

Asset Management Plan 2025

Bruce County

September 2025



This Asset Management Plan was prepared by:



*Empowering your organization through advanced asset management,
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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, Bruce County can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

Core asset categories are defined through Ontario Regulation 588/17, however, municipalities may expand further if desired. Non-core asset categorization is left to the Municipality's discretion.

This AMP's categories are summarized in Figure 1.

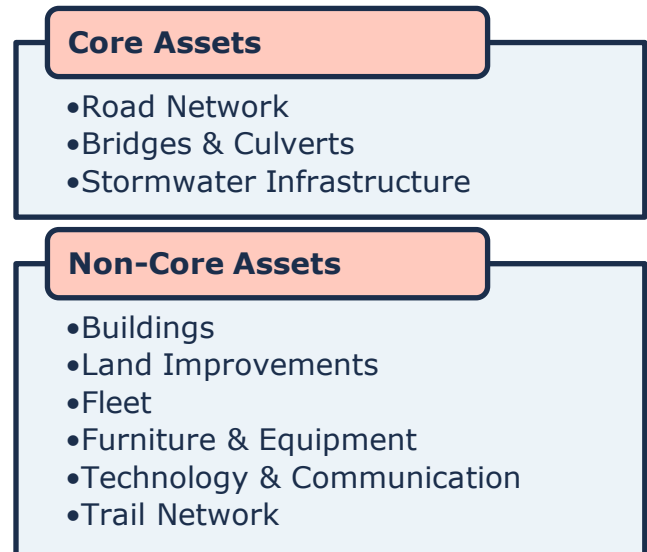


Figure 1 Core and Non-Core Asset Categories



1.2 Compliance



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

1.3 Findings

Total Portfolio Replacement Cost:
\$1.2 billion

Assets in Fair or Better Condition:

75%

Assets with Condition Assessments:

76%

Recommended Annual Capital Spending:
\$45 million (for current LOS)
\$47 million (for proposed LOS)

Historical Annual Capital Spending:
\$15 million

Annual Capital Spending Deficit:
\$30 million (for current LOS)
\$32 million (for proposed LOS)

Figure 2 Summary of AMP Findings

1.4 Recommendations

A financial strategy was developed to address the annual capital funding gap to meet the proposed levels of service desired by the County. The following graphic shows the annual tax change required to eliminate the County's infrastructure deficit and achieve sustainability based on a **15-year plan**:

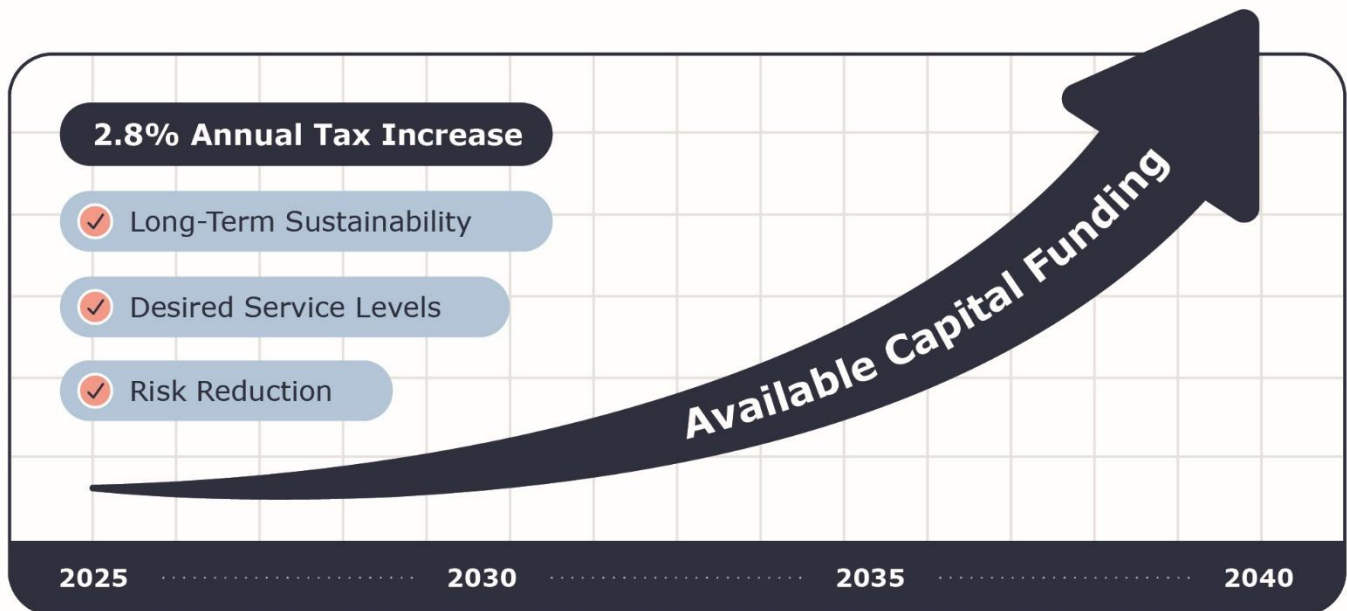


Figure 3 Proposed Tax/Rate Changes

2. Introduction & Context

2.1 Asset Management Overview

Asset Management

[noun]

The process of decision-making, planning, control over the acquisition, use, safeguarding, and disposal of assets to maximize their service delivery potential and benefits, and to minimize their related risks and costs over their entire life.

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 4 Asset Management Definition

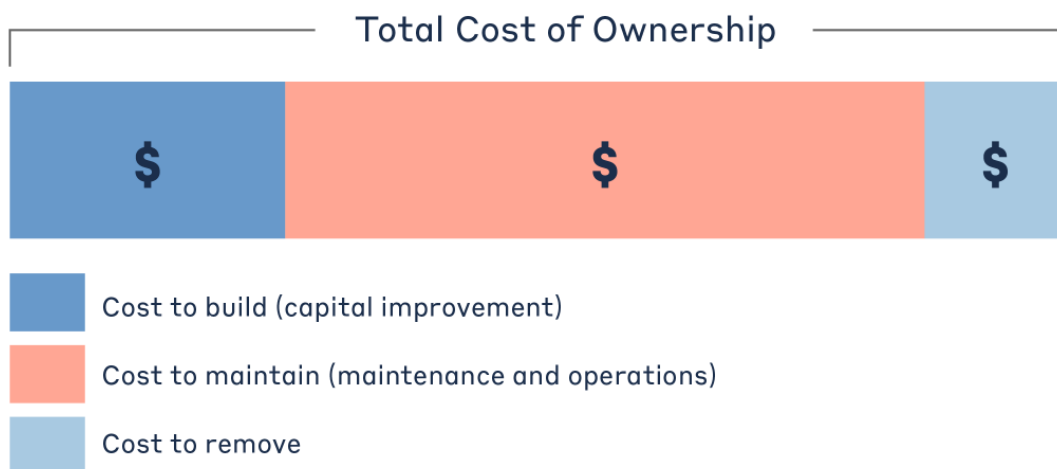


Figure 5 Total Cost of Asset Ownership

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.

2.1.1 Foundational Asset Management Documentation

The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.

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.



Figure 6 Foundational Asset Management Documents

Asset Management Policy

An asset management policy represents a statement of the principles guiding the County'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.

Bruce County adopted their "Strategic Asset Management Policy" on July 1st, 2019, in accordance with Ontario Regulation 588/17. The objectives of this policy include:

- ♦ Providing leadership and commitment to asset management
- ♦ Guiding the consistent use of asset management across the organization
- ♦ Facilitating logical and evidence-based decision-making
- ♦ Supporting the delivery of sustainable community services now and in the future

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

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

Asset Management Plan

The asset management plan (AMP) presents the outcomes of the County'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 County to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

2.1.2 Key Concepts in Asset Management

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

Lifecycle Management Strategies

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

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

The County's approach to lifecycle management is described within each asset category outlined in this AMP. Staff will continue to evolve and innovate current practices for developing and implementing proactive lifecycle strategies to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

Lifecycle Activity	Cost	Typical Associated Risks
Maintenance Activities that prevent defects or deteriorations from occurring	\$	♦ Balancing limited resources between planned maintenance and reactive, emergency repairs and interventions; ♦ Diminishing returns associated with excessive maintenance activities, despite added costs; ♦ Intervention selected may not be optimal and may not extend the useful life as expected, leading to lower payoff and potential premature asset failure;
Rehabilitation/ Renewal Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	\$\$\$	♦ Useful life may not be extended as expected; ♦ May be costlier in the long run when assessed against full reconstruction or replacement; ♦ Loss or disruption of service, particularly for underground assets;
Replacement/ Reconstruction Asset end-of-life activities that often involve the complete replacement of assets	\$\$\$\$\$	♦ Incorrect or unsafe disposal of existing asset; ♦ Costs associated with asset retirement obligations; ♦ Substantial exposure to high inflation and cost overruns; ♦ Replacements may not meet capacity needs for a larger population; ♦ Loss or disruption of service, particularly for underground assets;

Table 1 Lifecycle Management: Typical Lifecycle Interventions

Risk & Criticality

Asset risk and criticality are essential building blocks of asset management, integral in prioritizing projects and distributing funds where they are needed most based on a variety of factors. Assets in disrepair may fail to perform their intended function, pose substantial risk to the community, lead to unplanned expenditures, and create liability for the municipality. In addition, some assets are simply more important to the community than others, based on their financial significance, their role in delivering essential services, the impact of their failure on public health and safety, and the extent to which they support a high quality of life for community stakeholders.

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

Formula to Assess Risk of Assets

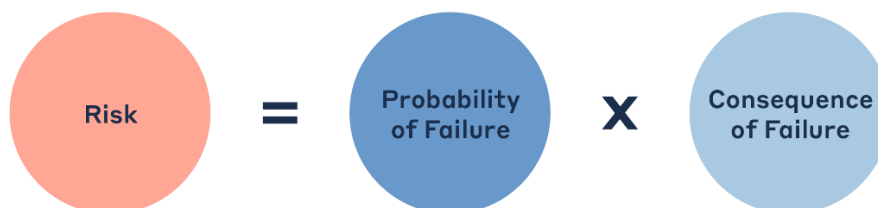


Figure 7 Risk Equations

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

Probability of Failure

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

Consequence of Failure

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

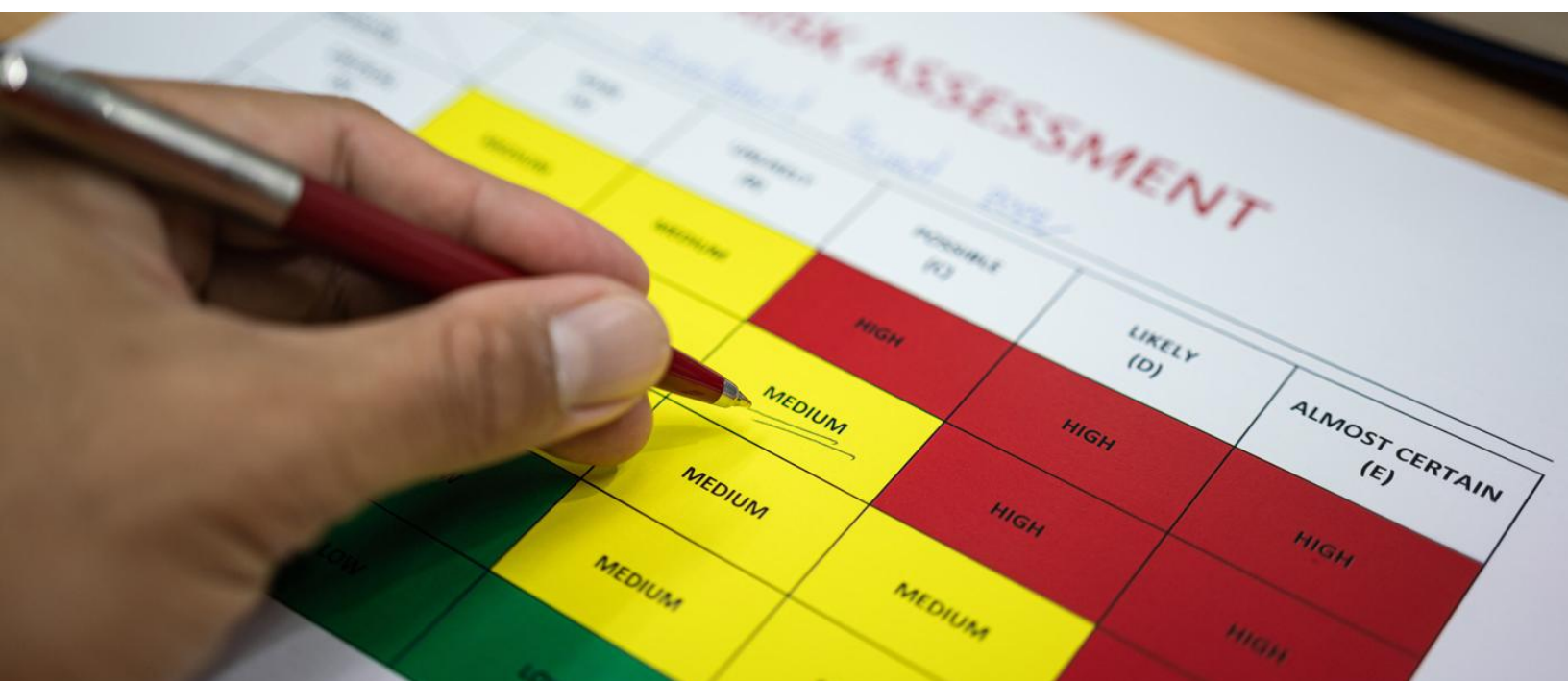


Table 2 illustrates the various types of consequences that can be integrated in developing risk and criticality models for each asset category and segments within. We note that these consequences are common, but not exhaustive.

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

Table 2 Risk Analysis: Types of Consequences of Failure

This AMP includes a preliminary evaluation of asset risk and criticality. Each asset has been assigned a probability of failure score and consequence of failure score based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation, and replacement strategies for critical assets.

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

Levels of Service

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

The County measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service.

Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives.

For core asset categories as applicable (roads, bridges and culverts, stormwater) the province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP. For the remaining asset categories, service level descriptions are provided at the discretion of the County.

Technical Levels of Service

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

For core asset categories as applicable to the County, through O. Reg. 588/17, the Province has also provided technical metrics that are required to be included in this AMP.

Current and Proposed Levels of Service

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

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

2.2 Scope & Methodology

2.2.1 Asset Categories for this AMP

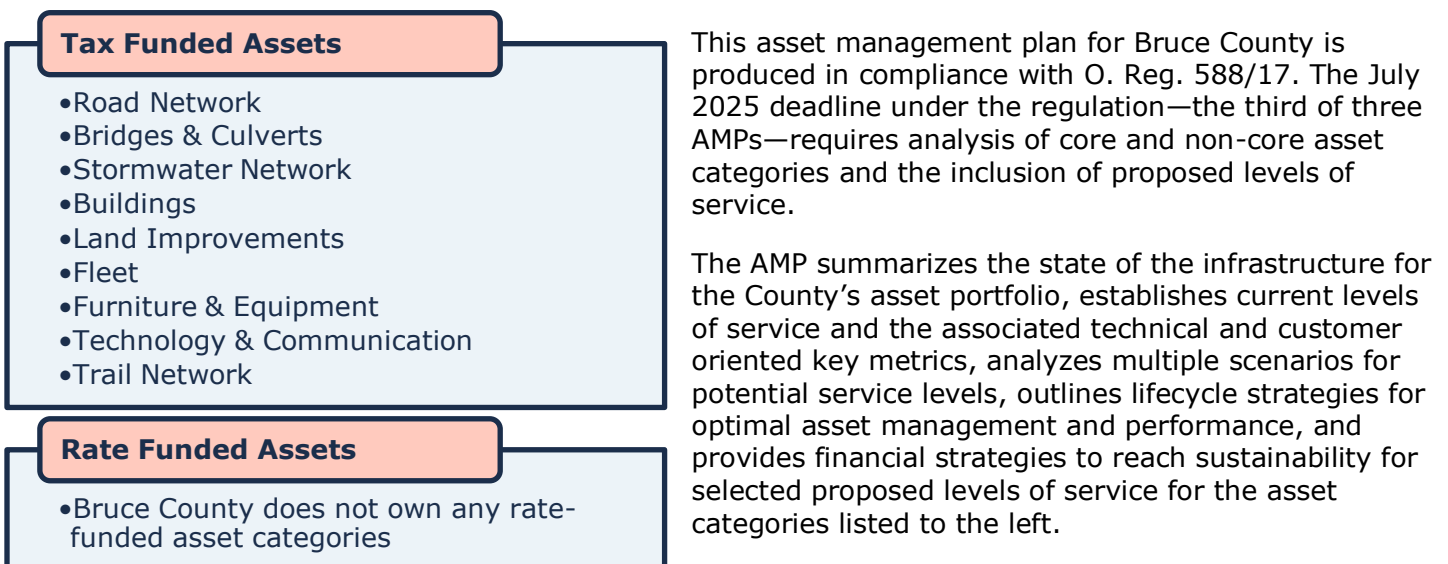


Figure 8 Tax Funded and Rate Funded Asset Categories

2.2.2 Data Effective Date

It is important to note that this plan is based on data as of **December 2023**; therefore, it represents a snapshot in time using the best available processes, data, and information at the County. Strategic asset management planning is an ongoing and dynamic process that requires continuous data updates and dedicated data management resources.

2.2.3 Deriving Replacement Costs

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

User-Defined Cost and Cost Per Unit

Based on costs provided by municipal staff which 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 costs of the assets are inflated based on Consumer Price Index or Non-Residential Building Construction Price Index.

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

2.2.4 Estimated Service Life & Service Life Remaining

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

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



Figure 9 Service Life Remaining Calculation

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

$$\text{TARGET Reinvestment Rate} = \frac{\text{Annual Capital Requirement}}{\text{Total Replacement Cost}}$$

Figure 10 Target Reinvestment Rate Calculation

$$\text{ACTUAL Reinvestment Rate} = \frac{\text{Annual Capital Funding}}{\text{Total Replacement Cost}}$$

Figure 11 Actual Reinvestment Rate Calculation

2.2.6 Deriving Asset Condition

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

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the County'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. The analysis in this AMP is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition.



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

Table 3 Standard Condition Rating Scale

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

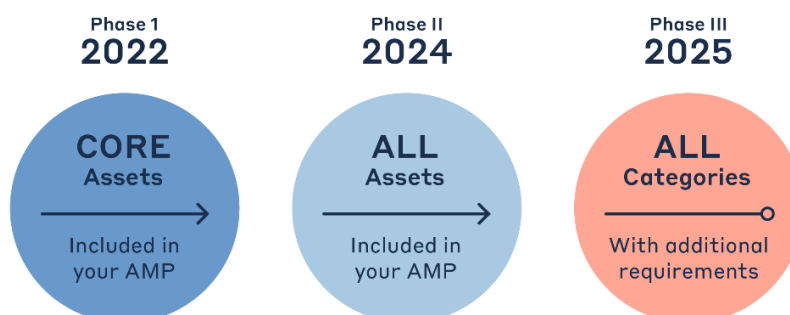


Figure 12 O. Reg. 588/17 Requirements and Reporting Deadlines

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

2.3.1 O. Reg. 588/17 Compliance Review

Requirement	O. Reg. 588/17 Section	AMP Section Reference	Status
Summary of assets in each category	S.5(2), 3(i)	5.1 – 13.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	5.1 – 13.1	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)	5.2 – 13.2	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	5.4 – 13.4	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	14.1 – 14.2	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)	4.3	Complete
Lifecycle management activities for proposed levels of service	S.6(1), 4(i)	4.3	Complete
10-year capital costs for proposed levels of service	S.6(1), 4(ii)	Appendix B	Complete
Annual funding availability projections	S.6(1), 4(iii)	4.3	Complete

Table 4 O. Reg. 588/17 Compliance Review

Portfolio Overview

3. State of the Infrastructure

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

3.1 Asset Hierarchy & Data Classification

Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Key category details are summarized at asset segment level.

