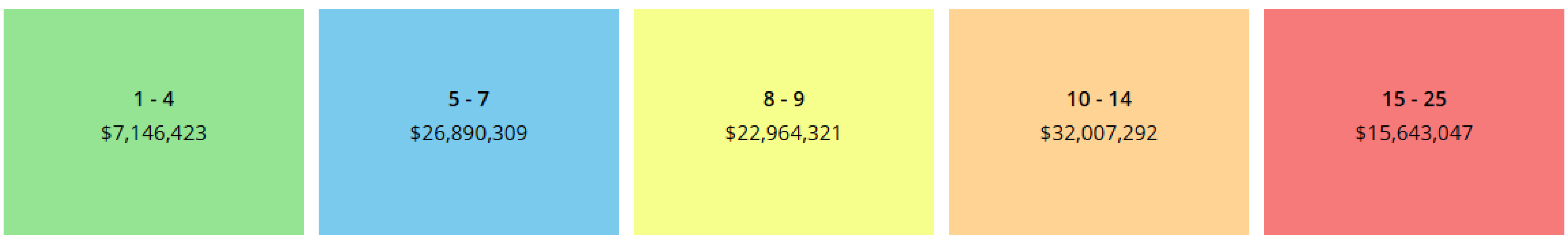


Figure 28: Road Network Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data. Gravel roads are not included in the current risk rating model, as they are considered perpetual assets that require ongoing maintenance rather than full replacement.

5.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for the Road Network.

5.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the road network.

Table 10: Road Network Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Accessible & Reliable	Description, which may include maps, of the road network in the Municipality and its level of connectivity	See Appendix B.
Sustainable	Description or images that illustrate the different levels of road class pavement condition	Municipal roads receive a Pavement Condition Index (PCI) score from 0-100 based on a combination of distress issues and ride comfort ratings. The PCI scores are used to inform a recommended timeframe for maintenance, rehabilitation, or replacement. (80-100 PCI) – Roads are considered in very good condition, with minimal maintenance required. (70-80 PCI) – Roads are considered in fair-good condition with major rehabilitation required in 6-10 years. (50-70 PCI) – Roads are considered in poor-fair condition with major rehabilitation required in 1 to 5 years. (<50 PCI) – Roads are considered in poor-very poor condition requiring resurfacing or major rehabilitation within 2 years.

5.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the road network.

Table 11: Road Network Technical Levels of Service

Service Attribute	Technical Metric	Curent LOS
Accessible & Reliable	Lane-km of arterial roads (MMS classes 1 and 2) per land area in the municipality (km/km^2)	0 km / 487 km2
	Lane-km of collector roads (MMS classes 3 and 4) per land area in the municipality (km/km^2)	572 km / 487 km2
	Lane-km of local roads (MMS classes 5 and 6) per land area in the municipality (km/km^2)	229 km / 487 km2
Sustainable	Average pavement condition index for paved roads in the municipality	54
	Average surface condition for unpaved roads in the municipality	53
	Average condition for sidewalks in the municipality	23%

5.8. 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 municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for the Road Network. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenarios Section.

5.8.1. PLOS Scenarios Analyzed

Table 12: Road Network PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

5.8.2. PLOS Analysis Results

The following table compares three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 13: Road Network pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	56.71%	57.09%	49.40%	52.25%
	Average Asset Risk	9.88	9.57	10.57	10.3
	Average Annual Investment	$3,847,133			
	Capital re-investment rate	2.6%			
Scenario 2	Average Condition	56.71%	54.56%	42.08%	49.53%
	Average Asset Risk	9.88	9.85	11.45	10.63
	Average Annual Investment	$2,885,350			
	Capital re-investment rate	1.9%			
Scenario 3	Average Condition	56.71%	52.49%	33.90%	45.62%
	Average Asset Risk	9.88	10.14	12.23	11.09
	Average Annual Investment	$1,923,567			
	Capital re-investment rate	1.3%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

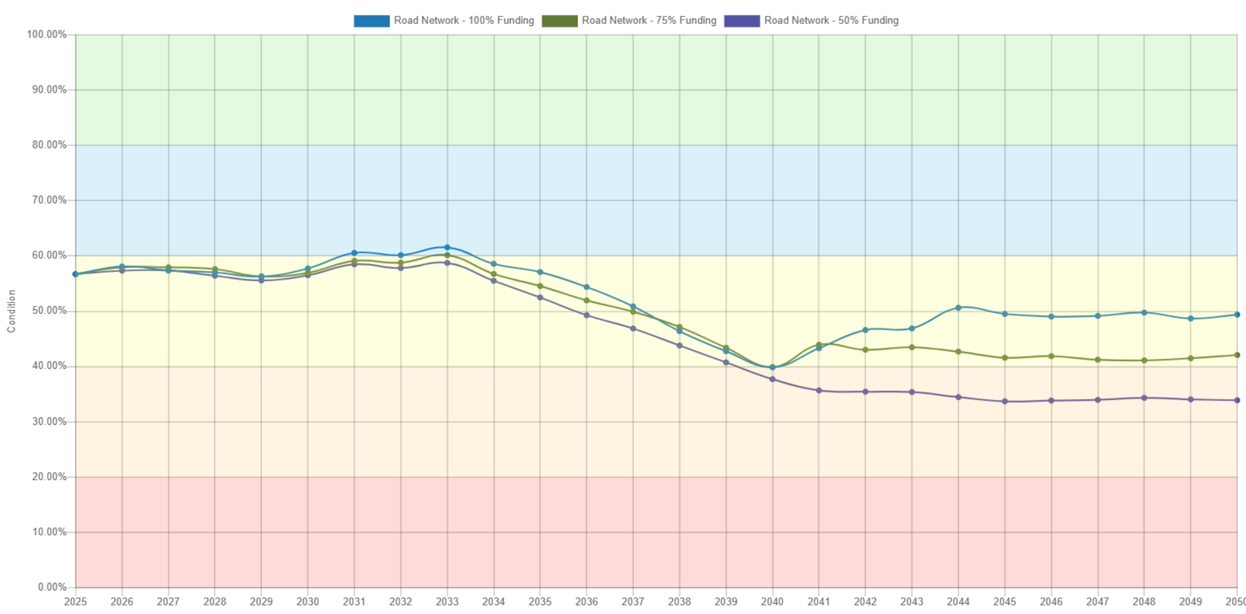


Figure 29: Road Network Scenario Comparison

6. Bridges & Culverts

6.1. State of the Infrastructure

Bridges & Culverts represent a critical portion of the transportation services provided to the community. Public Works staff are responsible for the maintenance of all bridges and structural culverts located across municipal roads with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$56,933,694

Replacement Cost

61% (Good)

Condition

Annual Target: **$857,838**
Funding Available: **$815,924**
Annual Deficit: **$41,914**

Financial Capacity

Figure 30: Bridges & Culverts State of the Infrastructure

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

Table 14: B&C Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Bridges	29	Assets	User-Defined	$42,593,780
Culverts	16	Assets	User-Defined	$14,339,914
Total				**$56,933,694**

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

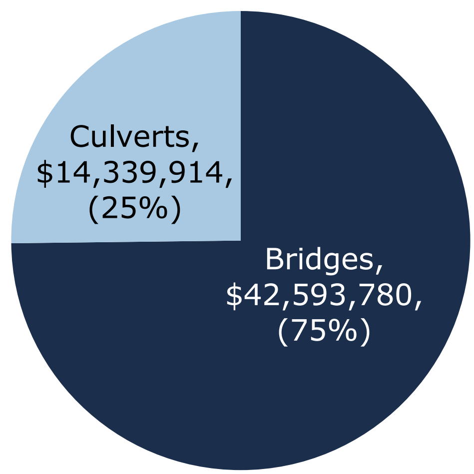


Figure 31: Bridges & Culverts Replacement Cost

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

6.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

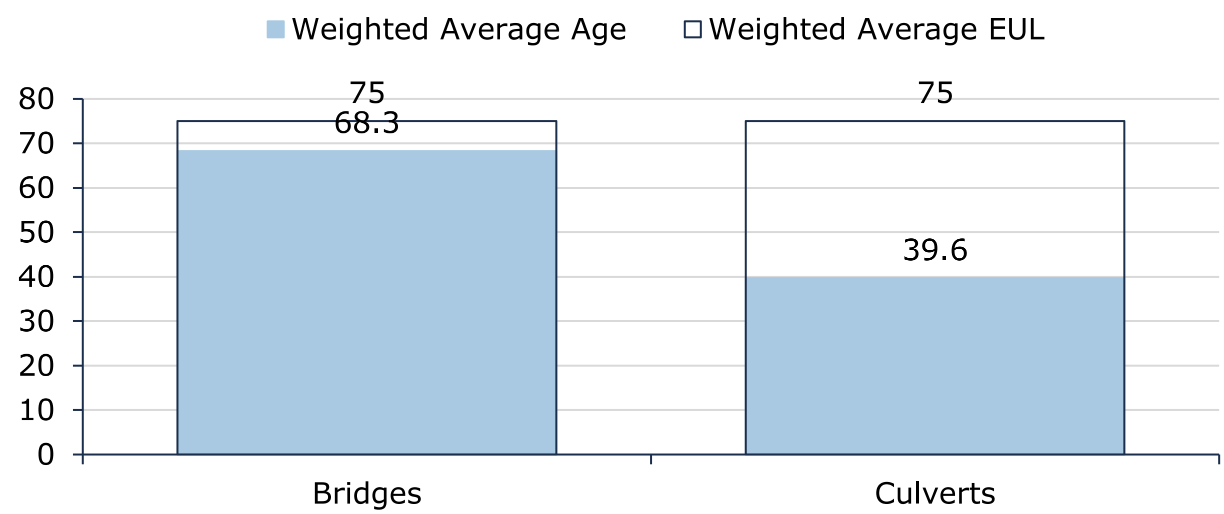


Figure 32: B&C Average Age vs Average EUL

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

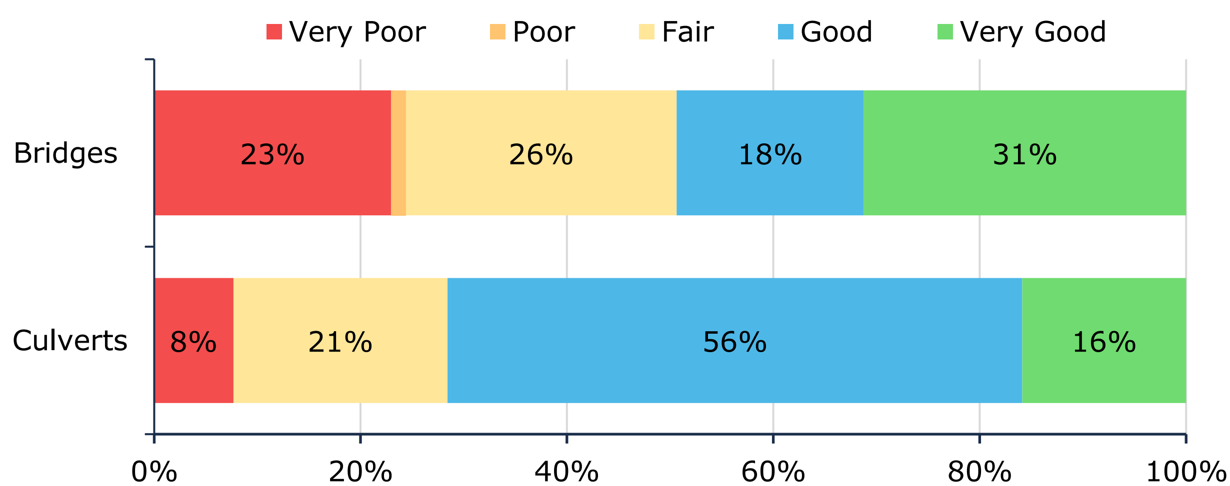


Figure 33: B&C Condition Breakdown

To ensure that the Municipality's bridges and culverts continue to provide an acceptable level of service, the staff should monitor the average condition of all assets. Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

6.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Inspections of bridges and culverts, with a span greater than or equal to 3 meters, are completed every 2-4 years in accordance with the Ontario Structure Inspection Manual (OSIMs). Staff visually assess assets between OSIMs to ensure they are functioning as expected.
- The most recent assessment was completed in 2024

6.4. Lifecycle Management Strategy

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 Figure below outlines South Bruce's current lifecycle management strategy.

Maintenance

- Staff perform regular maintenace activiteis such as sweeping and dust control on bridge and culvert structure, as needed.

Rehabilitation / Renewal / Replacement

- All lifecycle activities are driven by the results of mandated structural inspections competed according to the Ontario Structure Inspection Manual (OSIM)

Figure 34: B&C Current Lifecycle Strategy

6.5. Forecasted Capital Requirements

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

The following analysis was run until 2200, and the resulting graph identifies capital requirements over the next 80 years. South Bruce's average annual requirements (red dotted line) for bridges and culverts total $1.1 million. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service.

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

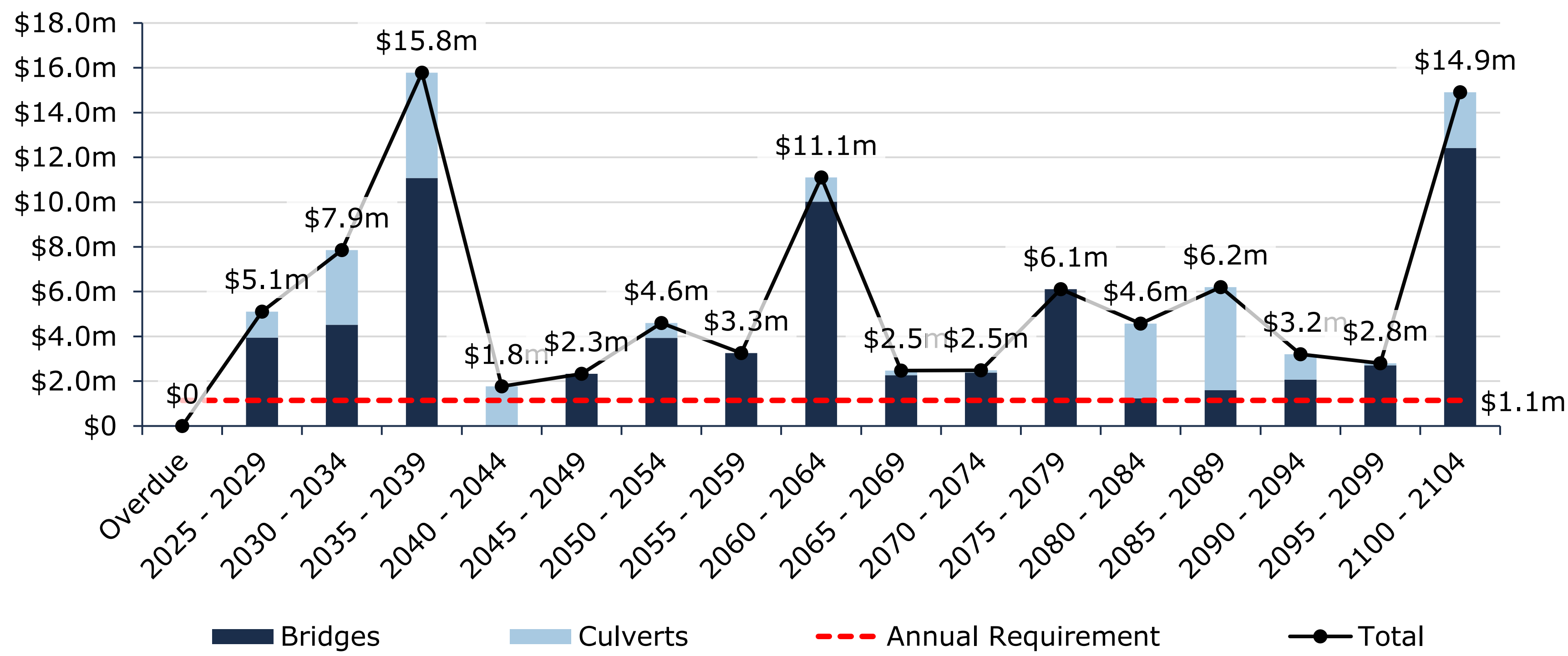


Figure 35: B&C Forecasted Capital Replacement Requirements

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

Table 15: B&C System-generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Bridges	-	$547k	$1.1m	$262k	$1.3m	$789k	-	-	$3.3m	$1.2m	-
Culverts	-	-	-	$1.2m	-	-	$3.3m	-	-	-	-
Total	**-**	**$547k**	**$1.1m**	**$1.4m**	**$1.3m**	**$789k**	**$3.3m**	**-**	**$3.3m**	**$1.2m**	**-**

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

6.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 **Very Low**	**5 - 7** **Low**	**8 - 9** **Moderate**	**10 - 14** **High**	**15 - 25** **Very High**
$10,116,394 (18%)	$8,281,512 (15%)	$12,104,288 (21%)	$22,973,000 (40%)	$3,458,500 (6%)

Figure 36: B&C Risk Matrix

This is a high-level model developed by municipal staff and should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

6.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for the bridges and culverts.

6.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by bridges and culverts.

Table 16: B&C Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Accessible & Reliable	Description of the traffic that is supported by municipal bridges (e.g. heavy transport, motor, emergency vehicles, pedestrians, cyclists)	Bridges and structural culverts are a key component of the municipal transportation network. Only 8 of the municipality's structures have loading or dimensional restrictions meaning that most types of vehicles, including heavy transport, motor vehicles, emergency vehicles and cyclists can cross them without restriction.
Sustainable	Description or images of the condition of bridges and culverts and how this would affect use of the bridges and culverts	The Municipality uses the Bridge Condition Index (BCI) as reported through its Ontario Structure Inspection Manual (OSIM) reports to evaluate each structure. The BCI is a standardized rating system that ranges from 0 to 100, with higher values indicating better condition. The condition of these assets directly affects their usability, safety, and load capacity. Structures with lower BCI scores may face usage restrictions, require increased maintenance, or be scheduled for rehabilitation or replacement to ensure continued service and public safety.

6.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by bridges and culverts.

Table 17: B&C Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Accessible & Reliable	% of bridges in the Municipality with loading or dimensional restrictions	20%
Sustainable	Average bridge condition index value for bridges in the municipality	59
	Average BCI value for structural culverts in the municipality	68

6.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for Bridges & Culverts. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenarios Section.

6.8.1. PLOS Scenarios Analyzed

Table 18: B&C PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

6.8.2. PLOS Analysis Results

The following table presents the outcomes for three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 19: B&C pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	69.55%	49.85%	38.43%	48.90%
	Average Asset Risk	10.35	14.05	15.31	13.63
	Average Annual Investment	$1,143,784			
	Capital re-investment rate	2.0%			
Scenario 2	Average Condition	69.55%	49.85%	38.43%	45.67%
	Average Asset Risk	10.35	14.05	15.31	14.06
	Average Annual Investment	$857,838			
	Capital re-investment rate	1.5%			
	Average Condition	69.55%	49.85%	38.43%	35.88%

Scenario 3	Average Asset Risk	10.35	14.05	15.31	15.4
	Average Annual Investment	$571,892			
	Capital re-investment rate	1.0%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

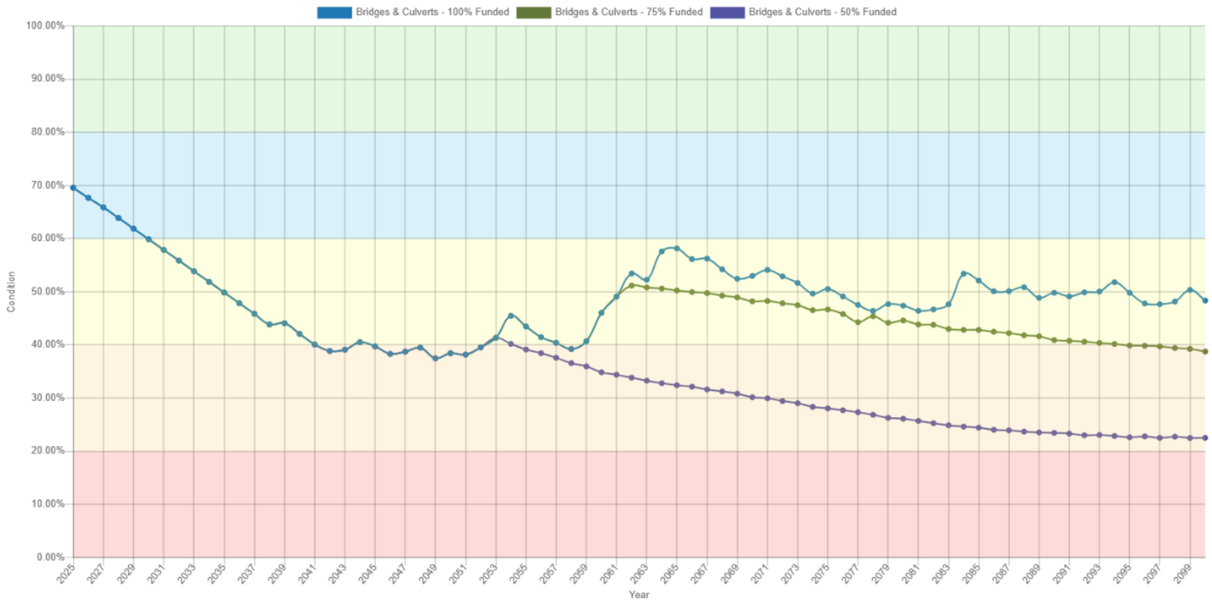


Figure 37: B&C Scenario Comparison

7. Water Network

7.1. State of the Infrastructure

The Municipality manages the Teeswater and Mildmay water systems, which include watermains, hydrants, and pumping stations. Veolia is contracted to operate vertical assets such as the water tower and pumphouses.

A second well and new water tower are planned to be introduced into the Teeswater water system. Although financial figures for these future assets are not currently included in this asset management plan, these assets will be incorporated into future iterations of the plan.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$23,072,140
Replacement Cost

61% (Good)
Condition

Annual Target:
$208,118
Funding Available:
$237,552
Annual Deficit:
$0
Financial Capacity

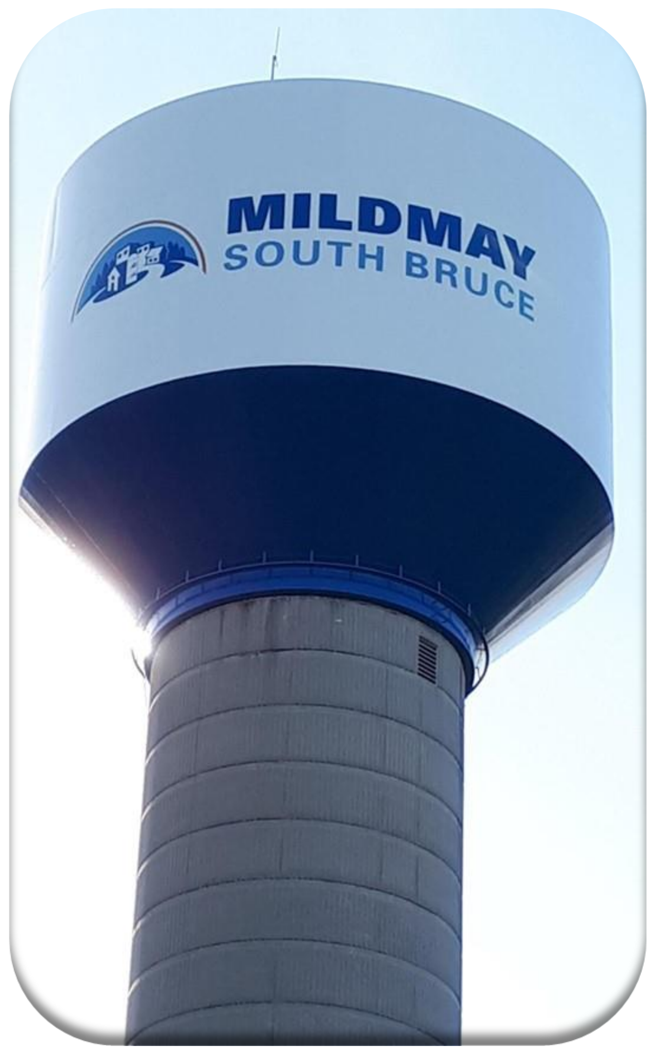


Figure 38: Water Network State of the Infrastructure

7.2. Inventory & Valuation

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

Table 20: Water Network Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Hydrants	111	Quantity	CPI	$883,476
Water Equipment	17	Quantity	User-Defined	$2,312,996
Water Towers	1	Quantity	User-Defined	$7,015,173
Watermains	21.3	Length (km)	CPI	$11,660,495
Wells	3	Quantity	User-Defined	$1,200,000
Total				**$23,072,140**

The graph below displays the total replacement cost of each asset segment in South Bruce's water network inventory.

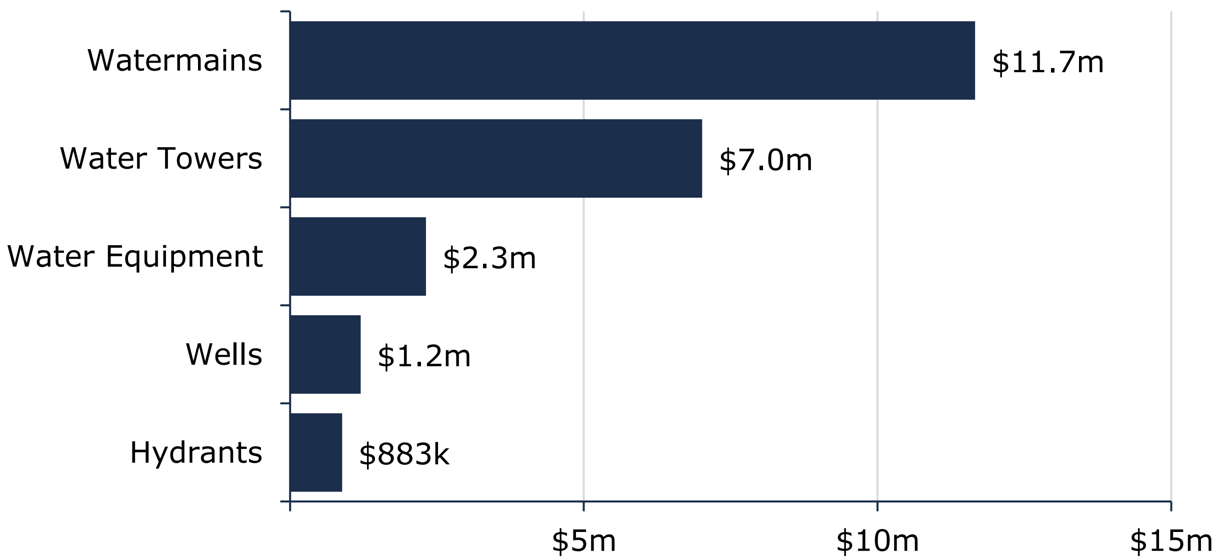


Figure 39: Water Network Replacement Cost

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

7.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

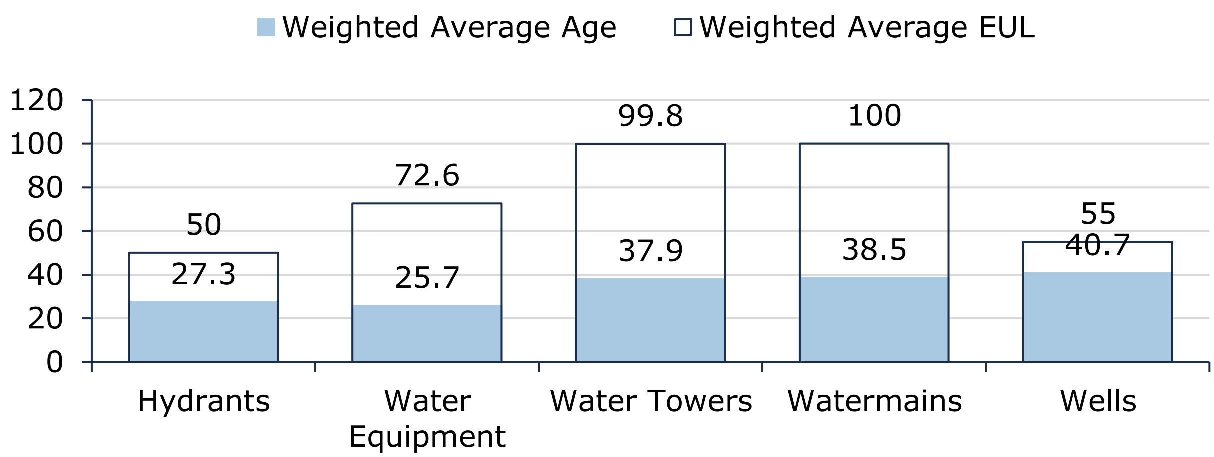


Figure 40: Water Network Average Age vs Average EUL

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

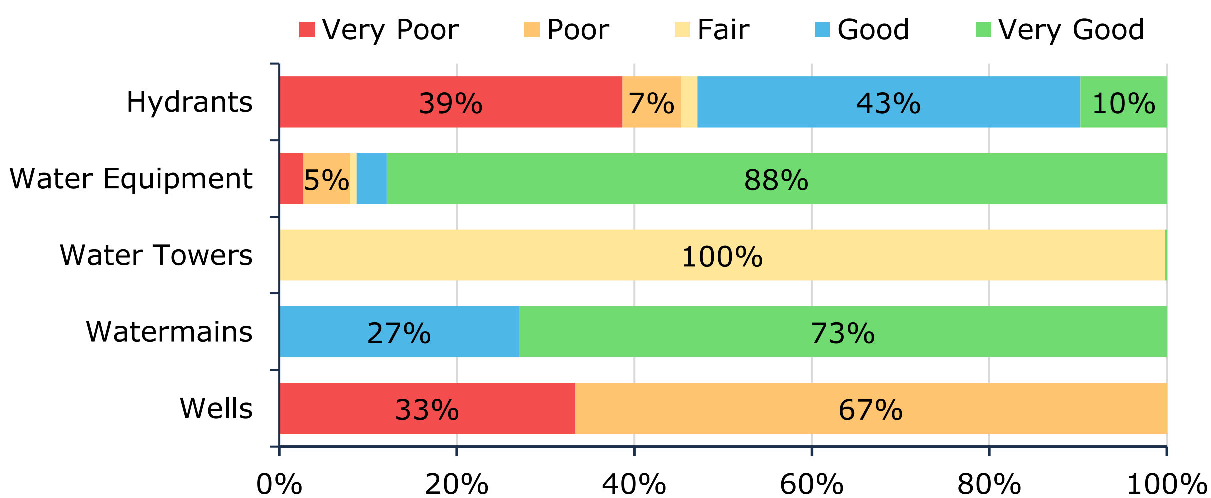


Figure 41: Water Network Condition Breakdown

To ensure that the municipal water network continues to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the water network.