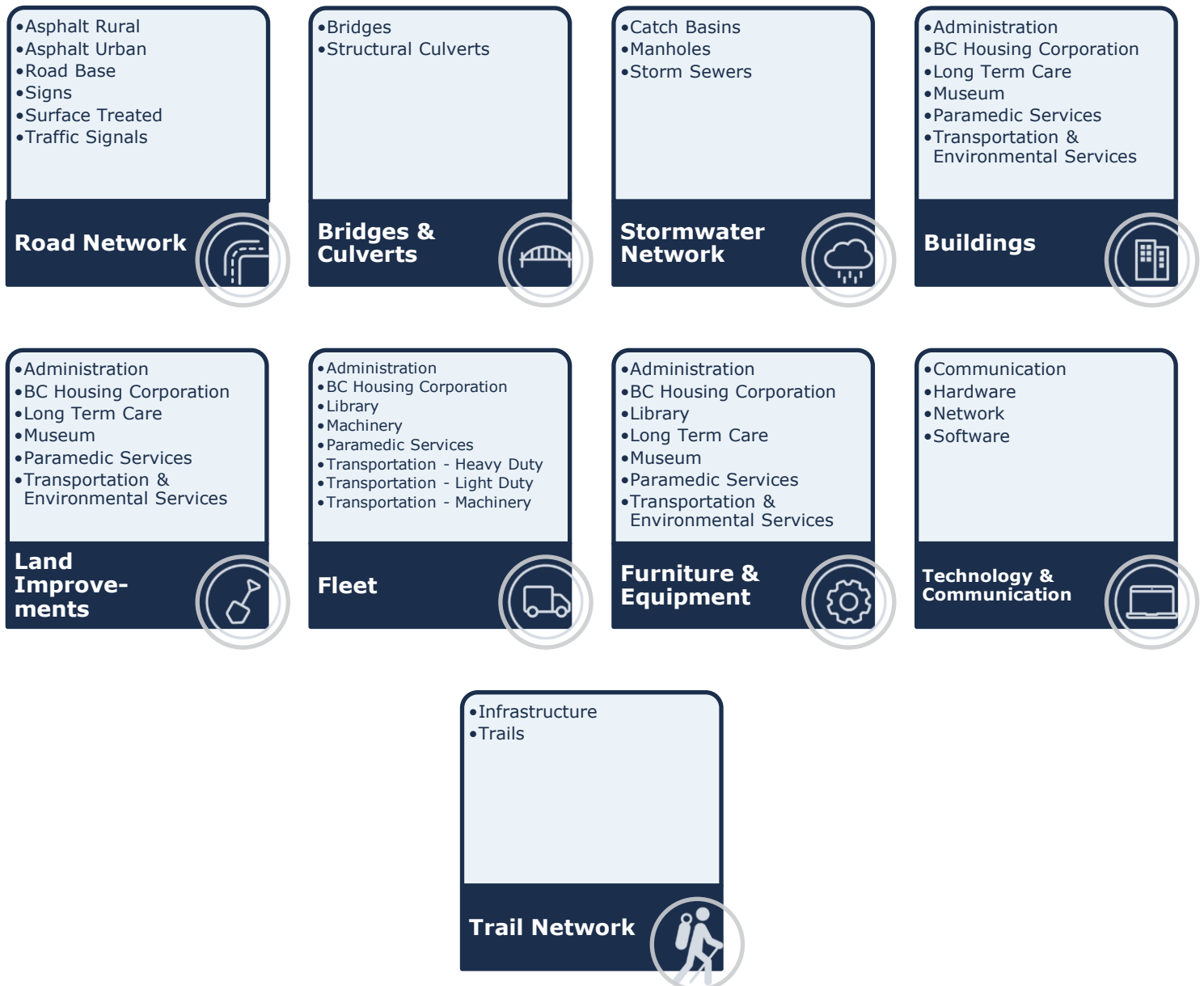


Figure 13 Asset Hierarchy and Data Classification

3.2 Portfolio Overview

3.2.1 Total Replacement Cost of Asset Portfolio

The nine asset categories analyzed in this Asset Management Plan have a **total current replacement cost of \$1.2 billion**. This estimate was calculated using a combination of user-defined costing, as well as inflation of historical or original costs to current date. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today. Figure 14 illustrates the replacement cost of each asset category; at 39% of the total portfolio, the road network forms the largest share of the County's asset portfolio, followed by bridges and culverts at 27%.

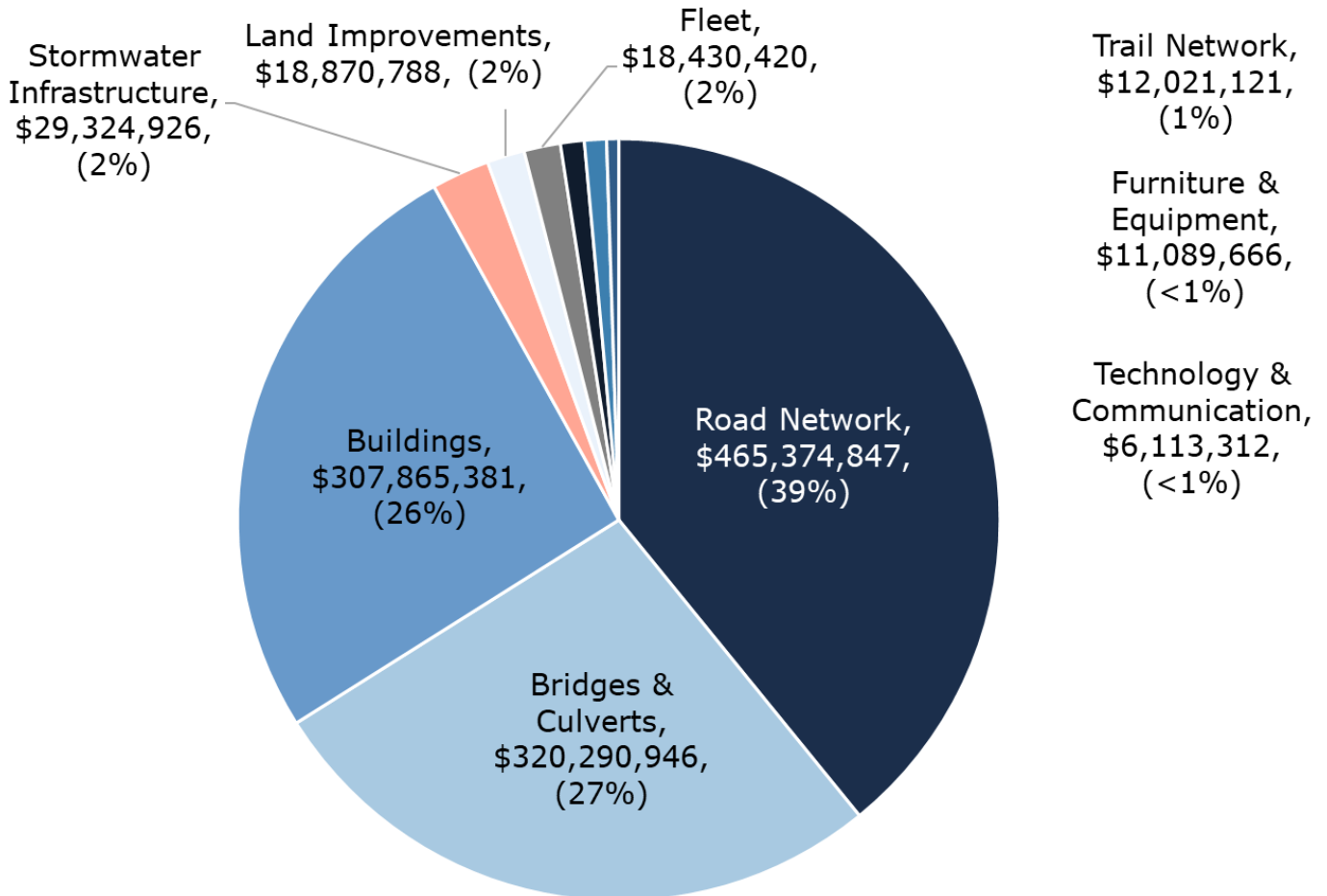


Figure 14 Current Replacement Cost by Asset Category

3.2.2 Target vs. Actual Reinvestment Rate

Figure 15 below depicts funding gaps by comparing the target to the current reinvestment rate.

Note: The target reinvestment rate in this section is based on current lifecycle management approaches and does not consider proposed changes to service levels. For analysis of proposed levels of service, refer to Section 4.

To meet the existing long-term capital requirements, the County requires an annual capital investment of \$44.9 million, for a target portfolio reinvestment rate of 3.8%. Currently, annual investment from sustainable revenue sources is \$15.3 million, resulting in a current portfolio reinvestment rate of 1.3%. Target and current re-investment rates by asset category are detailed below.

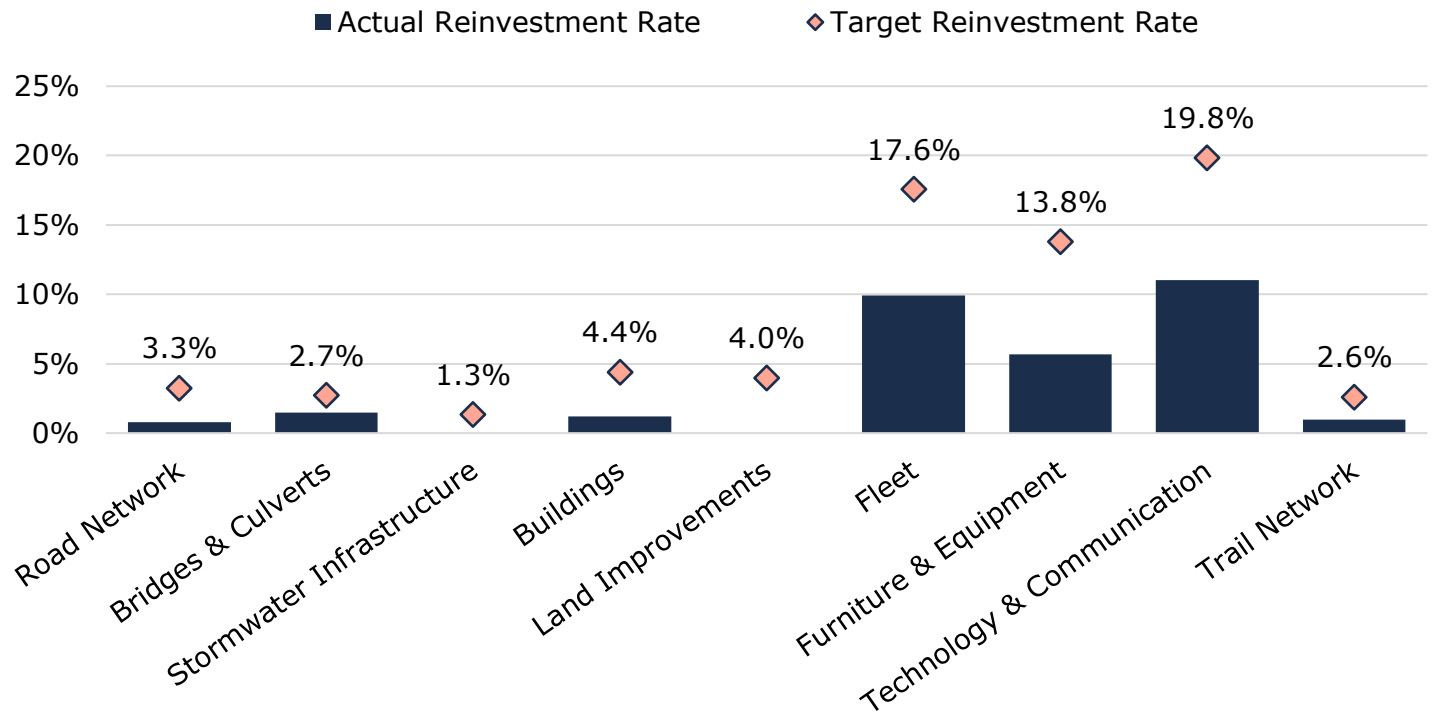


Figure 15 Current Vs. Target Reinvestment Rate

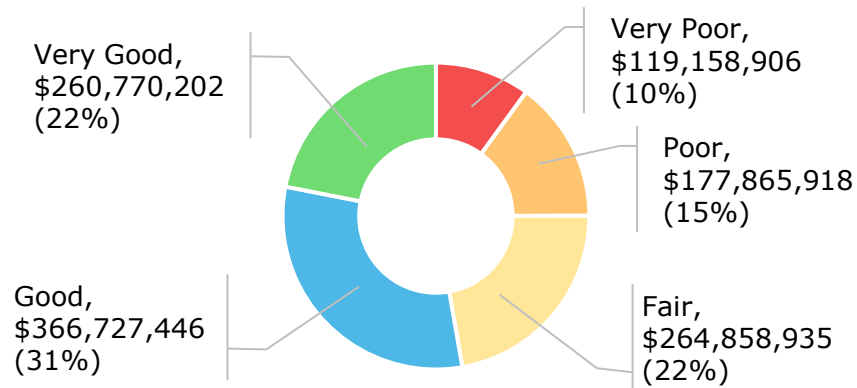
3.2.3 Condition of Asset Portfolio

Figure 16 and Figure 17 summarize asset condition at the portfolio and category levels, respectively. Based on both assessed condition and age-based analysis, 75% of the County's infrastructure portfolio is in fair or better condition, with the remaining 25% in poor or worse condition. Typically, assets in poor or worse condition may require replacement or major rehabilitation in the immediate or short-term. Targeted condition assessments may help further refine the list of assets that may be candidates for immediate intervention, including potential replacement or reconstruction.

Similarly, assets in fair condition should be monitored for disrepair over the medium term. Keeping assets in fair or better condition is typically more cost-effective than addressing assets needs when they enter the latter stages of their lifecycle or decline to a lower condition rating.

Condition data was available for majority of the road network, bridges and culverts, buildings, fleet, and the trail network. For all remaining assets, including major infrastructure such as stormwater, and land improvements, age was used as an approximation of condition for the majority of these assets. Age-based condition estimations can skew data and lead to potential under- or overstatement of asset needs.

Further, when assessed condition data was available, it was projected to current year-end (2023). This 'projected condition' can generate lower condition ratings than those established at the time of the condition assessment. The rate of this deterioration will also depend on lifecycle curves used to project condition over time.



As further illustrated in Figure 17 at the category level, the majority of major, core infrastructure including roads, bridges, and structural culverts are in fair or better condition, based on in-field condition assessment data. Assets in poor or very poor condition appear to be concentrated in technology and communication, furniture and equipment, and land improvements. Refer to Table 5 for details on how condition data was derived for each asset segment.

Figure 16 Asset Condition: Portfolio Overview

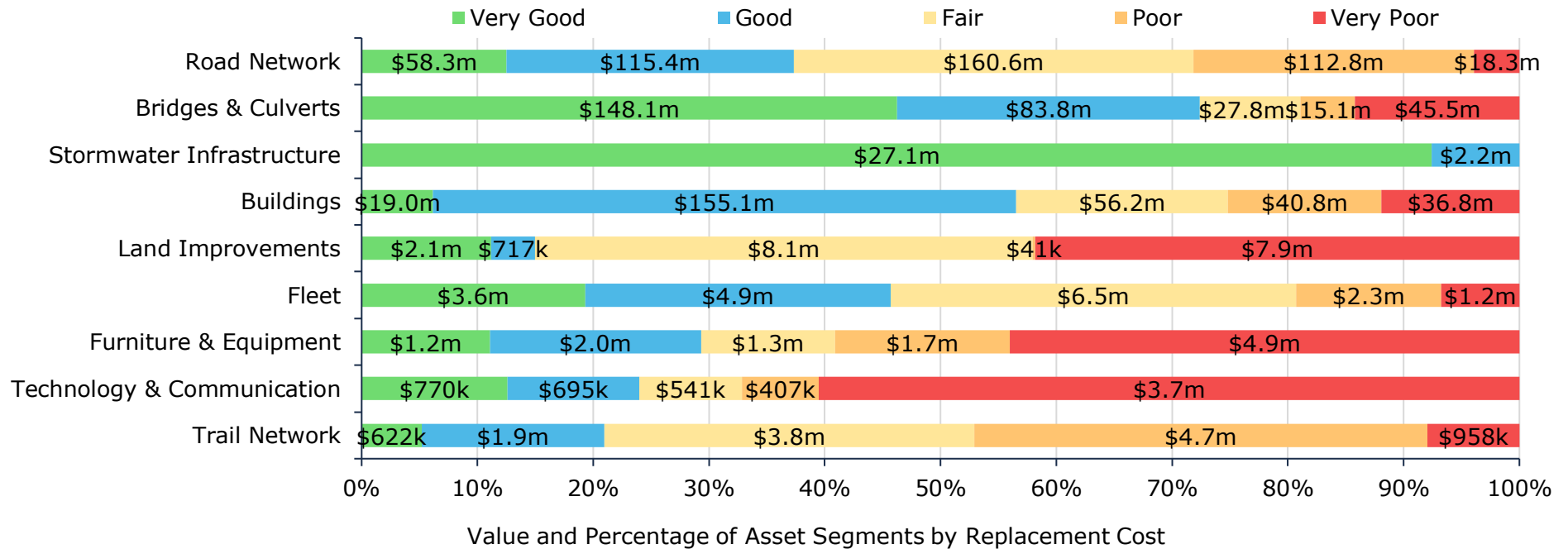


Figure 17 Asset Condition by Asset Category

Source of Condition Data

This AMP relies on assessed condition for 76% of assets, weighted by replacement cost. For the remaining assets, age (in relation to estimated useful life) 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. Table 5 below identifies the source of condition data used throughout this AMP.

Asset Category	% of Assets with Assessed Conditions	Source of Condition Data
Road Network	61%	2023 Road Assessment (Surface Only)
Bridges & Culverts	97%	2021 & 2022 OSIM Bridge Inspections
Stormwater Infrastructure	0%	Age-based
Buildings	94%	2019-2020 Building Condition Assessments
Land Improvements	0%	Age-based
Fleet	87%	Staff Assessments
Furniture & Equipment	2%	Age-based
Technology & Communication	2%	Age-based
Trail Network	79%	2016 Inspections

Table 5 Source of Condition Data

3.2.4 Risk Matrix

Using the risk equation and preliminary risk models, Figure 18 shows how assets across the different asset categories are stratified within a risk matrix.

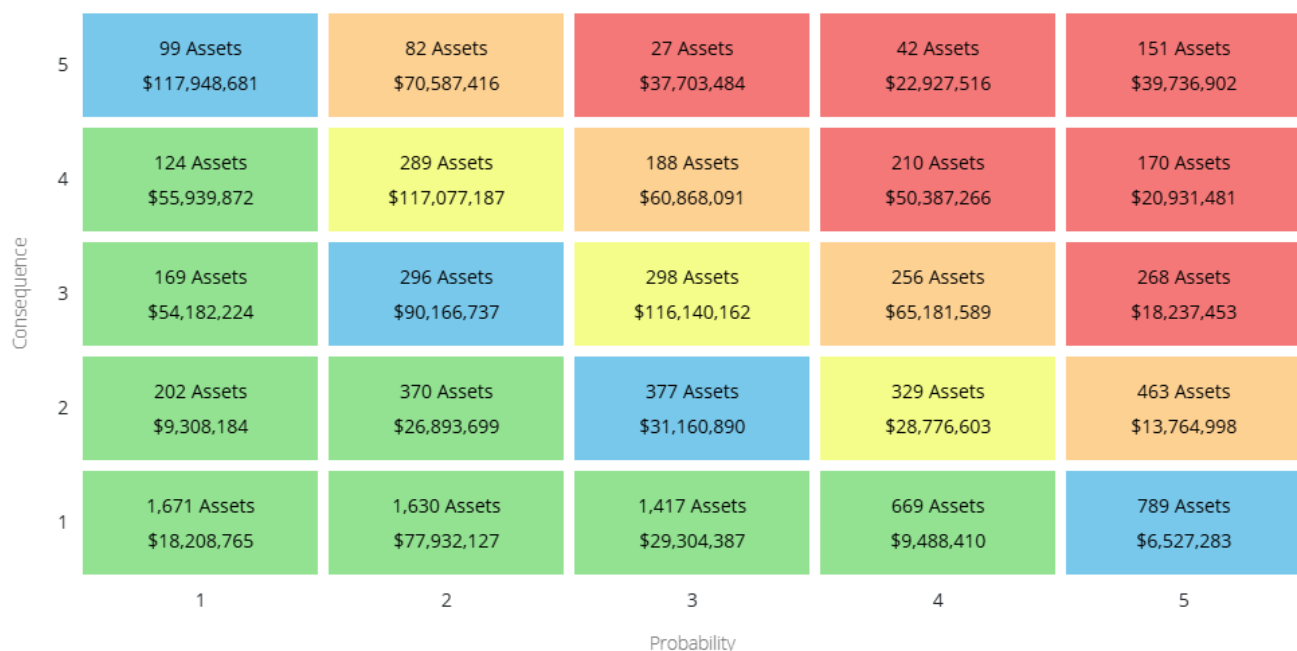


Figure 18 Risk Matrix: All Assets

The analysis shows that based on current risk models, approximately 17% of the County's assets, with a current replacement cost of approximately \$201 million, carry a risk rating of 15 or higher (red) out of 25. Assets in this group may have a high probability of failure based on available condition data and age-based estimates and were considered to be most essential to the County.

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

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

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

3.2.5 Forecasted Capital Requirements

Aging assets require maintenance, rehabilitation, and replacement. Figure 19 below illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for all asset categories analyzed in this AMP over a 70-year time horizon. On average, \$44.9 million is required each year to remain current with capital replacement needs for the County's asset portfolio (red dotted line). Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise. This figure relies on age and available condition data.

The chart also illustrates a backlog of more than \$31.3 million, comprised of assets that remain in service beyond their estimated useful life. It is unlikely that all such assets are in a state of disrepair, requiring immediate replacements. This makes continued and expanded targeted and consistent condition assessments integral. Risk frameworks, proactive lifecycle strategies, and levels of service targets can then be used to prioritize projects, continuously refine estimates for both backlogs and ongoing capital needs, and help select the right treatment for each asset. In addition, more effective componentization of buildings will improve these projections, including backlog estimates.

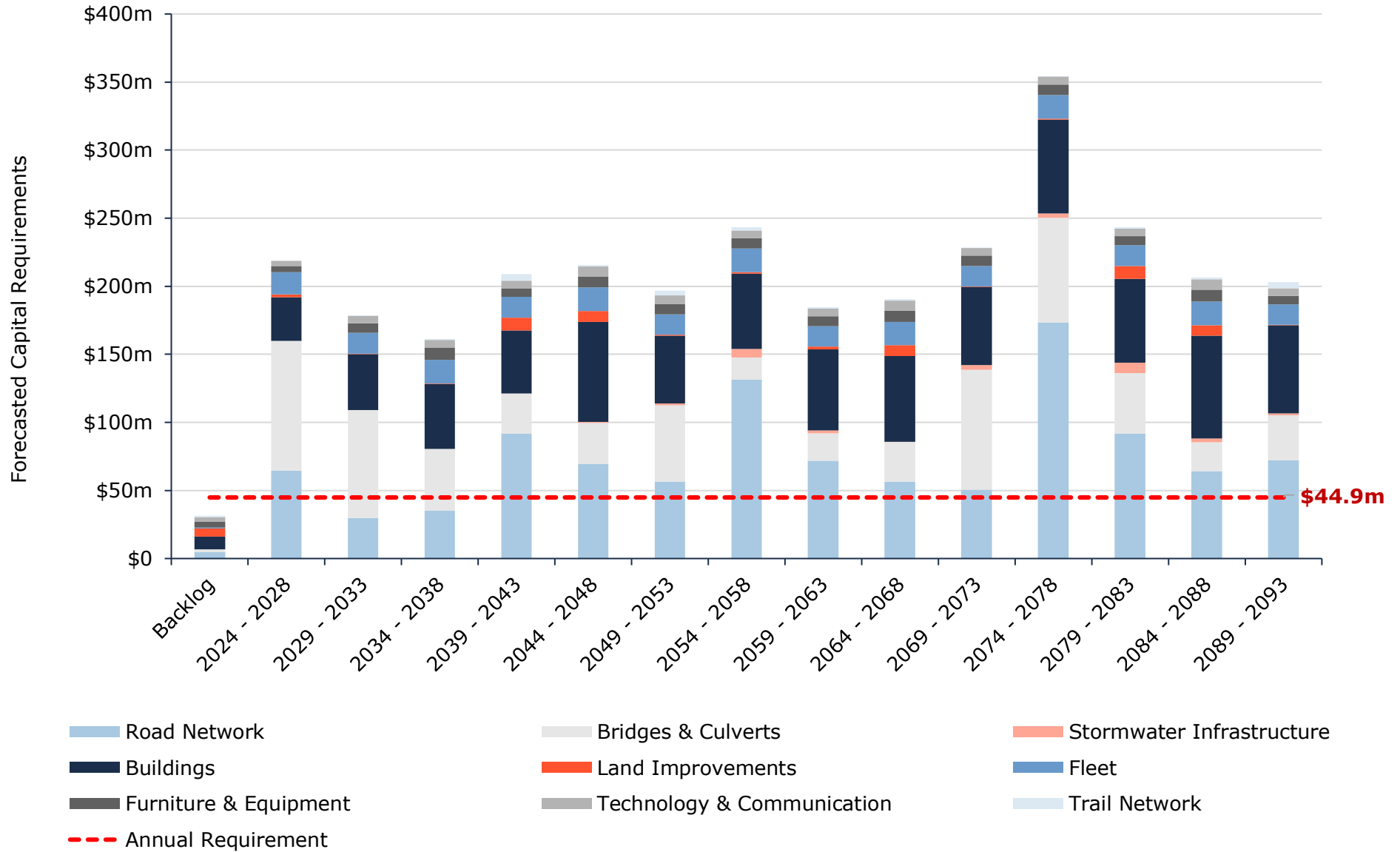


Figure 19 Capital Replacement Needs: Portfolio Overview 2024-2093 (Current Levels of Service)

Proposed Levels of Service

Scenario 1

- Maintain Existing Funding Levels

Scenario 2

- Achieve 100% Recommended Funding in 13 years

Scenario 3

- Achieve Specific Condition Rating Targets (by Category)

4. Proposed Levels of Service Analysis

4.1 Overview

4.1.1 O. Reg. 588/17 Proposed Levels of Service Requirements

The third iteration of municipal Asset Management Plans required under O. Reg. 588/17 requires the evaluation of levels of service (LOS) that includes:

- ♦ Proposed LOS options (i.e. increase, decrease, or maintain current LOS) and the risks associated with these options.
- ♦ How the proposed LOS may differ from current LOS.
- ♦ Whether the proposed LOS are achievable; and
- ♦ The municipality's ability to afford proposed LOS.

Additionally, a lifecycle management and financial strategy to support the proposed LOS must be identified for a period of 10 years with specific reporting on:

- ♦ Identification of lifecycle activities needed to provide the proposed LOS.
- ♦ Annual costs over the next 10 years to achieve the proposed LOS; and
- ♦ Identification of proposed funding projected to be available.

4.1.2 Considerations

Proposed LOS for the County have been developed through comprehensive engagement with County staff. In order to achieve any target LOS goal, careful consideration should be given to the following:

Financial Impact Assessments

- ♦ Assess historical expenditures/budget patterns to gauge feasibility of increasing budgets to achieve increased service levels
- ♦ Consider implications of LOS adjustments on other services and other infrastructure programs (i.e. trade-offs)

Infrastructure Condition Assessments

- ♦ Regularly assess the condition of critical infrastructure components
- ♦ Use standardized condition assessment protocols (where possible) to quantify the state of the infrastructure
- ♦ Identify non-critical components where maintenance could potentially be deferred without causing severe degradation
- ♦ Use current condition metrics as benchmarks to gauge feasibility of large adjustments to LOS

Service Metrics

- ♦ Measure user satisfaction, response times, and other relevant indicators for specific services

Service Impact Assessments

- ♦ Evaluate potential impacts on user satisfaction and service delivery due to changes in infrastructure condition

Key Lifecycle Activities

- ♦ Implement routine maintenance and inspections to ensure infrastructure reaches its optimal useful life
- ♦ Monitor and optimize operational processes for efficiency

- ◆ Regularly review and update preventive maintenance schedules
- ◆ Prioritize critical infrastructure components for maintenance
- ◆ Implement cost-saving measures without compromising safety or compliance
- ◆ Develop strategies for managing and communicating service impacts to stakeholders
- ◆ Invest in technology and process improvements to enhance maintenance efficiency
- ◆ Upgrade critical infrastructure components to improve overall reliability
- ◆ Explore opportunities for innovation and efficiency gains

Risk Management

- ◆ Identify potential risks to infrastructure and service quality resulting from adjusted service levels
- ◆ Develop contingency plans to address unforeseen challenges without compromising service quality
- ◆ Monitor performance closely to ensure that the target investment translates to the desired infrastructure condition

Infrastructure Condition Enhancements

- ◆ Identify areas for improvement and increased maintenance to enhance overall infrastructure condition

Timelines

- ◆ Although O. Reg. 588/17 requires evaluation of expenditures for a 10-year period in pursuit of proposed LOS, it does not require municipalities to achieve the LOS within this 10-year timeframe (ex. a municipality may have a goal to reach X% condition by 2050, the AMP is required to review the first 10 years of the strategy to reach this goal)
- ◆ Careful consideration should be given to setting realistic targets for when proposed service levels can be achieved.

Stakeholder Engagement

- ◆ It is recommended to ensure adjustments to LOS are not made in isolation and without consultation of various stakeholders. This could include, but is not limited to:
 - ◆ Department Heads/Infrastructure Managers
 - ◆ Residents
 - ◆ Service Users
 - ◆ Council
- ◆ Efforts should be made to communicate changes to LOS transparently to all affected stakeholders

Flexibility

- ◆ Priorities may change over time due to a variety of factors, such as:
 - ◆ Financial state of the municipality
 - ◆ Availability of grants
 - ◆ Significant increases or decreases in population
 - ◆ Changes in political priorities
 - ◆ Changes in resident priorities
 - ◆ New technologies
 - ◆ Changes in legislation
- ◆ Any proposed changes to LOS should be flexible and able to adapt to changes listed above, and other unforeseen circumstances

4.2 Stakeholder Engagement

In order to determine appropriate levels of service, Bruce County engaged with administration, residents, and County Council to solicit feedback on areas of focus/improvement. These engagement activities took place throughout fall 2024 and winter 2025. Summaries of stakeholder engagement results can be found in the following sections.

4.2.1 Council

Bruce County felt it was important to ensure that feedback was collected from the local Council to ensure that scenarios being modelled for analysis were in line with political goals in the County. It is expected that Council have a 'pulse' on the sentiment of local residents and businesses but also have the benefit of understanding the challenges and opportunities within the municipality. This combination of understanding uniquely positions Councils' to make informed decisions on behalf of their constituents.

The Council for Bruce County completed an online survey reflecting on current infrastructure owned by the County, current funding levels, and service quality. Highlights of the responses received from councilors are summarized below.

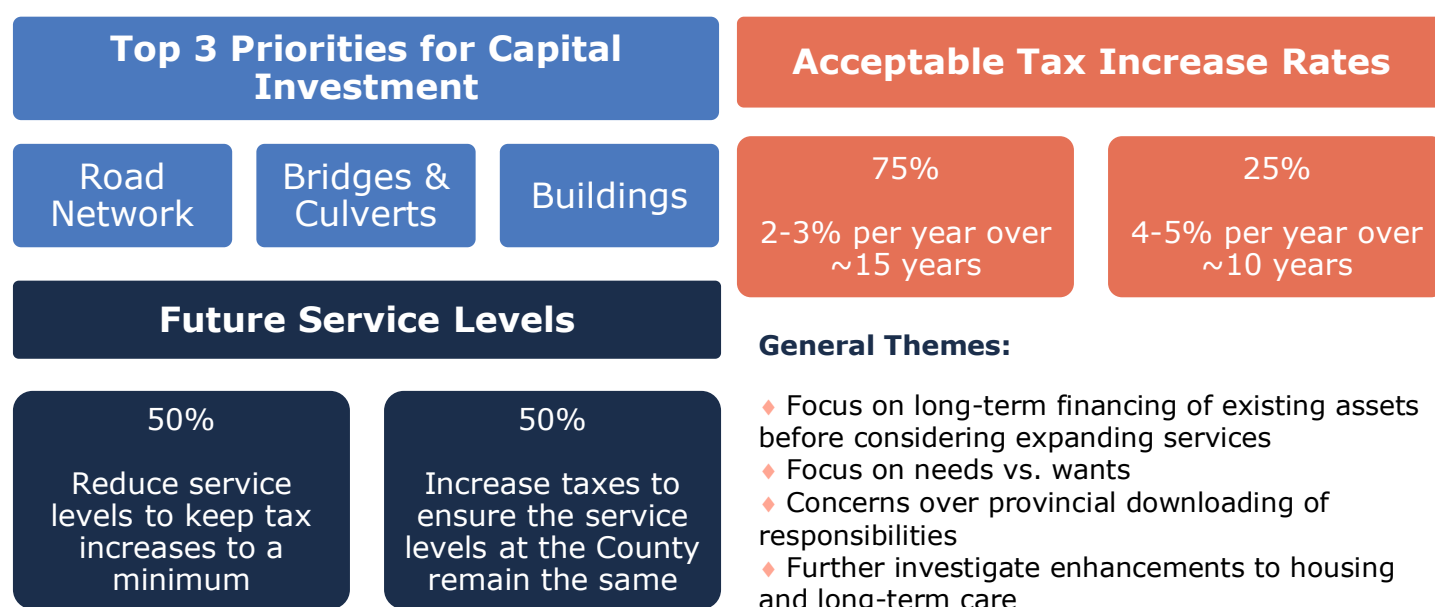


Figure 20 Highlights of Council Engagement Survey

4.2.2 Administration

Surveys were issued for each asset category, summarizing the results of the 2024 Asset Management Plan and requesting feedback on levels of confidence in the statistics, whether respondents felt that existing service levels met the current needs of the County, and whether they felt they had the resources (financial, man power, or otherwise) to appropriately manage existing assets. Surveys were distributed for a total of 9 asset categories, and 18 responses were received (note: as there were a number of overlaps in responsibilities for respondents, some staff provided responses for multiple surveys).

The survey results were analyzed and used to inform further workshops with departments. Individual department workshops were conducted for Transportation/Environmental Services, Facilities, Fleet, and Trails. The general themes of those workshops are summarized below.

Roads	-Opportunity to upgrade surface treated roads to pavement, as degradation is occurring faster than expected, and would reduce the need for 'half load' weight restrictions. -Many roads are below County standards due to minimal improvements since inheriting from lower-tier municipality in 2003 -Lack of funding for capital replacements/rehabilitations severely limiting administration's ability to appropriately manage road network assets
Bridges	-Overall happy with average condition -Would appreciate increased funding to ensure bridge replacements don't 'fall behind'
Facilities	-Administration wants to ensure that over the long-term, that housing, long-term care, and municipal services facilities are looked at separately to ensure they increase expenditures proportionally, and that no particular segment is left behind.
Fleet	-Overall satisfied with the maintenance/management of fleet and equipment -Could better manage the fleet with increase in capital expenditures to minimize the number of vehicles being pushed beyond their expected service lives
Trails	-Potential review needed for projected life expectancy of trails -Need more capital funding to maintain trails in good condition, high expectation from community
Storm, Land Improv., Technology, Furniture	-Minimal feedback provided -All would benefit from increased funding to minimize assets moving past their expected useful life

Figure 21 Highlights of Administration Engagement Workshops

4.2.3 Residents

Bruce County understands that services are provided for the benefit of the people including residents, businesses, and visitors. The County made available a public survey on its website for multiple weeks in the fall of 2024 to allow stakeholders to voice their opinions of the services that were most important to them, affordability, and their experiences with those services. Highlights of the survey results are summarized below:

470 Survey Responses

Location

62%
Urban

21%
Rural

14%
Semi-
Urban

3%
Outside
of BC

Age

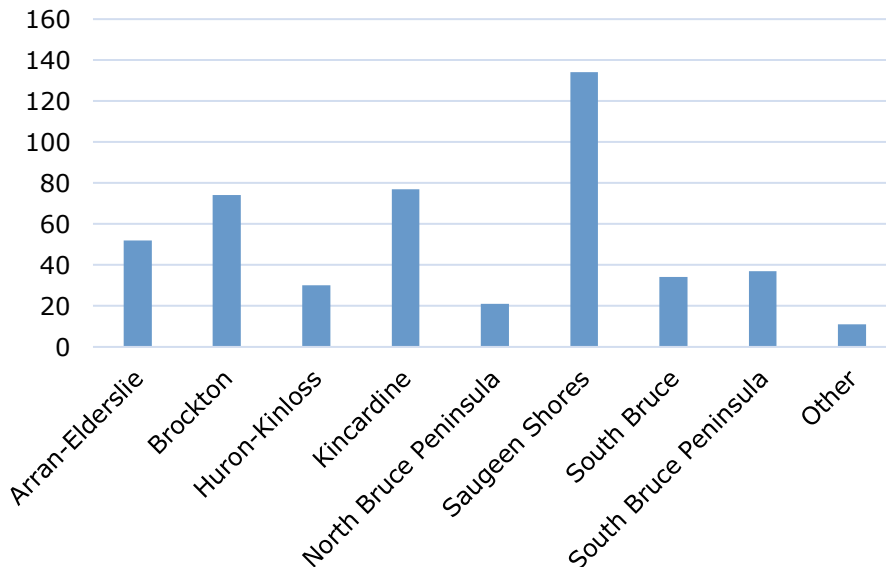
5%
15-29
years

25%
30-44
years

35%
45-64
years

35%
65+
years

Respondent Municipality



Services with Highest Satisfaction

Roads

Bridges

Trails

Services with Lowest Satisfaction

Long-Term
Care
Facilities

Community
Housing

Figure 22 Highlights of Resident Engagement Survey

General Themes of Comments

- ◆ Respondents emphasize an urgent need for more affordable housing, particularly for low-income workers, seniors, and single-parent families. Many suggest innovative solutions like co-op housing, subsidized units, and tiny homes to address the crisis and ensure the community remains livable for all income levels.

- ◆ Issues with road and bridge conditions, including potholes and unsafe travel routes, are a recurring concern. Many residents call for improved winter maintenance, better paving, and a proactive approach to maintaining critical infrastructure.
- ◆ The aging population has driven significant demand for increased long-term care facilities and beds, with concerns about inadequate staffing and wait times. Respondents also highlight the need to expand other essential services like paramedic coverage, library programming, and recreational facilities.

4.3 Scenario Analysis

The three scenarios outlined in the following section were analyzed as options for proposed service levels for all categories included in this Asset Management Plan.

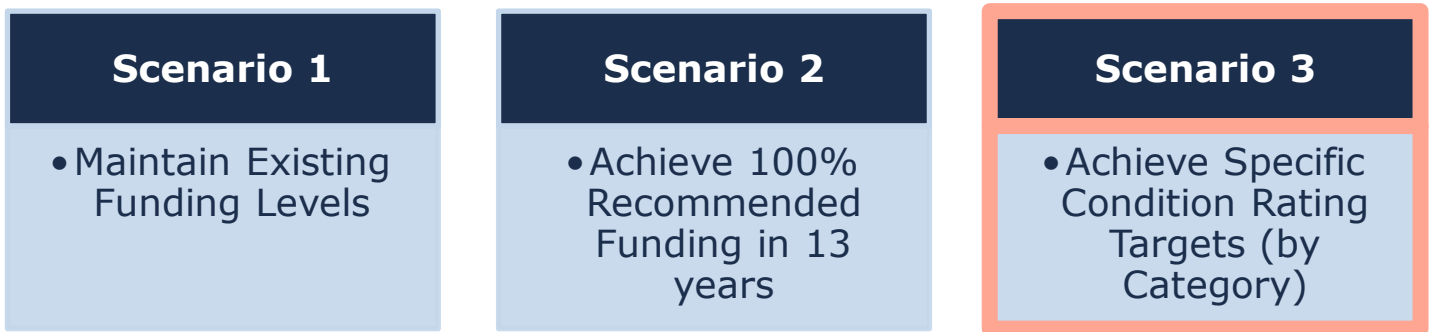


Figure 23 PLOS Scenario Overview

While three scenarios were analyzed, **Bruce County selected Scenario 3 as their preferred path forward regarding proposed levels of service**, which is reflected in the financial strategy and 10-year capital replacement forecasts.

Comprehensive reviews by asset category were completed and can be found in Sections 5 through 13 in this document. Below is a summary of the aggregated 30-year condition projections based on each of the three analyzed scenarios:

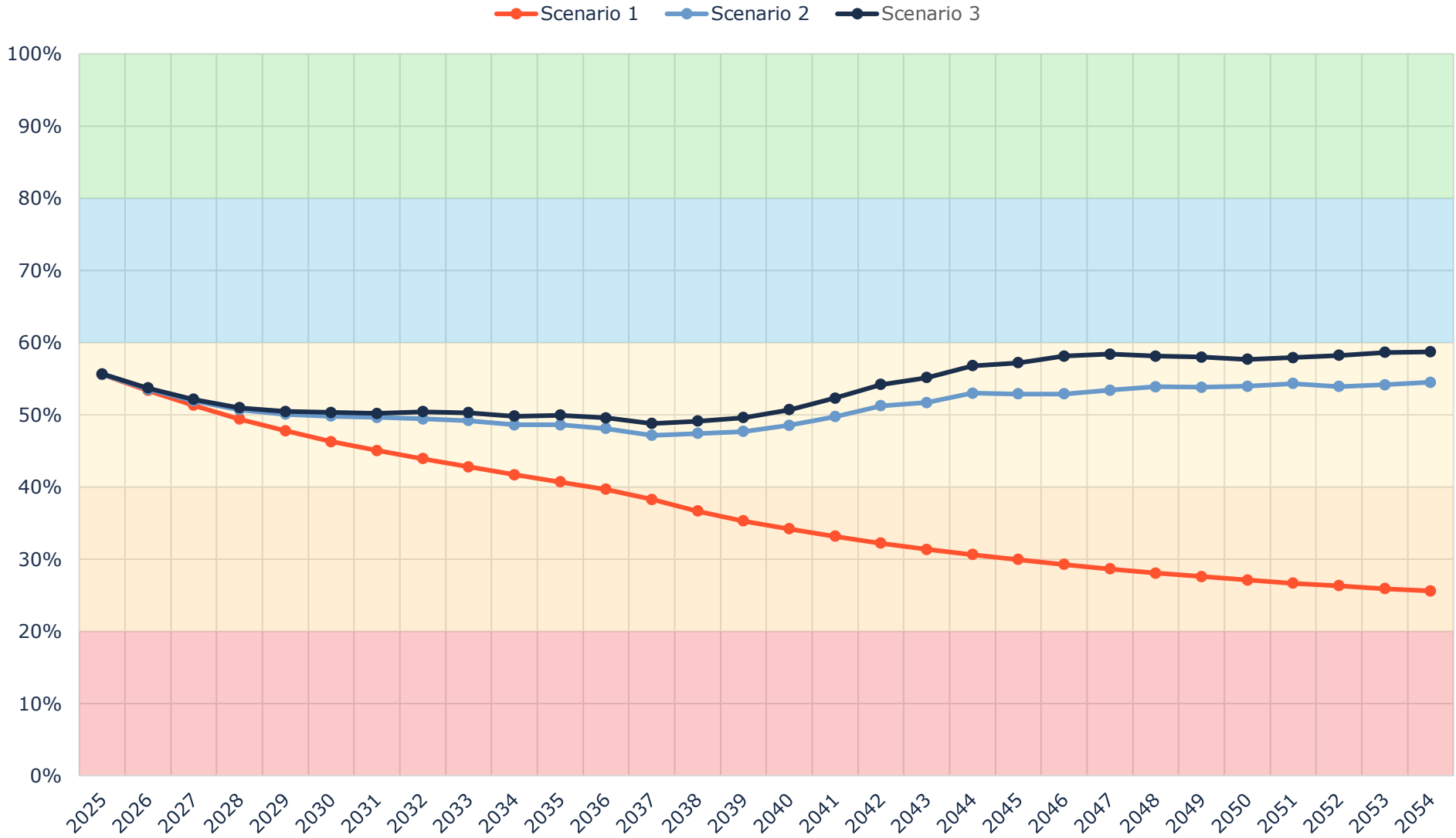


Figure 24 Aggregated Condition Results - Proposed LOS Scenario Analysis

4.3.1 Scenario 1: Maintain Existing Funding

This scenario assumes no tax increases for the purpose of increasing capital funding.