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

7.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Municipality's current approach:

- For linear watermains, staff utilize a combination of age, breaks per segment, pipe material and diameter size to approximate assessed condition of the pipes.
- For non-linear assets, such as the towers and pumphouses, Veolia inspects these assets and their components at varying frequencies in accordance with the Safe Drinking Water Act.

7.4. Lifecycle Management Strategy

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 Municipality's current lifecycle management strategy.

Maintenance / Rehabilitation / Replacement

- Hydrant flushing and valve exercising is completed on the network annually
- Fire flow and pressure testing is performed as needed
- Water equipment is maintained and/or rehabilitated based on recommendations from Veolia, in accordance with O.Reg. 170/03 (Safe Drinking Water Act)
- Watermains are replaced as they near their end-of-life, typically being replaced with polvinyl chloride (PVC) pipes due to their durability. Staff prioritize the replacement of watermains in coordination with other asset replacements and for health and safety issues.

Figure 42: Water Network Current Lifecycle Strategy

7.5. Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that South Bruce should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 80 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average capital requirement of $77 thousand. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service

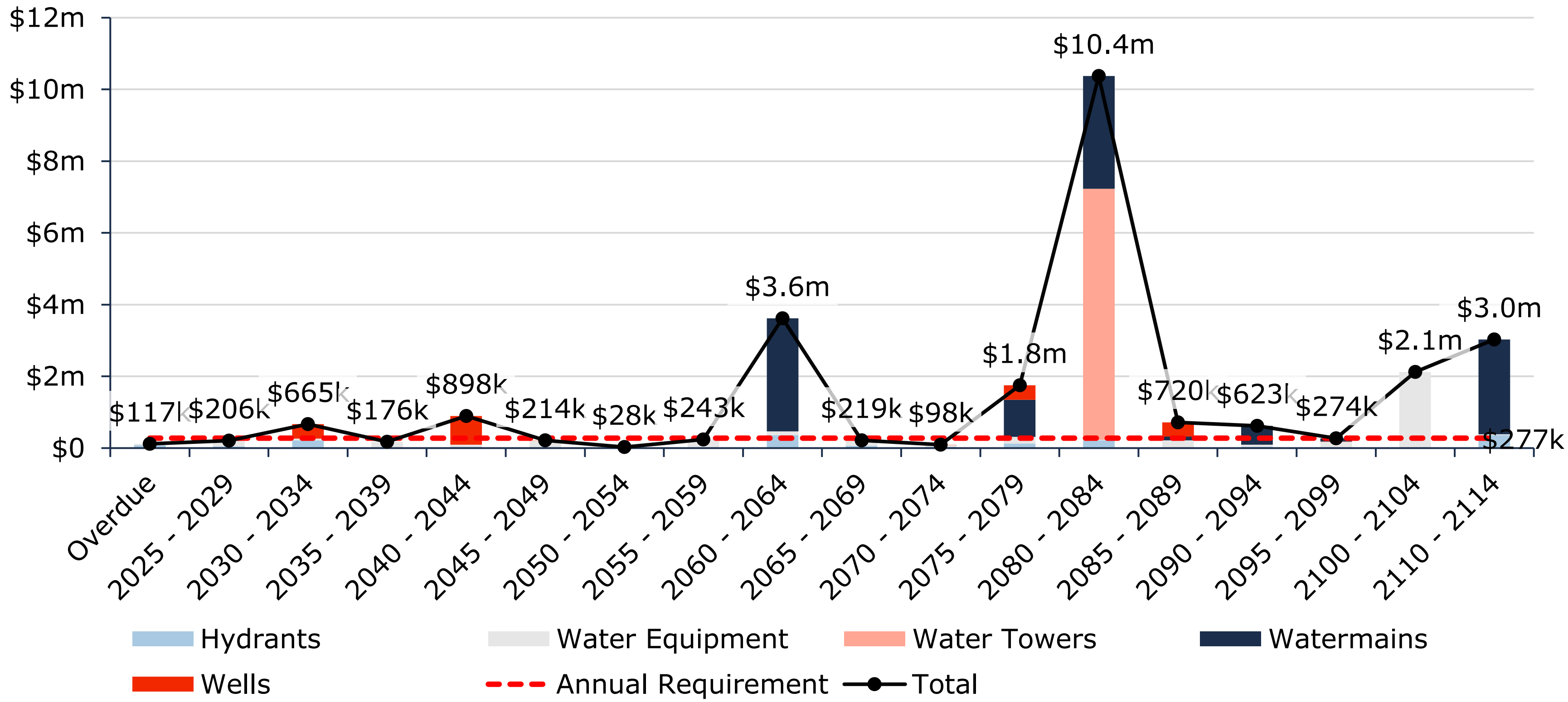


Figure 43: Water Network Forecasted Capital Replacement Requirements

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

Table 21: Water Network System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Hydrants	$77k	-	-	$42k	$7k	-	-	-	$17k	$17k	$182k
Water Equipment	$40k	-	-	$144k	$13k	-	-	$13k	-	$24k	$13k
Water Towers	-	-	-	-	-	-	-	-	-	-	-
Watermains	-	-	-	-	-	-	-	-	-	-	-
Wells	-	-	-	-	-	-	-	-	-	-	$400k
Total	**$117k**	**-**	**-**	**$186k**	**$20k**	**-**	**-**	**$13k**	**$17k**	**$41k**	**$595k**

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

7.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 Very Low	**5 - 7 Low**	**8 - 9 Moderate**	**10 - 14 High**	**15 - 25 Very High**
$11,046,511 (48%)	$3,251,117 (14%)	$8,574,631 (37%)	$41,364 (<1%)	$158,517 (<1%)

Figure 44: Water Network Risk Matrix

This is a high-level model that has been developed based on information currently available and should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

7.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for the Water Network.

7.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the water network.

Table 22: Water Network Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Accessible & Reliable	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	See Appendix B
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	See Appendix B
Safe & Regulatory	Description of boil water advisories and service interruptions	The Municipality did not experience any boil water advisories or service interruptions for this reporting period.

7.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the water network.

Table 23: Water Network Technical Levels of Service

Service Attribute	Technical Metric	Current LOS[3]
Accessible & Reliable	% of properties connected to the municipal water system	33.35%
	% of properties where fire flow is available	33.35%
Safe & Regulatory	# of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system	1:1,051
	# 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
Sustainable	Average condition of water network assets	75%

7.8. 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 municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for the Water Network. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenarios Section.

7.12.1. PLOS Scenarios Analyzed

Table 24: Water Network PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased rate increase of approximately 0.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario models the impact of maintaining current rates, projecting a funding level of 75% over 15 years. It is a theoretical exercise only, as the

[3] Percentages for properties connected to the municipal water system and those with available fire flow are based on the most recent (2025) municipal household data, rather than 2021 Statistics Canada figures.

	Municipality's water systems are currently 85.6% funded, and no reductions to rates are planned.
Scenario 3: Achieving 50% Funding in 15 Years	This scenario models the impact of maintaining current rates, projecting a funding level of 50% over 15 years. It is a theoretical exercise only, as the Municipality's water systems are currently 85.6% funded, and no reductions to rates are planned.

7.12.2. PLOS Analysis Results

The following table presents the outcomes for three investment scenarios, illustrating how varying levels of capital investment influence asset condition, risk, and required investment over time.

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	74.04%	68.49%	57.18%	60.95%
	Average Asset Risk	6.41	6.32	8.48	8.02
	Average Annual Investment	$277,490			
	Capital re-investment rate	1.2%			
Scenario 2	Average Condition	74.04%	68.49%	57.18%	54.58%
	Average Asset Risk	6.41	6.32	8.48	8.93
	Average Annual Investment	$208,118			
	Capital re-investment rate	0.9%			
Scenario 3	Average Condition	74.04%	68.49%	57.18%	52.10%
	Average Asset Risk	6.41	6.32	8.48	9.24
	Average Annual Investment	$138,745			
	Capital re-investment rate	0.6%			

Table 25: Water Network pLOS Scenario Analysis

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

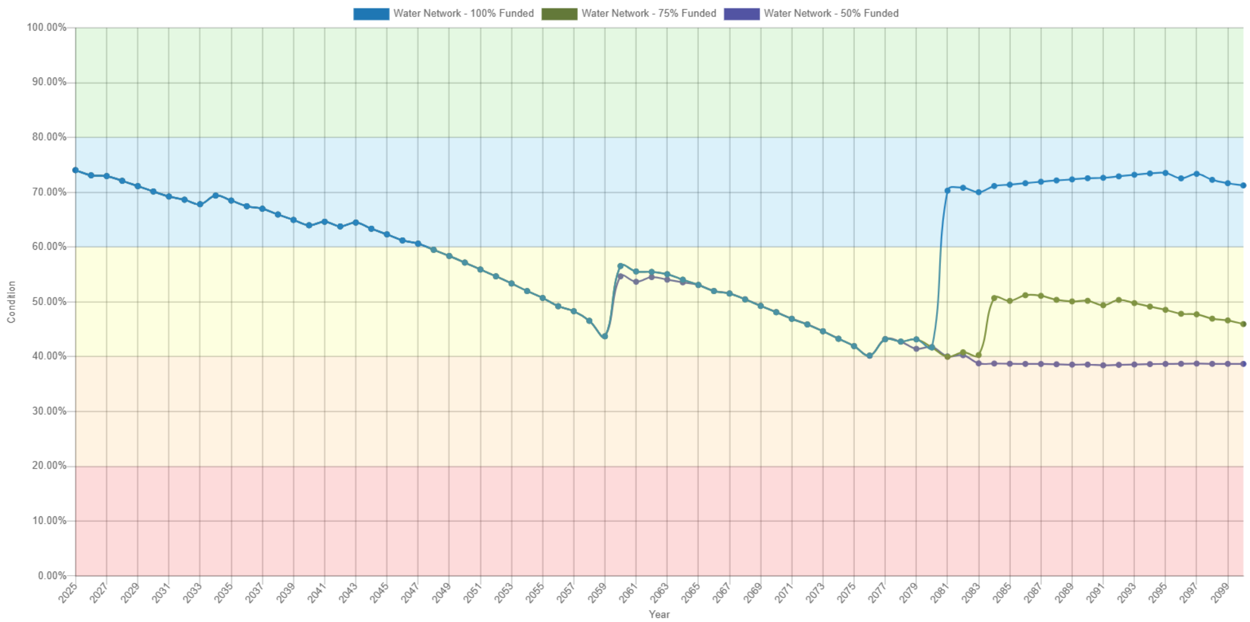


Figure 45: Water Network Scenario Comparison

8. Wastewater Network

8.1. State of the Infrastructure

The Municipality is responsible for maintaining both the Teeswater-Formosa and Mildmay sanitary sewer systems. The two systems have slight design differences, but generally consist of sewer mains, grinder pumps, pumping stations, wastewater treatment equipment, and treatment plants. Veolia oversees day-to-day activities and operations within the systems as an independent third-party operator.

Although not included in this iteration of the asset management plan, South Bruce is currently undertaking an expansion to the Teeswater-Formosa wastewater treatment plant. While the existing treatment plant is in good physical condition, expanded functional capacity is a priority.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$50,827,346

Replacement Cost

78% (Good)

Condition

Annual Target:
$855,906
Funding Available:
$211,142
Annual Deficit:
$644,764

Financial Capacity

Figure 46: Wastewater Network State of the Infrastructure

8.2. Inventory & Valuation

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

Table 26: Wastewater Network Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Pumping Stations	8	Quantity	User-Defined	$5,057,014
Sewer Grinder Pumps	147	Quantity	User-Defined	$1,432,703
Sewer Mains	33.0	Length (km)	User-Defined	$23,136,845
Wastewater Equipment	43	Quantity	User-Defined	$3,381,619
Wastewater Treatment Plant	2	Quantity	User-Defined	$17,819,165
Total				**$50,827,346**

The graph below displays the total replacement cost of each asset segment in South Bruce's wastewater network inventory.

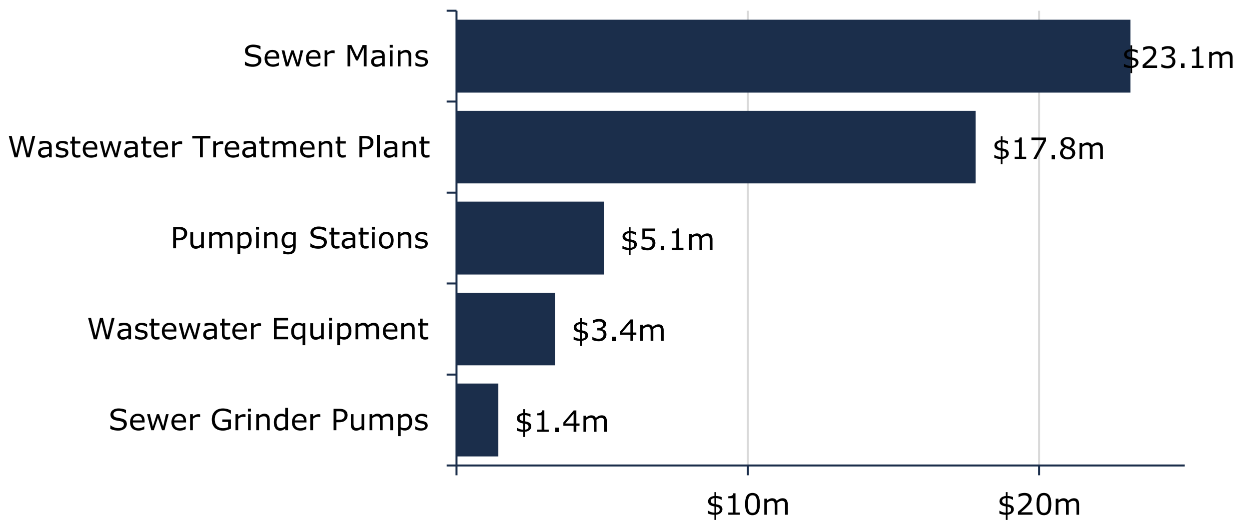


Figure 47: Wastewater Network Replacement Cost

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

8.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

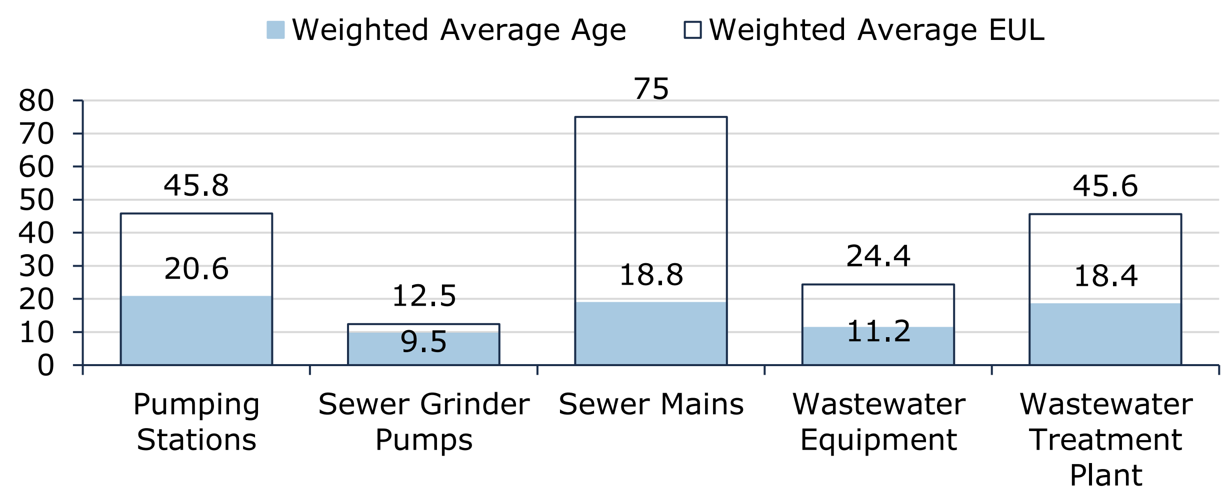


Figure 48: Wastewater Network Average Age vs Average EUL

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

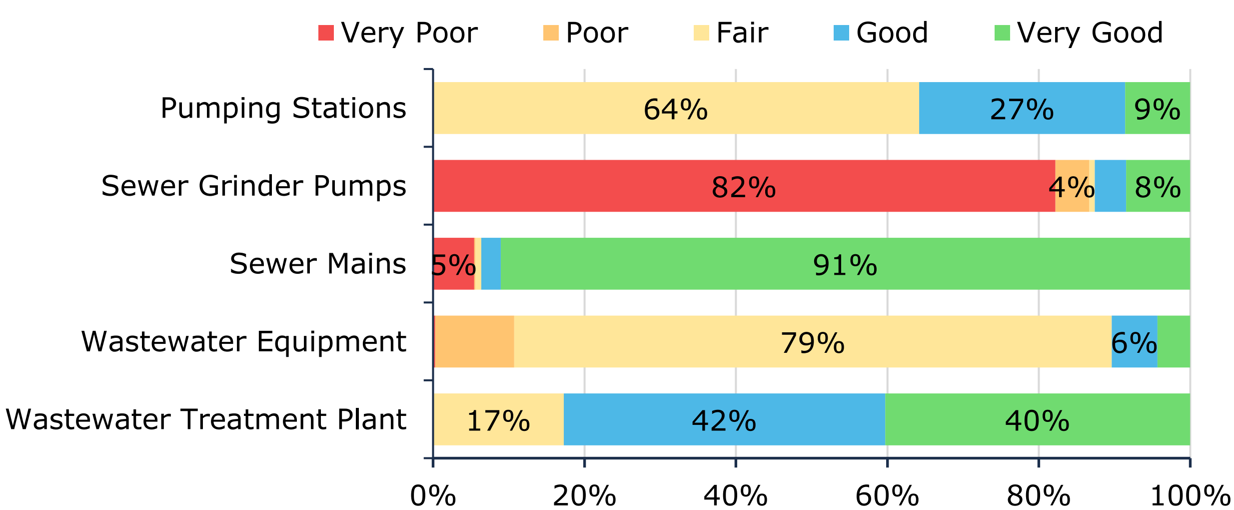


Figure 49: Wastewater Network Condition Breakdown

To ensure that the municipal Wastewater Network continues to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the wastewater network.

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

8.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Municipality's current approach:

- Condition ratings for the wastewater network are primarily based on asset age and pipe material. The majority of sewer mains in the Mildmay system were installed in the 1970s and 1980s and are primarily constructed of concrete. In contrast, the Teeswater-Formosa system is predominantly composed of polyvinyl chloride (PVC) mains installed in 2013. Both concrete and PVC are considered durable materials with an expected service life of 75 to 100 years. In addition to condition ratings based on age and pipe material, staff use performance indicators such as infiltration issues, bedding concerns, pipe capacity, failure history, and service disruptions to assess pipe condition more accurately.
- CCTV inspections are conducted on an as-needed basis, typically prior to a reconstruction project. However, a network-wide inspection of the Mildmay sewer system was completed in 2017.
- The pumping station, wastewater treatment plants and other wastewater assets are assessed regularly by Veolia staff, in accordance with the Ontario Water Resources Act and/or manufacturer recommendations.

8.4. Lifecycle Management Strategy

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 Municipality's current lifecycle management strategy.

Maintenance / Rehabilitation / Replacement

- CCTV inspections are performed as-needed
- System flushing is performed annually; broken out by zones
- Smoke testing is performed when necessary to identify leaks
- Non-linear assets are repaired and/or replaced based on Veolia recommendations, criticality and budget limitations.
- Trenchless relining is considered when viable sewer main candidates are identified to optimize time, effort and budget.
- Sewer main replacements are prioritized by condition, service life remaining, capacity or infiltration issues, and in coordination with other reconstruction projects

Figure 50: Wastewater Network Current Lifecycle Strategy

8.5. Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that South Bruce should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 75 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average capital requirements at $1.1 million. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service

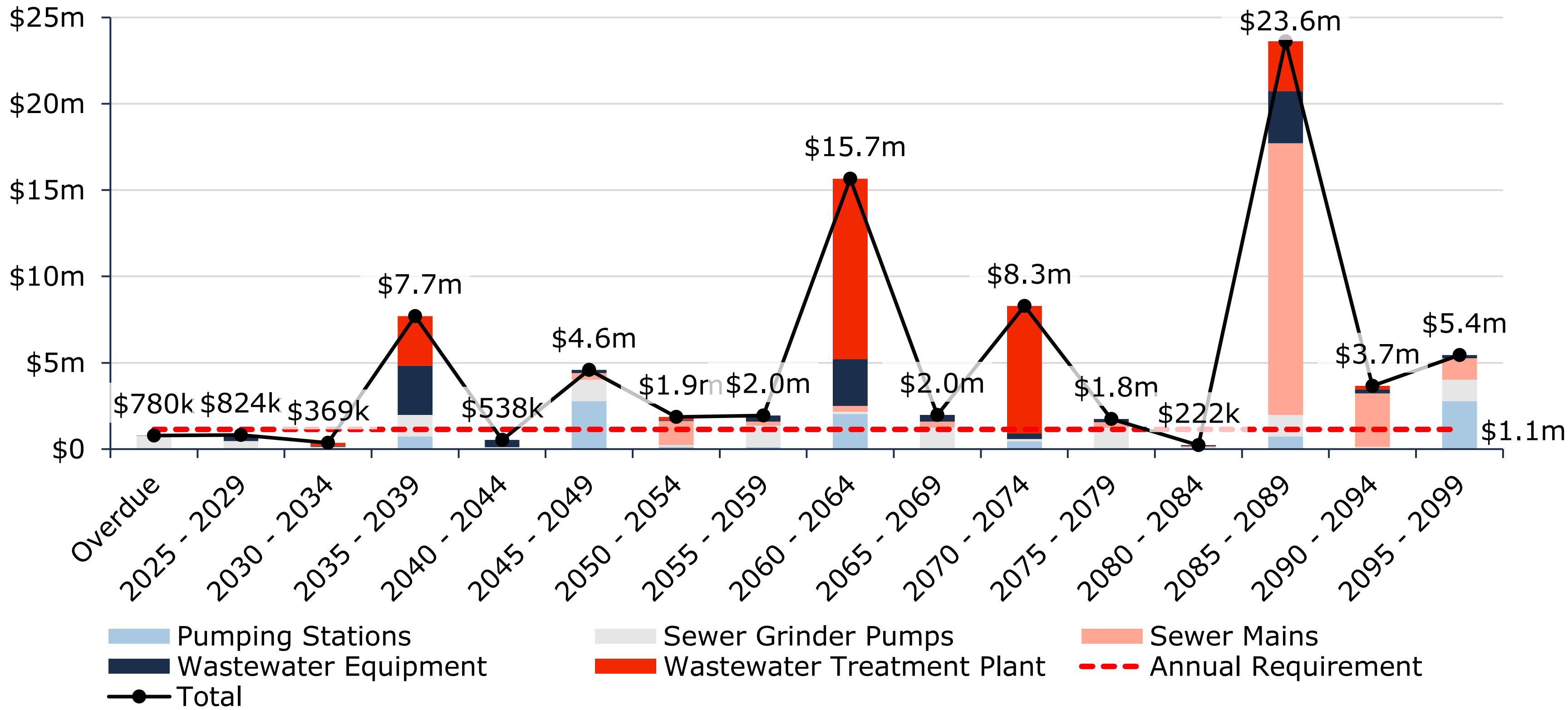


Figure 51: Wastewater Network Forecasted Capital Replacement Requirements

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

Table 27: Wastewater Network System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Pumping Stations	-	-	-	-	-	-	-	-	-	$33k	-
Sewer Grinder Pumps	$771k	$407k	-	$64k	-	-	$11k	$21k	$38k	$23k	-
Sewer Mains	-	-	-	-	-	-	-	-	-	-	-
Wastewater Equipment	$10k	-	-	$176k	$177k	-	$13k	$8k	$7k	$25k	-
Wastewater Treatment Plant	-	-	-	-	-	-	-	-	-	$190k	-
Total	**$780k**	**$407k**	**-**	**$240k**	**$177k**	**-**	**$24k**	**$29k**	**$45k**	**$271k**	**-**

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

8.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 Very Low	5 - 7 Low	8 - 9 Moderate	10 - 14 High	15 - 25 Very High
$13,766,689 (27%)	$19,765,775 (39%)	$2,001,489 (4%)	$11,695,136 (23%)	$3,598,257 (7%)

Figure 52: Wastewater Network Risk Matrix

This is a high-level model that has been developed based on information currently available and should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

8.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for the Wastewater Network.

8.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Wastewater Network.

Table 28: Wastewater Network Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Accessible & Reliable	Description, which may include maps, areas of the municipality that are connected to the municipal wastewater system	See Appendix B.
Safe & Regulatory	Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes.	The Municipality does not own any combined sewers.
	Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches.	
	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes.	Stormwater can enter into 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.
	Description of how sanitary sewers in the municipal wastewater	The municipality follows a series of design standards that integrate servicing requirements and land use considerations

	system are designed to be resilient to avoid stormwater infiltration	when constructing or replacing sanitary sewers. These standards have been determined with consideration of the minimization of sewage overflows and backups.
	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system.	Effluent refers to water pollution that is discharged from a wastewater treatment plant, and may include suspended solids, total phosphorous and biological oxygen demand. The Environmental Compliance Approval (ECA) identifies the effluent criteria for municipal wastewater treatment plants.

8.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Wastewater Network.

Table 29: Wastewater Network Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Accessible & Reliable	% of properties connected to the municipal wastewater systems	38.24%[4]
Safe & Regulatory	# of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system	Not Applicable
	# of connection-days per year with sanitary main backups compared to the total number of properties connected to the municipal wastewater system	0
	# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system	1:1,205
Sustainable	Average condition of sanitary network assets	78%

[4] Percentage for properties connected to the municipal wastewater systems is based on the most recent (2025) municipal household data, rather than 2021 Statistics Canada figures.

8.8. 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 municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for the Wastewater Network. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenarios Section.

8.8.1. PLOS Scenarios Analyzed

Table 30: Wastewater Network PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased rate increase of approximately 2.2% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased rate increase of approximately 1.4% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased rate increase of approximately 0.5% annually, reaching 50% funding within 15 years

8.8.2. PLOS Analysis Results

The following table presents the outcomes for three investment scenarios, illustrating how varying levels of capital investment influence asset condition, risk, and required investment over time.