- Annual capital allocation for tax-funded assets: \$15.3 million

While this scenario was modelled for consideration, Bruce County did not elect to move forward with this scenario.

Lifecycle Changes Required for Scenario 1

For all asset classes, no changes to lifecycle strategies are required in order to achieve Scenario 1. With the lack of funding, although existing lifecycle strategies are modelled within the County's asset management system, a significant number of lifecycle events will not have sufficient funds and will move from projected events into the infrastructure backlog.

Affordability/Achievability of Scenario 1

Of the three scenarios analyzed, Scenario 1 is the least expensive option. Maintaining existing funding levels would require no tax or rate increases. The available **capital** funding over the next 10 years for Scenario 1 would remain consistent as indicated in the table below:

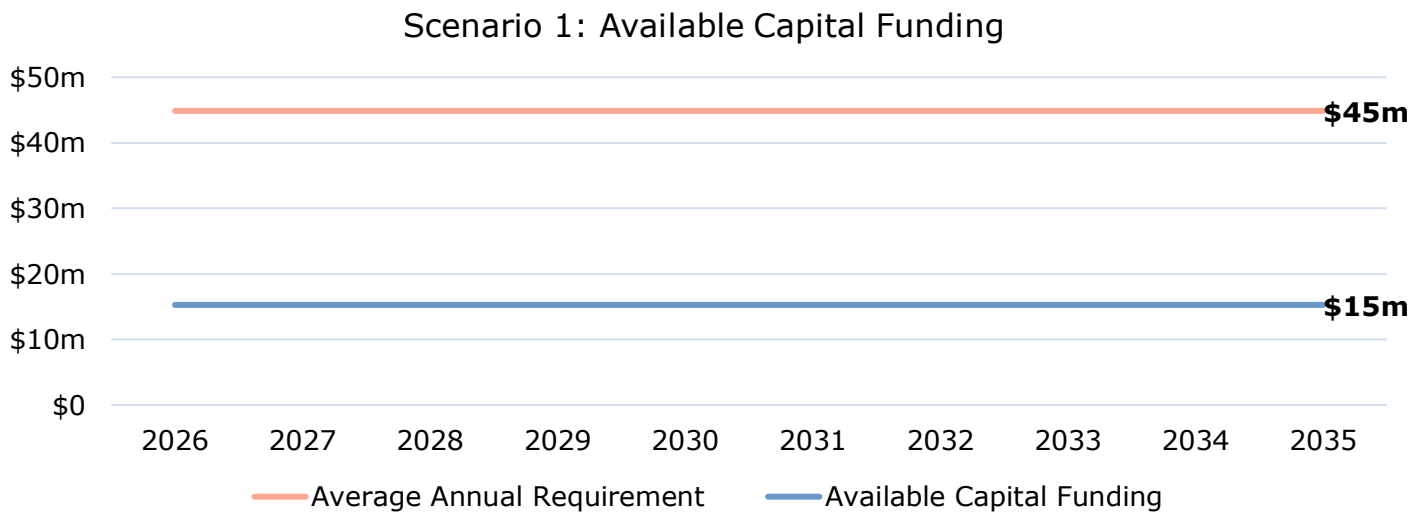


Figure 25 Scenario 1 Available Capital Funding Over Next 10 Years

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

Changes to Community and Technical Levels of Service for Scenario 1

Bruce County does not anticipate any changes to qualitative community levels of services for any of the asset categories included within this AMP. All asset categories will see adjustments to their technical levels of service over time, particularly relating to a decrease in average condition of assets due to the chronic underfunding of lifecycle interventions and replacements. Refer to each asset category for more details.

Risks Associated with Scenario 1

There are pros and cons associated with each scenario analyzed, and each benefit is counter-balanced with consequences. For Scenario 1, the following risks have been identified:

- ♦ Increased infrastructure backlog
 - ♦ While modelling no financial increases is beneficial for the personal finances of residents and businesses, knowingly continuing with insufficient infrastructure funding forces the County to commit to sub-optimal lifecycle management of its assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, increase resident complaints, and the potential for costly unbudgeted repairs to maintain services.
 - ♦ The risks of maintaining a funding level of 34% of the recommendation, Scenario 1 increases the risk of services being impacted by deteriorating asset conditions.
- ♦ Reliance on Grants
 - ♦ As Scenario 1 maintains a position of 34% of recommended funding levels, the County will be more reliant on conditional grants, as they become available. While these are beneficial to all municipalities to reduce their tax/rate burden on residents, they are considered an unsustainable revenue source. The County will be more vulnerable to changes in provincial and federal policy and funding programs.
- ♦ Missed opportunities for efficiencies
 - ♦ While analyzing Scenario 1, no alternative lifecycle strategies were proposed. Mid-lifecycle interventions, such as asphalt overlays and sewer lining, can result in extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the County risks paying more than necessary to maintain their asset inventory.

4.3.2 Scenario 2: Achieving 100% Recommended Funding in 13 Years

This scenario assumes gradual tax and rate increases, stabilizing at 100% of recommended funding in 13 years.

- ♦ Annual Tax Increase ~2.8% for 13 years

While this scenario was modelled for consideration, the County did not elect to move forward with this scenario.

Lifecycle Changes Required for Scenario 2

For all asset categories, no changes to lifecycle strategies are required in order to achieve Scenario 2. In future iterations of the AMP, it is recommended to more closely analyze changes to lifecycle management strategies to find long-term cost savings and efficiencies.

Affordability/Achievability of Scenario 2

Of the three scenarios analyzed, Scenario 2 is the middle ground in terms of tax increases, however, it is very similar (financially) to Scenario 3, which is condition target based. Reaching 100% of the recommended funding immediately would require an increase of 47% in tax revenue. This is not reasonable or realistic to achieve in a short period of time. With the recommended implementation timeframe of 13 years, total tax revenue would be increased gradually from \$63 million to \$92 million. Based on these gradual proposed increases, while maintaining existing sustainable grant funding, the available **capital** funding over the next 10 years for Scenario 2 is indicated in the table below:

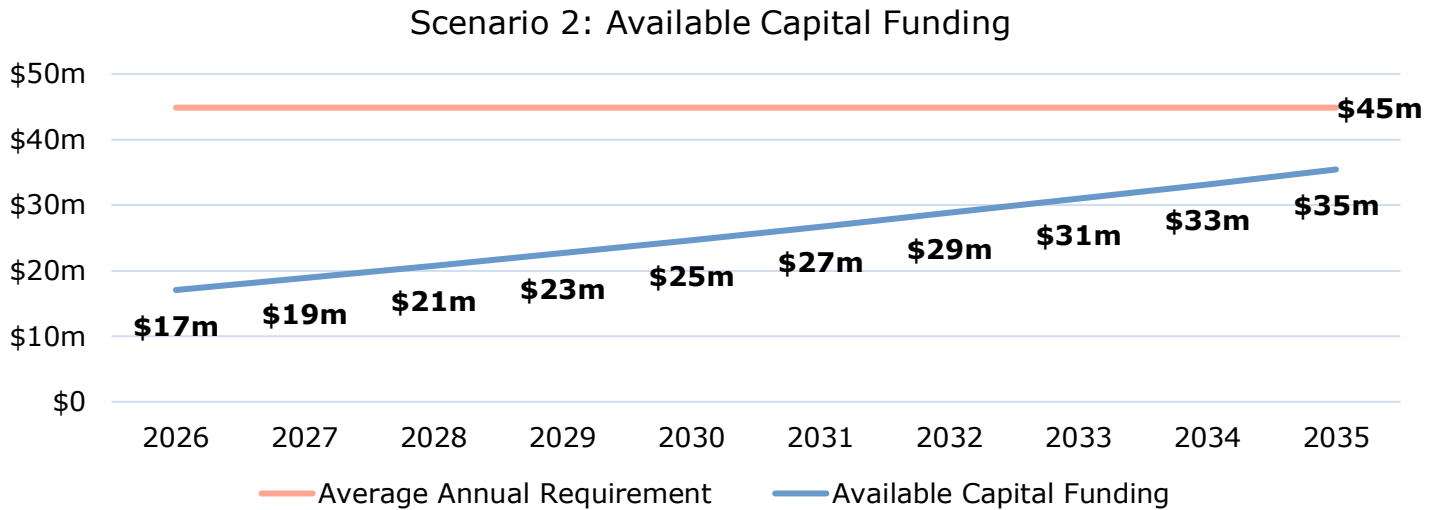


Figure 26 Scenario 2 Available Capital Funding Over Next 10 Years

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

Changes to Community and Technical Levels of Service for Scenario 2

Bruce County does not anticipate any changes to qualitative community levels of services for any of the asset categories included within this AMP. All asset categories will see adjustments to their technical levels of service over time, particularly relating to capital reinvestment rate and average condition of assets. Refer to each asset category for more details.

Risks Associated with Scenario 2

There are pros and cons associated with each scenario analyzed, and each benefit is counter-balanced with consequences. For Scenario 2, the following risks have been identified:

- ♦ Increased infrastructure backlog during 13-year implementation
 - ♦ While mitigating the impact of financial increases on residents and businesses, taking 13 years to reach the targeted funding levels means 13 years of sub-optimal lifecycle management of assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, and the potential for costly unbudgeted repairs to maintain services.
- ♦ Missed opportunities for efficiencies
 - ♦ While analyzing Scenario 2, no alternative lifecycle strategies were proposed. Mid-lifecycle interventions, such as asphalt overlays and sewer lining, can result in extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the County risks paying more than necessary to maintain their asset inventory.

4.3.3 Scenario 3: Targeted Conditions by Category (Preferred Scenario)

This scenario includes a combination of targeted conditions and recommended funding levels.

Categories with Targeted Condition:

- ♦ Buildings Target: 60%
- ♦ Fleet Target: 60%
- ♦ Trail Network Target: 60%

Categories with Targeted 100% Funding

- ◆ Road Network
- ◆ Bridges & Culverts
- ◆ Stormwater Infrastructure
- ◆ Land Improvements
- ◆ Furniture & Equipment
- ◆ Technology & Communication

Lifecycle Changes Required for Scenario 3

For the majority of asset classes, no changes to lifecycle strategies were required in order to achieve Scenario 3 the PLOS targets, relying solely on the increase in funding to transition from the norm of routine rehabilitation/replacements being deferred to having sufficient funding for the assets' lifecycle interventions. Specifically for buildings, fleet and the trail network, the lifecycle strategy was adjusted slightly to trigger replacement at a condition of 15% rather than 0% to ensure the overall condition of these categories were maintained at a higher average.

In future iterations of the AMP, it is recommended to more closely analyze changes to lifecycle management strategies to find long-term cost savings and efficiencies. It was identified by administration that there is a desire to model a scenario where surface treated roads are upgraded to asphalt. This can be a prime consideration in the 2030 AMP update.

Affordability/Achievability of Scenario 3

Of the three scenarios analyzed, Scenario 3 is the most expensive option, surpassing Scenario 2 by only \$2 million/year. Reaching full funding of this scenario immediately would require an increase of 50% in tax revenue. 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 \$63 million to \$95 million. Based on these gradual proposed increases, while maintaining existing sustainable grant funding, the available **capital** funding over the next 10 years for Scenario 3 is indicated in the table below:

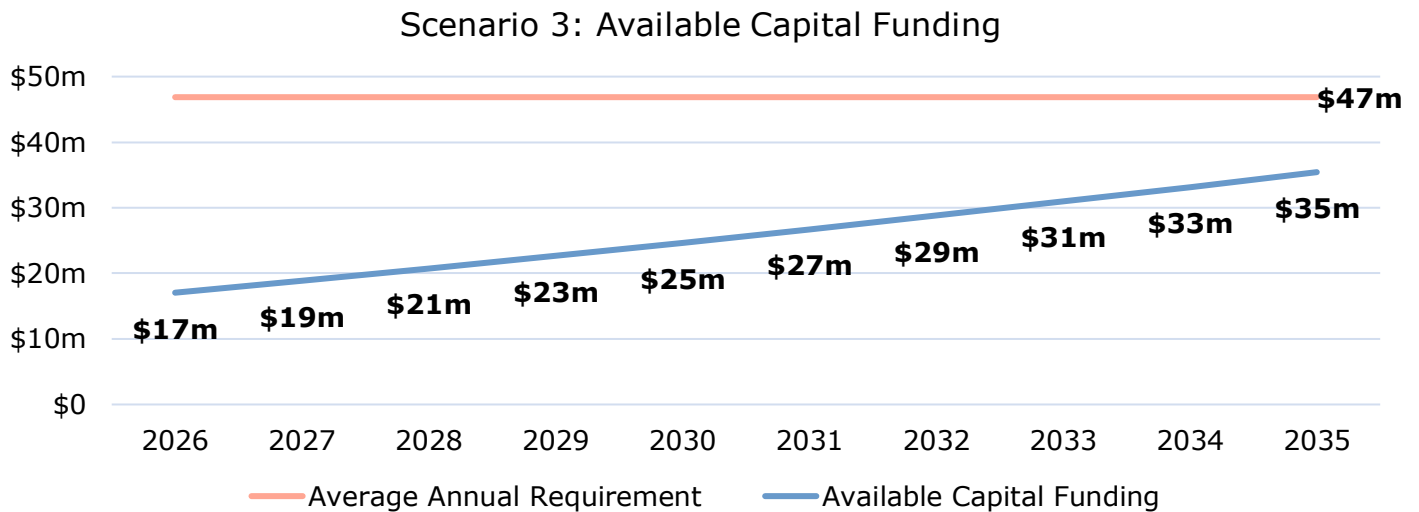


Figure 27 Scenario 3 Available Capital Funding Over Next 10 Years

The above table accounts for both current and future expenditures in order 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. As an example, Bruce County owns and maintains 82 bridges and 74 structural culverts, each with an estimated useful life averaging 40 years. Because of the nature of bridge structures, and the long duration between replacements, it is likely that there will be years with no capital expenditures relating to bridges, however, this does not mean that the County should ignore the funding requirements in these years. Instead, annual funding should be set aside in the form of reserves to ensure funding for upcoming lifecycle events is available when required.

As the County has selected Scenario 3 as their preferred proposed level of service, a further breakdown of projected capital expenditures by asset category can be found in Appendix B – 10-Year Capital Requirements.

It is important to note that an AMP is a dynamic document which should be reviewed regularly to ensure up-to-date information is incorporated including accurate replacement costs, changes in inventory, changes in available funding sources, and reflection on progress made on previous recommendations.

Changes to Community and Technical Levels of Service for Scenario 3

Bruce County does not anticipate any changes to qualitative community levels of services for any of the asset categories included within this AMP. All asset categories will see adjustments to their technical levels of service over time, particularly relating to capital reinvestment rate and average condition of assets. Refer to each asset category for more details.

Risks Associated with Scenario 3

There are pros and cons associated with each scenario analyzed, and each benefit is counter-balanced with consequences. For Scenario 3, the following risks have been identified:

- ♦ Increased infrastructure backlog during 15-year implementation
 - ♦ While mitigating the impact of financial increases on residents and businesses, taking 15 years to reach the targeted funding levels means 15 years of sub-optimal lifecycle management of assets. Being unable to complete strategic lifecycle interventions and replacements may result in increased asset failures, reduced reliability, and the potential for costly unbudgeted repairs to maintain services.
- ♦ Missed opportunities for efficiencies
 - ♦ While analyzing Scenario 3, no alternative lifecycle strategies were proposed (aside from adjustments to condition rating replacement triggers). Mid-lifecycle interventions, such as asphalt overlays and sewer lining, can result in extended lifespans of assets and reduced costs over the lifetime of the assets. By relying on existing lifecycle strategies, the County risks paying more than necessary to maintain their asset inventory.
- ♦ Consistency of condition assessments
 - ♦ When selecting a scenario based on condition ratings, there is a risk of outdated or inconsistent assessments being performed which can skew the County's progress. This can be mitigated by implementing a robust condition assessment protocol for each asset category, to be performed at regularly scheduled intervals.

Appropriateness of Scenario 3 to Meet the County's Needs

County staff emphasized the need to balance financial impacts on residents with the reality of the current state of infrastructure within the municipality. Upon review of all three scenarios and analysis of council and community engagement feedback (more detail provided below), Scenario 3 was selected as the most appropriate option as an annual tax increase of 2.8% was determined to be subjectively manageable to implement, while creating a sustainable future for the County's infrastructure at a level acceptable to residents, stakeholders, and the County Council.

As per the engagement feedback from both Council and residents, the recommendation of 2.8% annual tax increases is within acceptable levels and addresses the key resident concerns of condition improvements to the buildings category.

Category Analysis: Core Assets

Road Network

Bridges & Culverts

Stormwater Infrastructure

5. Road Network

Road Assets Snapshot



569 km

Rural (Asphalt) Roads



38 km

Urban (Asphalt) Roads



70 km

Surface Treated Roads



284

Traffic Signs



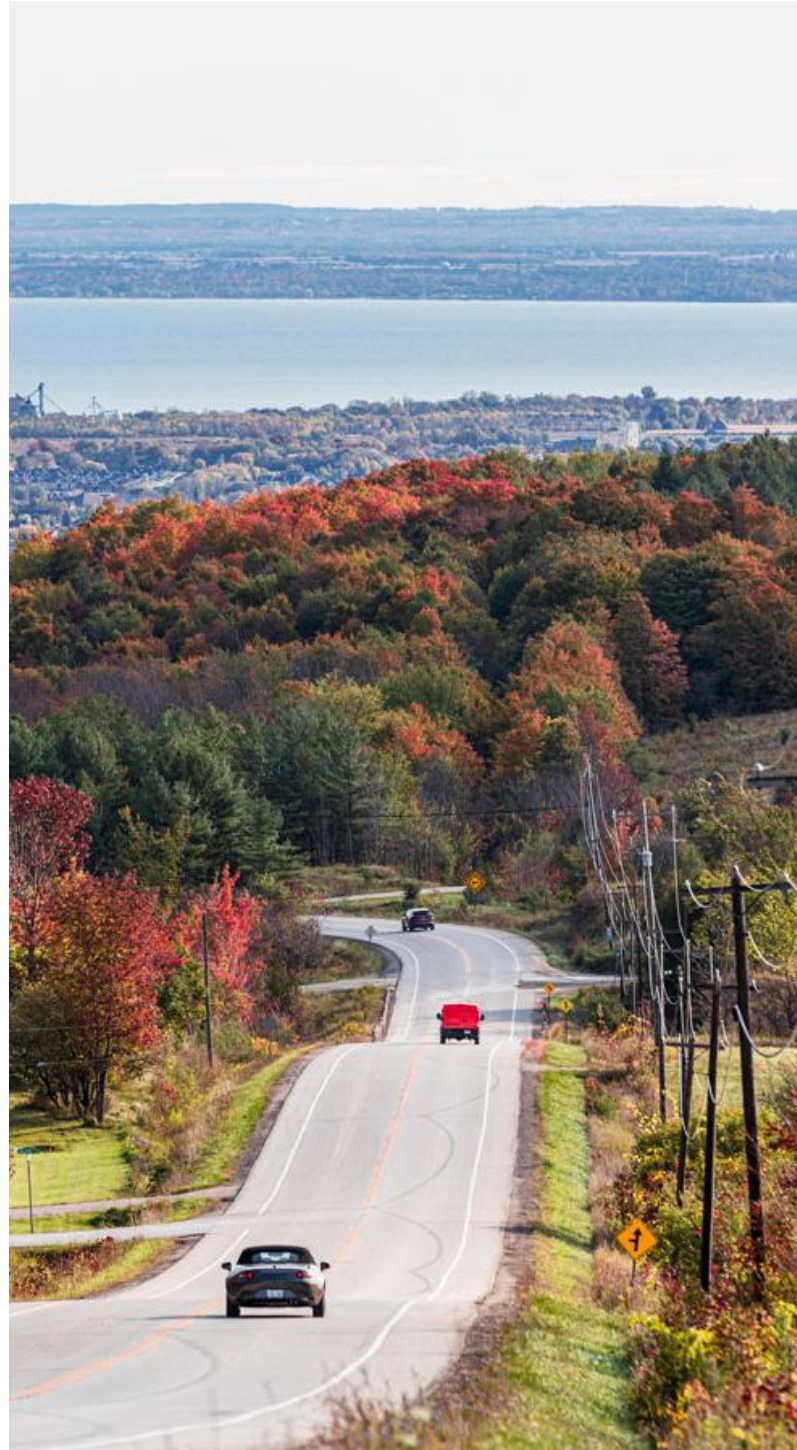
20

Traffic Signals

Total Replacement Cost



\$465 million



5.1 Inventory & Valuation

Table 6 summarizes the quantity and current replacement cost of the County's various road network assets as managed in its primary asset management register, Citywide.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Asphalt Rural	569	Kilometers	\$242,674,000	Cost/Unit
Asphalt Urban	38	Kilometers	\$19,312,000	Cost/Unit
Road Base	677	Kilometers	\$180,879,000	CPI Tables
Signs	284	Assets	\$841,000	CPI Tables
Surface Treated	70	Kilometers	\$20,398,000	Cost/Unit
Traffic Signals	20	Assets	\$1,270,000	CPI Tables
TOTAL			\$465,374,000	

Table 6 Detailed Asset Inventory: Road Network

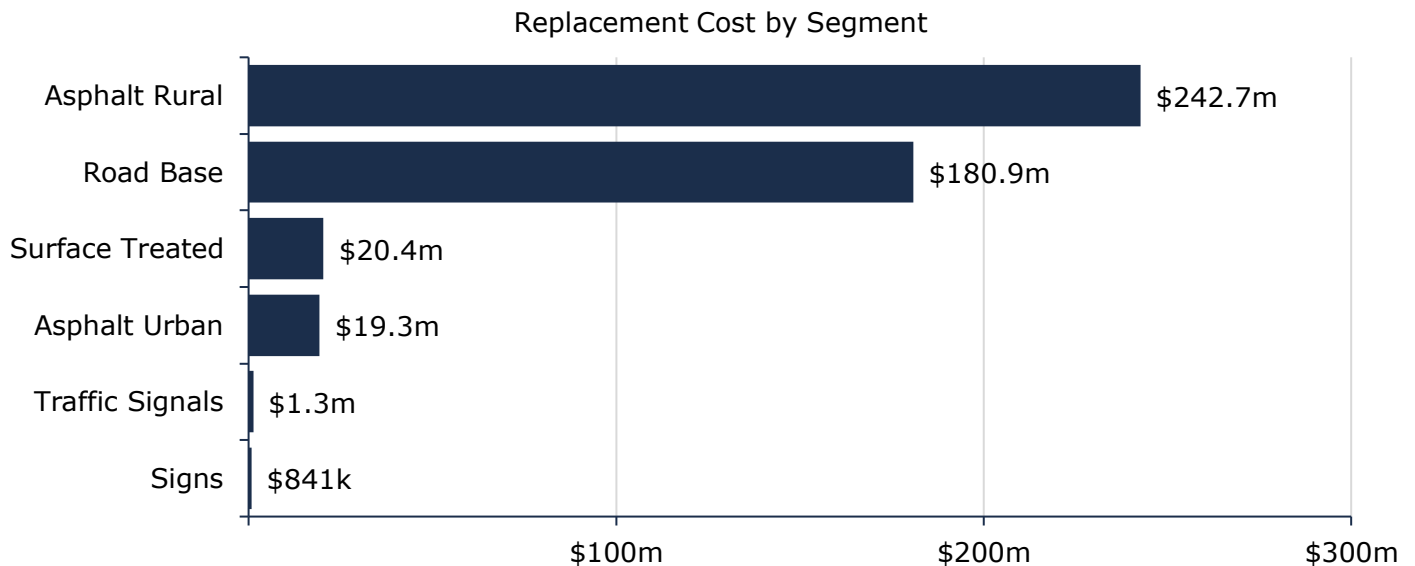


Figure 28 Portfolio Valuation: Road Network

5.2 Asset Condition

Figure 29 summarizes the replacement cost-weighted condition of the County's road network. Based on a combination of field inspection data and age, 72% of assets are in fair or better condition; the remaining 28% of assets are in poor to very poor condition. Condition assessments were available for 100% of paved and surface treated roads, whereas all supporting infrastructure relied on age-based assessments. Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. As illustrated in Figure 29, the majority of the County's road network assets are in fair or better condition.

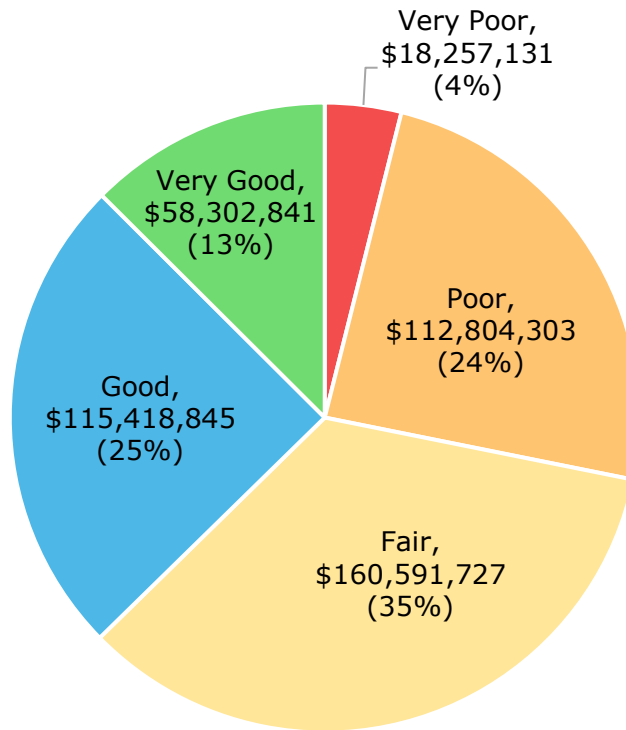


Figure 29 Asset Condition: Road Network Overall

As illustrated in Figure 30, based on condition assessments, the majority of the County's asphalt roads are in fair or better condition, whereas surface treated roads show a significant proportion in poor condition. Over 70% of traffic signals are in very poor condition, however, since this information is based on age analysis, field verification is recommended.

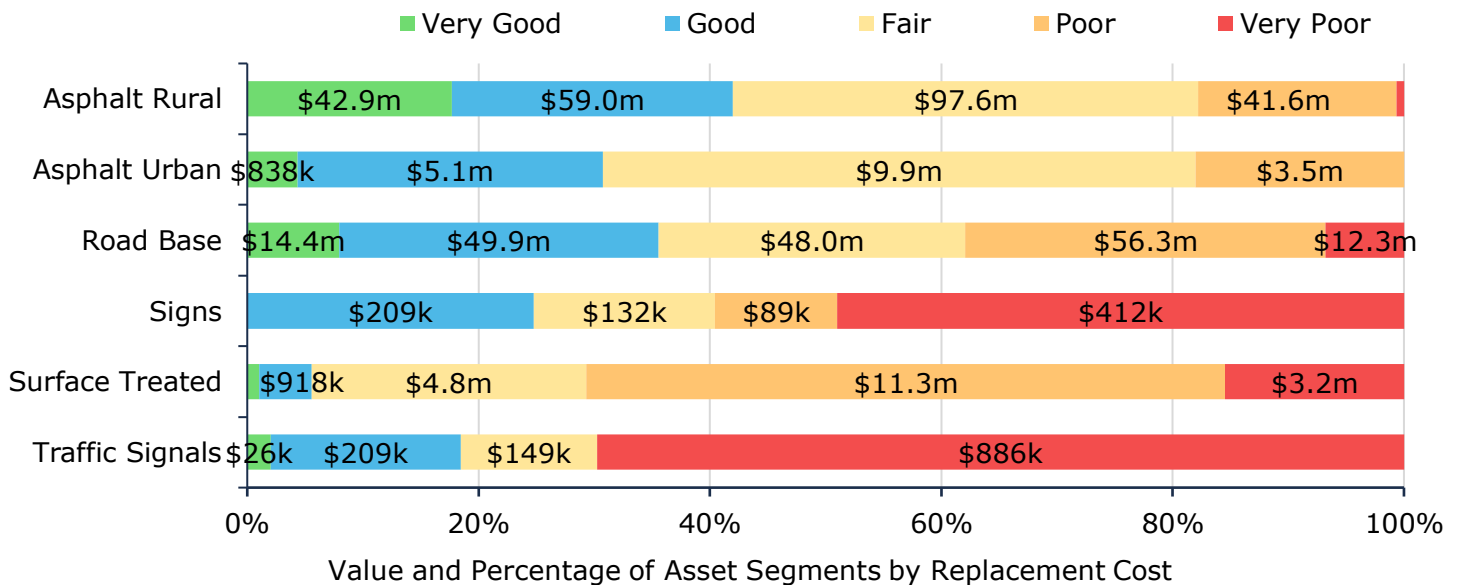


Figure 30 Asset Condition: Road Network by Segment

5.3 Age Profile

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

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

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

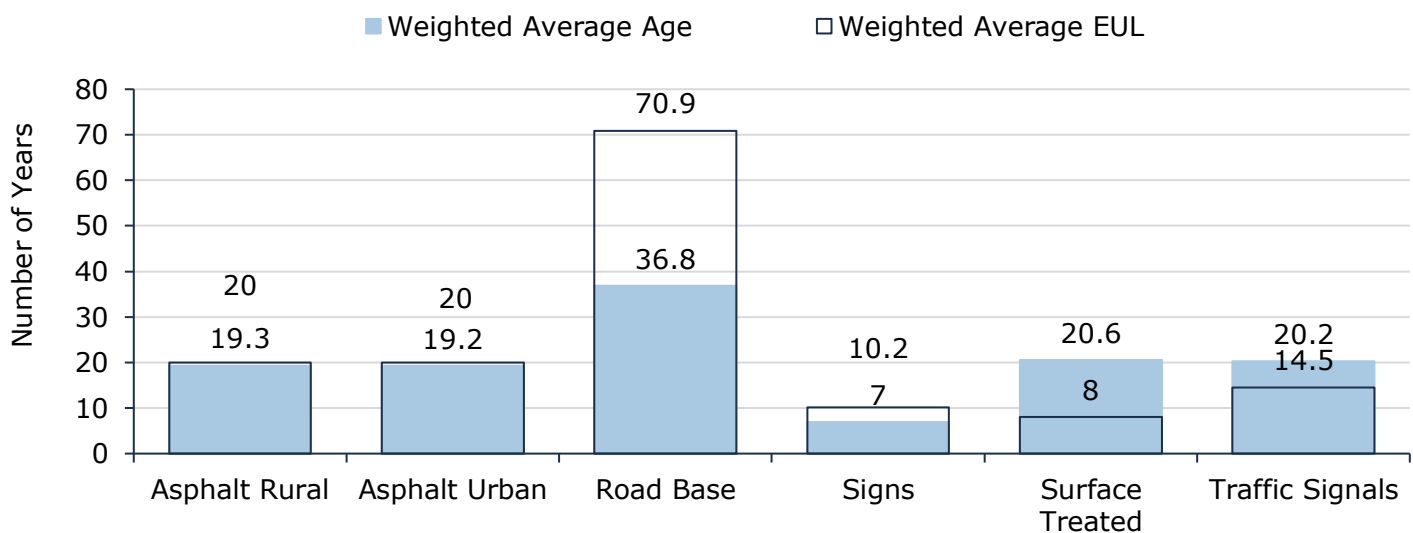


Figure 31 Estimated Useful Life vs. Asset Age: Road Network

Age analysis shows that most road-related assets are approaching or have exceeded their expected useful life.

Note: Figure 31's Average Estimated Useful Life (EUL) is based on the original estimated lifespan with no mid-lifecycle interventions (i.e. crack sealing, spot repairs, overlays, etc.). As the County routinely performs mid-life interventions on road surfaces, it is expected that the roadway assets will well exceed their originally projected EULs.

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

5.4 Current Approach to Lifecycle Management

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

The following lifecycle strategies have been developed to illustrate the maintenance and rehabilitation cycle required to keep paved roads in a good state of repair. Tar & chip surfaces undergo a similar maintenance strategy as listed below accompanied by perpetual maintenance activities such as periodic surface treatments that maintain these roads in a state of good repair.

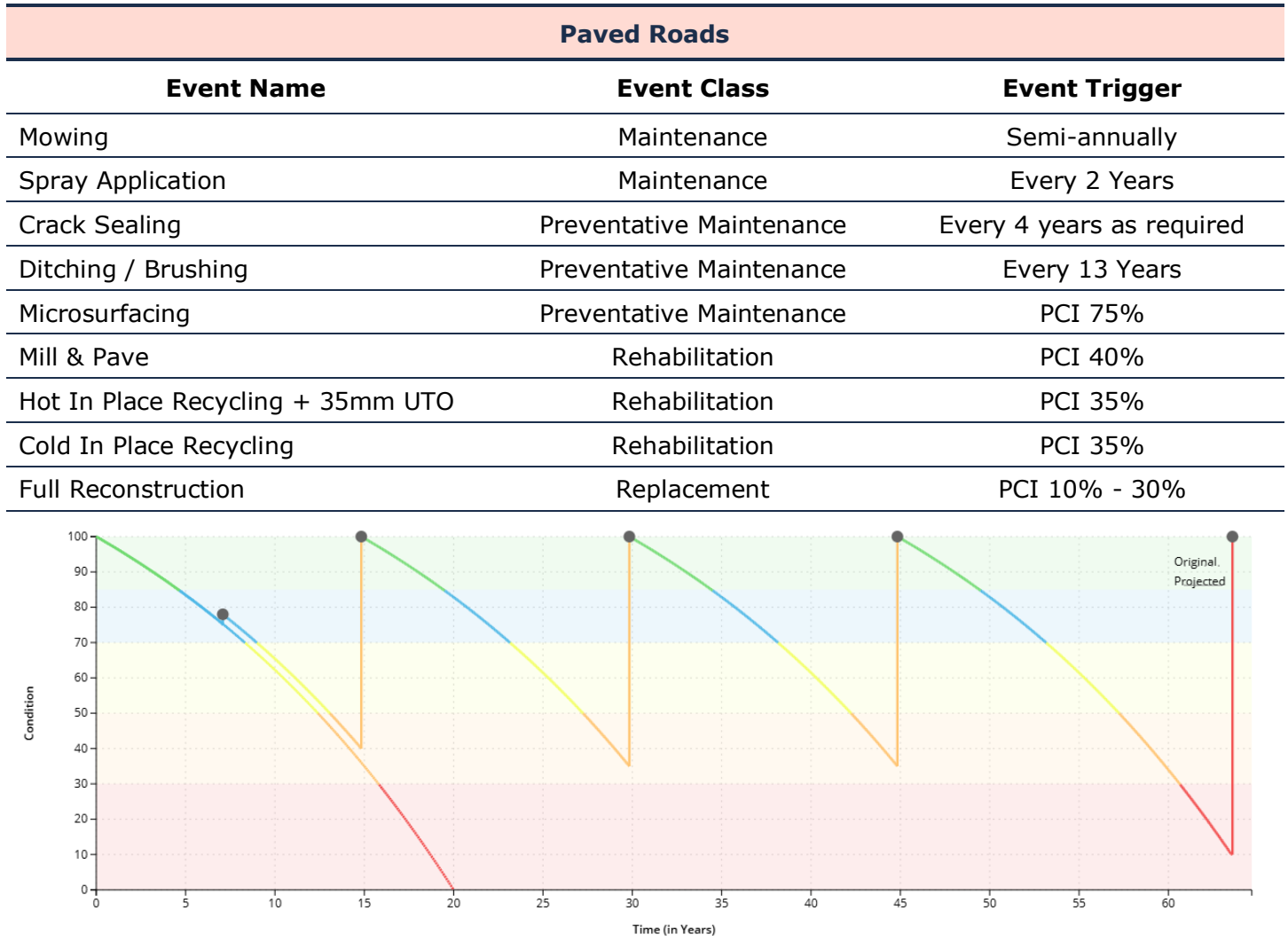


Table 7 Lifecycle Management Strategy: Road Network (Paved Roads)

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

Activity Type	Description of Current Strategy
Maintenance	Pothole repairs are completed annually based on deficiencies identified through regular road patrols and feedback from the public.
	Summer maintenance activities include grading, re-gravelling, dust control, ditching, roadside mowing, tree trimming, brush cleanup, road sign installation/maintenance, line painting, and crack sealing. .
	Winter maintenance activities include snow plowing and snow removal.
Rehabilitation	Rehabilitation activities include microsurfaceing, mill and pave, hot in-place recycling, cold in-place recycling, and surface treatments.
Replacement	Surface treated roads are considered for upgrade to hot mix when their condition warrants replacement.
	Road replacement prioritization is determined by consideration of growth, risk, condition, health and safety, and social impact.
	Road reconstruction projects (that include road base & surface components) are identified based on road condition, risk, and sub-surface asset requirements (i.e. storm infrastructure, if applicable).
Inspection	The most recent Roads Assessment was prepared in 2023 by StreetScan. Road inspections/assessments are conducted annually by internal staff and, generally, a Road Needs Study is conducted by an external consultant every 4-5 years.
	Supporting infrastructure such as signs and traffic signals are inspected on a more ad hoc basis.

Table 8 Lifecycle Management Strategy: Road Network

5.5 Forecasted Long-Term Replacement Needs

Figure 32 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the County's road network. This analysis was run until 2093 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$15.1 million per year** 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) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period. It also shows a backlog \$4.6 million, dominated by road base. 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.

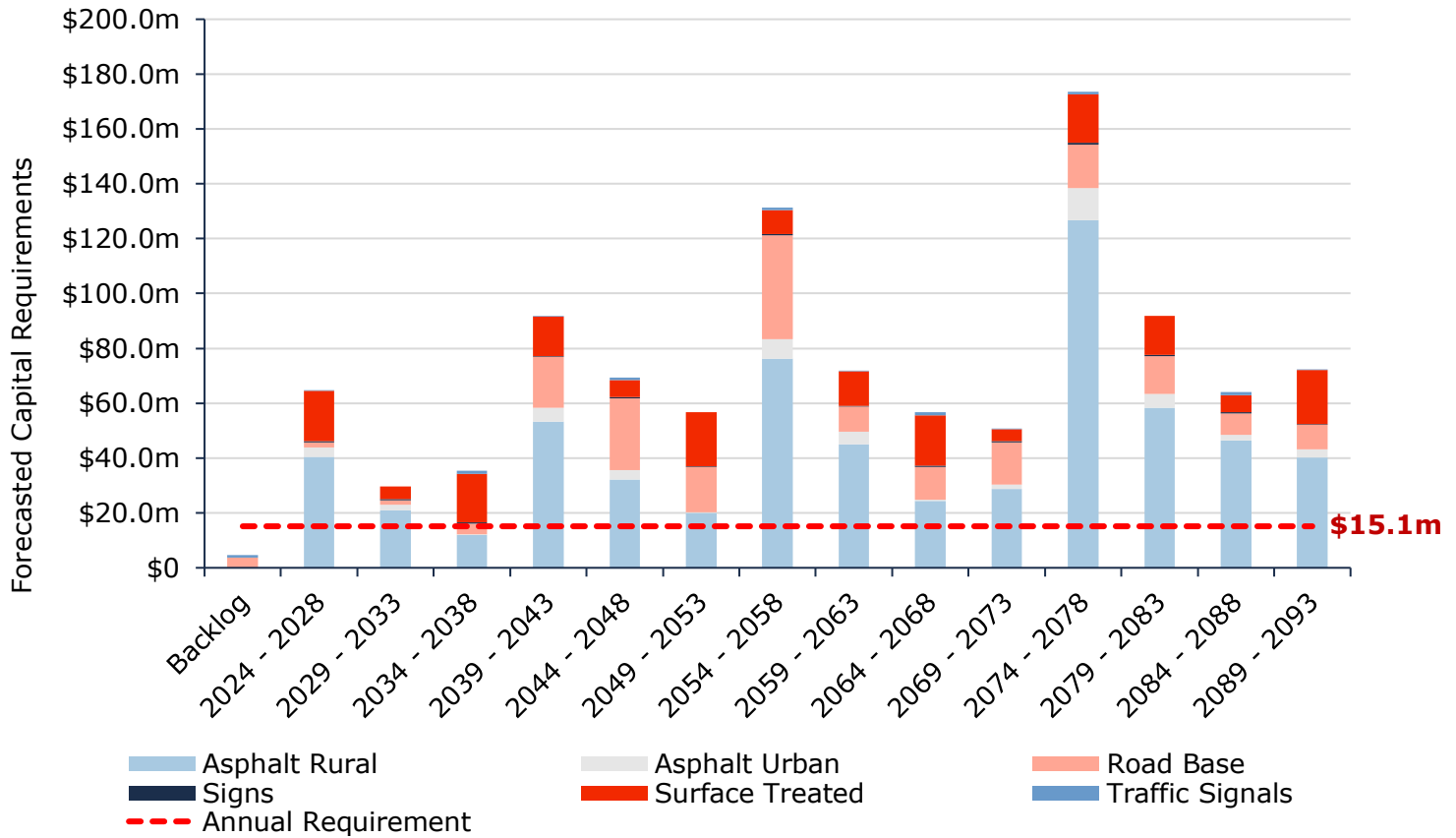


Figure 32 Forecasted Capital Replacement Needs: Road Network 2024-2093

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular pavement condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

5.6 Risk Analysis

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

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

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

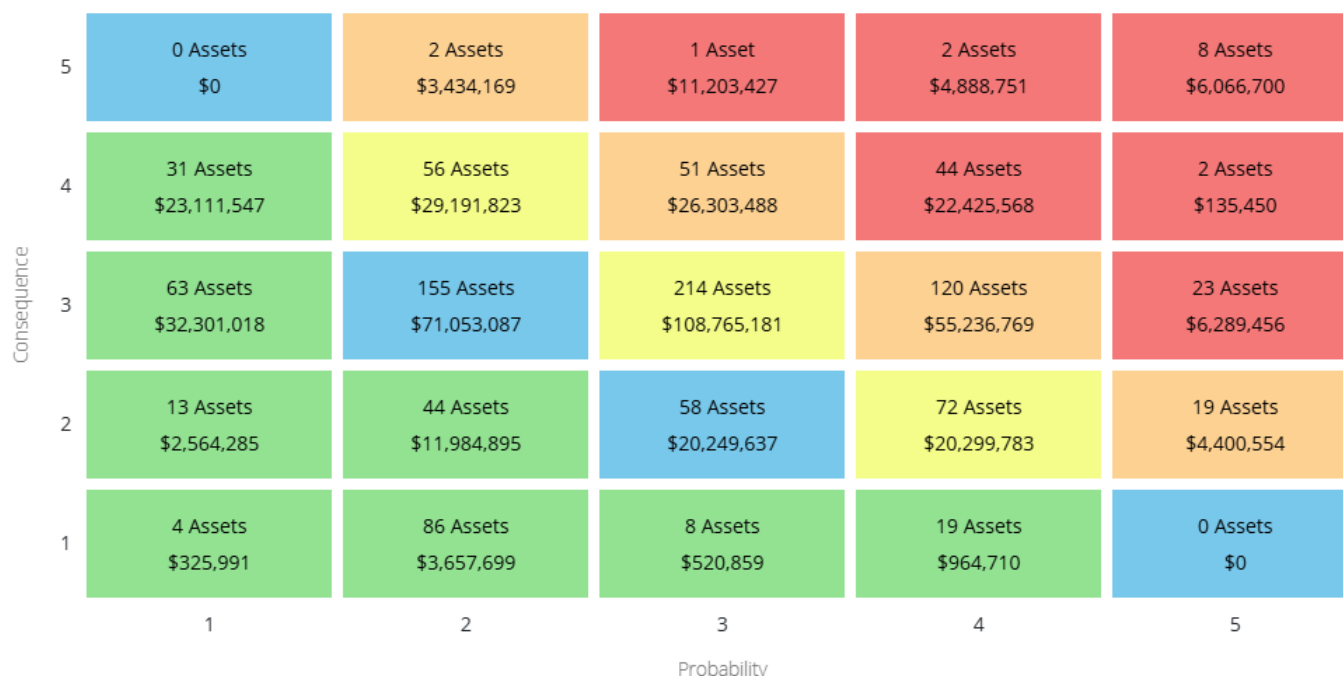


Figure 33 Risk Matrix: Road Network

5.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Financial Reinvestment

Maintaining County infrastructure and providing desired levels of service requires the allocation of adequate financial resources. Fiscal capacity and budget constraints are a constant concern for staff across all departments attempting to manage the maintenance and rehabilitation of County infrastructure. Capital funding is all too often negatively impacted by increasing operating costs.