Table 31: Wastewater Network pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	78.44%	68.45%	63.66%	63.19%
	Average Asset Risk	7.64	9.82	9.76	9.8
	Average Annual Investment	$1,141,208			
	Capital re-investment rate	2.3%			
Scenario 2	Average Condition	78.44%	68.58%	63.52%	56.54%
	Average Asset Risk	7.64	9.78	9.72	10.9
	Average Annual Investment	$855,906			
	Capital re-investment rate	1.7%			
	Average Condition	78.44%	68.97%	59.17%	48.88%

Scenario 3	Average Asset Risk	7.64	9.72	10.42	12.41
	Average Annual Investment	$120,493			
	Capital re-investment rate	1.1%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

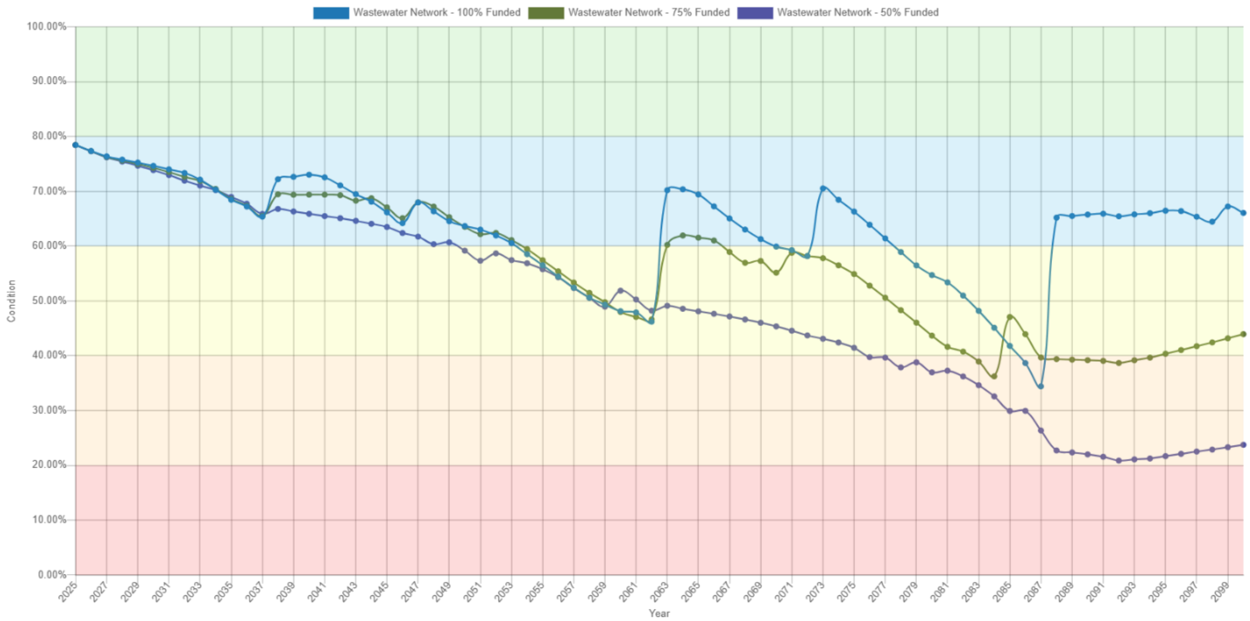


Figure 53: Wastewater Network Scenario Comparison

9. Storm Network

9.1. State of the Infrastructure

The Municipality is responsible for maintaining a stormwater network of storm mains, small culverts, stormwater management ponds, and other supporting infrastructure.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

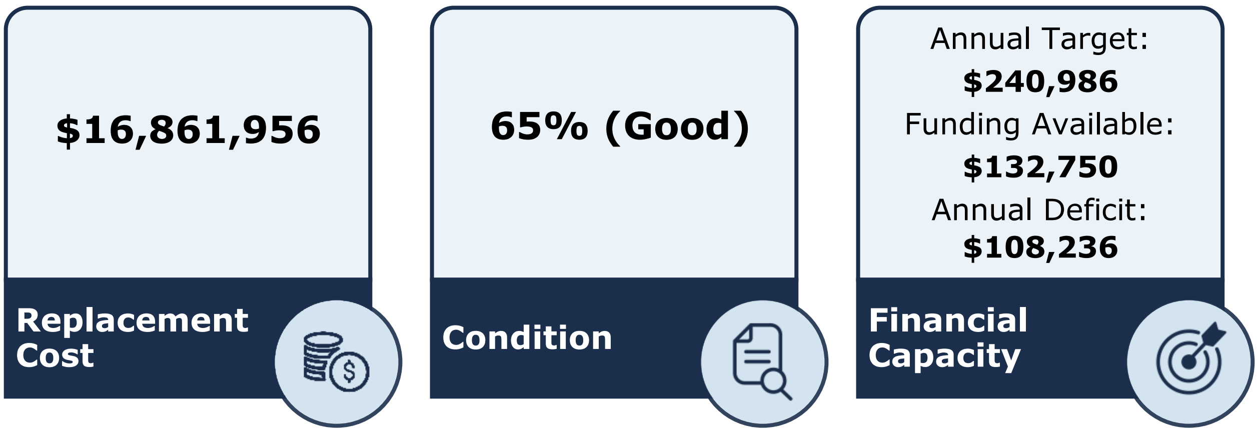


Figure 54: Storm Network State of the Infrastructure

9.2. Inventory & Valuation

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

Table 32: Storm Network Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Municipal Drains	21	Quantity	CPI	$1,320,413
Small Culverts	11	Quantity	CPI	$119,182
Storm Mains	15	Length (km)	CPI	$14,149,746
Stormwater Pond	TBD	Quantity	CPI	$27,911
Catch Basins	TBD	Quantity	CPI	$1,244,704
Total				**$16,861,956**

The graph below displays the total replacement cost of each asset segment in South Bruce's Storm Network inventory.

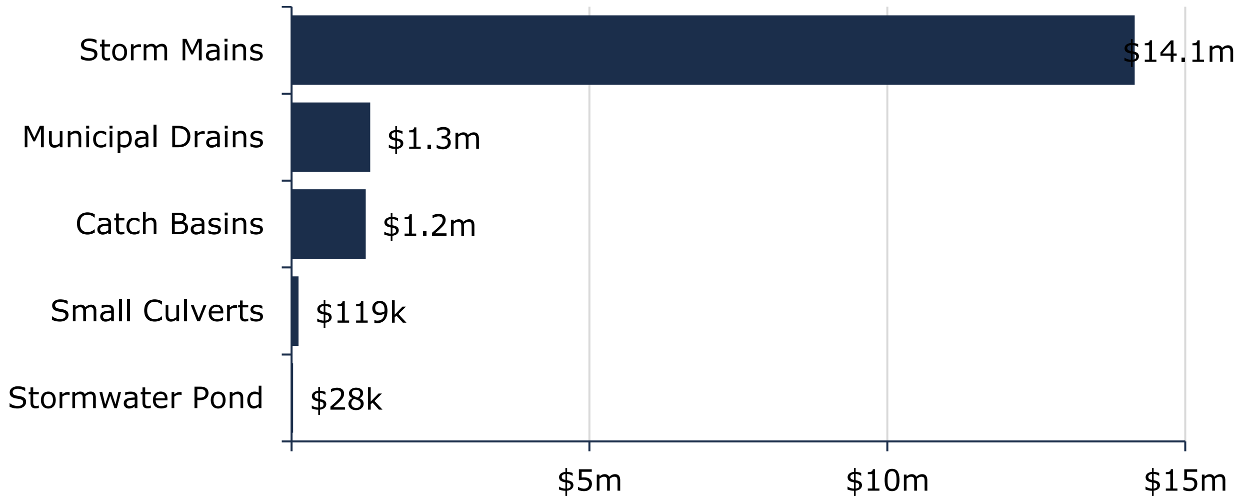


Figure 55: Storm Network Replacement Cost

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

9.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

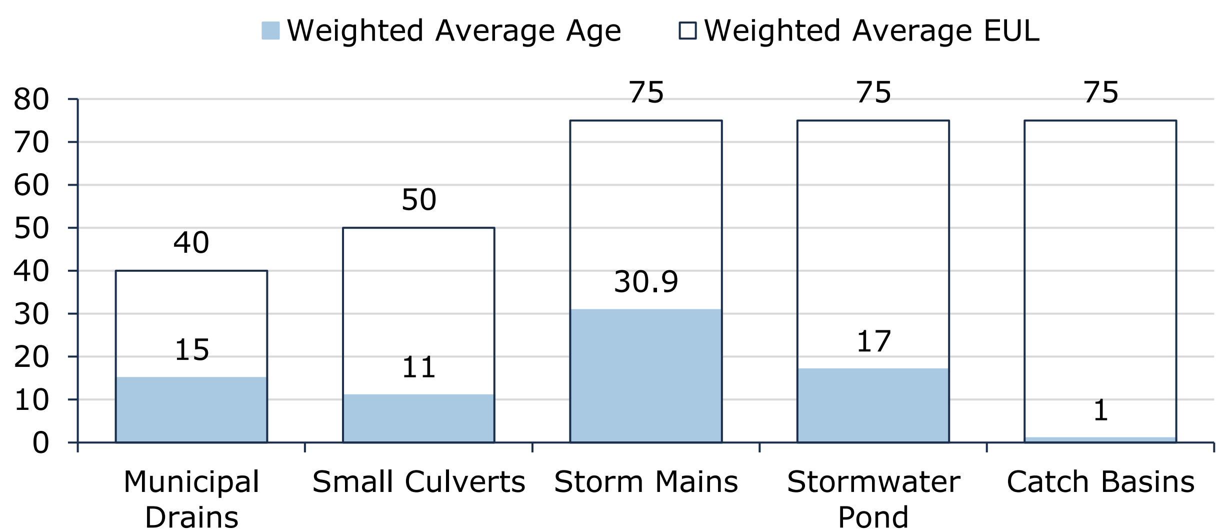


Figure 56: Storm Network Average Age vs Average EUL

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

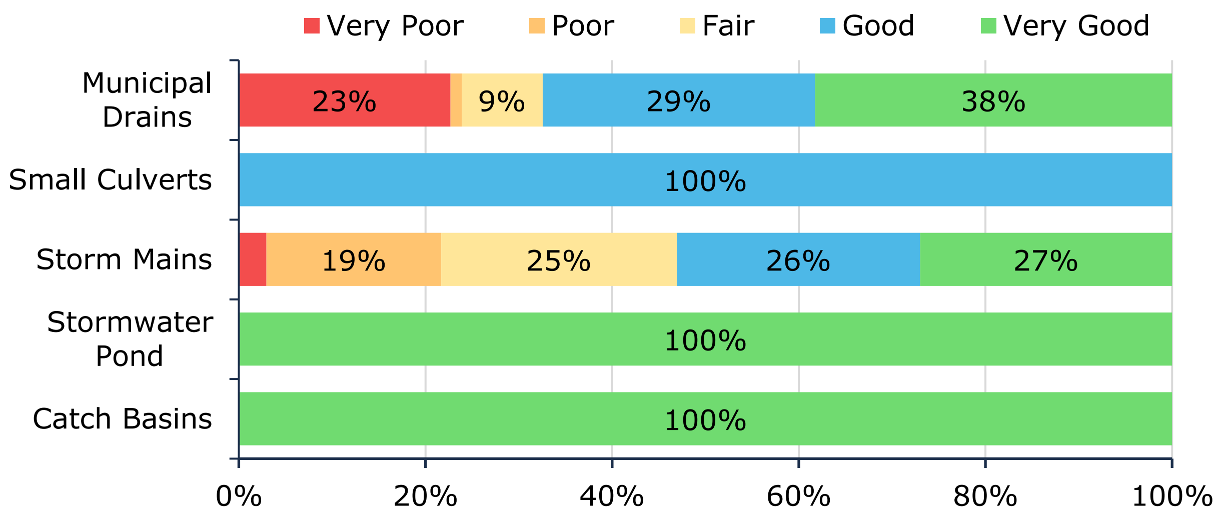


Figure 57: Storm Network Condition Breakdown

To ensure that the municipal Storm Network continues to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Storm network.

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

9.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- There are no formal condition assessment programs in place for the stormwater network. CCTV inspections are completed on a project-by-project basis
- Other non-linear storm assets are regularly inspected by internal staff.
- In the absence of comprehensive inspection data, asset age and pipe material are used to estimate expected condition and guide future capital planning and inspection priorities.

9.4. Lifecycle Management Strategy

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 Municipality's current lifecycle management strategy.

Maintenance / Rehabilitation / Replacement

- CCTV inspections occur on select storm mains on a project basis
- System flushing is usually performed on an as needed basis, such as when blockages occur
- Catch basins are inspected and cleaned regularly to avoid blockages
- Stormwater management ponds are maintained and repaired as needed.
- Replacement projects are prioritized primarily by age and in coordination with road and other underground projects
- Staff are considering proactive re-lining rehabilitation for future projects involving high risk mains

Figure 58: Storm Network Current Lifecycle Strategy

9.5. Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that South Bruce should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 75 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average capital requirements at $241k. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service

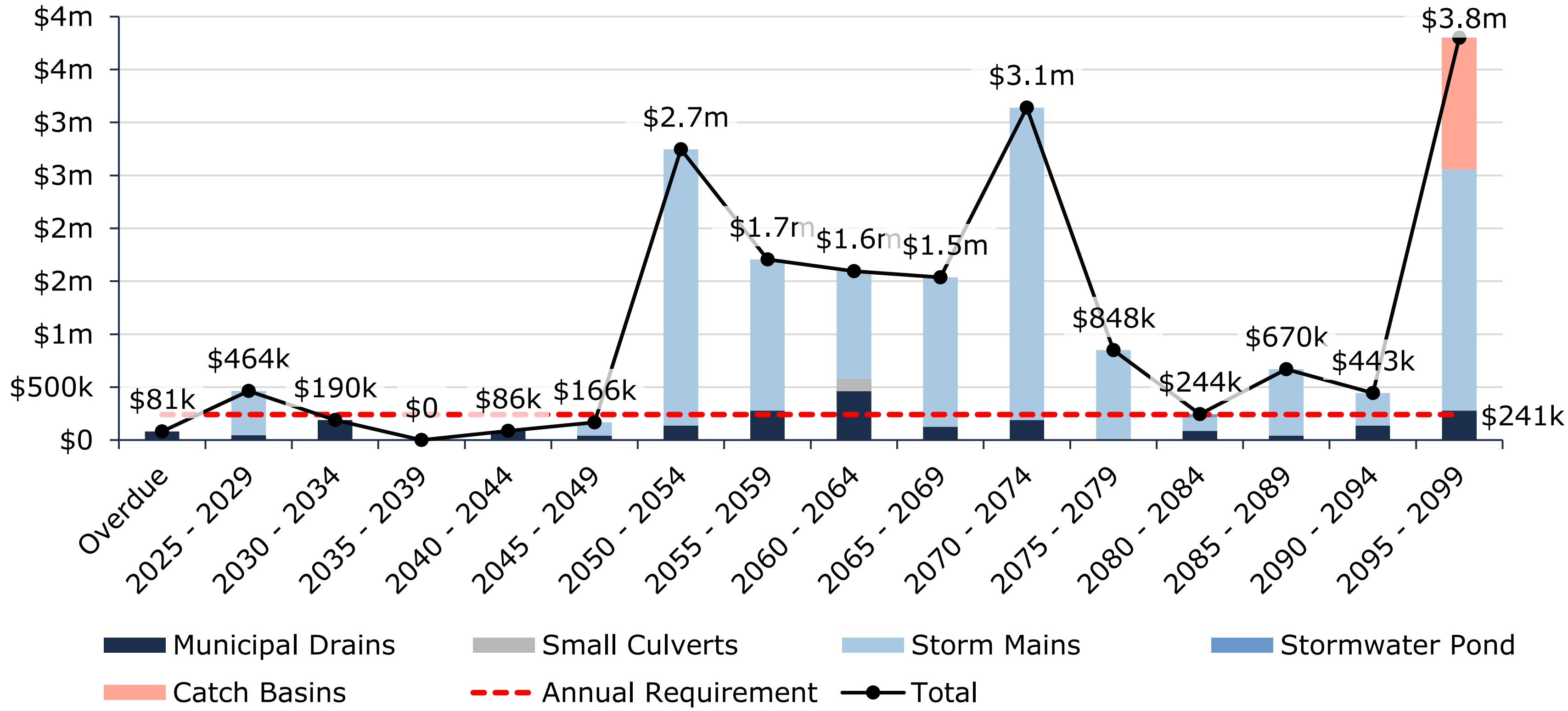


Figure 59: Storm Network Forecasted Capital Replacement Requirements

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

Table 33: Storm Network System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Municipal Drains	$81k	-	-	$30k	-	$15k	-	-	$174k	$16k	-
Small Culverts	-	-	-	-	-	-	-	-	-	-	-
Storm Mains	-	$419k	-	-	-	-	-	-	-	-	-
Stormwater Pond	-	-	-	-	-	-	-	-	-	-	-
Catch Basins	-	-	-	-	-	-	-	-	-	-	-
Total	$81k	$419k	-	$30k	-	$15k	-	-	$174k	$16k	-

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

9.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 **Very Low**	**5 - 7** **Low**	**8 - 9** **Moderate**	**10 - 14** **High**	**15 - 25** **Very High**
$16,143,078 (96%)	$718,878 (4%)	- (0%)	- (0%)	- (0%)

Figure 60: Storm Network Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

9.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for the Storm Network.

9.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Storm Network.

Table 34: Storm Network Community Levels of Service

Service Attribute	Qualitative Description	Current LOS
Accessible & Reliable	Description, which may include map, of the user groups or areas of the municipality that are protected from flooding, including the extent of protection provided by the municipal stormwater system	See Appendix B.

9.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Storm Network.

Table 35: Storm Network Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Safe & Regulatory	% of properties in municipality resilient to a 100-year storm.	94%[5]
	% of the municipal stormwater management system resilient to a 5-year storm	85%[6]
Sustainable	Average condition of stormwater assets	65%

[5] Based on a 2022 B.M. Ross study, an estimated 94% of properties within settlement areas are resilient to a 100-year storm event, with individual community estimates at 82% for Formosa, 95% for Mildmay, and 97% for Teeswater.

[6] Estimated based on a 2022 B.M. Ross study, which used pipe age as a proxy for resiliency in the absence of a storm network model. Sections newer than 65 years were considered adequately sized for a 5-year storm, resulting in an estimated network resiliency of 85%.

9.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for the Storm Network. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenario Analysis.

9.8.1. PLOS Scenarios Analyzed

Table 36: Storm Network PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

9.8.2. PLOS Analysis Results

The following table compares three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 37: Storm Network pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	86.00%	81.02%	70.93%	76.05%
	Average Asset Risk	2.65	3.05	4.03	3.8
	Average Annual Investment	$240,986			
	Capital re-investment rate	1.4%			
Scenario 2	Average Condition	86.00%	81.02%	70.93%	70.18%
	Average Asset Risk	2.65	3.05	4.03	4.63
	Average Annual Investment	$180,740			
	Capital re-investment rate	1.1%			
	Average Condition	86.00%	81.02%	70.93%	61.82%

Scenario 3	Average Asset Risk	2.65	3.05	4.03	5.25
	Average Annual Investment	$120,493			
	Capital re-investment rate	0.7%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

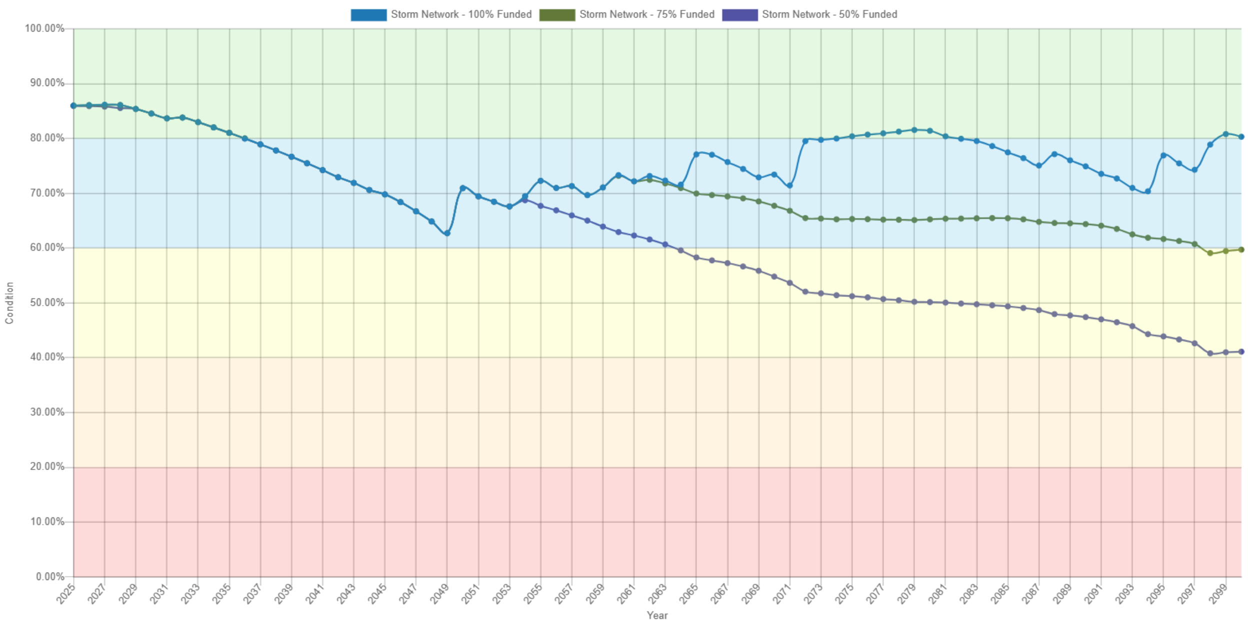


Figure 61: Storm Network Scenario Comparison

10. Buildings

10.1. State of the Infrastructure

The Municipality of South Bruce owns and maintains a diverse portfolio of buildings that support the delivery of key municipal services and contribute to community well-being. These facilities are located across the communities of Mildmay, Teeswater, and Formosa, and include recreational complexes, community centres, administrative buildings, fire halls, and public works storage facilities.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$64,650,381

Replacement Cost

36% (Poor)

Condition

Annual Target:
$760,729
Funding Available:
$181,903
Annual Deficit:
$578,827

Financial Capacity

Figure 62: Buildings State of the Infrastructure

10.2. Inventory & Valuation

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

Table 38: Buildings Detailed Asset Inventory

Segment	Quantity (Components)	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
General Government	8	Assets	User-Defined	$5,582,587
Protection Services	2 (5)	Assets	User-Defined	$3,627,721
Recreation Services	21 (37)	Assets	User-Defined	$47,744,771
Transportation Services	8 (10)	Assets	User-Defined	$7,695,302
Total				**$64,650,381**

The graph below displays the total replacement cost of each asset segment in South Bruce's buildings inventory.

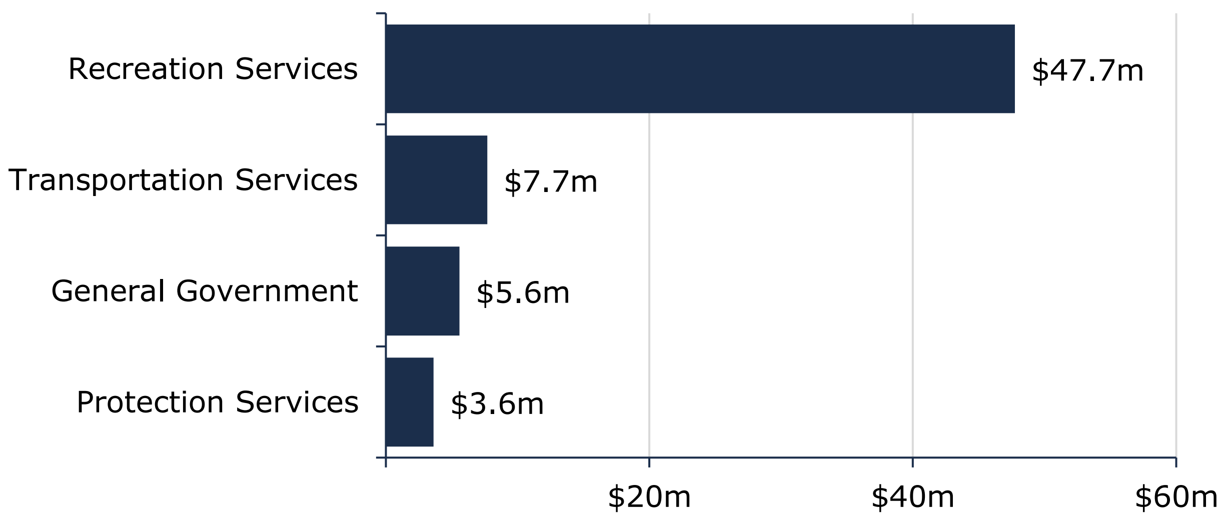


Figure 63: Buildings Replacement Cost

10.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

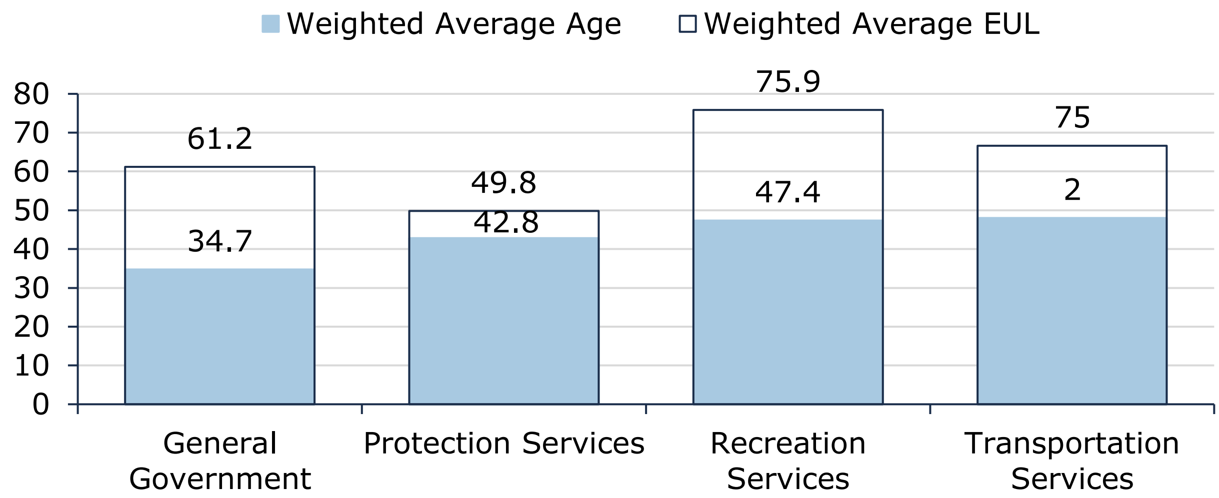


Figure 64: Buildings Average Age vs Average EUL

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

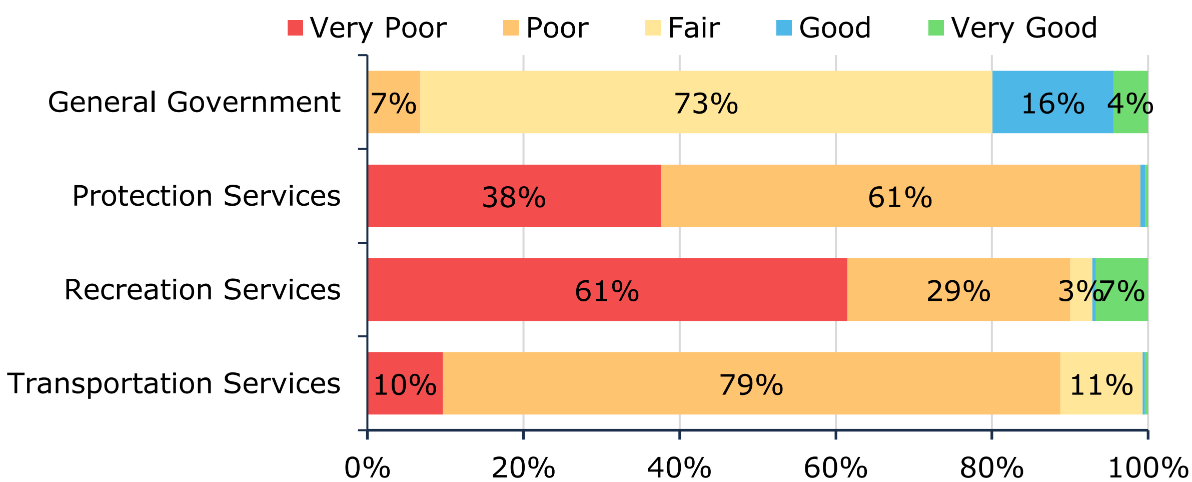


Figure 65: Buildings Condition Breakdown

To ensure that the municipal buildings continue to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the buildings.

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

10.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Health and safety inspections are carried out monthly.
- Critical components such as elevators, generators, and HVAC units are inspected by third-party contractors on a monthly and/or annual basis as recommended by manufacturer suggestions.
- Staff visually inspect their building assets, on a regular basis, to inform their capital and operating planning.
- A Facility Condition Assessment (FCA) was conducted in 2022 by B.M. Ross to evaluate the physical condition and functional adequacy of municipal buildings across South Bruce. The findings of the assessment inform prioritization of investments, help estimate remaining useful life and support the development of lifecycle strategies that ensure buildings remain safe, functional, and cost-effective over time.

10.4. Lifecycle Management Strategy

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 Municipality's current lifecycle management strategy.