Municipalities typically have few means at their disposal to raise adequate and sustainable funding to meet operational and capital requirements. As a result, they are heavily dependent on both provincial and federal grant programs to maintain and replace municipal infrastructure. Any fluctuations in annual grant funding secured can have a dramatic impact on provided services.

5.7 Current Levels of Service

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

5.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description, which may include maps, of the road network in the County and its level of connectivity	The County's road network is critical infrastructure that supports multi-modal transportation including commercial and personal transportation, emergency vehicles, agricultural machinery, and cyclists. Also refer to Appendix C – Levels of Service Supplemental Information.
Performance	Description, images, or map that illustrate the different levels of road class pavement condition	A Road Assessment was completed in 2023 by StreetScan and provided surface condition data for the Bruce County road network.

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

5.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Availability	Lane-km of MMS classes 1 and 2 per land area (km/km ²)	0.30
	Lane-km of MMS classes 3 and 4 per land area (km/km ²)	0.04
Reliability	Average pavement condition index for paved roads in the County	66% (Good)
	Average surface condition for unpaved roads in the County (e.g. excellent, good, fair, poor, very poor)	44% (Fair)
Sustainability	Target vs. Actual Capital Reinvestment Rate	3.3% vs. 0.8%

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

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 County's ability to afford the PLOS.

The below tables and graphs 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 Section 4. *Proposed Levels of Service Analysis*.

5.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Road Network capital funding maintained at \$3.7m/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Road Network capital funding gradually increases from \$3.7m/year to \$15.1m/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for the road network. Scenario 3 was selected to mirror Scenario 2.

Table 11 Road Network PLOS Scenario Descriptions

5.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	56%	40%	24%	
	% Risk that is High and Very High	44%	53%	64%	
	Average Asset Risk	10.1	12.8	14.6	
	Annual Investment		\$3,676,000		This is the maintained parameter in this scenario
	Capital re-investment rate		0.8%		
Scenario 2	Average Condition	56%	53%	56%	
	% Risk that is High and Very High	44%	48%	44%	
	Average Asset Risk	10.1	10.8	10.3	
	Annual Investment		\$15,140,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		3.3%		
Scenario 3	Average Condition		Same as Scenario 2		
	% Risk that is High and Very High				
	Average Asset Risk				
	Annual Investment				
	Capital re-investment rate				

Table 12 Road Network PLOS Scenario Analysis

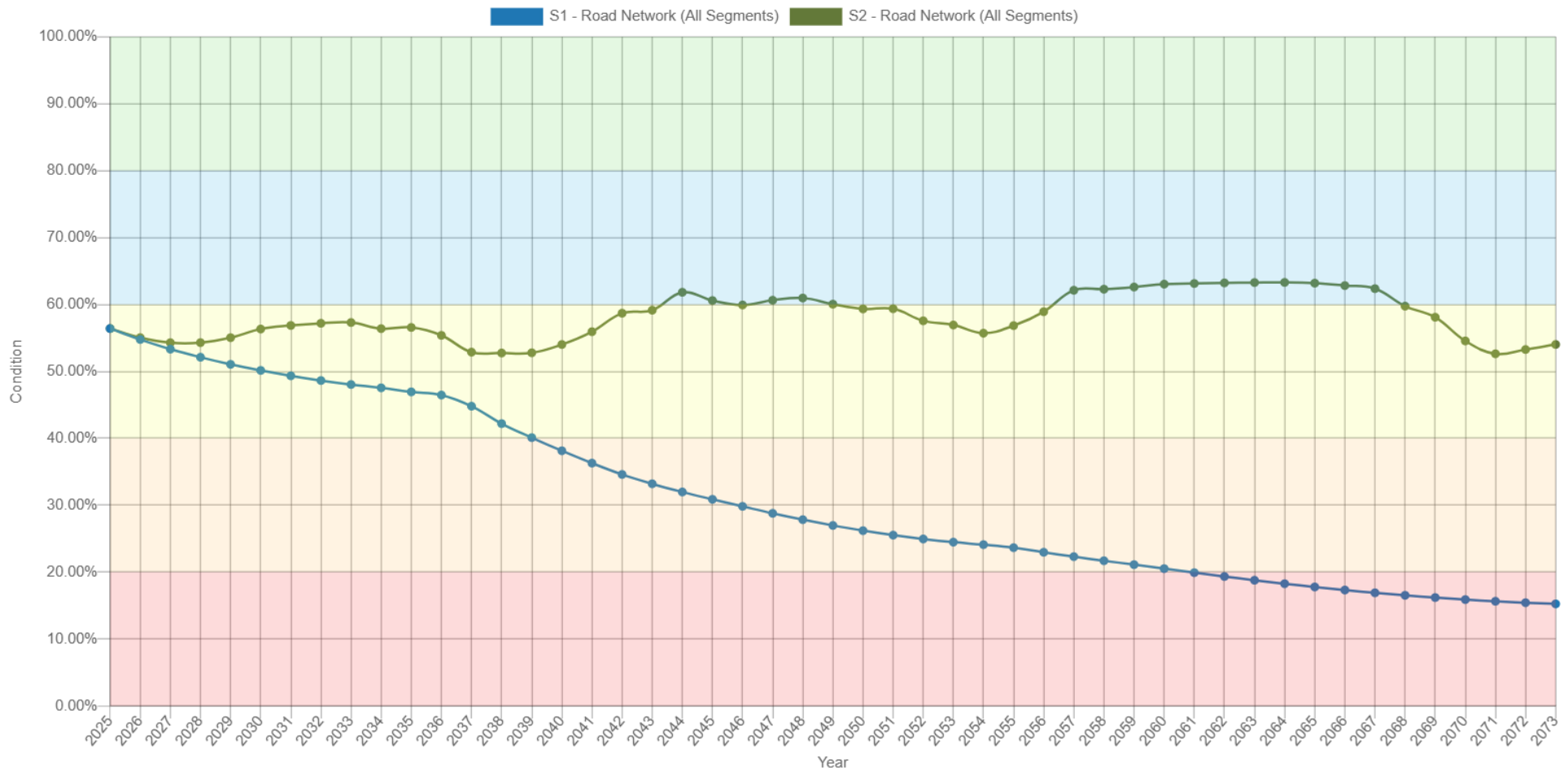


Figure 34 Road Network PLOS Scenario Condition Results

5.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the road network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m	\$15.1m
Projected Capital Spending	\$4.3m	\$5.0m	\$5.7m	\$6.4m	\$7.2m	\$7.9m	\$8.7m	\$9.5m	\$10.3m	\$11.2m
Funding Deficit	\$10.8m	\$10.1m	\$9.4m	\$8.7m	\$8.0m	\$7.2m	\$6.4m	\$5.6m	\$4.8m	\$4.0m
Target Reinvestment Rate	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Projected Reinvestment Rate	0.9%	1.1%	1.2%	1.4%	1.5%	1.7%	1.9%	2.0%	2.2%	2.4%

Table 13 Road Network 10-Year PLOS Financial Projections

6. Bridges & Culverts

Bridges Snapshot



82

Bridge Structures



74

Structural Culverts (>3m)

Total Replacement Cost



\$320 million



6.1 Inventory & Valuation

Table 14 summarizes the quantity and current replacement cost of bridges and culverts. The County owns and manages 82 bridges and 74 culverts.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Bridges	82	Assets	\$267,463,000	User-Defined
Culverts	74	Assets	\$52,828,000	User-Defined
TOTAL			\$320,291,000	

Table 14 Detailed Asset Inventory: Bridges & Culverts

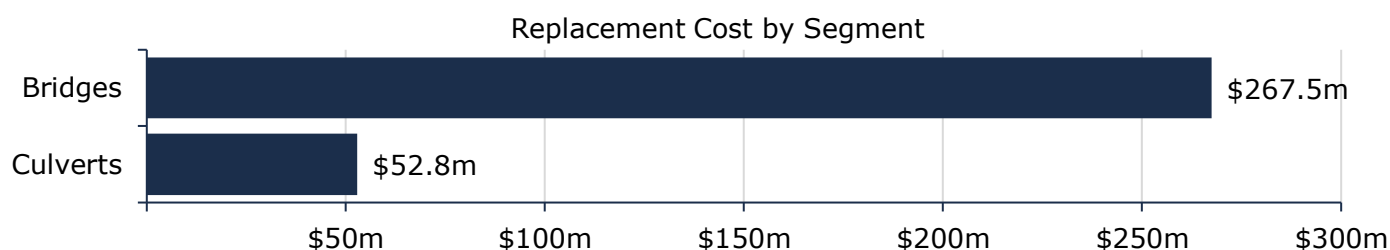


Figure 35 Portfolio Valuation: Bridges & Culverts

6.2 Asset Condition

Figure 36 summarizes the replacement cost-weighted condition of the County's bridges and culverts. Based on the County's recent Ontario Structures Inspection Manual (OSIM) assessments, 81% of bridges and culverts are in fair or better condition. Some elements or components of these structures may be candidates for replacement or rehabilitation in the medium term and should be monitored for further degradation in condition. At 19% of the total bridges and culverts portfolio, assets in poor or worse condition may require replacement in the immediate or short term.

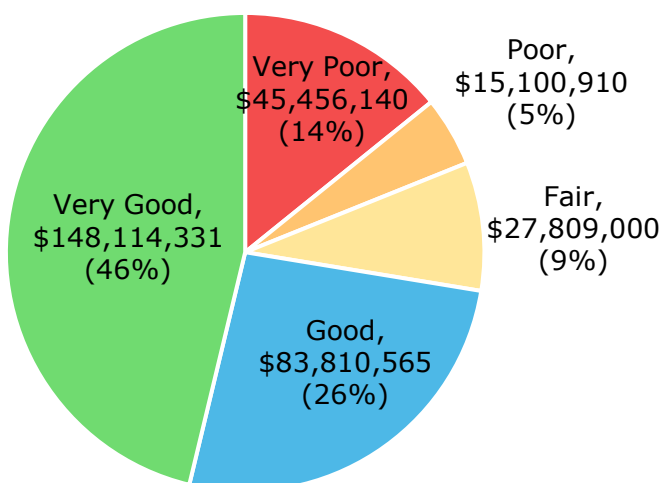


Figure 36 Asset Condition: Bridges & Culverts Overall

As further detailed in Figure 37, based on in-field condition assessments from 2021-2022 OSIM inspections, \$44 million of bridges were assessed as being in poor or worse condition. Similarly, \$16 million of structural culvert assets were identified as poor or worse. Bridges and structures with a poor or worse rating (i.e. a bridge condition index of less than 50) are not necessarily unsafe for regular use. The OSIM ratings are designed to identify repairs needed to elevate condition ratings to a fair or higher.

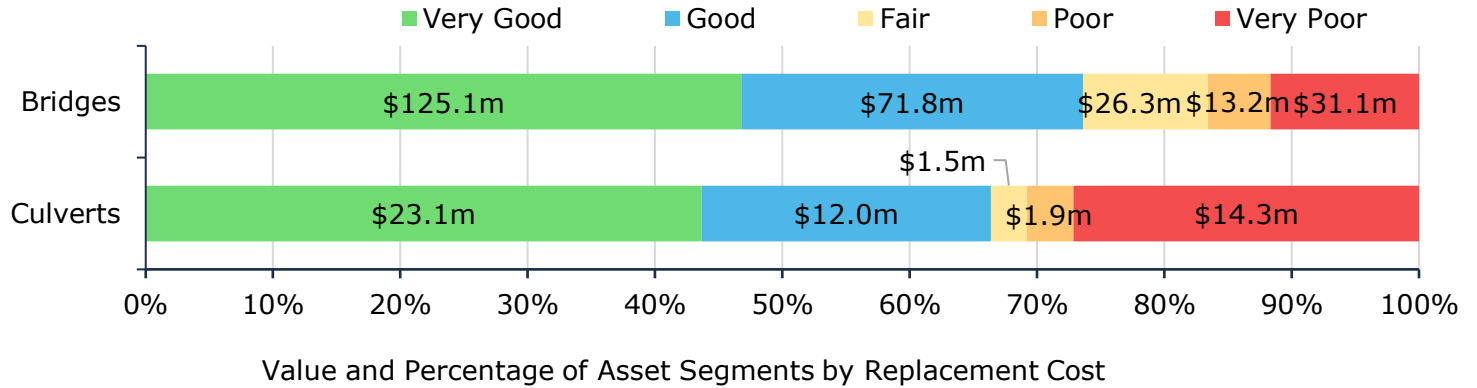


Figure 37 Asset Condition: Bridges & Culverts by Segment

6.3 Age Profile

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

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

Figure 38 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

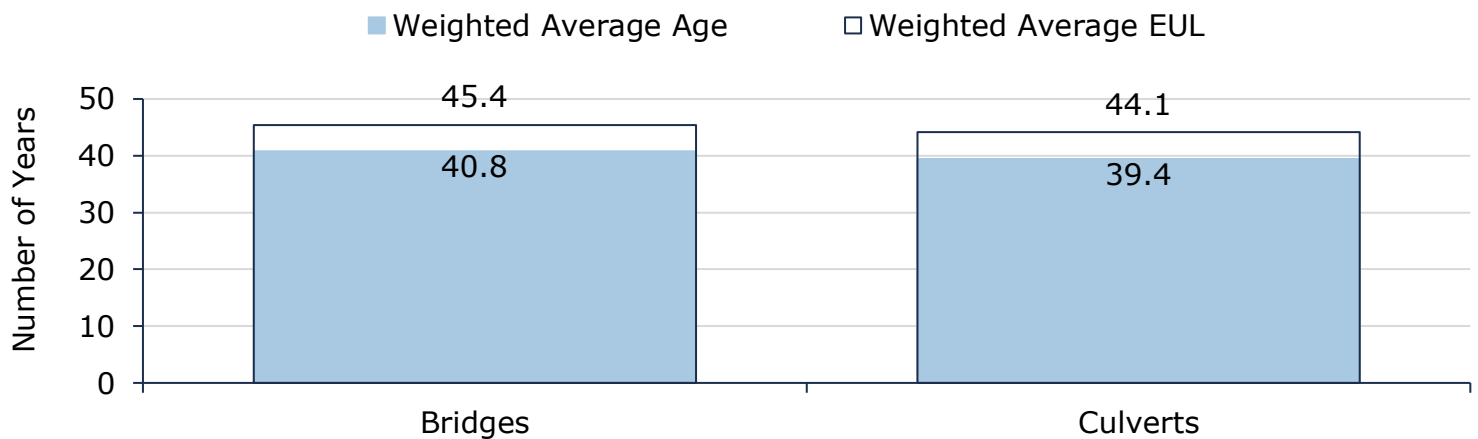


Figure 38 Estimated Useful Life vs. Asset Age: Bridges & Culverts

Age analysis reveals that on average both bridges and culverts have nearly exhausted their estimated useful life. OSIM assessments should continue to be used in conjunction with age and asset criticality to prioritize capital rehabilitation, replacement, and maintenance expenditures.

6.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance, Rehabilitation and Replacement	All lifecycle activities are driven by the results of mandated structural inspections completed according to the Ontario Structure Inspection Manual (OSIM)
Inspections	The most recent inspection report was completed in 2022 by B.M. Ross and Associates Limited

Table 15 Lifecycle Management Strategy: Bridges & Culverts

6.5 Forecasted Long-Term Replacement Needs

Figure 39 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the County's bridges and culverts. This analysis was run until 2093 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) for bridges and culverts total **\$8.7 million per year**. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

This capital forecast analysis highlights significant peaks in investment requirements for bridges and culverts over the planning horizon. The largest spike is projected in the next 5 years, with capital needs reaching \$95.2 million, driven primarily by bridge assets. A second major peak of \$88.0 million is expected in the 2069–2073 period. These projections and estimates 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.

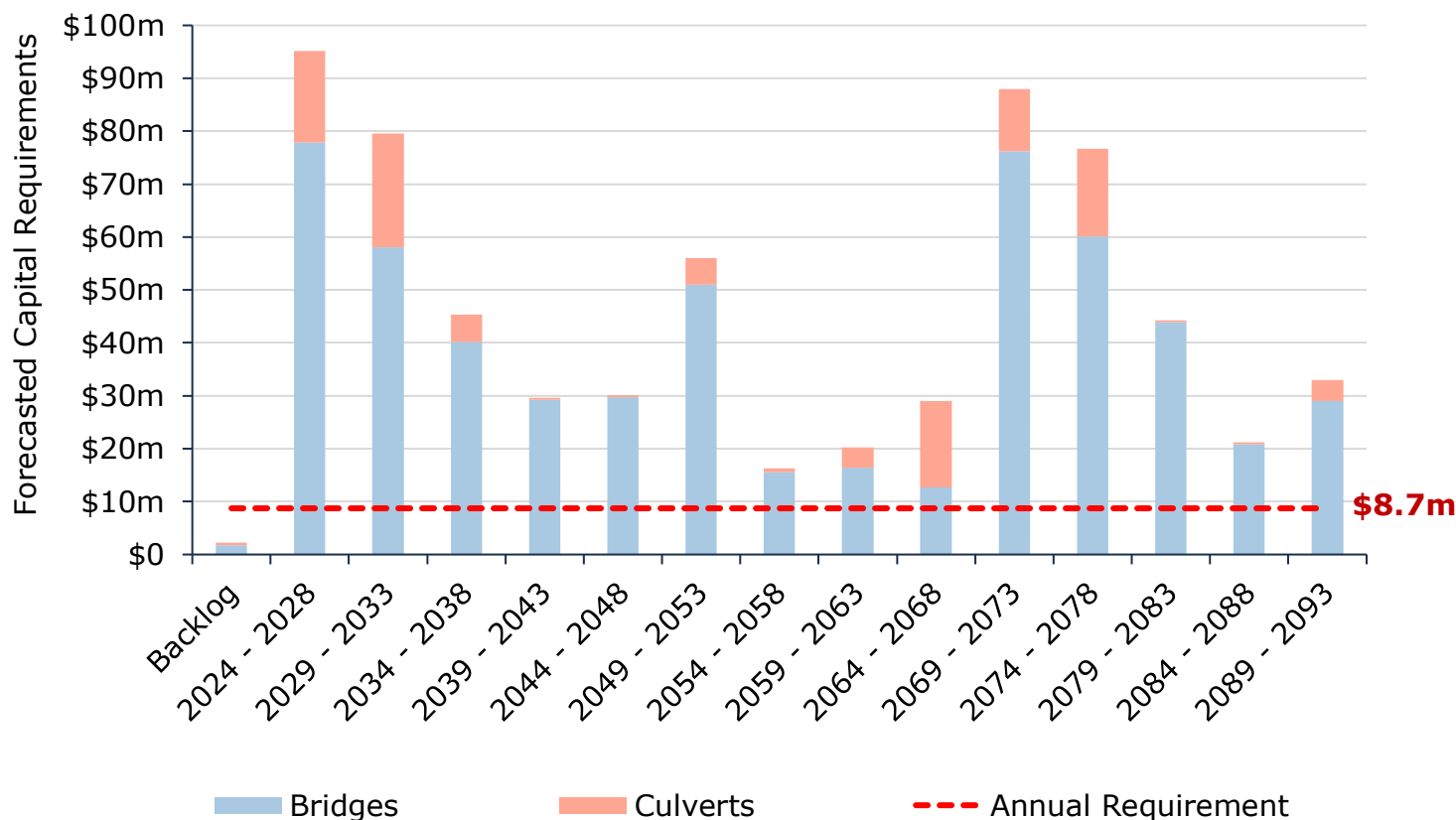


Figure 39 Forecasted Capital Replacement Needs: Bridges & Culverts 2024-2093

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. OSIM condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

6.6 Risk Analysis

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

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

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



Figure 40 Risk Matrix: Bridges & Culverts

An asset's criticality rating, determined by the nature and magnitude of the consequences of its potential failure should be used to prioritize projects, particularly lifecycle management strategies. Using risk in conjunction with levels of service, and the recommended workplans in OSIM inspections, can assist in optimizing limited funds.

6.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Aging Infrastructure

As County bridges continue to age, there are a handful of structures that are approaching their original useful life. Based on bi-annual OSIM inspections the engineering team reviews each structure in relation to the 5- and 10-year capital plans and makes recommendations as part of the annual budget process.



Capital Funding Strategies

Major capital rehabilitation projects for bridges and culverts are somewhat dependant on the availability of grant funding opportunities. When grants are not available, bridge rehabilitation projects may be deferred. An annual capital funding strategy can reduce dependency on grant funding and help prevent deferral of capital works. In the 2022 budget the County took proactive steps towards such a strategy by implementing a Capital Infrastructure Renewal Levy of 1.5% annually to be directed to a number of major bridge projects. These efforts have continued in the form of commitment to increasing the County's reinvestment rate annually in line with the Asset Management Plan recommendation.

6.7 Current Levels of Service

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

6.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description of the traffic that is supported by County bridges (e.g. heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	Bridges and structural culverts are a key component of the County's transportation network. 4% of the County's structures have loading or dimensional restrictions meaning that not all types of vehicles, including heavy transport, motor vehicles, emergency vehicles, agricultural machinery, and cyclists can cross them without restriction. Also refer to Appendix C – Levels of Service Supplemental Information.
Performance	Description or images of the condition of bridges & culverts and how this would affect use of the bridges & culverts	See Appendix C – Levels of Service Supplemental Information

Table 16 O. Reg. 588/17 Community Levels of Service: Bridges & Culverts

6.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Availability	% of bridges in the County with loading or dimensional restrictions	4%
Reliability	Average bridge condition index value for bridges in the County	69
	Average bridge condition index value for structural culverts in the County	61
Sustainability	Target vs. Actual Capital Reinvestment Rate	2.7% vs. 1.5%

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

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for bridges and culverts. Further PLOS analysis at the portfolio level can be found in section 4. *Proposed Levels of Service Analysis*.

6.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Bridges and culverts capital funding maintained at \$4.7m/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Bridges and culverts capital funding gradually increases from \$4.7m/year to \$8.7m/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for bridges and culverts. Scenario 3 was selected to mirror Scenario 2.

Table 18 Bridges & Culverts PLOS Scenario Descriptions

6.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	63%	42%	43%	
	% Risk that is High and Very High	42%	49%	56%	
	Average Asset Risk	11.6	15.4	14.8	
	Annual Investment		\$4,680,000		This is the maintained parameter in this scenario
	Capital re-investment rate		1.5%		
Scenario 2	Average Condition	63%	52%	69%	
	% Risk that is High and Very High	43%	52%	31%	
	Average Asset Risk	11.6	13.5	9.8	
	Annual Investment		\$8,734,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		2.7%		
Scenario 3	Average Condition				
	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
	Annual Investment				
	Capital re-investment rate				

Table 19 Bridges & Culverts PLOS Scenario Analysis

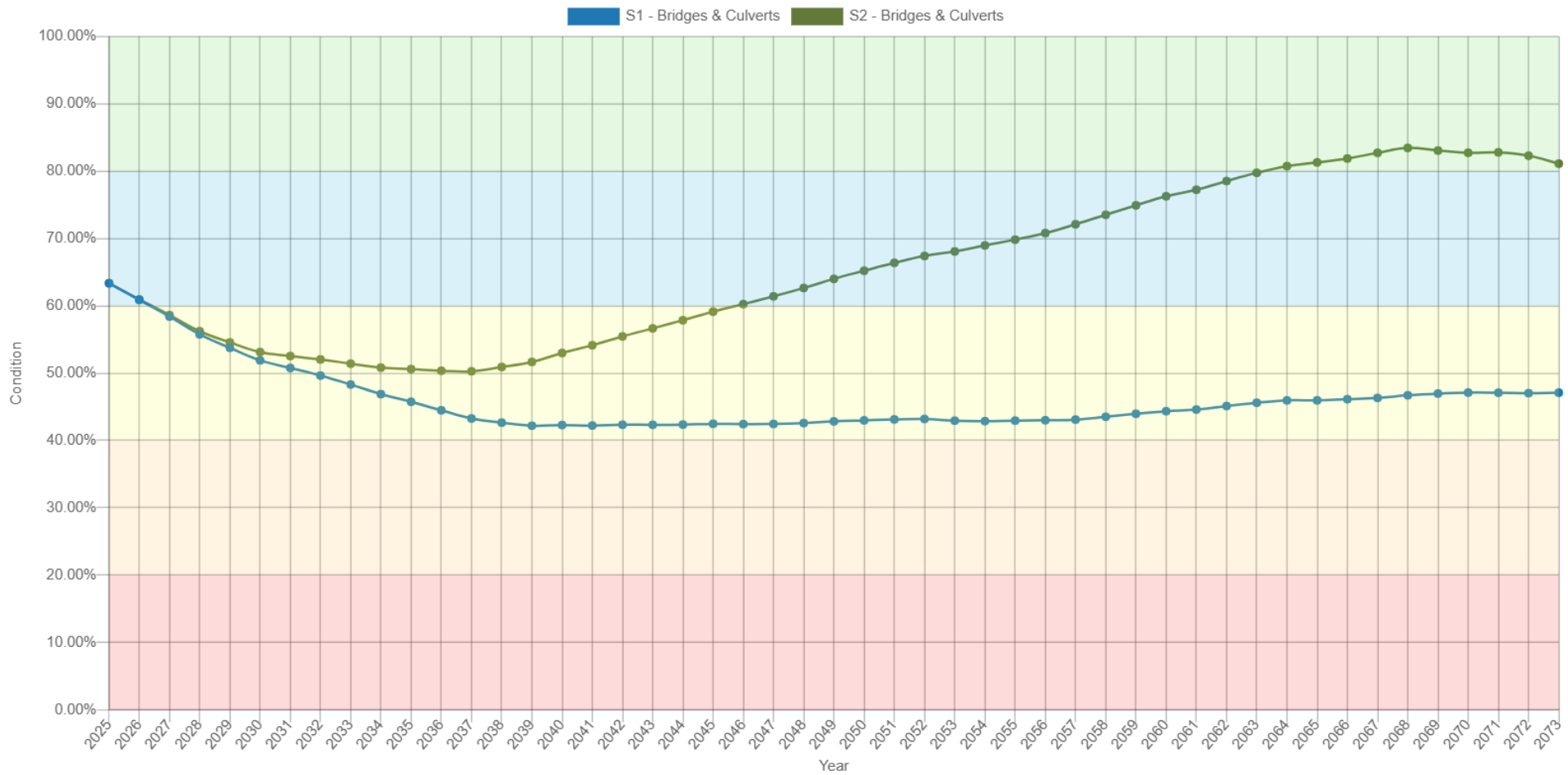


Figure 41 Bridges & Culverts PLOS Scenario Condition Results

6.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for bridges and culverts if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m	\$8.7m
Projected Capital Spending	\$4.9m	\$5.2m	\$5.4m	\$5.7m	\$5.9m	\$6.2m	\$6.5m	\$6.7m	\$7.0m	\$7.3m
Funding Deficit	\$3.8m	\$3.6m	\$3.3m	\$3.1m	\$2.8m	\$2.6m	\$2.3m	\$2.0m	\$1.7m	\$1.4m
Target Reinvestment Rate	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
Projected Reinvestment Rate	1.5%	1.6%	1.7%	1.8%	1.8%	1.9%	2.0%	2.1%	2.2%	2.3%

Table 20 Bridges & Culverts 10-Year PLOS Financial Projections

7. Stormwater Infrastructure

Storm Assets Snapshot

29 km

Storm Sewers

162

Storm Manholes

1,164

Catch Basins

Total Replacement Cost

\$29 million



7.1 Inventory & Valuation

Table 21 summarizes the quantity and current replacement cost of the County's various stormwater infrastructure assets as managed in its primary asset management register, Citywide Assets.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Catch Basins	1,164	Assets	\$10,264,000	Cost/Unit
Manholes	162	Assets	\$3,199,000	Cost/Unit
Storm Sewers	28.8	Kilometers	\$15,862,000	Cost/Unit
TOTAL			\$29,325,000	

Table 21 Detailed Asset Inventory: Stormwater Infrastructure

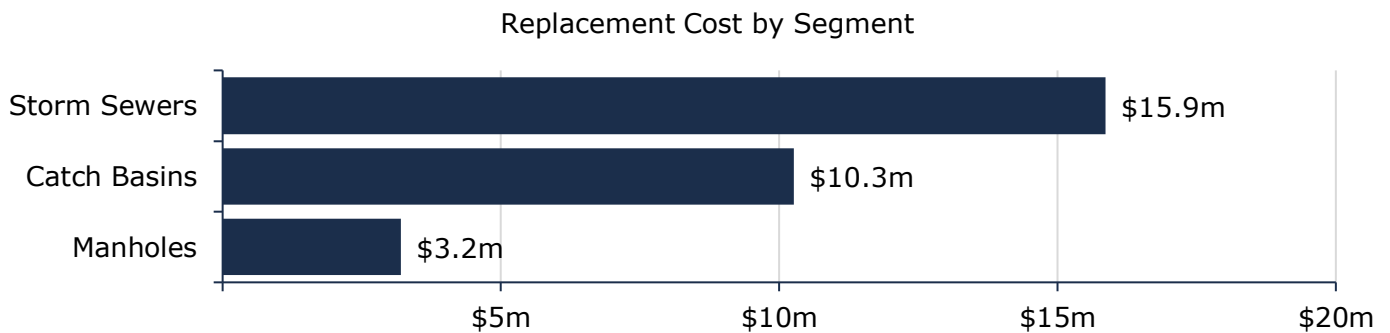


Figure 42 Portfolio Valuation: Stormwater Infrastructure

7.2 Asset Condition

Figure 43 summarizes the replacement cost-weighted condition of the County's stormwater infrastructure. Based on age projected conditions, all stormwater assets are in fair or better condition; No condition assessments were available for any stormwater assets.

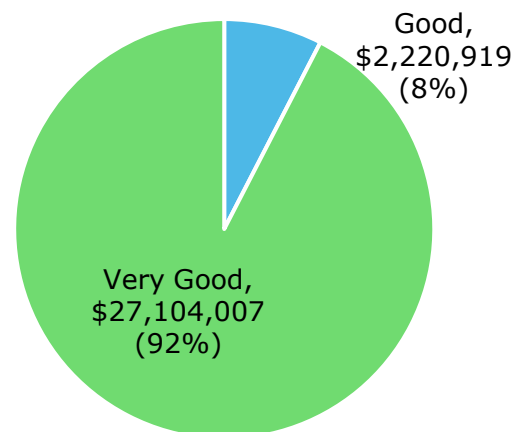


Figure 43 Asset Condition: Stormwater Infrastructure Overall

As illustrated in Figure 44, based on age-projected conditions, the majority of the County's catch basins, manholes, and storm sewers are in very good condition. As age-based conditions have a higher risk of being inaccurate, it is recommended to verify conditions with field based inspections, which may include CCTV inspections.

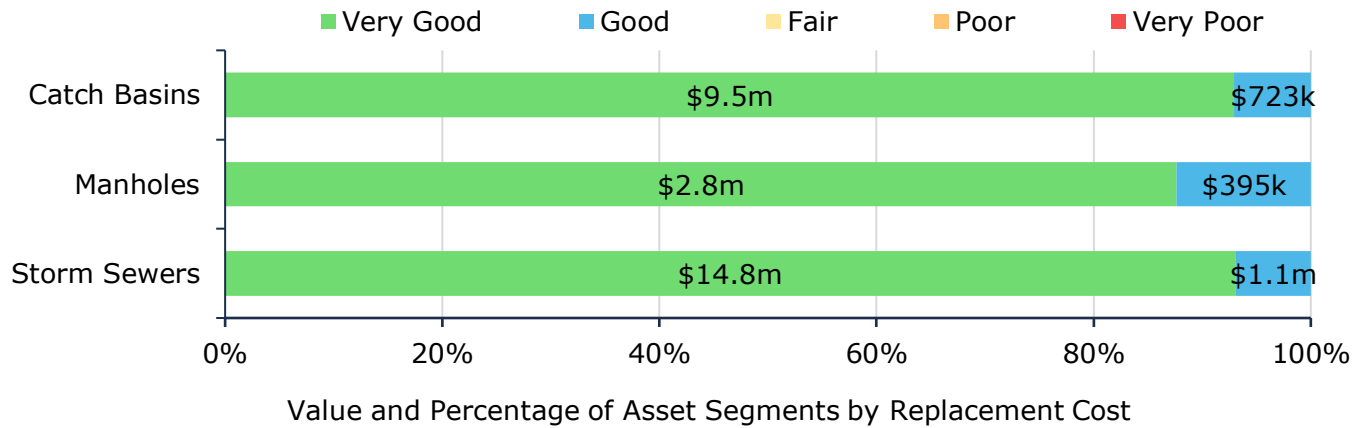


Figure 44 Asset Condition: Stormwater Infrastructure by Segment

7.3 Age Profile

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

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

Figure 45 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

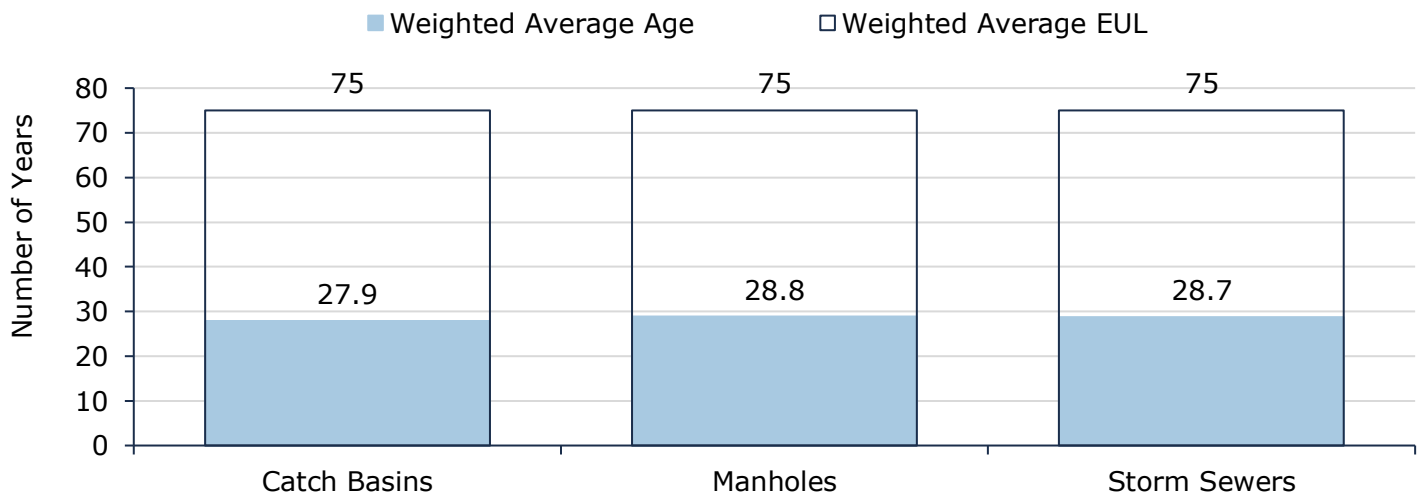


Figure 45 Estimated Useful Life vs. Asset Age: Stormwater Infrastructure

Age analysis reveals that, on average, catch basins, manholes, and storm sewers are in the early to mid stages of their expected useful life. With weighted average ages around 28 years and a consistent expected useful life of 75 years across all three asset types, these stormwater assets appear to be in relatively good condition with significant remaining service life.

7.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance	Maintenance activities are informal and more reactive compared to other infrastructure and assets
	Primary activities include annual catch basin cleaning and storm main flushing when required

Table 22 Lifecycle Management Strategy: Stormwater Infrastructure

7.5 Forecasted Long-Term Replacement Needs

Figure 46 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the County's stormwater infrastructure. This analysis was run until 2093 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$391,000 per year** for all assets in the stormwater infrastructure portfolio. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period. It also reveals two significant peaks in investment needs, the first occurring between 2054-2058 at \$6.4 million, followed by \$7.9 million between 2079-2083, both driven primarily by storm sewer replacements. These projections are based on asset replacement costs, age analysis, and condition data when available. 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.

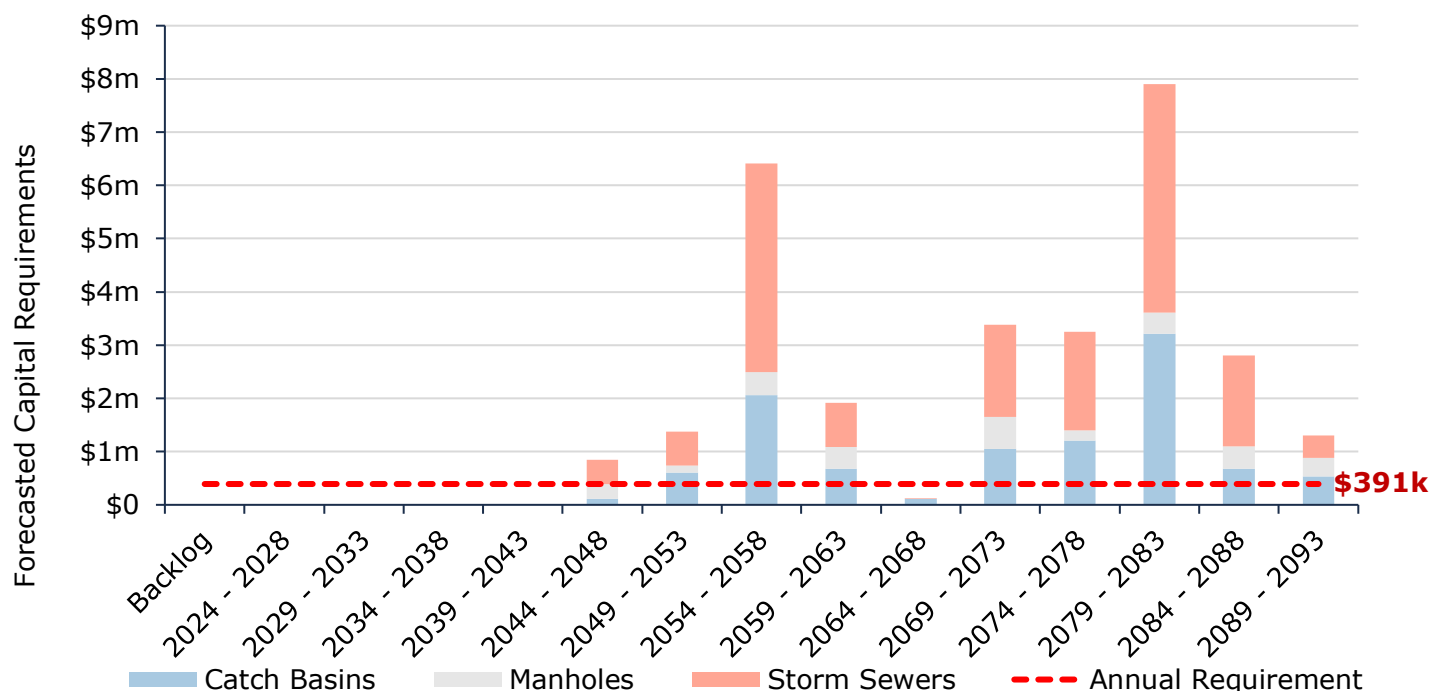


Figure 46 Forecasted Capital Replacement Needs: Stormwater Infrastructure 2024-2093

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

7.6 Risk Analysis

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

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

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

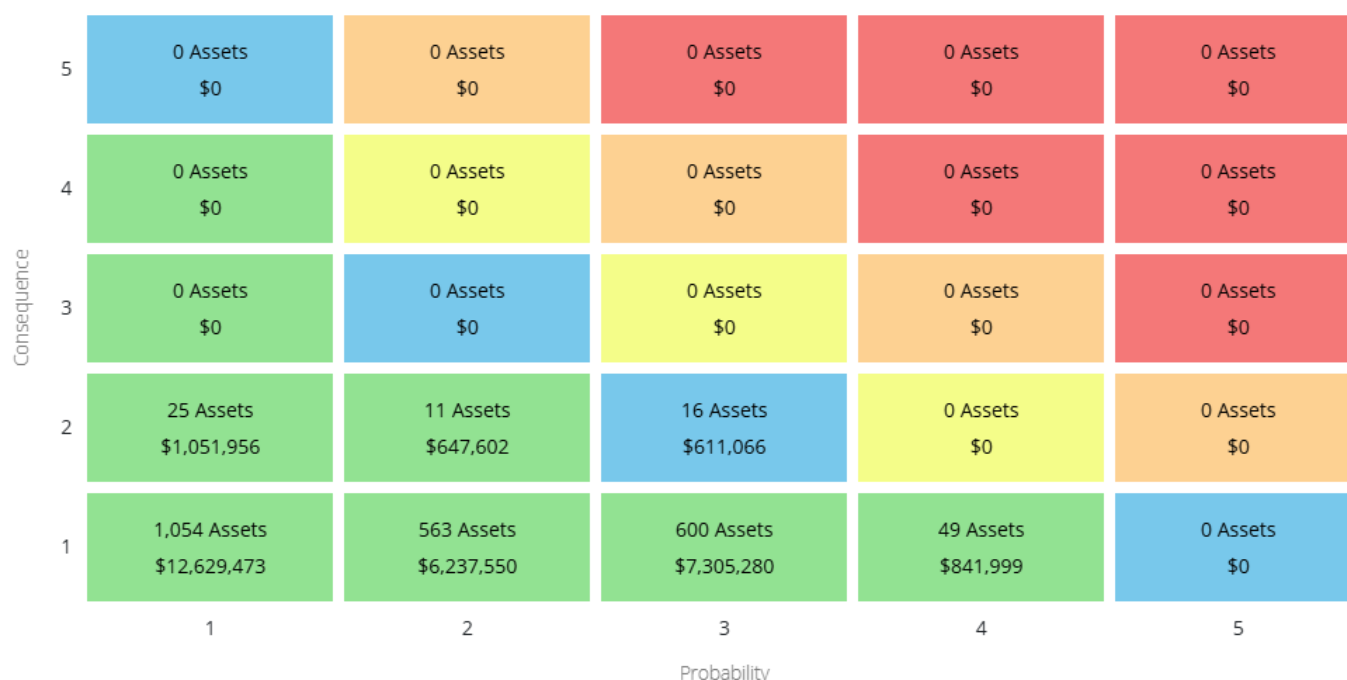


Figure 47 Risk Matrix: Stormwater Infrastructure

7.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Aging Infrastructure

As County stormwater infrastructure continues to age without current condition assessment data, some stormwater structures may be approaching the end of their original useful life. The County has developed a plan to assess a portion of stormwater structures annually starting in 2024 to determine assets that will require future replacement, rehabilitation or disposal. The County incorporates replacements with road reconstruction projects where appropriate.