Maintenance / Rehabilitation / Replacement
• Maintenance activities are undertaken as a result of internal inspections, prioritizing activities related to health and safety and regulatory compliance • Assessments are completed strategically as buildings approach their end-of-life to determine whether replacement or rehabilitation is a more appropriate treatment option

Figure 66: Buildings Current Lifecycle Strategy

10.5. Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that South Bruce should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 95 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average capital requirements at $1 million. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service

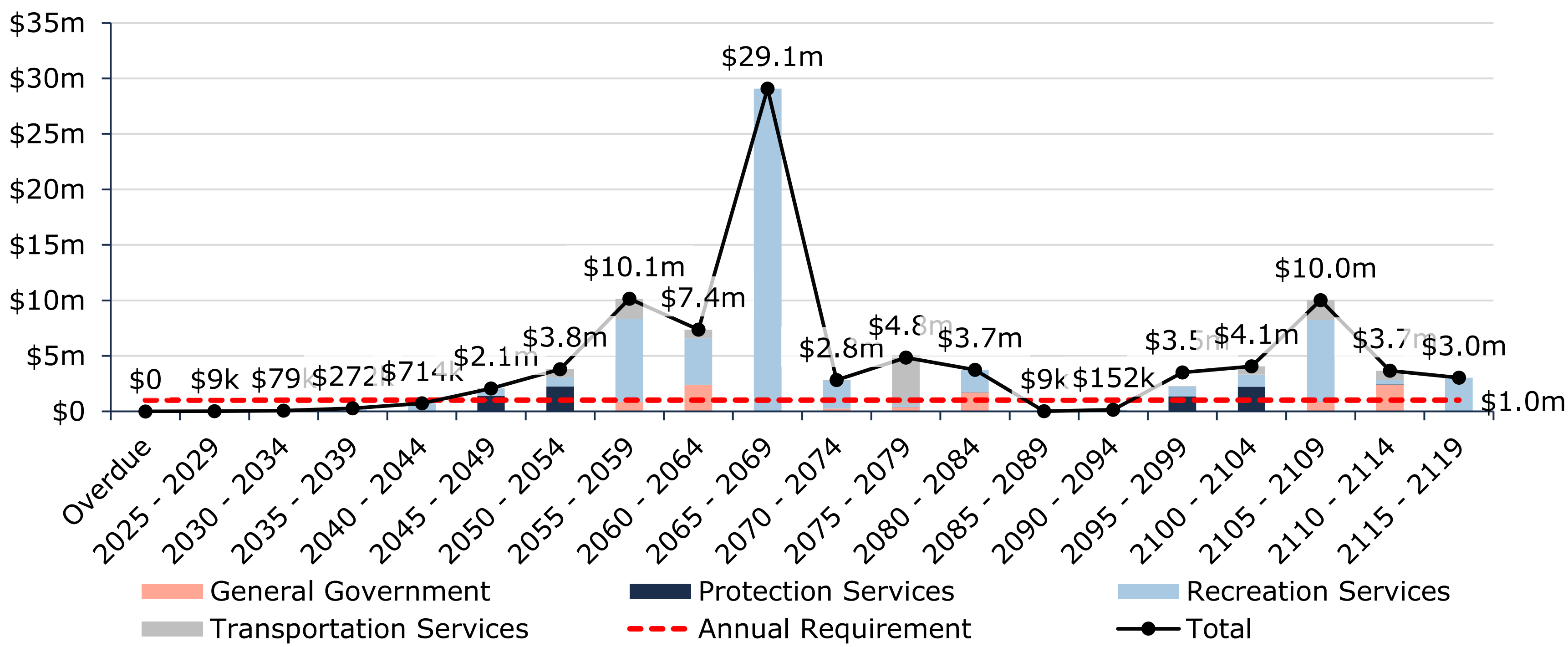


Figure 67: Buildings Forecasted Capital Replacement Requirements

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

Table 39: Buildings System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2034
General Government	-	-	-	-	-	-	-	-	-	-
Protection Services	-	-	-	-	-	-	-	-	-	-
Recreation Services	-	-	-	-	-	$9k	-	$32k	$15k	-
Transportation Services	-	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**$9k**	**-**	**$32k**	**$15k**	**-**

These projections are generated in Citywide and rely on the data available in the asset register, which was imported from the 2022 Facility Condition Assessment and applicable recommendations.

10.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4	**5 - 7**	**8 - 9**	**10 - 14**	**15 - 25**
Very Low	**Low**	**Moderate**	**High**	**Very High**
$63,785,083	$11,033	$854,265	-	-
(99%)	(<1%)	(1%)	(0%)	(0%)

Figure 68: Buildings Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

10.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for municipal Buildings.

10.7.1. Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by municipal buildings.

Table 40: Buildings Community Levels of Service

Service Attribute	Technical Metric	Current LOS
Safe & Regulatory	Description of the current condition of municipal buildings and the plans that are in place to maintain or improve the provided level of service	The average condition of the Municipality's buildings is Poor (36%) based on assessed condition information. Staff undertake regular maintenance and renewal activities to ensure they are meeting the desired level of service.

10.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by municipal Buildings.

Table 41: Buildings Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Sustainable	Average condition of municipal buildings	36%

10.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for municipal Buildings. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenario Analysis.

10.8.1. PLOS Scenarios Analyzed

Table 42: Buildings PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

10.8.2. PLOS Analysis Results

The following table presents the outcomes for three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 43: Buildings pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	60.70%	45.65%	27.54%	44.46%
	Average Asset Risk	8.54	11.8	12.92	10.7
	Average Annual Investment	$1,014,306			
	Capital re-investment rate	1.6%			
Scenario 2	Average Condition	60.70%	45.65%	27.54%	38.39%
	Average Asset Risk	8.54	11.8	12.92	11.82
	Average Annual Investment	$760,729			
	Capital re-investment rate	1.2%			
Scenario 3	Average Condition	60.70%	45.65%	27.54%	32.05%
	Average Asset Risk	8.54	11.8	12.92	13.05
	Average Annual Investment	$507,153			
	Capital re-investment rate	0.8%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

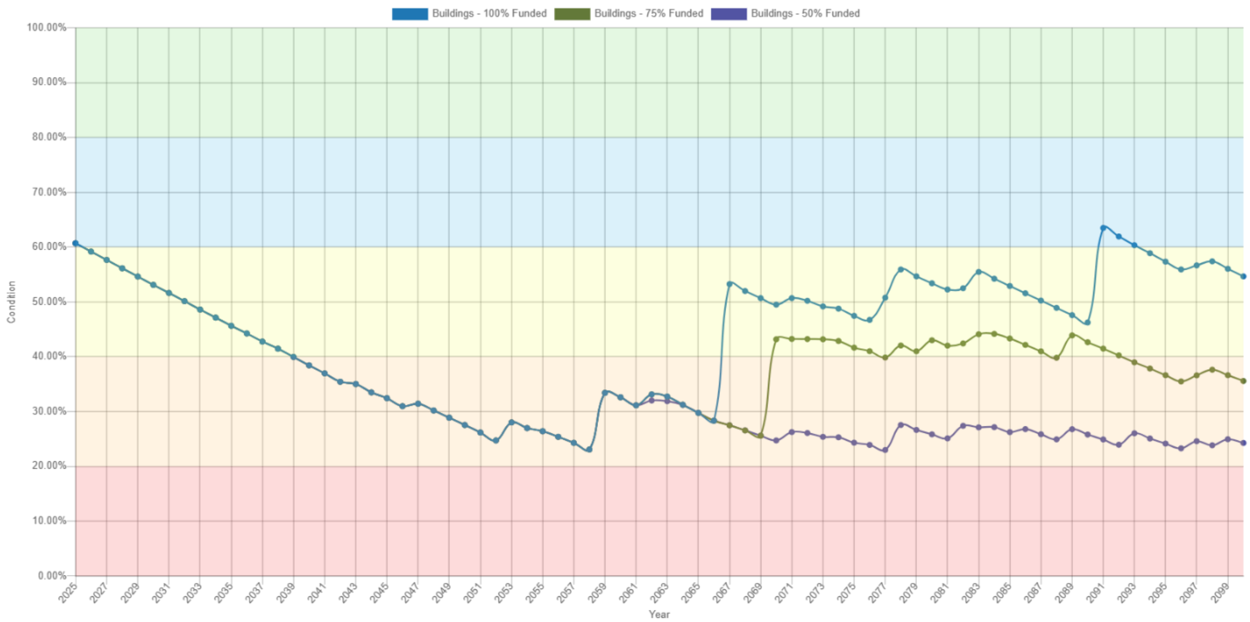


Figure 69: Buildings Scenario Comparison

11. Land Improvements

11.1. State of the Infrastructure

South Bruce's land improvement infrastructure is made up of sports fields and rinks, outdoor structures, parks, and play structures.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$5,021,703

Replacement Cost

51% (Fair)

Condition

Annual Target:
$164,353
Funding Available:
$4,846
Annual Deficit:
$159,507

Financial Capacity

Figure 70: Land Improvements State of the Infrastructure

11.2. Asset Inventory & Valuation

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

Table 44: Land Improvements Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Fencing & Gates	3	Quantity	CPI	$57,369
Landscaping	8	Quantity	CPI	$554,820
Outdoor Structures	8	Quantity	CPI	$1,923,907
Parking Lots	7	Quantity	CPI	$210,798
Parks Lighting	32	Quantity	User-Defined	$1,200,000
Playground Equipment	16	Quantity	CPI	$565,961
Signage	4	Quantity	CPI	$137,546
Sports Courts	5	Quantity	CPI	$371,302
Total				**$5,021,703**

The graph below displays the replacement cost of each asset segment in the Municipality's land improvement inventory.

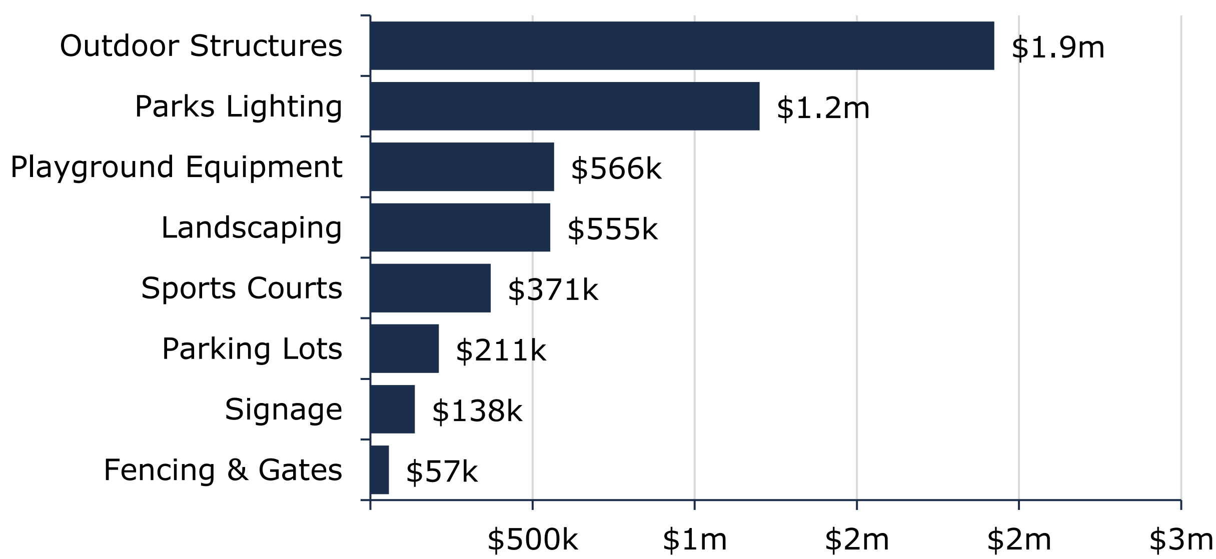


Figure 71: Land Improvements Replacement Value

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

11.3. Asset Condition & Age

The graph below identifies the average age, and the estimated useful life for each asset segment.

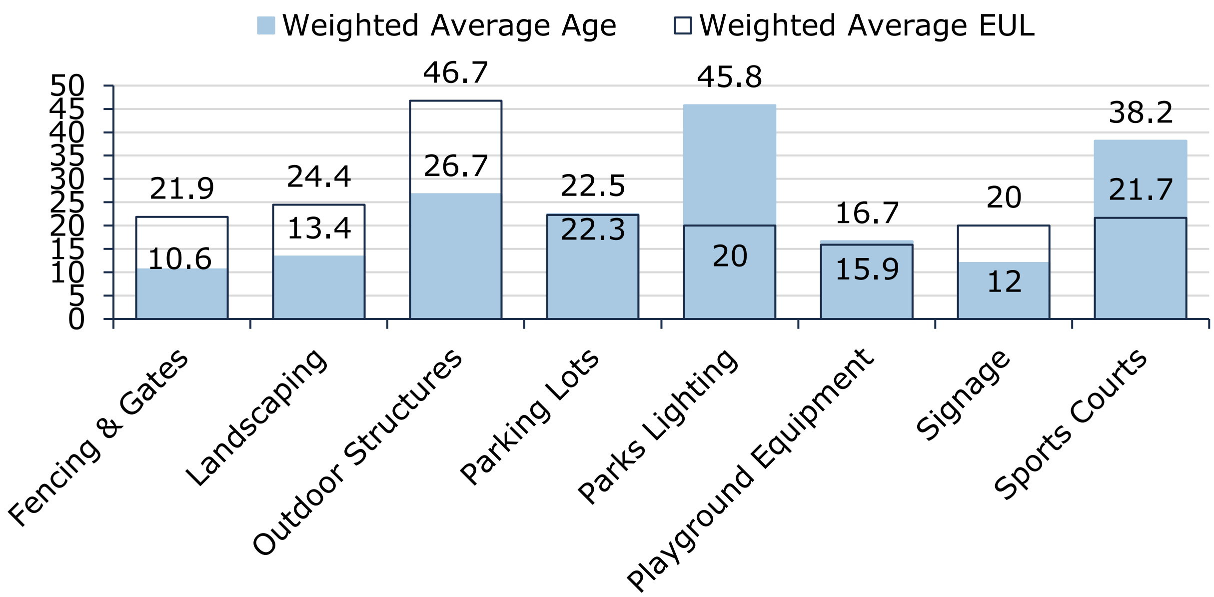


Figure 72: Land Improvements Average Age vs. Average EUL

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

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

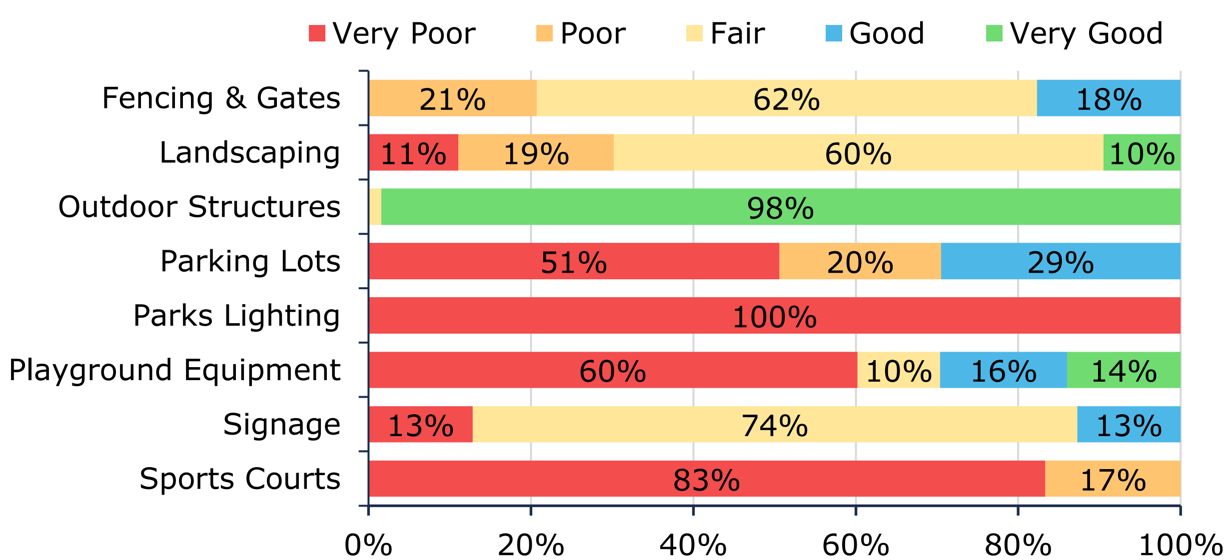


Figure 73: Land Improvement Condition Breakdown

To ensure that the Municipality's land improvements continue to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of activities is required to increase the overall condition of the land improvements.

11.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Staff complete regular visual inspections of land improvements assets to ensure they are in a state of adequate repair.
- Playgrounds are inspected monthly based on Canadian Standard Association (CSA) standards
- Trails are inspected internally on a bi-weekly basis to ensure safety and proper functioning

11.4. Lifecycle Management Strategy

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 figures outline South Bruce's current lifecycle management strategy.

Maintenance / Rehabilitation / Replacement

- Routine maintenance of land improvement assets includes cleaning, minor repairs, and vegetation management
- Assets are rehabilitated and/or replaced based on staff expertise and performance. More critical assets such as parking lots and playgrounds are prioritized.

Figure 74: Land Improvements Current Lifecycle Strategy

11.5. Forecasted Capital Requirements

The figure below illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the Municipality's land improvement infrastructure. This analysis was run until 2064 to capture at least one iteration of replacement for the longest-lived asset in the asset register. South Bruce's average annual requirements (red dotted line) total $219 thousand for all land improvement assets. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service.

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

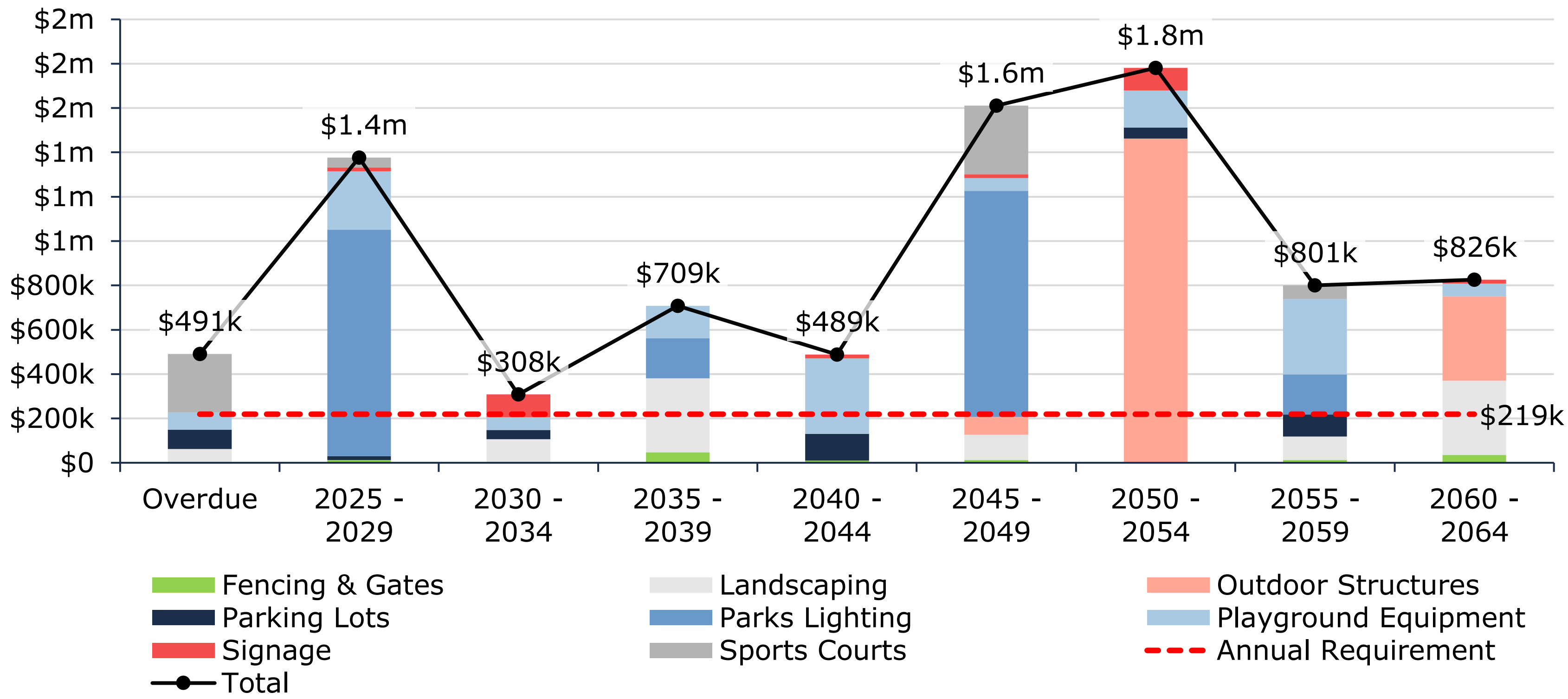


Figure 75: Land Improvements Forecasted Capital Replacement Requirements

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

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

Table 45: Land Improvements System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Fencing & Gates	-	-	-	-	-	$12k	-	-	-	-	-
Landscaping	$61k	-	-	-	-	-	-	$23k	-	$84k	-
Outdoor Structures	-	-	-	-	-	-	-	-	-	-	-
Parking Lots	$88k	-	$18k	-	-	-	-	-	$42k	-	-
Parks Lighting	-	$360k	-	-	$660k	-	-	-	-	-	-
Playground Equipment	$77k	-	$230k	$34k	-	-	-	-	-	$57k	-
Signage	-	-	$18k	-	-	-	-	-	-	$102k	-
Sports Courts	$265k	-	-	-	$45k	-	-	-	-	-	-
Total	**$491k**	**$360k**	**$266k**	**$34k**	**$705k**	**$12k**	**-**	**$23k**	**$42k**	**$244k**	**-**

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

11.6. Risk & Criticality

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 Very Low	**5 - 7 Low**	**8 - 9 Moderate**	**10 - 14 High**	**15 - 25 Very High**
$2,433,468	$2,588,235	-	-	-
(48%)	(52%)	(0%)	(0%)	(0%)

Figure 76: Land Improvements Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

11.7. Current Levels of Service

The following tables identify South Bruce's metrics to identify the current level of service for land improvement assets.

11.7.1. Community Levels of Service

The following table outlines the qualitative metrics that determine the community level of service provided by the municipal Land Improvements.

Table 46: Land Improvements Community Levels of Service

Service Attribute	Technical Metric	Current LOS
Sustainable	Description of the current condition of land improvement assets and the plans that are in place to maintain or improve the provided level of service	The overall condition of land improvements in the Municipality is fair. Trails, parks and land improvement assets are managed on an as-needed basis or to end-of-life replacement. Critical assets are managed more proactively in accordance with regulatory requirements (i.e. CSA standards, AODA compliance)

11.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the municipal Land Improvements.

Table 47: Land Improvements Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Safe & regulatory	% of playgrounds in compliance with CSA standards	100%
Sustainable	Average condition of land improvement assets	51%

11.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for Land Improvement assets. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenario Analysis.

11.8.1. PLOS Scenarios Analyzed

Table 48: Land Improvements PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

11.8.2. PLOS Analysis Results

The following table presents the outcomes for three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 49: Land Improvements pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	47.47%	32.07%	37.26%	36.18%
	Average Asset Risk	4.91	5.95	5.49	5.67
	Average Annual Investment	$219,137			
	Capital re-investment rate	4.4%			
Scenario 2	Average Condition	47.47%	29.42%	28.91%	32.17%
	Average Asset Risk	4.91	6.11	6.19	5.94
	Average Annual Investment	$164,353			
	Capital re-investment rate	3.3%			
Scenario 3	Average Condition	47.47%	28.11%	20.13%	28.69%
	Average Asset Risk	4.91	6.2	6.68	6.16
	Average Annual Investment	$109,569			
	Capital re-investment rate	2.2%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

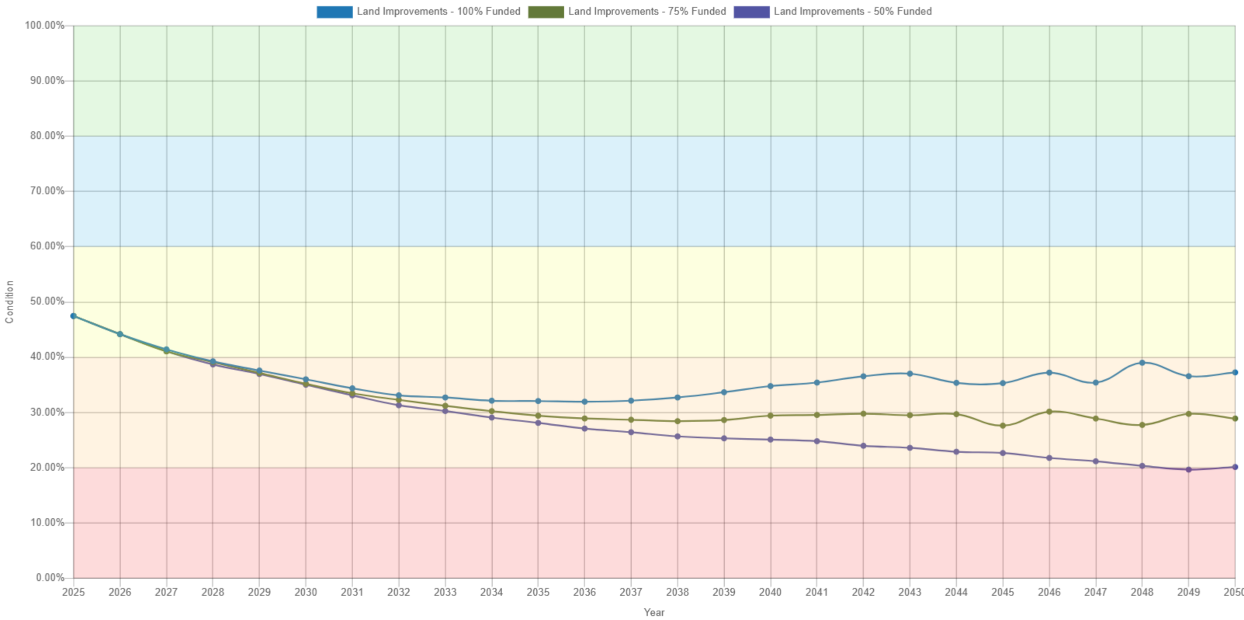


Figure 77: Land Improvements Scenario Comparison

12. Machinery & Equipment

12.1. State of the Infrastructure

The Municipality is responsible for managing equipment assets, including machinery, general equipment, computer hardware and software, and furniture.

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

$7,692,338

Replacement Cost

45% (Fair)

Condition

Annual Target:
$442,796
Funding Available:
$66,669
Annual Deficit:
$376,127

Financial Capacity

Figure 78: Machinery & Equipment State of the Infrastructure

12.2. Inventory & Valuation

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

Table 50: Machinery & Equipment Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
General Government	107	Quantity	CPI	$520,523
Health Services	17	Quantity	CPI	$103,436
Protection Services	691	Quantity	CPI	$1,355,213
Recreation Services	836	Quantity	CPI	$1,922,797
Transportation Services	46	Quantity	CPI	$3,790,369
Total				**$7,692,338**

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

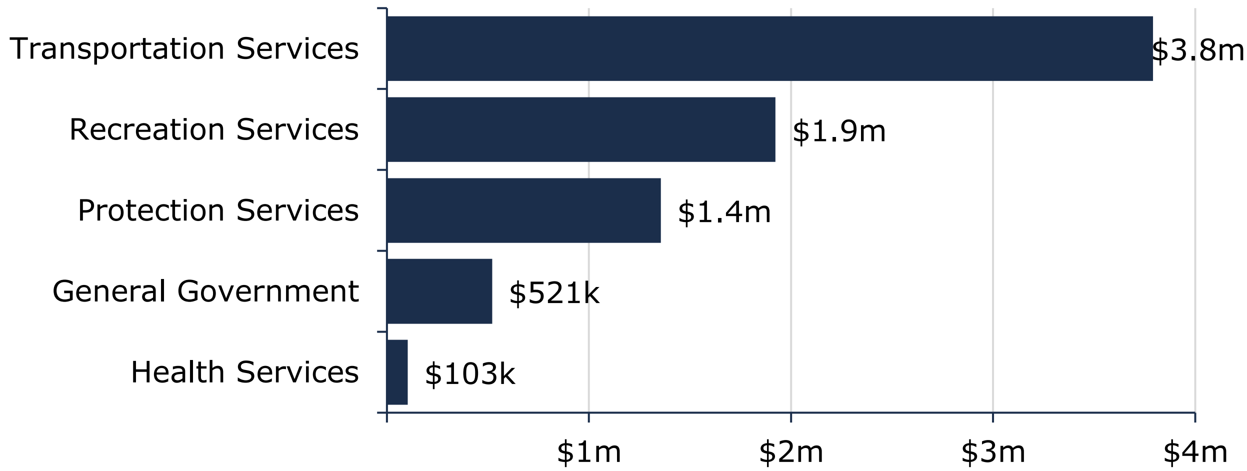


Figure 79: Machinery & Equipment Replacement Costs

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

12.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

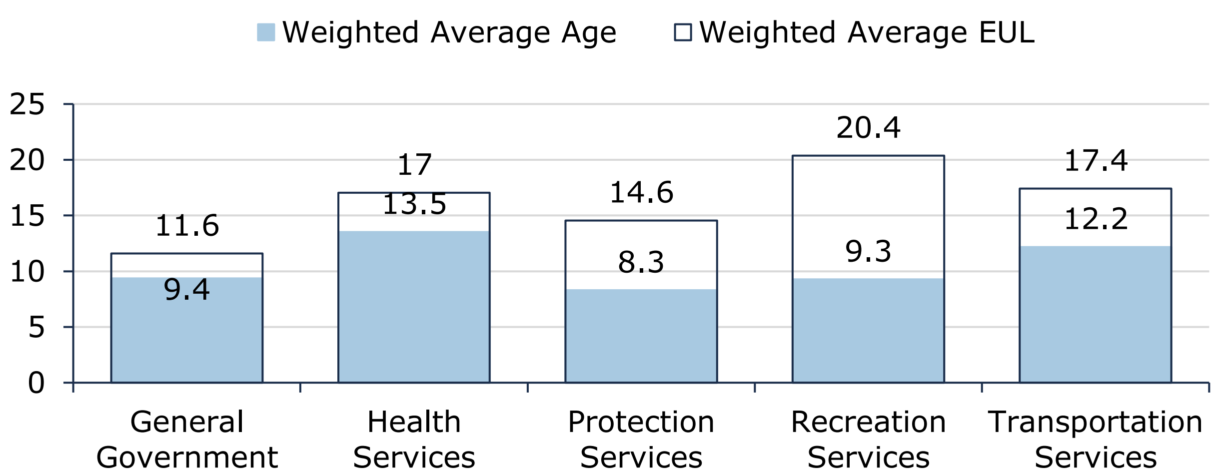


Figure 80: Machinery & Equipment Average Age vs Average EUL

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

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

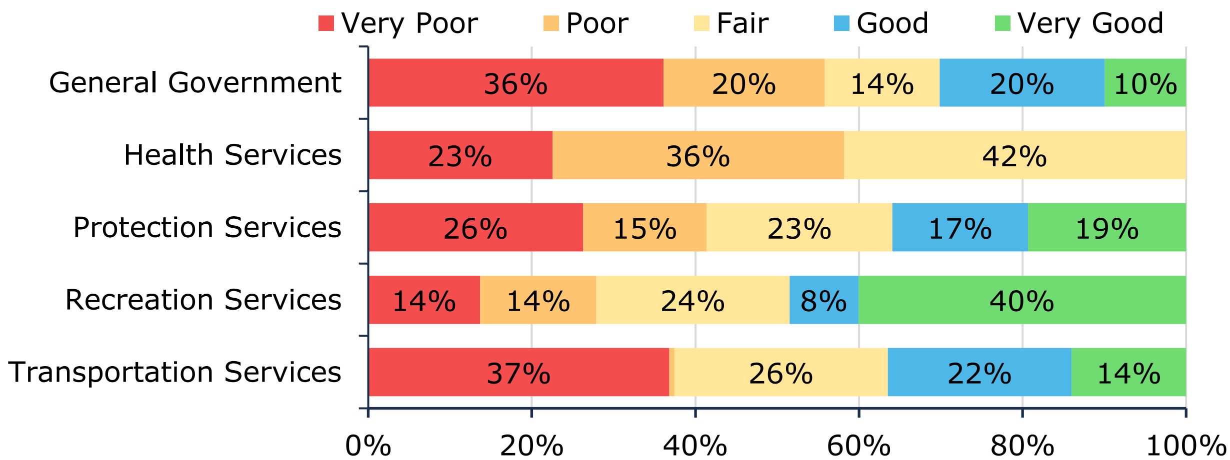


Figure 81: Machinery & Equipment Condition Breakdown

To ensure that the Municipality's equipment continues to provide an acceptable level of service, South Bruce should continue to monitor the average condition. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition.

12.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Machinery & Equipment is inspected regularly by internal staff, with more critical assets such as Public Works and Fire equipment being prioritized.

12.4. Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meet the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

Maintenance / Rehabilitation / Replacement

- Maintenance activities vary by department and type of asset in question. Some assets are replaced at end-of-life with no maintenance whereas more critical assets, such as Fire equipment, are inspected and maintained more stringently.
- Fire equipment (e.g. self-contained breathing apparatuses) is tested annually, based on National Fire Protection Association (NFPA) requirements.
- The rehabilitation and/or replacement of machinery & equipment assets depends on their criticality, performance, and budget constraints
- Heavy equipment is generally replaced based on operating hours

Figure 82: Machinery & Equipment Current Lifecycle Strategy

12.5. Forecasted Capital Requirements

The following graph identifies capital requirements over the next 40 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average annual capital requirements at $590 thousand. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service.

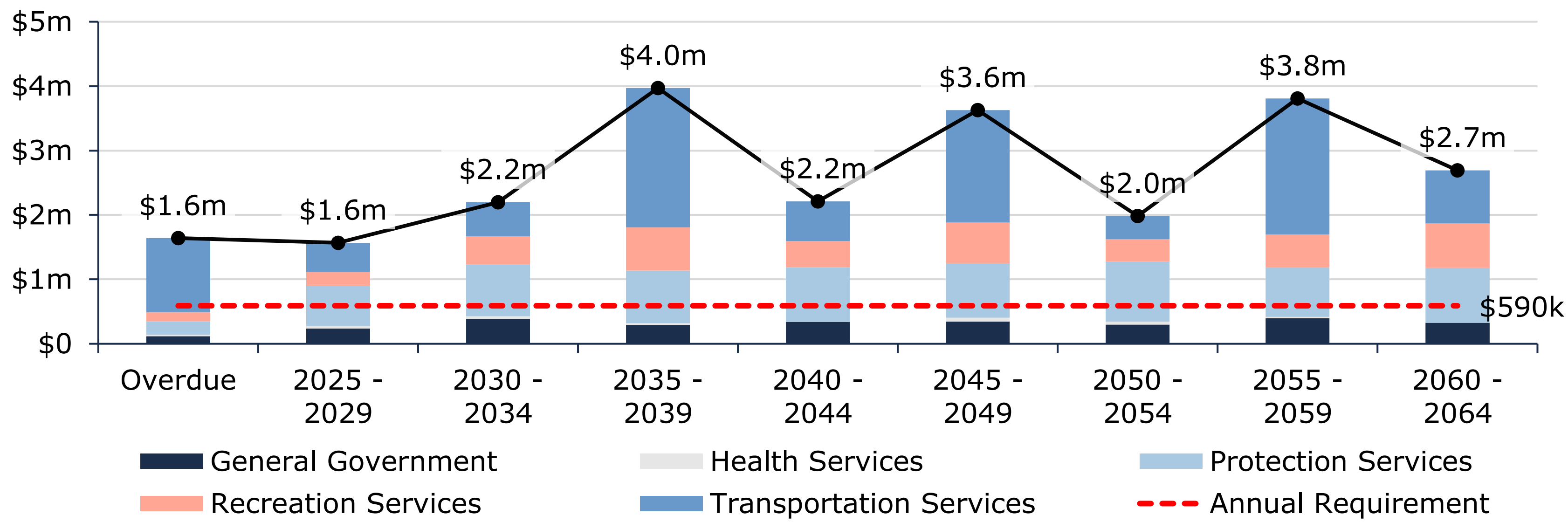


Figure 83: Machinery & Equipment Forecasted Capital Replacement Requirements

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

Table 51: Machinery & Equipment System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
General Government	$119k	$21k	$60k	$55k	$68k	$33k	$50k	$202k	$12k	$71k	$52k
Health Services	$23k	-	-	-	-	$37k	-	-	-	$43k	-
Protection Services	$209k	$68k	$136k	$199k	$137k	$87k	$129k	$169k	$148k	$263k	$93k
Recreation Services	$138k	-	$41k	$23k	$105k	$50k	$31k	$130k	-	$153k	$124k
Transportation Services	$1.2m	-	$41k	$204k	$24k	$180k	-	$15k	-	$344k	$169k
Total	**$1.6m**	**$89k**	**$278k**	**$481k**	**$334k**	**$387k**	**$211k**	**$516k**	**$160k**	**$874k**	**$438k**

As no assessed condition data was available for the equipment, only age was used to determine forthcoming replacement needs. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Municipality's capital expenditure forecasts.

12.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 **Very Low**	**5 - 7** **Low**	**8 - 9** **Moderate**	**10 - 14** **High**	**15 - 25** **Very High**
$1,451,860 (19%)	$357,520 (5%)	$1,186,493 (15%)	$1,765,324 (23%)	$2,931,140 (38%)

Figure 84: Machinery & Equipment Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

12.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for Machinery & Equipment assets.

12.7.1. Community Levels of Service

The following table outlines the qualitative metrics that determine the community level of service provided by equipment.

Table 52: Machinery & Equipment Community Levels of Service

Service Attribute	Technical Metric	Current LOS
Sustainable	Description of the current condition of municipal machinery & equipment and the plans that are in place to maintain or improve the provided level of service	The average condition of the machinery and equipment assets is Fair (45%). Assets are maintained proactively depending on their criticality to the municipality's operation.

12.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by equipment.

Table 53: Machinery & Equipment Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Sustainable	Average condition of machinery & equipment assets	45%

12.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for Machinery & Equipment. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenario Analysis.

12.8.1. PLOS Scenarios Analyzed

Table 54: Machinery & Equipment PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

12.8.2. PLOS Analysis Results

The following table presents the outcomes for three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 55: Machinery & Equipment pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	41.81%	26.92%	45.18%	35.79%
	Average Asset Risk	14.34	17.6	13.61	15.66
	Average Annual Investment	$590,394			
	Capital re-investment rate	7.7%			
Scenario 2	Average Condition	41.81%	21.91%	31.25%	28.42%
	Average Asset Risk	14.34	18.55	16.33	17.1
	Average Annual Investment	$442,796			
	Capital re-investment rate	5.8%			
Scenario 3	Average Condition	41.81%	20.29%	21.03%	24.23%
	Average Asset Risk	14.34	18.91	18.45	17.91
	Average Annual Investment	$295,197			
	Capital re-investment rate	3.8%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

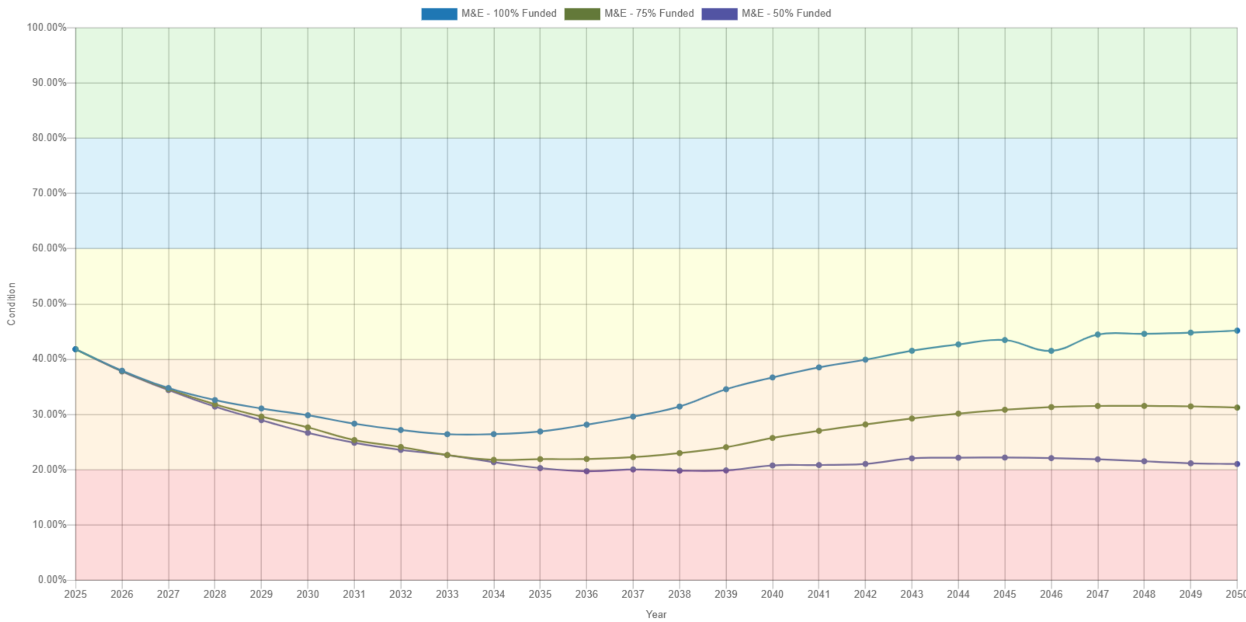


Figure 85: Machinery & Equipment Scenario Comparison

13. Vehicles

13.1. State of the Infrastructure

Vehicles allow staff to efficiently deliver municipal services and personnel. Municipal vehicles are used to support several service areas, including:

- Transportation vehicles for moving personnel, supplies, and for road maintenance and winter control activities.
- Protection vehicles for emergency services

The following summarizes the state of the infrastructure for the road network, and the Municipality's ability to fund the proposed levels of service under the 75% funding strategy:

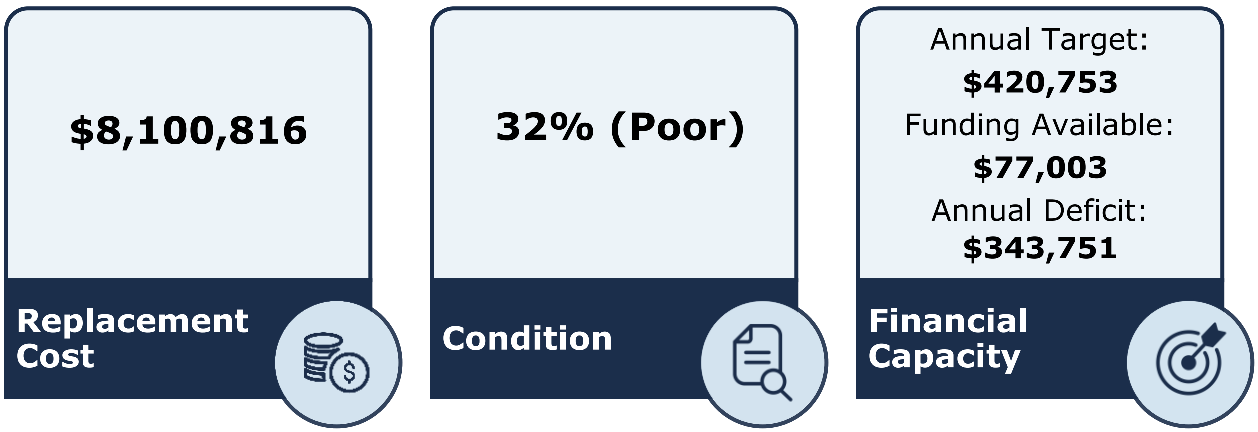


Figure 86: Vehicles State of the Infrastructure

13.2. Inventory & Valuation

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

Table 56: Vehicles Detailed Asset Inventory

Segment	Quantity	Unit of Measure	Primary Replacement Cost Method	Replacement Cost
Protection Services	9	Assets	CPI	$4,281,997
Transportation Services	17	Assets	CPI	$3,818,819
Total				**$8,100,816**

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

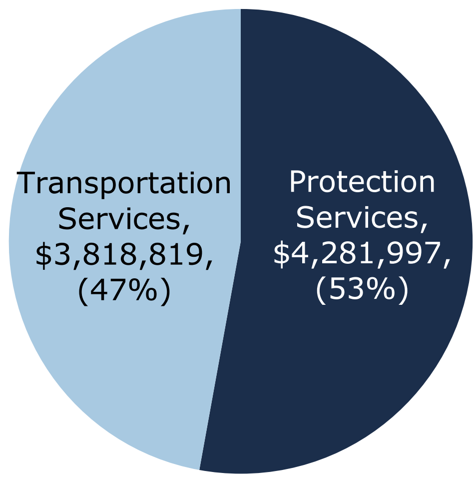


Figure 87: Vehicle Replacement Costs

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

13.3. Asset Condition & Age

The graph below identifies the average age and the estimated useful life for each asset segment.

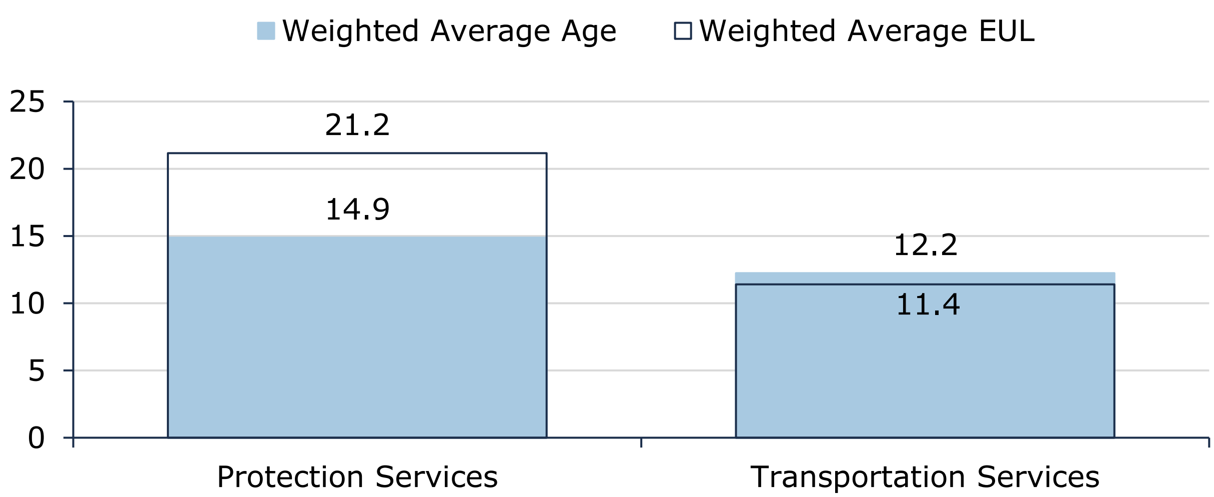


Figure 88: Vehicles Average Age vs Average EUL

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

The graph below visually illustrates the average condition for each asset segment on a very poor to very good scale. The overall condition of assets in each category is calculated using a weighted approach based on the replacement cost of individual assets.

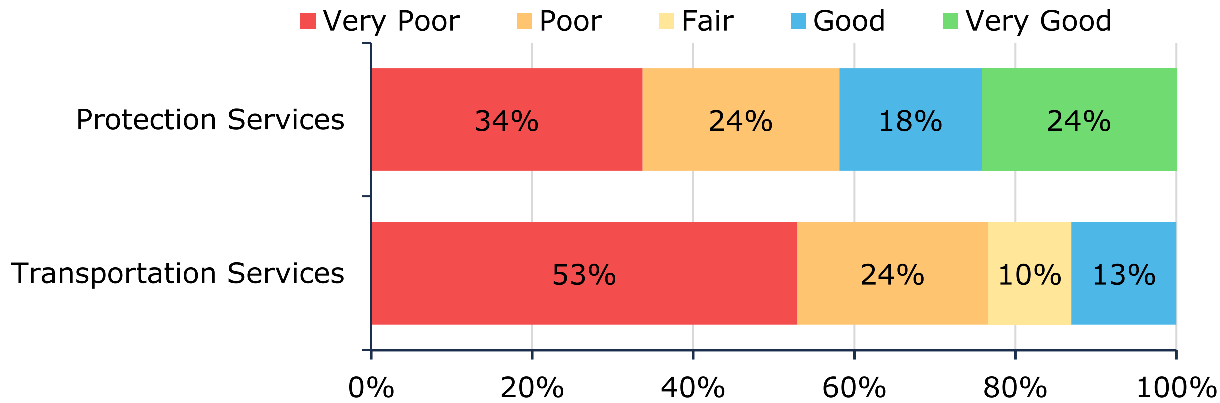


Figure 89: Vehicles Condition Breakdown

To ensure that the Municipality's vehicles continue to provide an acceptable level of service, the Municipality should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the vehicles.

13.3.1. Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Vehicles are inspected in accordance with Commercial Vehicle Operators Registration (CVOR) annually
- Fire vehicles are inspected by the fire technician to comply with National Fire Protection Association (NFPA) standards
- Vehicles that are nearing their end-of-life are inspected more frequently and proactive plans are put in place to rehabilitate or replace the assets strategically.

13.4. Lifecycle Management Strategy

The condition or performance of assets will deteriorate over time. To ensure vehicles are performing as expected, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

Maintenance / Rehabilitation / Replacement

- Regular maintenance is conducted on the vehicles to ensure they live to their maximum useful life
- Vehicles are inspected two years before the scheduled replacement date to extend service life where it is feasible to do so
- Pumps on Fire Trucks are tested annually based on the National Fire Protection Association (NFPA) requirements
- Major rehabilitations or replacements are conducted based on the vehicles' performance, mileage, criticality, and budget restraints.

Figure 90: Vehicles Current Lifecycle Strategy

13.5. Forecasted Capital Requirements

The annual capital requirement represents the average amount per year that the Municipality should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements over the next 25 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins, and the trend line represents the average annual capital requirements at $561 thousand. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) for the annual capital investment needed to maintain current levels of service.

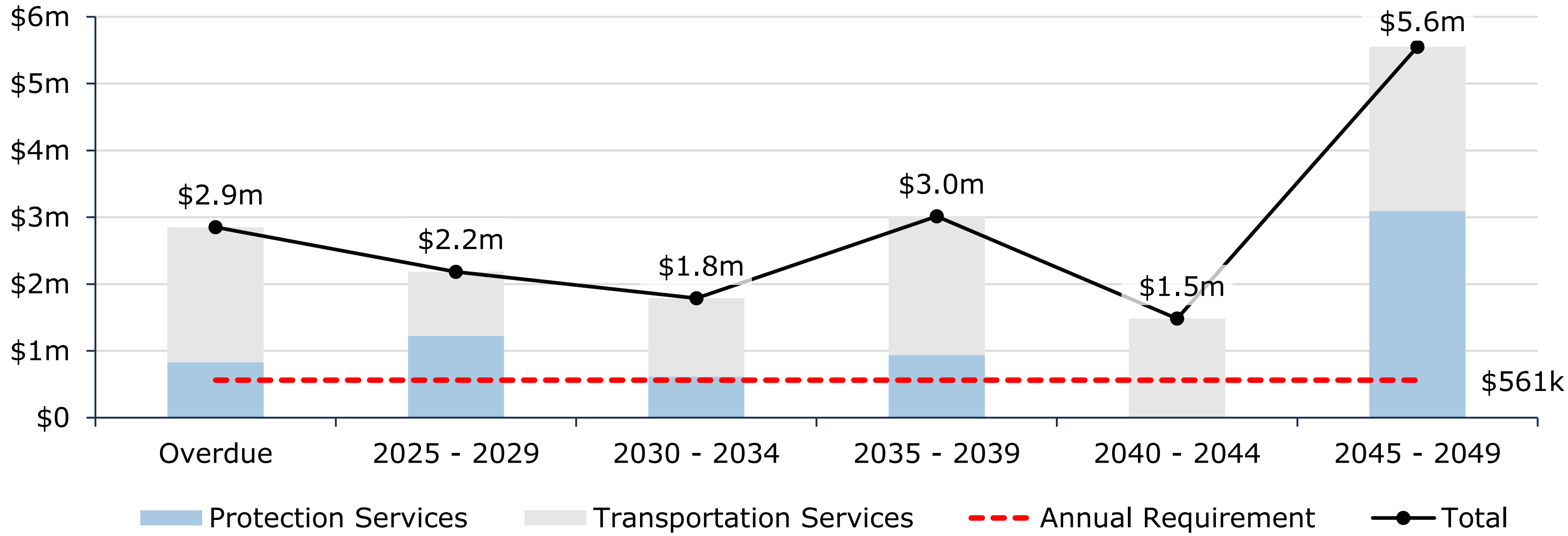


Figure 91: Vehicle Forecasted Capital Replacement Requirements

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

Table 57: Vehicles System-Generated 10-Year Capital Costs

Segment	Overdue	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Protection Services	$830k	-	-	$613k	-	$613k	-	$433k	$180k	-	-
Transportation Services	$2.0m	-	$58k	-	$421k	$478k	$396k	$129k	$209k	$438k	-
Total	**$2.9m**	**-**	**$58k**	**$613k**	**$421k**	**$1.1m**	**$396k**	**$562k**	**$390k**	**$438k**	**-**

As no assessed condition data was available for the vehicles, only age was used to determine forthcoming replacement needs. These projections can be different from actual capital forecasts. Consistent data updates, especially condition, will improve the alignment between the system-generated expenditure requirements, and the Municipality's capital expenditure forecasts.

13.6. Risk & Criticality

The risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on available inventory data. See Appendix D: Risk Rating Criteria for the criteria used to determine the risk rating of each asset.

1 - 4 Very Low	5 - 7 Low	8 - 9 Moderate	10 - 14 High	15 - 25 Very High
- (0%)	$1,152,142 (14%)	$380,566 (5%)	$1,211,682 (15%)	$5,356,426 (66%)

Figure 92: Vehicles Risk Matrix

This is a high-level model developed by Municipality staff and it should be reviewed and adjusted to reflect an evolving understanding of both the probability and consequences of asset failure. The identification of critical assets allows the Municipality to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

13.7. Current Levels of Service

The following tables identify the Municipality's metrics to identify their current level of service for municipal Vehicles.

13.7.1. Community Levels of Service

The qualitative descriptions that determine the community levels of service provided by municipal vehicles are based on the service usage outlined below:

Table 58: Vehicles Community Levels of Service

Service Attribute	Technical Metric	Current LOS
Safe & Reliable	Description of vehicles inspection process and any licensing requirements for operators	Fire vehicles are inspected in reference to vehicle manuals and in accordance with the guidelines set by the National Fire Protection Association (NFPA). The transportation vehicles abide by the Commercial Vehicle Operator's Registration (CVOR) and are inspected and maintained by a certified mechanic
Sustainable	Description of the current condition of municipal vehicles and the plans that are in place to maintain or improve the provided level of service	Vehicles are in an adequate state of repair. Regular maintenance and rehabilitation activities such as servicing or engine refurbishments are performed when required.

13.7.2. Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by vehicles.

Table 59: Vehicles Technical Levels of Service

Service Attribute	Technical Metric	Current LOS
Sustainable	Average condition of municipal vehicles	32%

13.8. 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 Municipality's ability to afford the PLOS.

The tables and graphs below explain the proposed levels of service scenarios that were analyzed for municipal Vehicles. Further PLOS analysis at the portfolio level can be found in Proposed Levels of Service Scenario Analysis.

13.8.1. PLOS Scenarios Analyzed

Table 60: Vehicles PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Achieving Full Funding in 15 Years	This scenario assumes a phased tax increase of approximately 3.3% annually, reaching full funding within 15 years
Scenario 2: Achieving 75% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 2.0% annually, reaching 75% funding within 15 years
Scenario 3: Achieving 50% Funding in 15 Years	This scenario assumes a phased tax increase of approximately 0.4% annually, reaching 50% funding within 15 years

13.8.2. PLOS Analysis Results

The following table presents the outcomes for three funding scenarios, illustrating how varying levels of capital investment impact asset condition, risk, and overall performance over time.

Table 61: Vehicles pLOS Scenario Analysis

Scenario	Technical LOS Outcomes	Initial Value (2025)	10 Year Projection (2035)	25 Year Projection (2050)	Scenario Average
Scenario 1	Average Condition	41.94%	24.88%	42.42%	33.77%
	Average Asset Risk	14.32	18.02	14.34	16.06
	Average Annual Investment	$561,004			
	Capital re-investment rate	6.9%			
Scenario 2	Average Condition	41.94%	21.79%	29.56%	27.75%
	Average Asset Risk	14.32	18.57	16.71	17.23
	Average Annual Investment	$420,753			
	Capital re-investment rate	5.2%			
Scenario 3	Average Condition	41.94%	18.81%	17.05%	22.07%
	Average Asset Risk	14.32	19.21	19.3	18.34
	Average Annual Investment	$280,502			
	Capital re-investment rate	3.5%			

The following figure illustrates the projected condition of the asset category under each of the three investment level scenarios, demonstrating how varying reinvestment strategies impact overall asset condition over time.

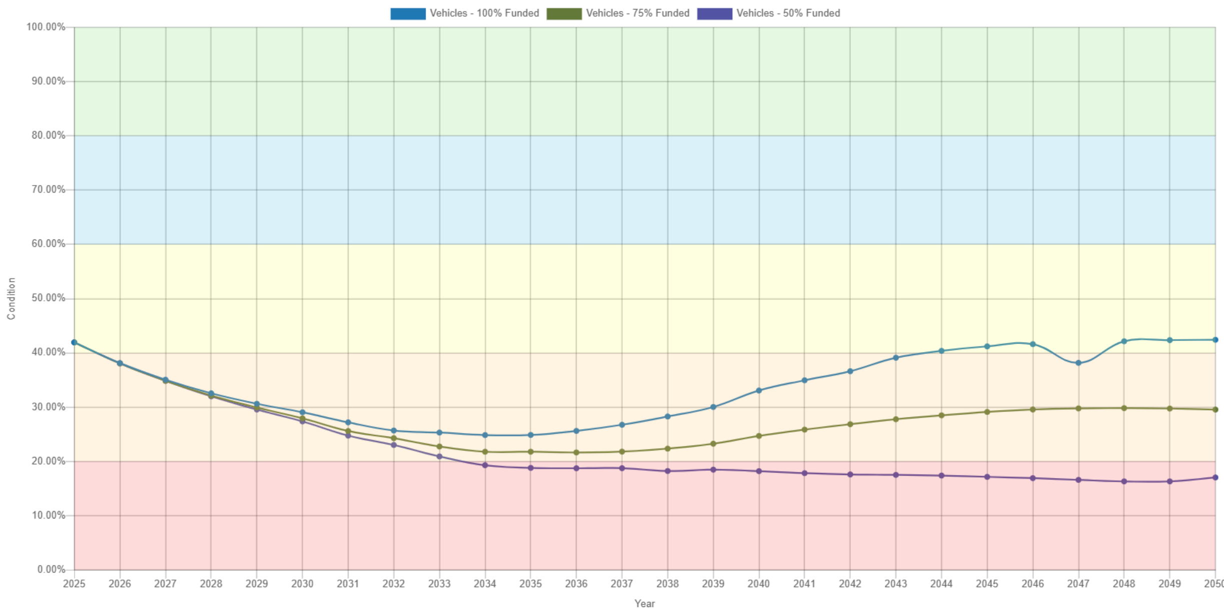


Figure 93: Vehicles Scenario Comparison

Strategies

14. Financial Strategy

14.1. Financial Strategy Overview

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

This plan identifies the financial requirements necessary to meet the identified proposed levels of service. These requirements are based on the financial requirements for existing assets as of December 31, 2023. However, the required funding is based on meeting the proposed levels of service, with consideration for any additional financial impacts from economic and population growth. The financial plan considers and accounts for traditional and non-traditional sources of municipal funding.

This financial strategy is designed around two key elements: the average annual capital requirement, and the average annual capital funding currently available. The annual requirement is calculated based on the replacement cost and service life of each asset, and, where possible, includes lifecycle modeling. These values are then aggregated to determine category-level funding needs.

Available capital funding is based on an average of historical capital expenditure, including contributions to capital reserves. For South Bruce, average spending from 2022-2024 was used to establish a baseline projection of available capital funding.

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

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

Although provincial and federal infrastructure programs can change with evolving policy, CCBF, and OCIF are considered as permanent and predictable.

14.2. Annual Capital Requirements

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

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

- **Replacement Only Scenario:** Based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life.
- **Lifecycle Strategy Scenario:** Based on the assumption that lifecycle activities are performed at strategic intervals to extend the service life of assets until replacement is required.

Table 62: Annual Requirement Comparison

Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Lifecycle Strategy)	Difference
Paved Roads	$5,750,352	$3,847,133	$1,903,219

The implementation of a proactive lifecycle strategy for paved roads leads to a potential annual cost avoidance of approximately $1.9 million for the road network. This represents an overall reduction of the annual requirements by 33%.

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

With a total replacement value of $383.2 million, the estimated annual investment needed to maintain current service levels is approximately $9.0 million. Under the proposed levels of service, this requirement is reduced to $6.8 million.

The table below illustrates the system-generated, equivalent target reinvestment rate for the proposed levels of service, calculated by dividing the annual capital requirements by the total replacement cost of each category. The cumulative target reinvestment for these categories is estimated at 1.2%.

Table 63: Average Annual Capital Requirements

Asset Category	Replacement Cost	Annual Capital Requirements	Target Reinvestment Rate
Road Network	$150,071,707	$2,885,350	1.9%
Stormwater Network	$16,861,956	$180,740	1.1%
Bridges & Culverts	$56,933,694	$857,838	1.5%
Buildings	$64,650,381	$760,729	1.2%
Machinery & Equipment	$7,692,338	$442,796	5.8%
Land Improvements	$5,021,703	$164,353	3.3%
Vehicles	$8,100,816	$420,753	5.2%
Water Network	$23,072,140	$208,118	0.9%
Wastewater Network	$50,827,346	$855,906	1.7%
Total	**$383,232,081**	**$6,776,583**	**1.8%**

14.3. Financial Profile: Tax Funded Assets

14.3.1. Current Funding Levels

The table below summarizes how current funding levels compare with funding required for the proposed levels of service. At existing levels, the Municipality is funding 54.8% of its annual capital requirements for all infrastructure analyzed. This creates a total annual funding deficit of $3.1 million.

Table 64: Current Funding Levels

Asset Category	Annual Capital Requirements	Annual Funding Available	Annual Infrastructure Deficit	Funding Level
Road Network	$2,885,350	$1,984,154	$901,196	68.8%
Stormwater Network	$180,740	$132,750	$47,990	73.4%
Bridges & Culverts	$857,838	$815,924	$41,914	95.1%
Buildings	$760,729	$181,903	$578,827	23.9%
Machinery & Equipment	$442,796	$66,669	$376,127	15.1%
Land Improvements	$164,353	$4,846	$159,507	2.9%
Vehicles	$420,753	$77,003	$343,751	18.3%
Water Network	$208,118	$237,552	($29,434)	114.1%
Wastewater Network	$855,906	$211,142	$644,764	24.7%
Total	**$6,776,583**	**$3,711,942**	**$3,064,641**	**54.8%**

Table 65: Required Funding vs Current Funding Position

Asset Category	Avg. Annual Requirement	Annual Funding Available				Annual Deficit
		Reserve Allocation	CCBF	OCIF	Total Available	
Road Network	$2,885,350	$1,064,868	$135,307	$783,979	$1,984,154	$901,196
Stormwater Network	$180,740	$132,750			$132,750	$47,990
Bridges & Culverts	$857,838	$479,200	$49,561	$287,163	$815,924	$41,914
Buildings	$760,729	$181,903			$181,903	$578,827
Machinery & Equipment	$442,796	$66,669			$66,669	$376,127
Land Improvements	$164,353	$4,846			$4,846	$159,507
Vehicles	$420,753	$77,003			$77,003	$343,751
Total	**$5,712,559**	**$2,007,238**	**$184,868**	**$1,071,142**	**$3,263,248**	**$2,449,311**

The average annual investment requirement for the above categories is $5,712,559. Annual revenue currently allocated to these assets for capital purposes is $3,263,248, leaving an annual deficit of $2,449,311. Put differently, these infrastructure categories are currently funded at 57.1% of their long-term requirements.

14.3.2. Closing the Gap

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

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

75% Funding Requirements Tax Revenues

As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, achieving 75% of full funding would require a 36.1% tax change over time.

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

Table 66: Phasing in Annual Tax Increases – Full Funding

Asset Category	Tax Change Required for 75% of full Funding
Road Network	13.3%
Stormwater Network	0.7%
Bridges & Culverts	0.6%
Buildings	8.5%
Machinery & Equipment	5.5%
Land Improvements	2.4%
Vehicles	5.1%

Funding 75% of the annual capital requirements ensures that major capital events, such as replacements, are completed as needed. While the remaining funding gap will need to be supplemented with other revenue sources, the Municipality will also draw from reserves as necessary to support high-priority projects. Project prioritization will help guide the allocation of these funds, ensuring that the most critical infrastructure needs are addressed first. With this approach, most projects are unlikely to be deferred to future years, helping to maintain high asset performance and community service levels.

The following changes in costs and/or revenues over the next number of years should also be considered in the financial strategy:

- South Bruce's debt payments for these asset categories will be decreasing by $173,379 over the next 5 to 10 years.

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

Table 67: Phase-in Period for tax-funded assets

	Phase-in Period for 75% of full funding			
	5 Years	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	$2,449,311	$2,449,311	$2,449,311	$2,449,311
Change in Debt Costs	N/A	($173,379)	($173,379)	($173,379)

Resulting Infrastructure Deficit:	**$2,449,311**	**$2,275,932**	**$2,275,932**	**$2,275,932**
Tax Increase Required	36.1%	33.5%	33.5%	33.5%
Annually:	**6.4%**	**3.0%**	**2.0%**	**1.5%**

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

Table 68: Scenarios Annual Impact on Taxation

Annual Impact on Taxation				
Change in Levels of Service	**5 Year**	**10 Year**	**15 Year**	**20 Year**
Full Funding	10.5%	5.1%	3.3%	2.5%
75% Funding	6.4%	3.0%	2.0%	1.5%
50% Funding	1.6%	0.8%	0.4%	0.3%
Recommended	6.4%	3.0%	2.0%	1.5%

14.3.3. Financial Strategy Recommendations

Considering all the above information, we recommend the 15-year option to achieve the proposed levels of service. This involves 75% funding being achieved over 15 years by:

a) Increasing tax revenues by 2.0% each year for the next 15 years solely for the purpose of phasing in 75% funding to the asset categories covered in this section of the AMP.
b) Allocating the current Canada Community-Building Fund (Formerly known as Gas Tax Fund) and OCIF revenue as outlined previously.
c) Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
d) Leveraging additional, non-sustainable revenue sources such as one-time grants, surpluses, and reserves, as supplementary funding to advance asset management goals.

Notes:

1. 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[7].

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

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 75% funding 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 $2.5m for the Road Network, $1.6m for the Machinery & Equipment, $2.9m for Vehicles, and $81k for the Stormwater Network.

14.4. Financial Profile: Rate Funded Assets

14.4.1. Current Funding Levels

The table below summarizes how current funding levels compare with funding required for each asset category. At existing levels, the Municipality is funding 42.2% of its annual capital requirements for the proposed levels of service for rate-supported infrastructure.

It should be noted that the annual capital requirements shown do not include planned future projects such as the new Teeswater water tower and well, or the ongoing expansion of the Teeswater-Formosa wastewater treatment plant. These projects are expected to have significant capital implications and should be addressed through additional long-term financial planning efforts.

Table 69: Required Funding vs Current Funding Position

Asset Category	Avg. Annual Requirement	Annual Funding Available		Annual Deficit
		Reserve Allocation	Total Available	
Water Network	$208,118	$237,552	$237,552	($29,434)
Wastewater Network	$855,906	$211,142	$211,142	$644,764
Total	**$1,064,024**	**$448,694**	**$448,694**	**$615,330**

The average annual investment requirement for the above categories is $1,064,024. Annual revenue currently allocated to these assets for capital purposes is $448,694, leaving an annual deficit of $615,330. Put differently, these infrastructure categories are currently funded at 42.2% of their long-term requirements for proposed levels of service.

14.4.2. Closing the Gap

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

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

Funding Requirements Rate Revenues

In 2024, South Bruce had annual water revenues of $873,055 and annual sanitary revenues of $1,766,896. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, achieving 75% funding would require a 36.5% rate change over time for the wastewater network.

Table 70: Phasing in Annual Rate Increases

Asset Category	Rate Change Required for 75% of full funding
Water Network	No increase required
Sanitary Network	36.5%

Funding 75% of the annual capital requirements ensures that major capital events, such as replacements, are completed as needed. While the remaining funding gap will need to be supplemented with other revenue sources, the Municipality will also draw from reserves as necessary to support high-priority projects. Project prioritization will help guide the allocation of these funds, ensuring that the most critical infrastructure needs are addressed first. With this approach, most projects are unlikely to be deferred to future years, helping to maintain high asset performance and community service levels.

The following changes in costs and/or revenues over the next number of years should also be considered in the financial strategy:

- South Bruce's debt payments for these asset categories will be decreasing by $387,876 over the next 10 to 15 years.

Table 71: Phase-in Period for full funding - Water and Wastewater

	Water Network				Wastewater Network			
	5 Years	**10 Years**	**15 Years**	**20 Years**	**5 Years**	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	$0	$0	$0	$0	$644,764	$644,764	$644,764	$644,764
Change in Debt Costs	N/A	N/A	N/A	N/A	($199,643)	($199,643)	($250,420)	($250,420)
Resulting Infrastructure Deficit:	**$0**	**$0**	**$0**	**$0**	**$445,122**	**$445,122**	**$394,344**	**$394,344**
Rate Increase Required	0%	0%	0%	0%	25.2%	25.2%	22.3%	22.3%
Annually:	**0%**	**0%**	**0%**	**0%**	**4.6%**	**2.3%**	**1.4%**	**1.1%**

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

Annual Impact on Rates					
	Changes in Levels of Service	**5 year**	**10 Year**	**15 Year**	**20 Year**
Water	Achieving 50% Funding	0%	0%	0%	0%
	Achieving 75% Funding	0%	0%	0%	0%
	Achieving Full Funding	0.9%	0.5%	0.3%	0.3%
	Recommended	0%	0%	0%	0%
	Changes in Levels of Service	**5 year**	**10 Year**	**15 Year**	**20 Year**
Waste-water	Achieving 50% Funding	1.8%	0.9%	0.5%	0.3%
	Achieving 75% Funding	4.6%	2.3%	1.4%	1.1%
	Achieving Full Funding	7.2%	3.6%	2.2%	1.7%
	Recommended	4.6%	2.3%	1.4%	1.1%

Table 72: Scenarios Annual Impact on User Rates

14.4.3. Financial Strategy Recommendations

Considering all the above information, we recommend the 15-year option for the water network and the wastewater network. This involves 75% of full funding being achieved over 15 years by:

a) increasing rate revenues by 1.4% for sanitary services each year for the next 15 years solely for the purpose of phasing in 75% funding to the asset categories covered in this section of the AMP.
b) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

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

Although this option achieves 75% funding 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 $409k for the Water Network.

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

14.5. Use of Debt

Debt can be strategically utilized as a funding source with in the long-term financial plan. The benefits of leveraging debt for infrastructure planning include:

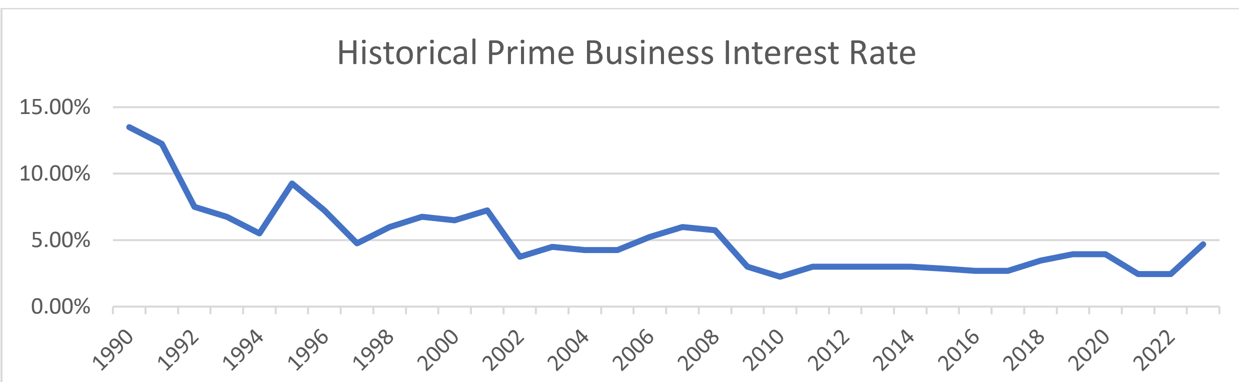
a) the ability to stabilize tax & user rates when dealing with variable and sometimes uncontrollable factors

b) equitable distribution of the cost/benefits of infrastructure over its useful life

c) a secure source of funding

d) flexibility in cash flow management

Debt management policies and procedures with limitations and monitoring practices should be considered when reviewing debt as a funding option. In efforts to mitigate increasing commodity prices and inflation, interest rates have been rising. Sustainable funding models that include debt need to incorporate the now current realized risk of rising interest rates. The following graph shows the historical changes to the lending rates:



A change in 15-year rates from 5% to 7% would change the premium from 45% to 65%. Such a change would have a significant impact on a financial plan.

The following tables outline how South Bruce has historically used debt for investing in the asset categories as listed. There is currently $2,669,963 of debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of $423,799. This amount is well within the Municipality's provincially prescribed maximum of $2,044,476, which is a limit set by the province to ensure that municipalities maintain a responsible level of debt in relation to their financial capacity.

Table 73: Use of Debt in the last Five Years

Asset Category	**Current Debt Outstanding**	**Use of Debt in the Last Five Years**				
		2019	**2020**	**2021**	**2022**	**2023**
Road Network	$1,340,917					
Stormwater Network						
Bridges & Culverts						
Buildings						
Land Improvements						
Machinery & Equipment						
Vehicles						
Total Tax Funded:	**$1,340,917**					
Water Network						
Wastewater Network	$1,329,046					
Total Rate Funded:	**$1,329,046**	**$**	**$**	**$**	**$**	**$**

Table 74: Principal & Interest Payments in the Next Ten Years

Asset Category	Principal & Interest Payments in the Next Ten Years						
	2025	**2026**	**2027**	**2028**	**2029**	**2030**	**2035**
Road Network	$173k	$173k	$173k	$174k	$173k	$173k	
Stormwater Network							
Bridges & Culverts							
Buildings							
Machinery & Equipment							
Land Improvements							
Vehicles							
Total Tax Funded:	**$173k**	**$173k**	**$173k**	**$174k**	**$173k**	**$173k**	
Water Network							
Wastewater Network	$250k	$250k	$250k	$101k	$101k	$51k	$51k
Total Rate Funded:	**$250k**	**$250k**	**$250k**	**$101k**	**$101k**	**$51k**	**$51k**

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:

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

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

Table 75: Reserve Balances

Asset Category	Balance at December 31, 2024
Road Network	$1,056,773
Storm Network	$385,924
Bridges & Culverts	$348,513
Buildings	$625,915
Machinery & Equipment	$283,256
Land Improvements	$110,897
Vehicles	$563,946
Total Tax Funded:	**$3,375,225**
Water Network	$1,509,836
Wastewater Network	$1,916,035
Total Rate Funded:	**$3,425,870**

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Municipality 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 full funding. This allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

15. Growth

15.1. Description of Growth Assumptions

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 Municipality to more effectively plan for new infrastructure, 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.

15.2. South Bruce Official Plan – Formosa, Mildmay, and Teeswater (2004, amended 2023)

The Official Plan for the Municipality of South Bruce was adopted in 2004 and has a planning horizon of 20 years until the year 2024. Previously, Mildmay and Teeswater had individual development plans, while Formosa followed the County of Bruce Official Plan. After reorganization, South Bruce introduced a unified Official Plan to standardize development across all three areas.

The Official Plan of South Bruce serves as a guiding framework for development and investment, standardizing land use across its communities. It sets social, economic, and environmental goals for managing development, zoning, and land division. Key objectives include enhancing Formosa, Mildmay, and Teeswater as service centers and desirable living areas, offering diverse housing options, and maintaining active commercial centers. The plan also commits to preserving the rural character, protecting historical buildings, ensuring environmental sustainability, supporting suitable industrial development, and improving recreational amenities like trails and parks.

In terms of settlement area growth, the Official Plan aims to foster sustainable development within Formosa, Mildmay, and Teeswater. It strives to develop these areas into vibrant service centers with a variety of residential options tailored to different demographics and income levels. The plan promotes detached residential housing as the standard while also supporting higher density and mixed residential projects on fully serviced municipal lands. It encourages redevelopment and densification through infilling and converting existing structures to meet modern needs, ensuring that new developments blend with the community's historical charm and available services, thus maintaining the area's quaint rural atmosphere while accommodating growth effectively.

The following table outlines the recorded population and private dwellings for South Bruce, based on 2021 Census data.

Table 76: South Bruce Census Data (Statcan)

Historical Figures	1996	2001	2006	2011	2016	2021
Population	6,248	6,063	5,939	5,685	5,639	5,880

Population Change	N/A	-3.0%	-2.0%	-4.3%	-0.8%	4.3%
Private Dwellings	N/A	2,278	2,297	2,342	2,381	2,419

The population forecasts for the settlement areas in South Bruce had anticipated growth over a 20-year planning period. However, recent census data indicate variable population trends rather than a consistent rise. It is recommended that the Municipality consider the recent population data to appropriately update infrastructure priorities.

15.3. Bruce County Official Plan (September 2017)

The Bruce County adopted an Official Plan to guide physical, social, and economic development within the County to the year 2024. The policies included in the Official Plan are intended to encourage economic development and prosperity in the County and necessary social, cultural, and educational facilities and services, while maintaining the quality of the natural environment.

The Bruce County Official Plan also frames growth trends in South Bruce. Section 4.2.2 of the Plan projects that South Bruce’s population will remain largely stable, despite ongoing aging trends. From 2011 to 2021, the Municipality saw modest declines across key indicators: population decreased by 3.97% (from 5,705 to 5,479), employment dropped by 3.96% (from 3,439 to 3,303), and the number of households declined by 2.0% (from 2,098 to 2,056). In contrast, many other areas within Bruce County experienced growth over the same period, highlighting South Bruce’s unique demographic and economic challenges.

15.4. Growth-Related Infrastructure Planning

As new development occurs, South Bruce will face increased demand on its infrastructure. Staff have identified the following key growth-related projects that will significantly affect lifecycle planning and long-term service delivery:

- **Teeswater-Formosa Wastewater Treatment Plant Expansion**
  - Although the plant remains in good physical condition, functional capacity concerns have prompted a proposed upgrade valued at over $17 million.
- **Teeswater Water System Expansion**
  - Plans include constructing a second well and water tower, with an estimated cost exceeding $6 million.

While new units will contribute to the tax base, these infrastructure investments will require careful lifecycle planning and sustainable long-term financial strategies to maintain current service levels.

15.5. Development Charges Background Study (2025)

The Municipality of South Bruce prepared a Development Charges Background Study to support the creation of a new by-law aimed at recovering capital costs from new development. The study assesses population and housing growth over a 20-year period, using recent census data, building permit trends, and forecasts.

Key findings show modest but steady residential growth, with 177 new residential units added over the past decade, and a projected 632 new units over the next 10 years. Growth is expected to continue primarily in Mildmay, with an increasing mix of multi-unit housing types.

The study outlines three service areas for development charges: municipal-wide, Teeswater, and Mildmay. It incorporates financial planning requirements under the Development Charges Act, including a high-level asset management plan. This plan identifies lifecycle costs for proposed new infrastructure, which total approximately $180 million, with an estimated annual funding requirement of $1.05 million.

Of the $10.9 million in total project costs identified, $5.7 million is recoverable from future development, while $4.9 million is attributed to existing development and must be funded from other municipal sources.

15.5.1. Impact of Growth on Lifecycle Activities

The Municipality’s Development Charges Background Study (2025) provides detailed forecasts for population, housing, and employment growth, offering important insights into how future demand for municipal services and infrastructure will evolve. These projections, in conjunction with planning direction from the South Bruce Official Plan and the Bruce County Official Plan, inform a forward-looking approach to capital investment and asset management.

Although this Asset Management Plan focuses on the Municipality's existing asset base, growth expectations have influenced broader lifecycle and financial planning. The DC Study estimates that 632 new residential units will be added over the next 10 years. While modest, this level of growth will increase pressure on core infrastructure and municipal services, particularly in Mildmay and Teeswater, where most development activity is anticipated.

South Bruce has already identified several growth-related capital needs that will require careful lifecycle planning. These include the planned $17 million expansion of the Teeswater-Formosa Wastewater Treatment Plant, and a $6 million second well and water tower. In addition, projects like the Adam Street Dam removal and reconstruction are nearing completion, addressing both growth demands and infrastructure renewal priorities.

The lifecycle costs of this new infrastructure, covering operating, maintenance, and eventual replacement, must be considered alongside traditional capital costs. While a portion of growth-related expenses may be funded through development charges, significant portions will fall outside DC eligibility and must be addressed through annual funding strategies, reserve contributions, and rate-based revenues.

As growth-related assets are constructed and formally assumed by the Municipality, they will be integrated into future updates of the Asset Management Plan. South Bruce's asset management approach remains adaptable, using phased investments, reserve planning, and scenario-based financial strategies to manage infrastructure demands while maintaining service levels. This growth-conscious planning ensures the Municipality remains fiscally responsible and positioned for long-term sustainability.

16. Recommendations & Key Considerations

16.1. Financial Strategies

1. Review the feasibility of adopting the funding required to meet the proposed levels of service for the asset categories analyzed. This includes:
    a. Increasing taxes by 2.0% per year over a period of 15 years;
    b. Increasing wastewater rates by 1.4% per year over a period of 15 years.
2. Continued allocation of OCIF and CCBF funding as previously outlined.
3. Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
4. Continue to apply for project specific grant funding to supplement sustainable funding sources

16.2. Asset Data

1. Continuously review, refine, and calibrate lifecycle and risk profiles to better reflect actual practices and improve capital projections. In particular:
    a. the timing of various lifecycle events, the triggers for treatment, anticipated impacts of each treatment, and costs
    b. the various attributes used to estimate the likelihood and consequence of asset failures, and their respective weightings
2. Asset management planning is highly sensitive to replacement costs. Periodically update replacement costs based on recent projects, invoices, or estimates, as well as condition assessments, or any other technical reports and studies. Material and labour costs can fluctuate due to local, regional, and broader market trends, and substantially so during major world events. Accurately estimating the replacement cost of like-for-like assets can be challenging. Ideally, several recent projects over multiple years should be used. Staff judgement and historical data can help attenuate extreme and temporary fluctuations in cost estimates and keep them realistic.
3. Like replacement costs, an asset's established serviceable life can have dramatic impacts on all projections and analyses, including condition, long-range forecasting, and financial recommendations. Periodically reviewing and updating these values to better reflect infield performance and staff judgement is recommended.

16.3. Risk & Levels of Service

1. Risk models and matrices can play an important role in identifying high-value assets, and developing an action plan which may include repair, rehabilitation, replacement, or further evaluation through condition

assessments. As a result, project selection and the development of multi-year capital plans can become more strategic and objective. Initial models have been built into Citywide for all asset groups. These models reflect current data, which was limited. As the data evolves and new attribute information is obtained, these models should also be refined and updated.

2. Available data on current performance should be centralized and tracked to support any calibration of service levels for long-term tracking of O. Reg. 588's requirements on proposed levels of service.
3. Staff should monitor evolving local, regional, and environmental trends to identify factors that may shape the demand and delivery of infrastructure programs. These can include population growth, and the nature of population growth; climate change and extreme weather events; and economic conditions and the local tax base. This data can also be used to review service level targets.

Appendices

Appendix A: Proposed Levels of Service 10-Year Capital Requirements

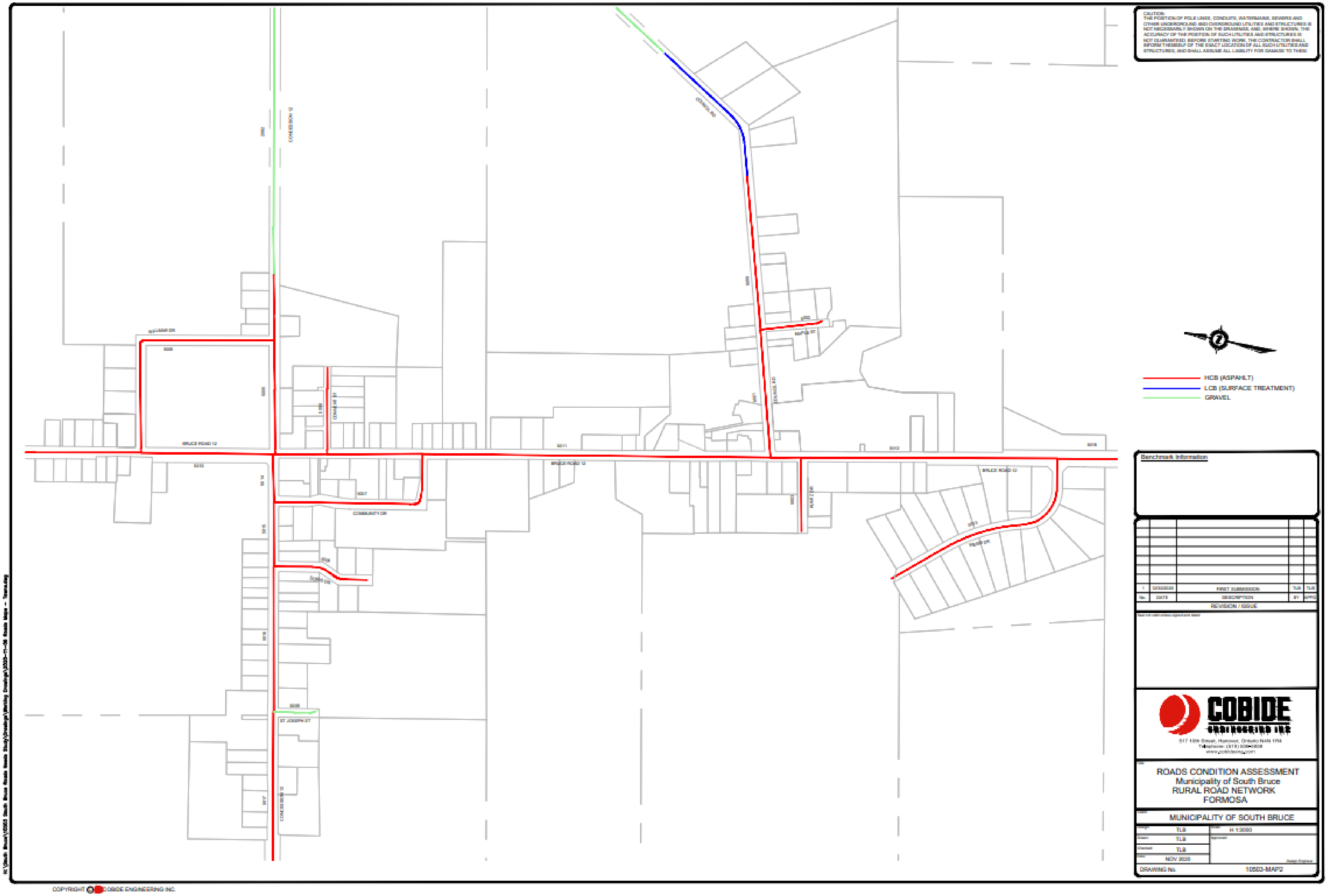
The table below outlines the capital cost requirements for recommended lifecycle activities, as generated through the Municipality's asset management software. These projections are based on annual budgets that start at current funding levels and gradually increase over a 15-year period to reach a 75% funding level, using Scenario 2 for all assets, as outlined in Section 4. For more information, please refer to the Financial Strategy.

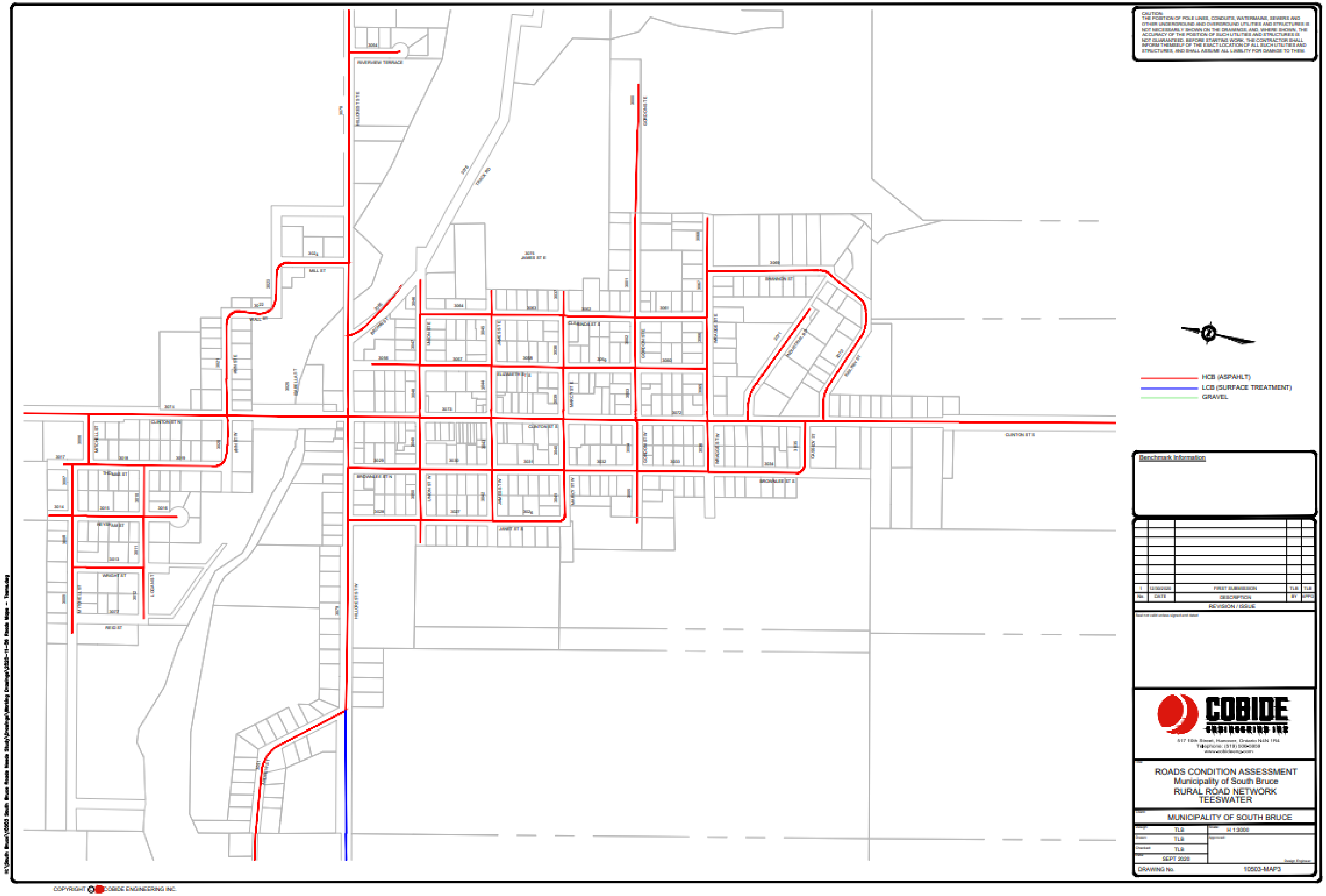
Table 77: Scenario 2 System-Generated 10-Year Capital Requirements

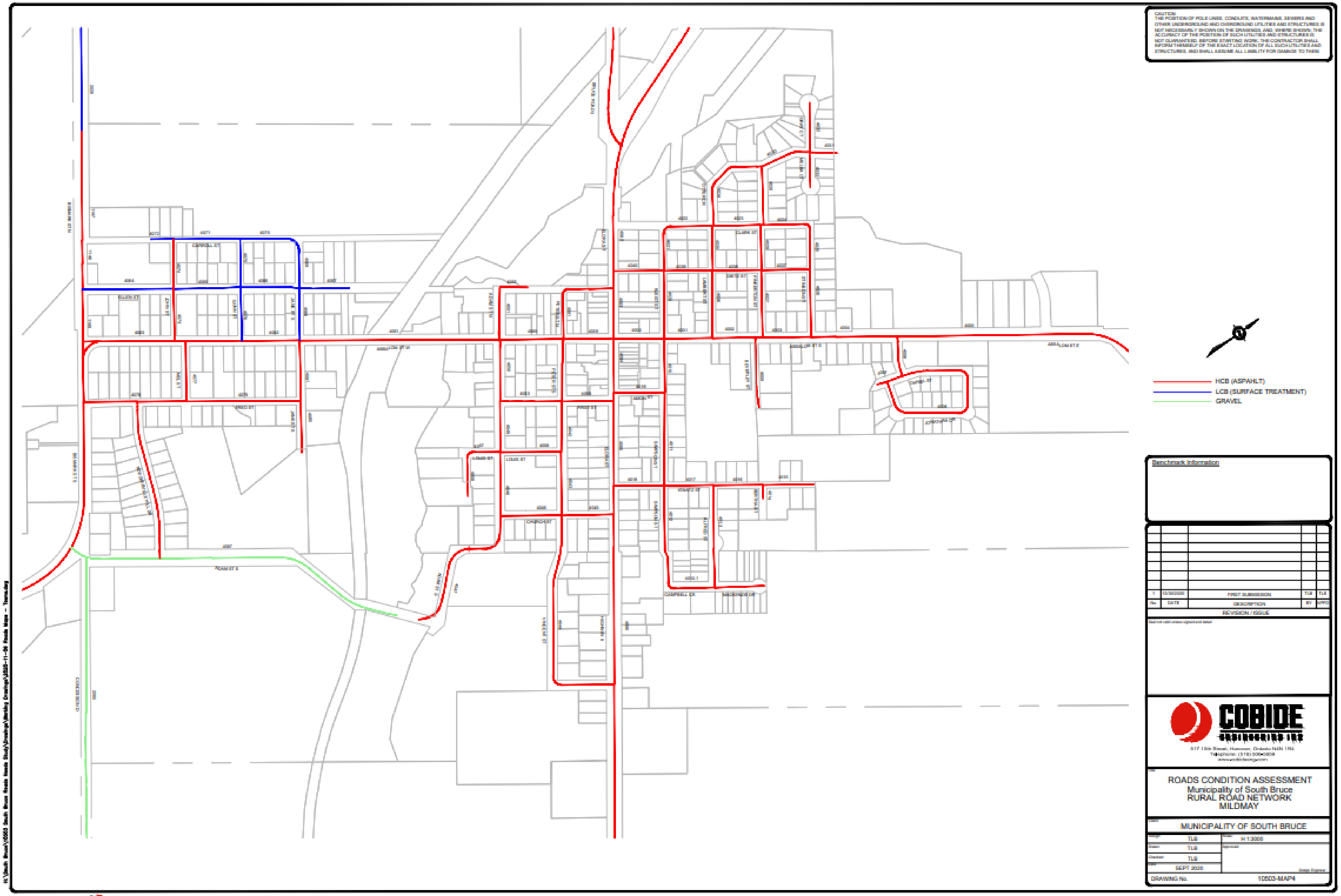
Asset Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Road Network	$2.0m	$2.0m	$2.1m	$2.1m	$2.2m	$2.2m	$2.3m	$2.3m	$2.4m	$2.5m
Bridges & Culverts	$547k	$398k	$262k	-	-	-	-	-	-	-
Buildings	-	-	-	-	$9k	-	$32k	$15k	-	$33k
Land Improvements	-	$9k	$18k	$40k	$42k	$43k	$58k	$83k	$84k	$84k
Machinery & Equipment	$67k	$88k	$109k	$130k	$153k	$175k	$198k	$222k	$246k	$270k
Vehicles	$77k	$96k	$116k	$135k	$155k	$176k	$197k	$219k	$241k	$262k
Storm Water Network	$130k	$135k	$128k	$137k	$15k	-	-	$174k	$16k	-
Water Network	$40k	-	$186k	$20k	-	-	$13k	$94k	$41k	$595k
Wastewater Network	$211k	$234k	$253k	$428k	$458k	$484k	$506k	$532k	$548k	$190k
TOTAL	**$3.0m**	**$3.0m**	**$3.2m**	**$3.0m**	**$3.0m**	**$3.1m**	**$3.3m**	**$3.7m**	**$3.6m**	**$3.9m**

Appendix B: Levels of Service Images & Maps

Road Network


HCB (ASPAHLT)
LCB (SURFACE TREATMENT)
GRAVEL
Benchmark Information
FIRST SUBMISSION
No.
DATE
DESCRIPTION
BY
REVISION / ISSUE
COBIDE
ROADS CONDITION ASSESSMENT
Municipality of South Bruce
RURAL ROAD NETWORK
FORMOSA
MUNICIPALITY OF SOUTH BRUCE
TLB
TLB
TLB
NOV 2020
DRAWING No.
10503-MAP2
BRUCE ROAD 12
COMMUNITY DR
ST JOSEPH ST
CONCESSION 12
COPYRIGHT COBIDE ENGINEERING INC.


HCB (ASPHALT)
LCB (SURFACE TREATMENT)
GRAVEL
Benchmark Information
FIRST SUBMISSION
DESCRIPTION
REVISION / ISSUE
COBIDE
ROADS CONDITION ASSESSMENT
Municipality of South Bruce
RURAL ROAD NETWORK
TEESWATER
MUNICIPALITY OF SOUTH BRUCE
TLB
TLB
TLB
SEPT 2020
DRAWING No.
10503-MAP3
COPYRIGHT COBIDE ENGINEERING INC.


HCB (ASPHALT)
LCB (SURFACE TREATMENT)
GRAVEL
Benchmark Information
COBIDE
ROADS CONDITION ASSESSMENT
Municipality of South Bruce
RURAL ROAD NETWORK
MILDMAY
MUNICIPALITY OF SOUTH BRUCE
TLB
TLB
TLB
SEPT 2020
DRAWING No.
10503-MAP4

Bridges & Culverts

Images of Bridges and Culverts in Good/Very Good Condition

Inspected in 2024

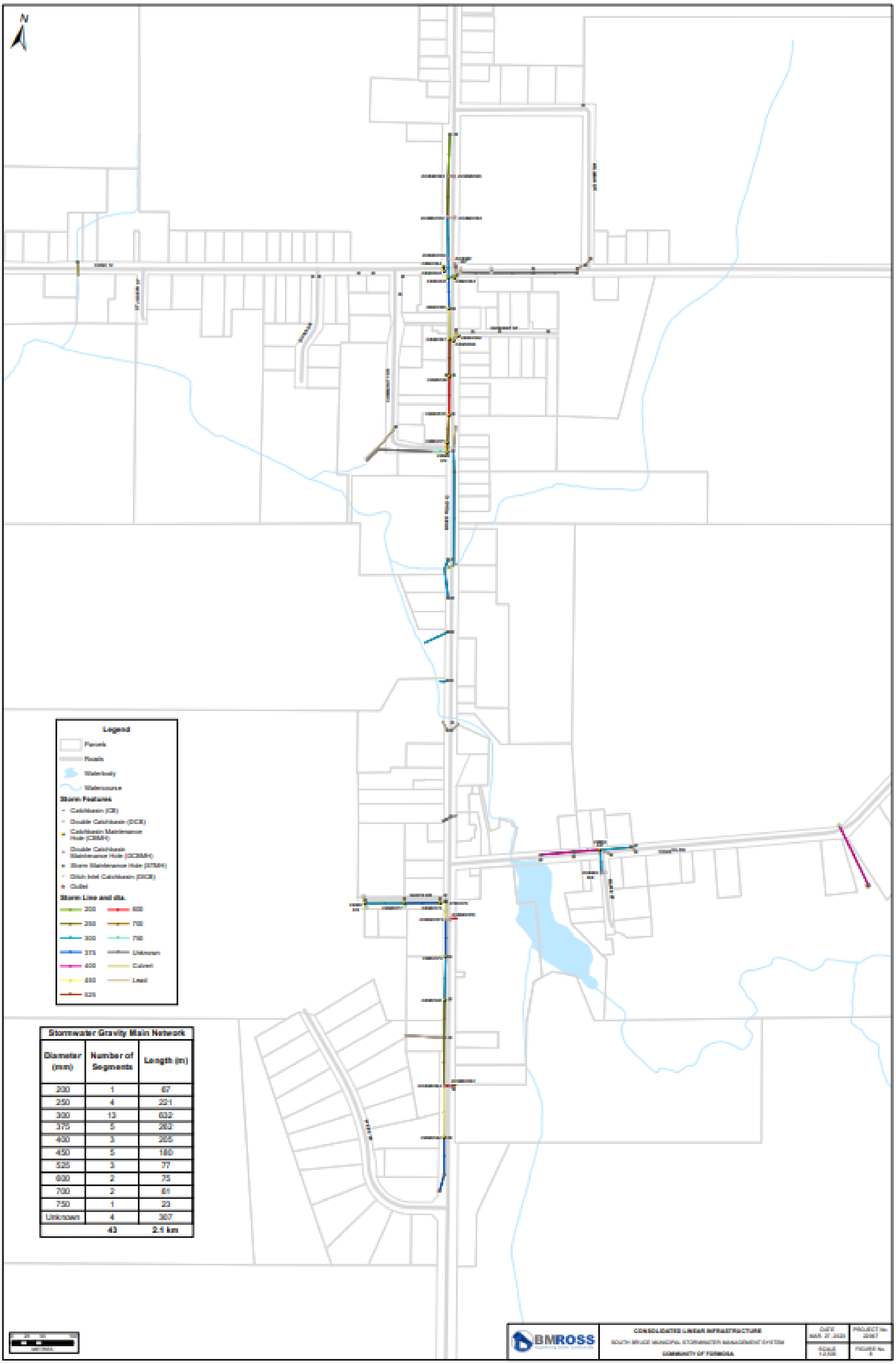
 Structure No. 0010 on Concession 10, BCI = 92.06	 Structure No. 0003 on Concession 4/5, BCI = 70.81
 Structure No. 1013 on Concession 10, BCI = 99.87	 Structure No. 0012 on Concession 10/11, BCI = 72.99

Images of Bridges and Culverts in Fair/Poor Condition

Inspected in 2024

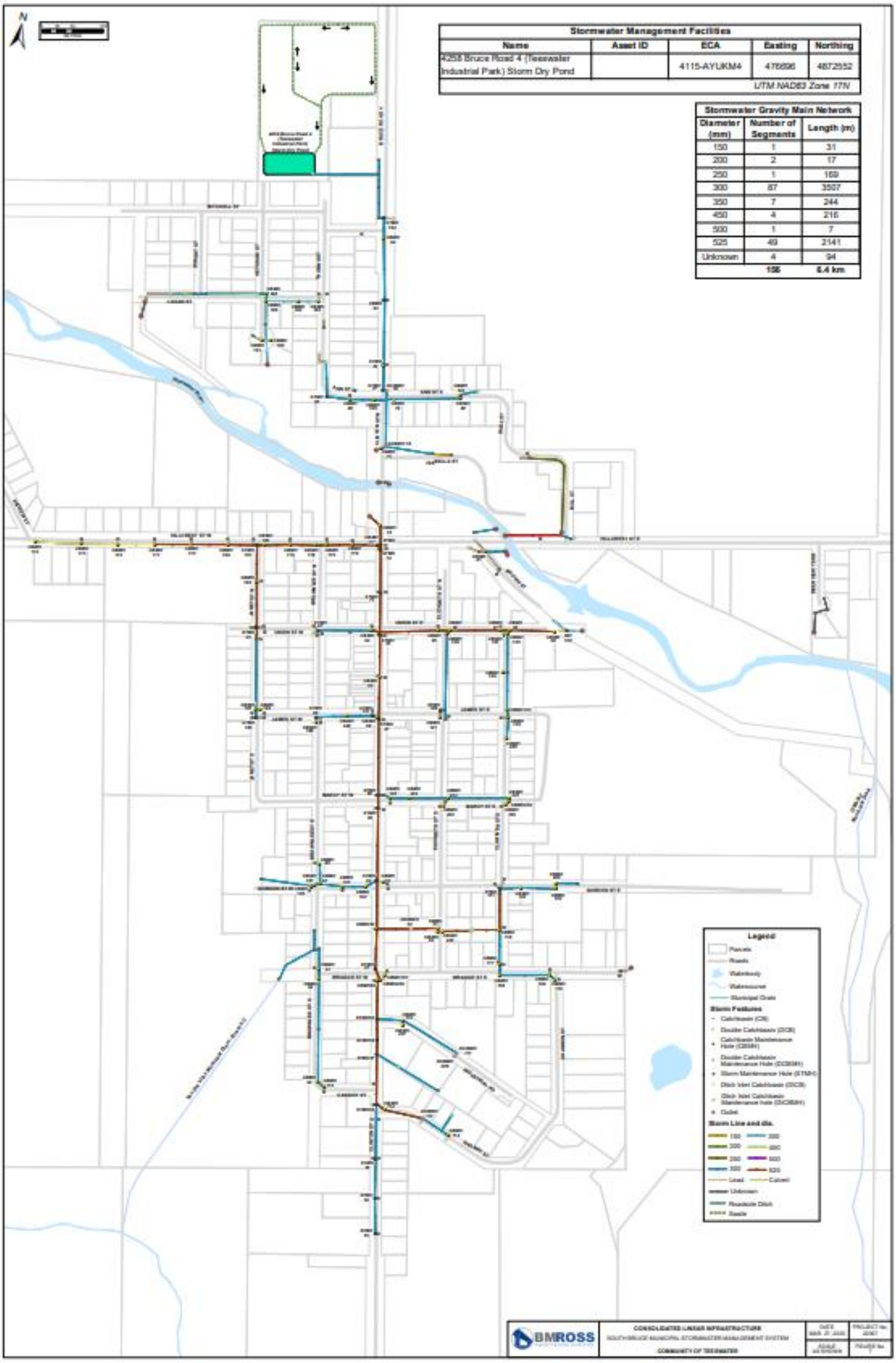
 Structure No. 0007 on Concession 7, BCI = 46.11	 Structure No. 0016 on Concession 14/15, BCI = 56.79
 Structure No. 0015 on Concession 12, BCI = 43.86	 Structure No. 0017 on Concession 4/5, BCI = 53.48

Stormwater System – Formosa



Stormwater Gravity Main Network		
Diameter (mm)	Number of Segments	Length (m)
200	1	67
250	4	221
300	13	632
375	5	283
400	3	205
450	5	180
525	3	77
600	2	75
700	2	81
750	1	23
Unknown	4	307
	43	2.1 km

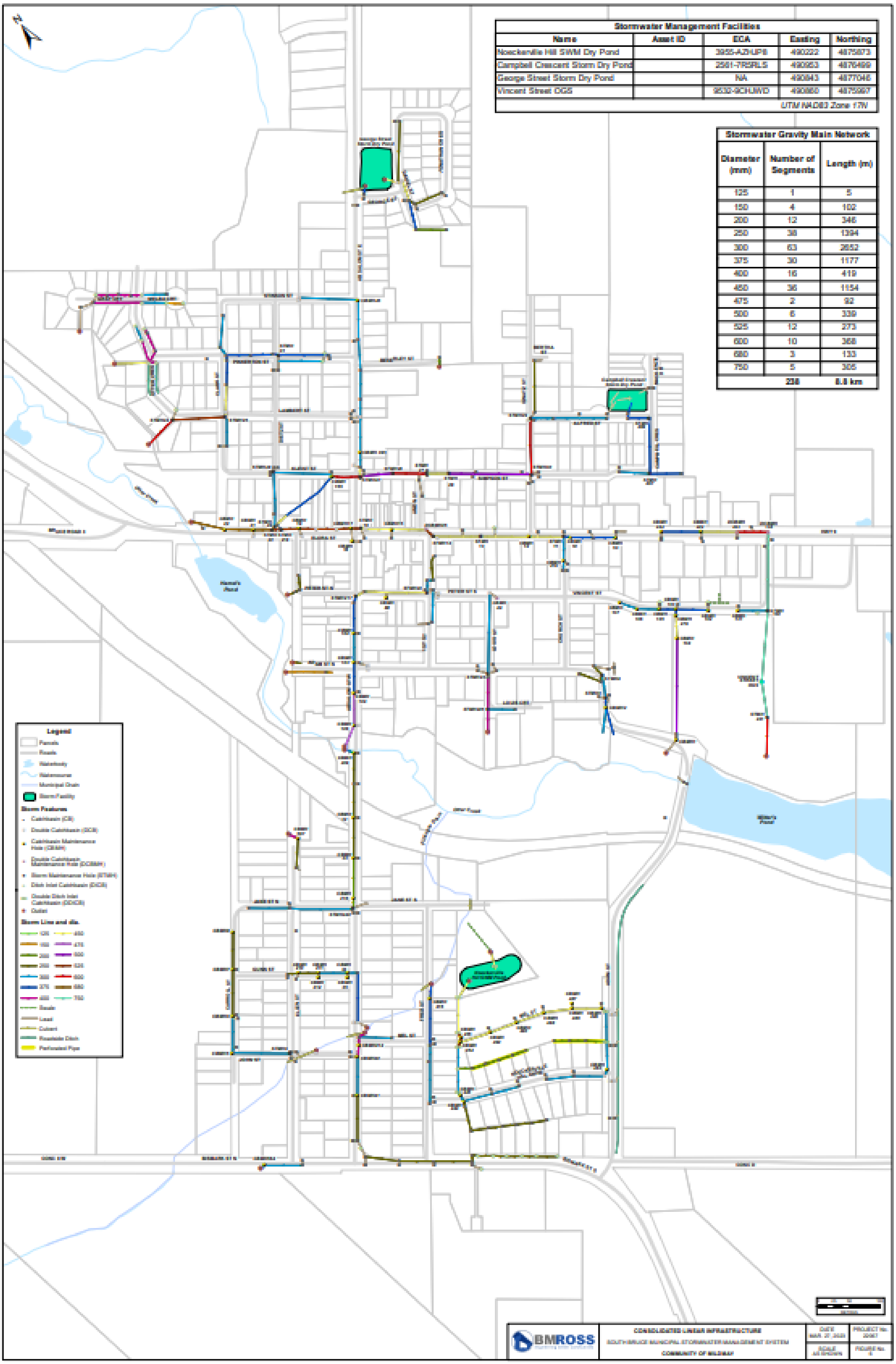
Stormwater System – Teeswater



Stormwater Management Facilities				
Name	Asset ID	ECA	Easting	Northing
4258 Bruce Road 4 (Teeswater Industrial Park) Storm Dry Pond		4115-AYUKM4	476696	4872552
			UTM NAD83 Zone 17N	

Stormwater Gravity Main Network		
Diameter (mm)	Number of Segments	Length (m)
150	1	31
200	2	17
250	1	169
300	87	3507
350	7	244
450	4	216
500	1	7
525	49	2141
Unknown	4	94
	156	6.4 km

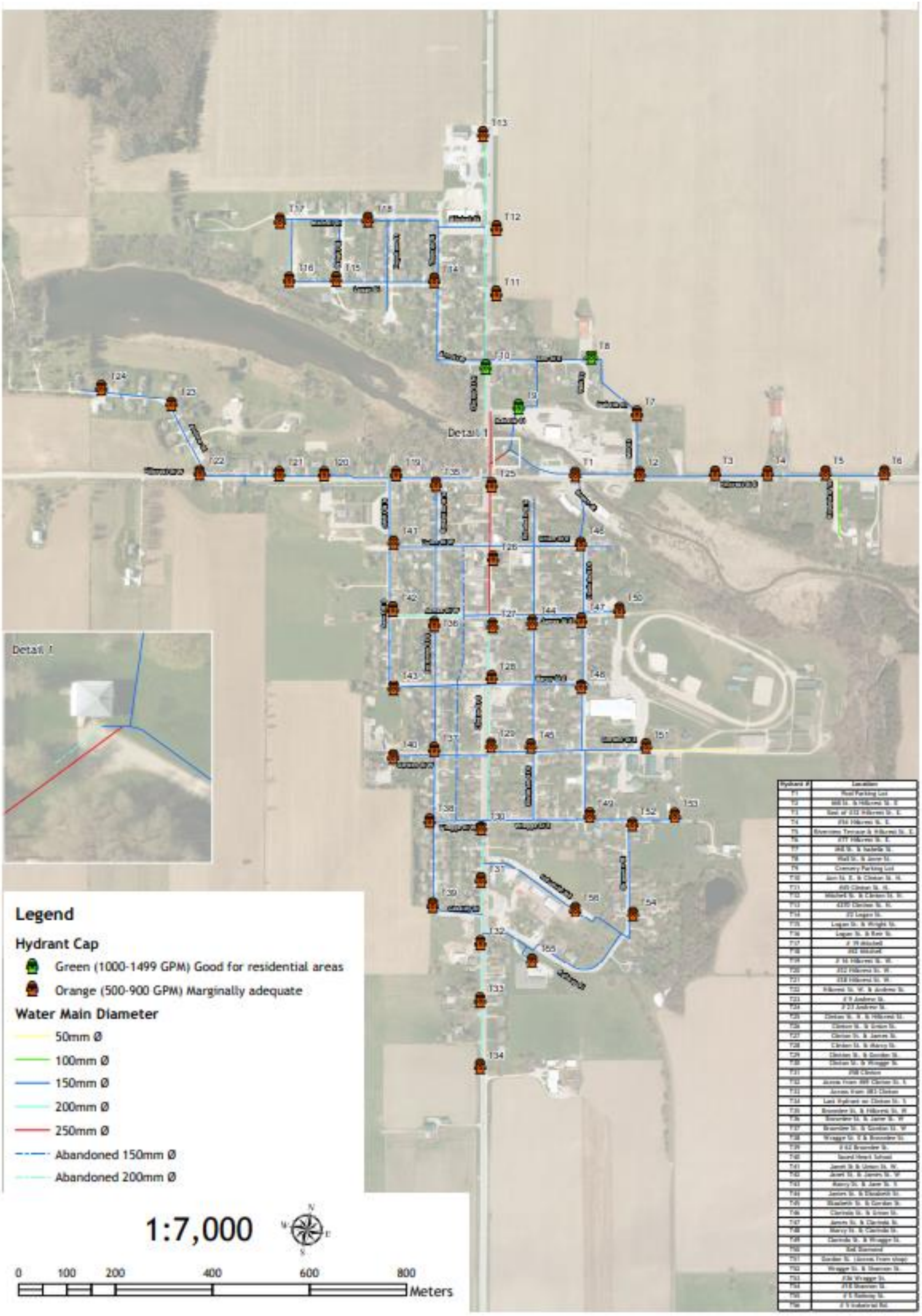
Stormwater System – Mildmay



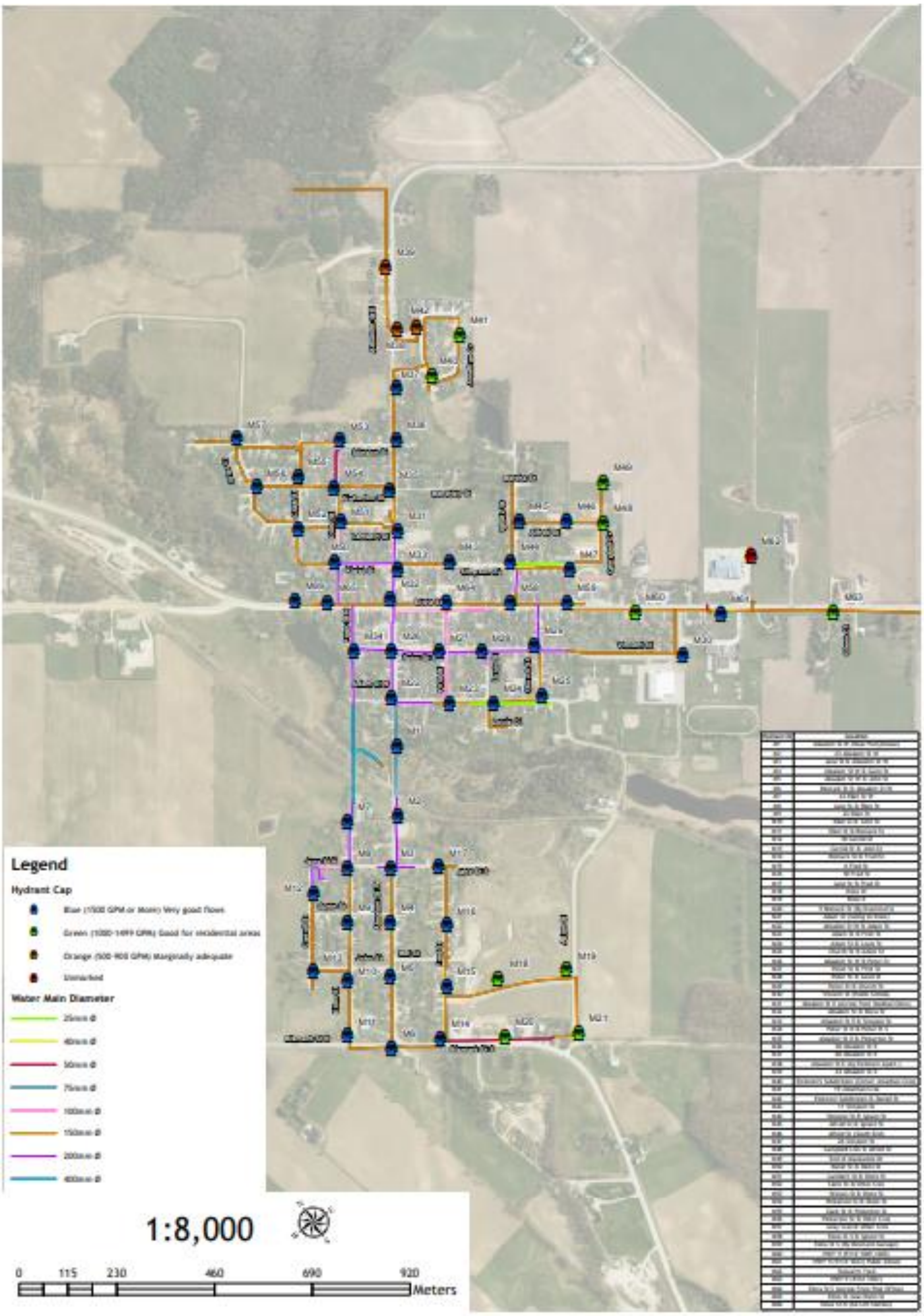
Stormwater Management Facilities				
Name	Asset ID	ECA	Easting	Northing
Nosckerville Hill SWM Dry Pond		3955-AZHUP8	490222	4875873
Campbell Crescent Storm Dry Pond		2561-7RSRLS	490953	4876499
George Street Storm Dry Pond		NA	490843	4877046
Vincent Street OGS		9532-9CHJWD	490860	4875997
			UTM NAD83 Zone 17N	

Stormwater Gravity Main Network		
Diameter (mm)	Number of Segments	Length (m)
125	1	5
150	4	102
200	12	346
250	38	1394
300	63	2652
375	30	1177
400	16	419
450	36	1154
475	2	92
500	6	339
525	12	273
600	10	368
680	3	133
750	5	305
	238	8.8 km

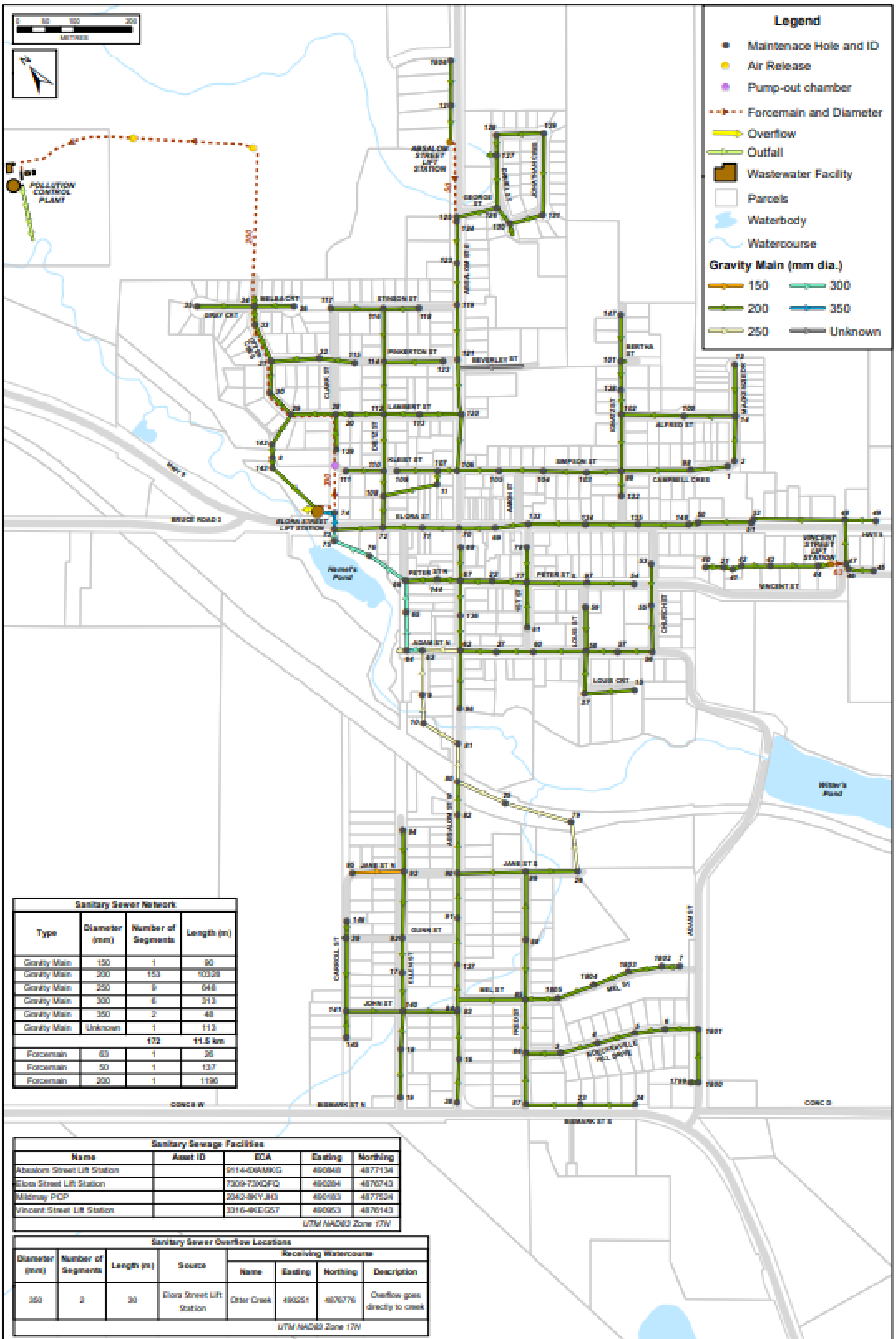
Fire Flow Testing Map – Teeswater



Fire Flow Testing Map – Mildmay



Wastewater System - Mildmay



Sanitary Sewer Network			
Type	Diameter (mm)	Number of Segments	Length (m)
Gravity Main	150	1	90
Gravity Main	200	153	10328
Gravity Main	250	9	648
Gravity Main	300	6	313
Gravity Main	350	2	48
Gravity Main	Unknown	1	113
		172	11.5 km
Forcemain	63	1	26
Forcemain	50	1	137
Forcemain	200	1	1198

Sanitary Sewage Facilities				
Name	Asset ID	ECA	Easting	Northing
Absalom Street Lift Station		9114-69AMKG	490848	4877134
Elora Street Lift Station		7309-73XDFQ	490284	4876743
Mildmay PCP		2042-8KYJH3	490183	4877524
Vincent Street Lift Station		3316-4KEG57	490953	4876143
				UTM NAD83 Zone 17N

Sanitary Sewer Overflow Locations							
Diameter (mm)	Number of Segments	Length (m)	Source	Receiving Watercourse			
				Name	Easting	Northing	Description
350	2	30	Elora Street Lift Station	Otter Creek	490251	4876776	Overflow goes directly to creek
							UTM NAD83 Zone 17N

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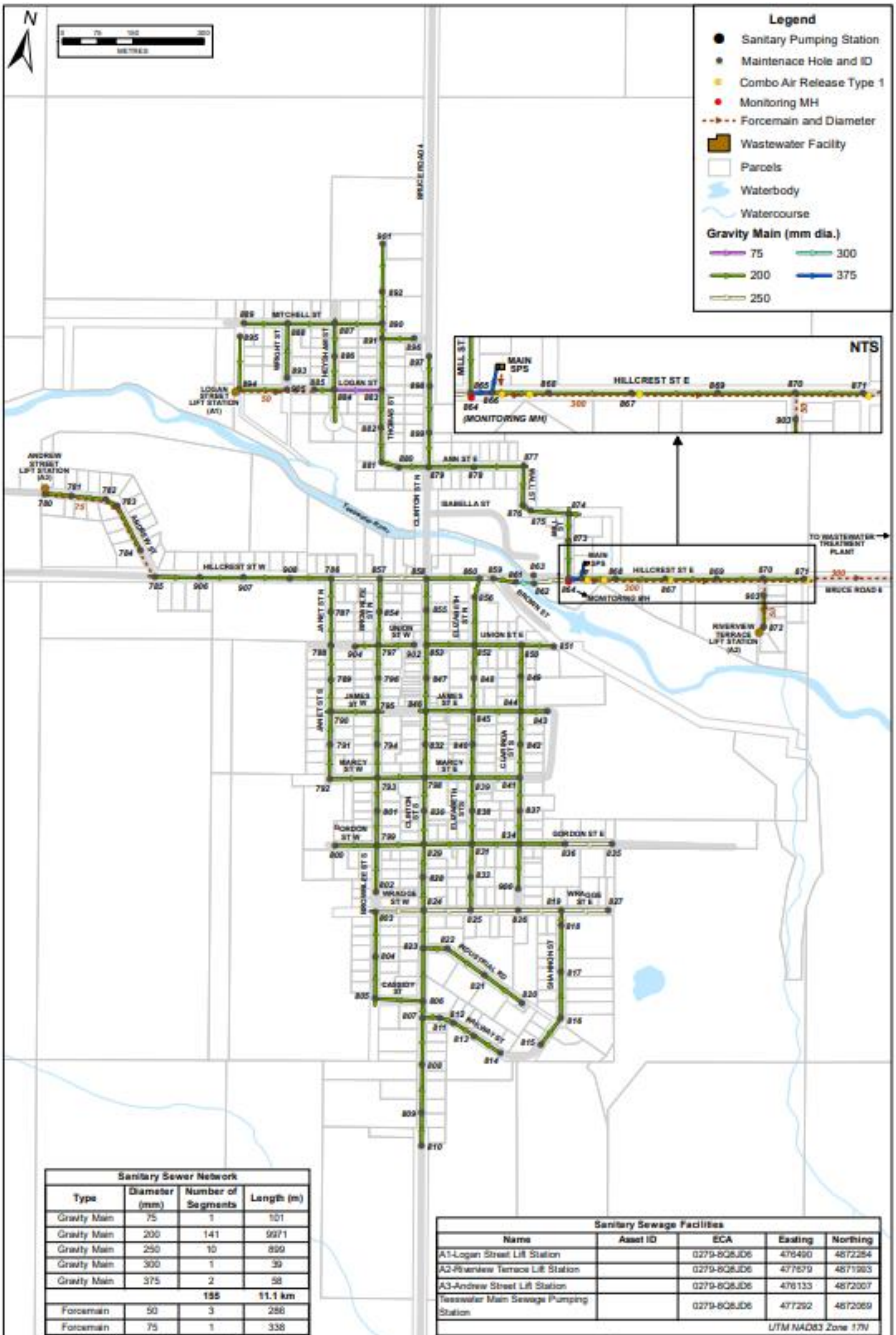
CONSOLIDATED LINEAR INFRASTRUCTURE

SOUTH BRUCE MUNICIPAL WASTEWATER COLLECTION SYSTEM

COMMUNITY OF MILDMAY

DATE MAR. 27, 2023	PROJECT No. 22067
SCALE AS SHOWN	FIGURE No. 1

Wastewater System – Teeswater



Sanitary Sewer Network			
Type	Diameter (mm)	Number of Segments	Length (m)
Gravity Main	75	1	101
Gravity Main	200	141	9971
Gravity Main	250	10	899
Gravity Main	300	1	39
Gravity Main	375	2	58
		155	11.1 km
Forcemain	50	3	286
Forcemain	75	1	338

Sanitary Sewage Facilities				
Name	Asset ID	ECA	Easting	Northing
A1-Logan Street Lift Station		0279-8Q8JD6	476490	4872284
A2-Riverview Terrace Lift Station		0279-8Q8JD6	477679	4871993
A3-Andrew Street Lift Station		0279-8Q8JD6	476133	4872007
Teeswater Main Sewage Pumping Station		0279-8Q8JD6	477292	4872069
UTM NAD83 Zone 17N				

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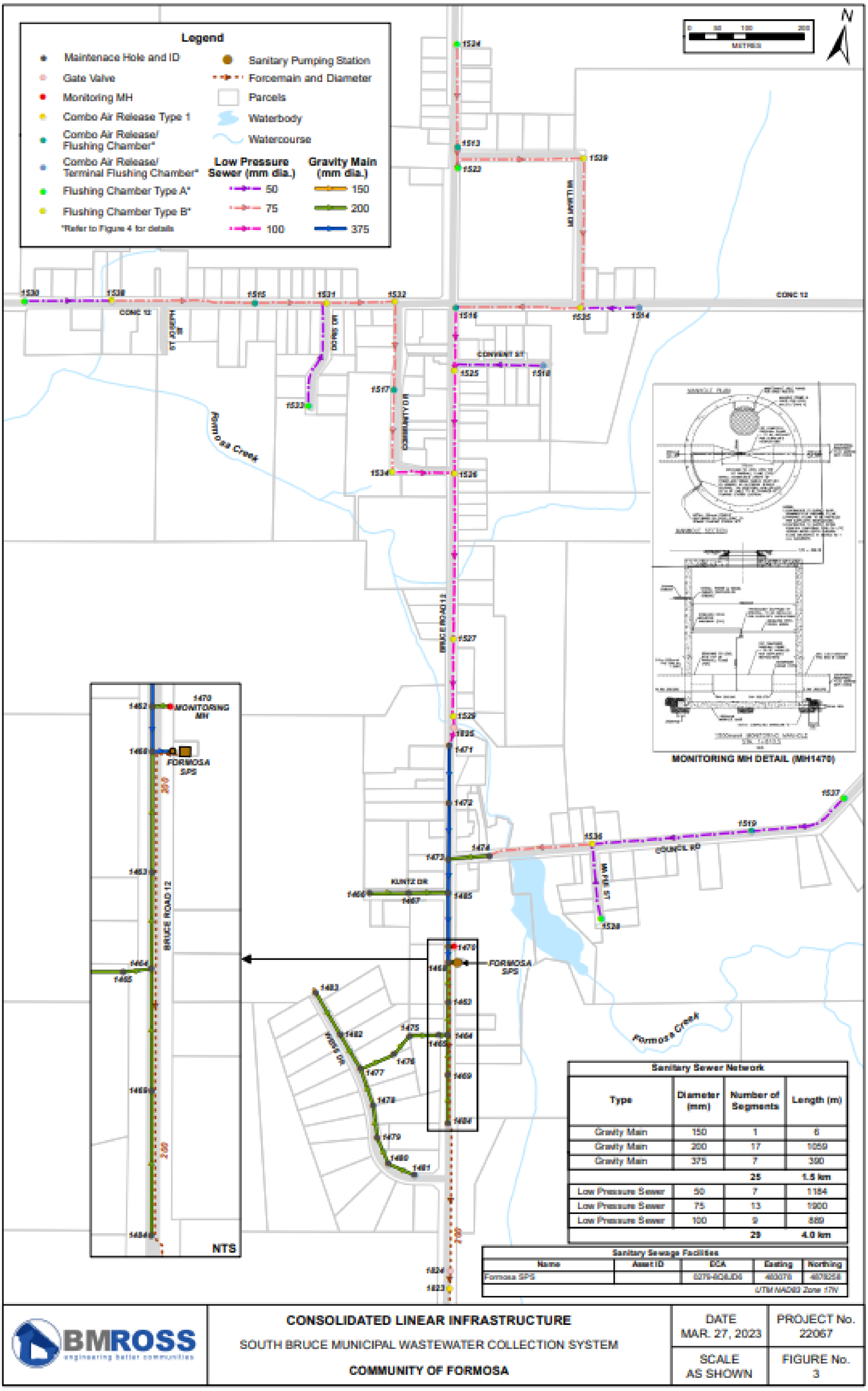
CONSOLIDATED LINEAR INFRASTRUCTURE
SOUTH BRUCE MUNICIPAL WASTEWATER COLLECTION SYSTEM
COMMUNITY OF TEESWATER

DATE	PROJECT No.
MAR. 27, 2023	22067
SCALE	FIGURE No.
AS SHOWN	2

Wastewater System - Formosa



Sanitary Sewer Network			
Type	Diameter (mm)	Number of Segments	Length (m)
Gravity Main	150	1	6
Gravity Main	200	17	1059
Gravity Main	375	7	390
		25	1.5 km
Low Pressure Sewer	50	7	1184
Low Pressure Sewer	75	13	1900
Low Pressure Sewer	100	9	889
		29	4.0 km

Sanitary Sewage Facilities				
Name	Asset ID	ECA	Easting	Northing
Formosa SPS		0279-8C8JD6	480078	4878258
			UTM NAD83 Zone 17N	

Appendix C: Condition Assessment Guidelines

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

Condition data is vital to the development of data-driven asset management strategies. Without accurate and reliable asset data, there may be little confidence in asset management decision-making which can lead to premature asset failure, service disruption and suboptimal investment strategies. To prevent these outcomes, the Municipality's condition assessment strategy should outline several key considerations, including:

- The role of asset condition data in decision-making
- Guidelines for the collection of asset condition data
- A schedule for how regularly asset condition data should be collected

Role of Asset Condition Data

The goal of collecting asset condition data is to ensure that data is available to inform maintenance and renewal programs required to meet the desired level of service. Accurate and reliable condition data allows municipal staff to determine the remaining service life of assets, and identify the most cost-effective approach to deterioration, whether it involves extending the life of the asset through remedial efforts or determining that replacement is required to avoid asset failure.

In addition to the optimization of lifecycle management strategies, asset condition data also impacts the Municipality's risk management and financial strategies. Assessed condition is a key variable in the determination of an asset's probability of failure. With a strong understanding of the probability of failure across the entire asset portfolio, the Municipality can develop strategies to mitigate both the probability and consequences of asset failure and service disruption. Furthermore, with condition-based determinations of future capital expenditures, the Municipality can develop long-term financial strategies with higher accuracy and reliability.

Guidelines for Condition Assessment

Whether completed by external consultants or internal staff, condition assessments should be completed in a structured and repeatable fashion, according to consistent and objective assessment criteria. Without proper guidelines for the completion of condition assessments there can be little confidence in the validity of condition data and asset management strategies based on this data.

Condition assessments must include a quantitative or qualitative assessment of the current condition of the asset, collected according to specified condition rating criteria, in a format that can be used for asset management decision-making. As a result, it is important that staff adequately define the condition rating criteria that should be used and the assets that require a discrete condition rating. When engaging with external consultants to complete condition assessments, it is critical that these details are communicated as part of the contractual terms of the project.

There are many options available to the Municipality to complete condition assessments. In some cases, external consultants may need to be engaged to complete detailed technical assessments of infrastructure. In other cases, internal staff may have sufficient expertise or training to complete condition assessments.

Developing a Condition Assessment Schedule

Condition assessments and general data collection can be both time-consuming and resource intensive. It is not necessarily an effective strategy to collect assessed condition data across the entire asset inventory. Instead, the Municipality should prioritize the collection of assessed condition data based on the anticipated value of this data in decision-making. The International Infrastructure Management Manual (IIMM) identifies four key criteria to consider when making this determination:

- Relevance: every data item must have a direct influence on the output that is required
- Appropriateness: the volume of data and the frequency of updating should align with the stage in the assets life and the service being provided
- Reliability: the data should be sufficiently accurate, have sufficient spatial coverage and be appropriately complete and current
- Affordability: the data should be affordable to collect and maintain

Appendix D: Risk Rating Criteria

Risk Definitions

Risk	Integrating a risk management framework into your asset management program requires the translation of risk potential into a quantifiable format. This will allow you to compare and analyze individual assets across your entire asset portfolio. Asset risk is typically defined using the following formula: **Risk = Probability of Failure (POF) x Consequence of Failure (COF)**
Probability of Failure (POF)	The probability of failure relates to the likelihood that an asset will fail at a given time. The current physical condition and service life remaining are two commonly used risk parameters in determining this likelihood.
POF - Structural	The likelihood of asset failure due to aspects of an asset such as load carrying capacity, condition, or breaks
POF - Functional	The likelihood of asset failure due to its performance
POF - Range	**1 - Rare 2 - Unlikely 3 - Possible 4 - Likely 5 - Almost Certain**
Consequences of Failure (COF)	The consequence of failure describes the overall effect that an asset's failure will have on an organization's asset management goals. Consequences of failure can range from non-eventful to impactful: a small diameter water main break in a subdivision may cause several rate payers to be without water service for a short time. However, a larger trunk water main may break outside a hospital, leading to significantly higher consequences.
COF - Financial	The monetary consequences of asset failure for the organization and its customers
COF - Social	The consequences of asset failure on the social dimensions of the community
COF - Environmental	The consequence of asset failure on an asset's surrounding environment
COF - Operational	The consequence of asset failure on the Town's day-to-day operations
COF - Health & safety	The consequence of asset failure on the health and well-being of the community
COF - Economic	The consequence of asset failure on strategic planning
COF - Range	**1 - Insignificant 2 - Minor 3 - Moderate 4 - Major 5 - Severe**

Risk Frameworks

Road Network – HCB/LCB Roads

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/ Range**	**Score**
Operational	Asset Condition	0-29	5 - Almost Certain
		30-49	4 - Likely
		50-74	3 - Possible
		75-84	2 - Unlikely
		85-100	1 - Rare
	AADT Range	>850	5 - Almost Certain
		400-849	4 - Likely
		251-399	3 - Possible
		200-250	2 - Unlikely
		50-199	1 - Rare

Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial (50%)	Replacement Cost ($)	>$500,000	5 – Severe
		$200,000	4 – Major
		$120,000	3 - Moderate
		$50,000	2 – Minor
		<$10,000	1 – Insignificant
Operational (30%)	Roadside Environment	Urban	5 – Severe
		Semi-Urban	3 – Moderate
		Rural	1 – Insignificant
	Road Class	6	5 – Severe
		4	4 – Major
		3	3 – Moderate
		2	2 – Minor
		1	1 – Insignificant
		Y	5 – Major

Social (20%)	Winter Maintenance	P	3 – Moderate
		N	2 – Minor

Bridges & Culverts

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/ Range**	**Score**
Performance (70%)	Asset Condition	0-29	5 - Almost Certain
		30-49	4 - Likely
		50-74	3 - Possible
		75-84	2 - Unlikely
		85-100	1 - Rare
Operational (30%)	Structure Type (60%)	Timber deck, Steel Truss (timber deck)	4 – Likely
		Precast Concrete Box Culvert, Steel truss (concrete deck), Precast Concrete I-Girder	3 - Possible
		Cast-In-Place Conc. Rigid Frame, CSP Arch culvert, CSP multi-plate Arch culvert	2 - Unlikely
		Cast in place box culvert	1 - Rare
	Service Life Remaining (Years) (40%)	0 months	5 - Almost Certain
		5 years	4 – Likely
		15 years	3 - Possible
		20 years	2 - Unlikely
		40 years	1 - Rare

Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial (70%)	Replacement Cost ($)	>$1,000,000	5 – Severe
		$750,000	4 – Major
		$500,000	3 - Moderate
		$250,000	2 – Minor
		<$50,000	1 – Insignificant
Operational (30%)	Recommended Work	Replace	5 – Severe
		Rehabilitate	3 – Moderate

Water Network – Watermains

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		20	4 - Likely
		40	3 - Possible
		60	2 - Unlikely
		80	1 - Rare
Operational	Material	Cast Iron	4 - Likely
		Poly	2 - Unlikely
		PVC	1 - Rare

Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 60%	Replacement Cost	>$100,000	5 - Severe
		$75,000	4 - Major
		$50,000	3 - Moderate
		$25,000	2 - Minor
		<$5,000	1 - Insignificant
		400mm	5 - Severe

Social 30%	Pipe Diameter	250mm	4 - Major
		200mm	3 - Moderate
		100mm	2 - Minor
		75mm	1 - Insignificant

Wastewater Network – Sanitary Mains

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance (80%)	Asset Condition (50%)	0	5 - Almost Certain
		30	4 - Likely
		50	3 - Possible
		70	2 - Unlikely
		90	1 - Rare
	Service Life Remaining (Years) (30%)	0 months	5 - Almost Certain
		5 years	4 - Likely
		15 years	3 - Possible
		20 years	2 - Unlikely
		40 years	1 - Rare
	Material (20%)	AC	3 - Possible
		PVC	1 - Rare
Operational (20%)	Slope	0	5 - Almost Certain
		0.25	4 - Likely
		0.5	3 - Possible
		0.75	2 - Unlikely
		1	1 - Rare
Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 80%	Replacement Cost	>$100,000	5 - Severe
		$75,000	4 - Major

		$50,000	3 - Moderate
		$25,000	2 - Minor
		<$5,000	1 - Insignificant
Social 20%	Sanitary Pipe Diameter	450mm	5 - Severe
		350mm	4 - Major
		250mm	3 - Moderate
		150mm	2 - Minor
		50mm	1 - Insignificant

Stormwater System – Storm Sewer Mains

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		30	4 - Likely
		50	3 - Possible
		70	2 - Unlikely
		90	1 - Rare
	Service Life Remaining (Years)	0 months	5 - Almost Certain
		5 years	4 - Likely
		15 years	3 - Possible
		20 years	2 - Unlikely
		40 years	1 - Rare
Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 80%	Replacement Cost	>$1,500,000	5 - Severe
		$1,000,000	4 - Major
		$500,000	3 - Moderate
		$250,000	2 - Minor
		<$100,000	1 - Insignificant

Operational 20%	Storm Pipe Diameter	<750mm	5 - Severe
		526-749mm	4 - Major
		376-525mm	3 - Moderate
		250-375mm	2 - Minor
		<250mm	1 - Insignificant

Land Improvements

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		20	4 - Likely
		40	3 - Possible
		60	2 - Unlikely
		80	1 - Rare

Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 80%	Replacement Cost	>$1,000,000	5 - Severe
		$750,000	4 - Major
		$500,000	3 - Moderate
		$250,000	2 - Minor
		<$100,000	1 - Insignificant
Strategic 20%	Function (50%)	Fire	5 - Severe
		Public Health	4 - Major
		Tourism	3 - Moderate
		Parks	3 - Moderate
		Drainage	2 - Minor
		Corporate Management	2 - Minor
	Segment (50%)	Playground Equipment	4 - Major
		Signage	3 - Moderate

		Driveways/Parking lots	3 - Moderate
		Landscaping	2 - Minor
		Fencing/Gates	2 - Minor

Buildings

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		20	4 - Likely
		40	3 - Possible
		60	2 - Unlikely
		80	1 - Rare
Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 80%	Replacement Cost	$1,000,000	5 - Severe
		$750,000	4 - Major
		$500,000	3 - Moderate
		$250,000	2 - Minor
		$100,000	1 - Insignificant
Strategic 20%	Function	Fire, Public Health, Sanitary treatment, Water Treatment	5 - Severe
		Corporate Management, Winter Control, Waste Disposal	4 - Major
		Parks, Recreational Facilities, Road Operations	3 - Moderate
		Libraries	2 – Minor

Vehicles

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		20	4 - Likely
		40	3 - Possible
		60	2 - Unlikely
		80	1 - Rare
Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Financial 80%	Replacement Cost	$1,000,000	5 - Severe
		$500,000	4 - Major
		$250,000	3 - Moderate
		$100,000	2 - Minor
		$25,000	1 - Insignificant
Social 20%	Function	Fire Vehicles	5 - Severe
		Roads Operations	3 - Moderate

Machinery & Equipment

Probability of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
Performance	Asset Condition	0	5 - Almost Certain
		20	4 - Likely
		40	3 - Possible
		60	2 - Unlikely
		80	1 - Rare
Consequence of Failure			
Criteria	**Sub-Criteria**	**Value/Range**	**Score**
		$200,000	5 - Severe

Financial 80%	Replacement Cost	$125,000	4 - Major
		$75,000	3 - Moderate
		$25,000	2 - Minor
		$10,000	1 - Insignificant
Social 20%	Function	Fire, Sanitary treatment	5 - Severe
		Water Distribution, Storm Sewer, Solid Waste Disposal, Road Operations, Winter Control, Public Health	4 - Major
		Building Inspection, Library, Parks, recreation Facilities, Tourism	3 - Moderate
		Cemeteries, Drainage	2 - Minor
		Corporate Management	2 - Minor