Capital Funding Strategies

Major capital reconstruction projects for stormwater infrastructure are typically included in road reconstruction projects. The County can access additional grant funding opportunities for stormwater infrastructure, especially regarding impacts of climate change and flooding. When grants are not available, stormwater infrastructure rehabilitation or reconstruction projects may be deferred.

7.7 Current Levels of Service

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

7.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description, which may include map, of the user groups or areas of the County that are protected from flooding, including the extent of protection provided by the County stormwater infrastructure.	The County's stormwater collection network controls minor or nuisance storms in urban areas. Their biggest benefit is protection of the road from minor flooding and prolonging the life of the road assets. Also refer to Appendix C – Levels of Service Supplemental Information
Performance	Description or images of the condition of stormwater infrastructure and how this would affect the level of protection provided by the network.	The County's transportation connectivity is highly dependent on critical water crossings. Without the proper maintenance and repair of the County's bridge and culvert structures the levels of service provided by the transportation network would be severely affected.

Table 23 O. Reg. 588/17 Community Levels of Service: Stormwater Infrastructure

7.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Reliability	% of properties in County resilient to a 100-year storm	95% ²
	% of the County's stormwater management system resilient to a 5-year storm	95% ³
Sustainability	Target vs. Actual Capital Reinvestment Rate	1.3% vs 0%

Table 24 O. Reg. 588/17 Technical Levels of Service: Stormwater Infrastructure

² The County does not currently have data available to determine this technical metric. The rate of properties that are not expected to be resilient to a 100-year storm is expected to be very low.

³ This is based on the observations of County staff.

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the stormwater infrastructure. Further PLOS analysis at the portfolio level can be found in section 4. *Proposed Levels of Service Analysis*.

7.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Stormwater infrastructure capital funding maintained at \$0/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Stormwater infrastructure capital funding gradually increases from \$0/year to \$391,000/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for stormwater infrastructure. Scenario 3 was selected to mirror Scenario 2.

Table 25 Stormwater Infrastructure PLOS Scenario Descriptions

7.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	69%	51%	29%	
	% Risk that is High and Very High	0%	0%	1%	
	Average Asset Risk	2.6	3.8	5.1	
	Annual Investment		\$0		This is the maintained parameter in this scenario
	Capital re-investment rate		0%		
Scenario 2	Average Condition	69%	51%	47%	
	% Risk that is High and Very High	0%	52%	31%	
	Average Asset Risk	2.6	3.8	4.1	
	Annual Investment		\$391,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		1.3%		
Scenario 3	Average Condition				
	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
	Annual Investment				
	Capital re-investment rate				

Table 26 Stormwater Infrastructure PLOS Scenario Analysis

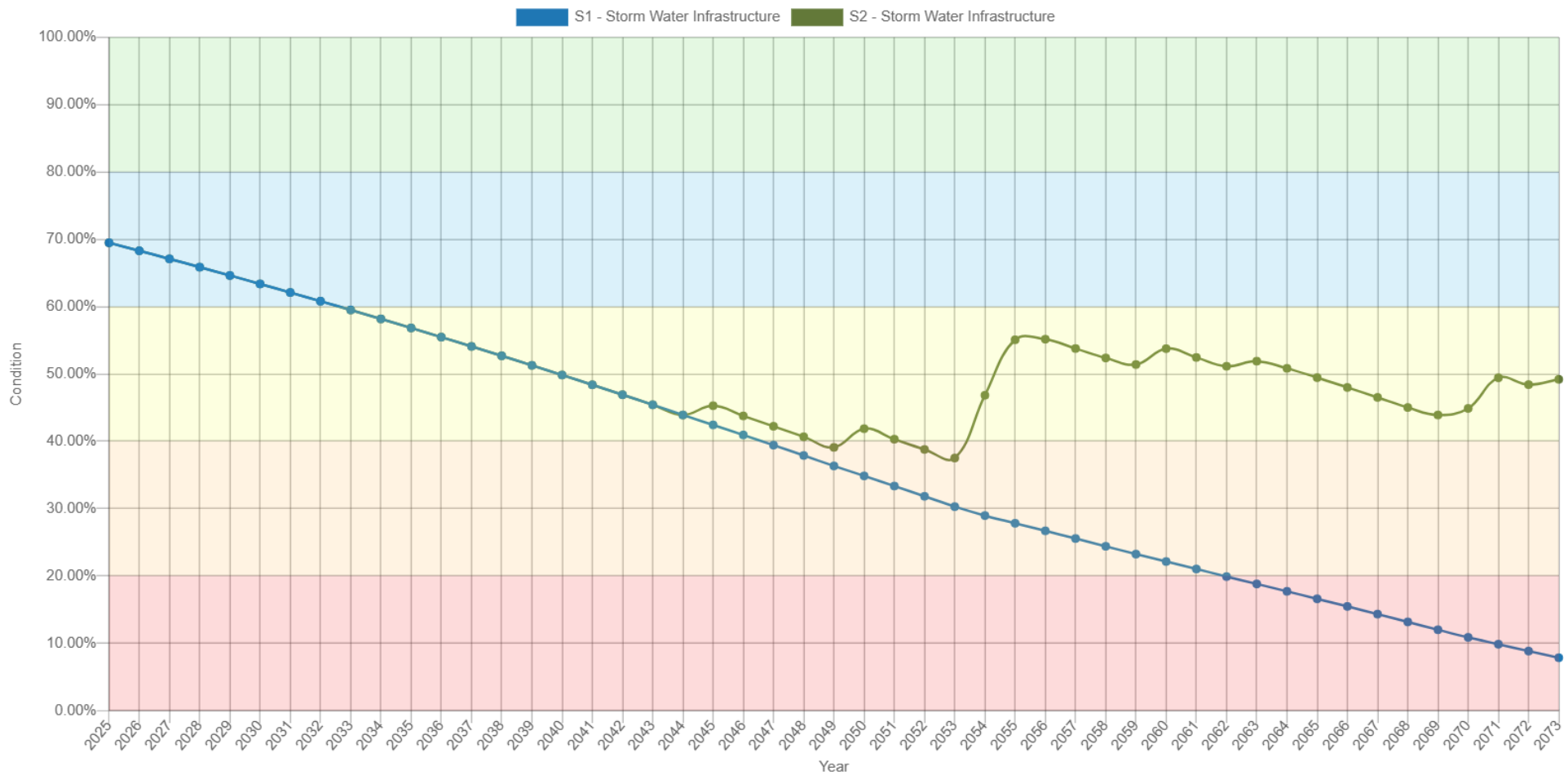


Figure 48 Stormwater Infrastructure PLOS Scenario Condition Results

7.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the stormwater infrastructure if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$391k	\$391k	\$391k	\$391k	\$391k	\$391k	\$391k	\$391k	\$391k	\$391k
Projected Capital Spending	\$22k	\$46k	\$69k	\$94k	\$119k	\$145k	\$171k	\$199k	\$227k	\$256k
Funding Deficit	\$369k	\$345k	\$322k	\$297k	\$272k	\$246k	\$220k	\$192k	\$164k	\$135k
Target Reinvestment Rate	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
Projected Reinvestment Rate	0.1%	0.2%	0.2%	0.3%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%

Table 27 Stormwater Infrastructure 10-Year PLOS Financial Projections

Category Analysis: Non-Core Assets

Buildings

Land Improvements

Fleet

Furniture & Equipment

Technology & Communication

Trail Network

8. Buildings

Buildings Assets Snapshot



48

County Owned Buildings



4,515

Componentized Building Assets



30

County Housing Units



2

Long-Term Care Facilities

Total Replacement Cost



\$308 million



8.1 Inventory & Valuation

Table 28 summarizes the quantity and current replacement cost of the County's various buildings assets as managed in its primary asset management register, Citywide Assets.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administration	7 (584)	Assets (Components)	\$40,358,000	Cost/Unit
Bruce County Housing Corporation	29 (3076)	Assets (Components)	\$150,266,000	Cost/Unit & CPI Tables
Long Term Care	2 (288)	Assets (Components)	\$65,301,000	Cost/Unit
Museum	4 (192)	Assets (Components)	\$28,642,000	Cost/Unit & CPI Tables
Paramedic Services	1 (48)	Assets (Components)	\$1,148,000	Cost/Unit
Transportation & Environmental Services	5 (327)	Assets (Components)	\$22,150,000	Cost/Unit
TOTAL	48 (4,515)		\$307,865,000	

Table 28 Detailed Asset Inventory: Buildings

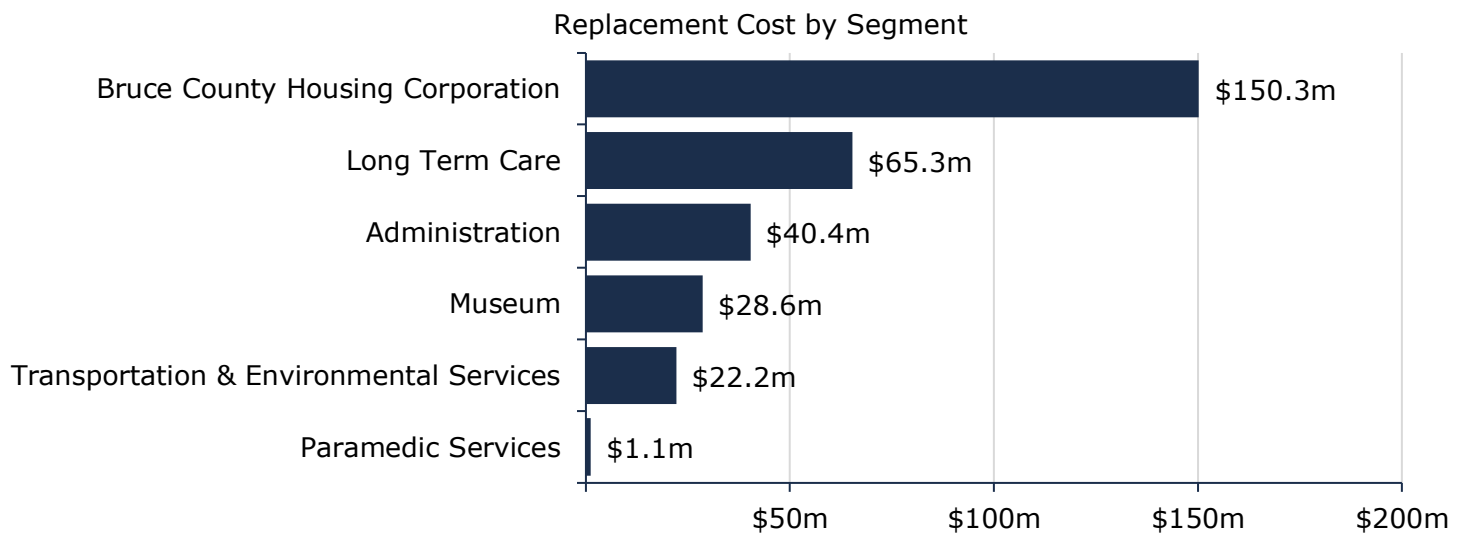


Figure 49 Portfolio Valuation: Buildings

8.2 Asset Condition

Figure 50 summarizes the replacement cost-weighted condition of the County's buildings. Based on a combination of field inspection data and age, 75% of assets are in fair or better condition; the remaining 25% of assets are in poor to very poor condition. Condition assessments were available for 94% of buildings assets.

Assets in poor or worse condition may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. Figure 50 shows the majority of the County's buildings assets are in fair or better condition.

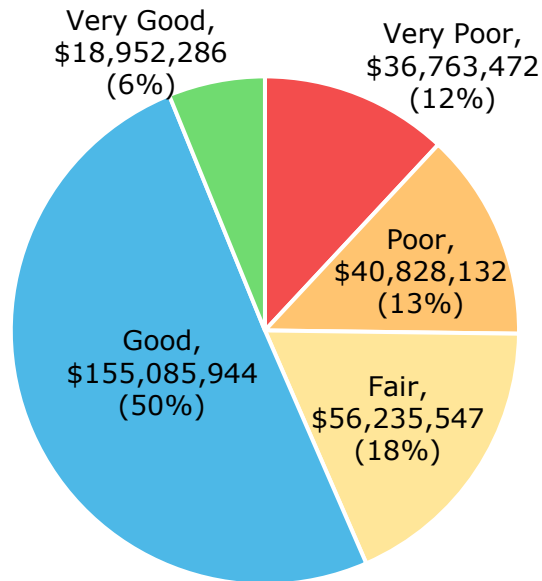


Figure 50 Asset Condition: Buildings Overall

As illustrated in Figure 51, based on a combination of condition assessments and age-based analysis, the majority of the County's buildings assets are in good condition, with administration holding the largest proportions of assets in poor or very poor condition.

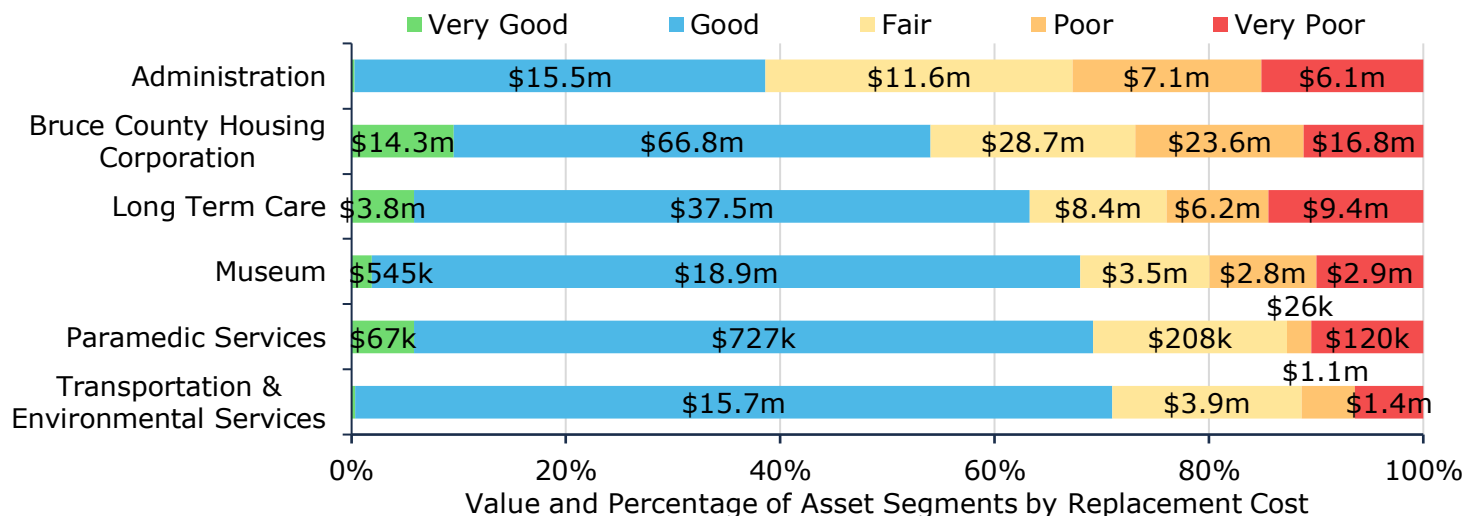


Figure 51 Asset Condition: Buildings by Segment

8.3 Age Profile

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

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

Figure 52 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

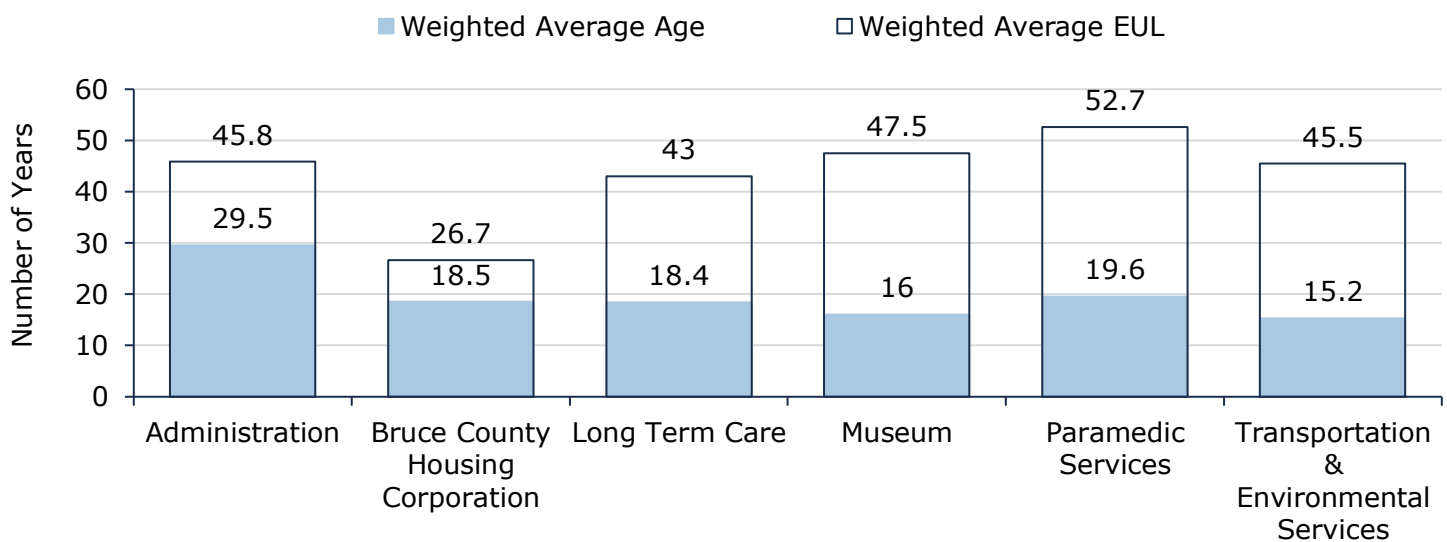


Figure 52 Estimated Useful Life vs. Asset Age: Buildings

Age analysis reveals that, on average, all buildings assets are in the early- to mid-stages of their expected useful life, with the exception of the Bruce County Housing Corporation, which averages its' building assets entering the latter stages. Buildings are a unique asset category, as each component of a facility has drastically different life expectancies and maintenance requirements. Routine building condition assessments are recommended to guide maintenance, rehabilitation, and replacement needs over age.

8.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance	Monthly health and safety inspections trigger maintenance inspections for all buildings. Routine maintenance is conducted on long term care facilities including electrical, mechanical, plumbing, HVAC, fire safety, specialized equipment, and land improvements (i.e. parking lot, walkways, etc.) as required.
Rehabilitation/ Replacement	Based on inspection results and consultants' recommendations as well as being reviewed with housing facility staff. Components at high risk, high probability of failure, or KPI impact.

Table 29 Lifecycle Management Strategy: Buildings

8.5 Forecasted Long-Term Replacement Needs

Figure 53 illustrates the cyclical short-, medium- and long-term infrastructure rehabilitation and replacement requirements for the County's buildings. This analysis was run until 2083 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$13.6 million per year** for all assets in the buildings portfolio. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates substantial capital needs throughout the forecast period, remaining relatively consistent over the next two decades, peaking in 2044-2048 with \$74 million in requirements in that 5-year period. The chart also shows a backlog of \$9.2 million. These projections are based on asset replacement costs, age analysis, and condition data when available. 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.

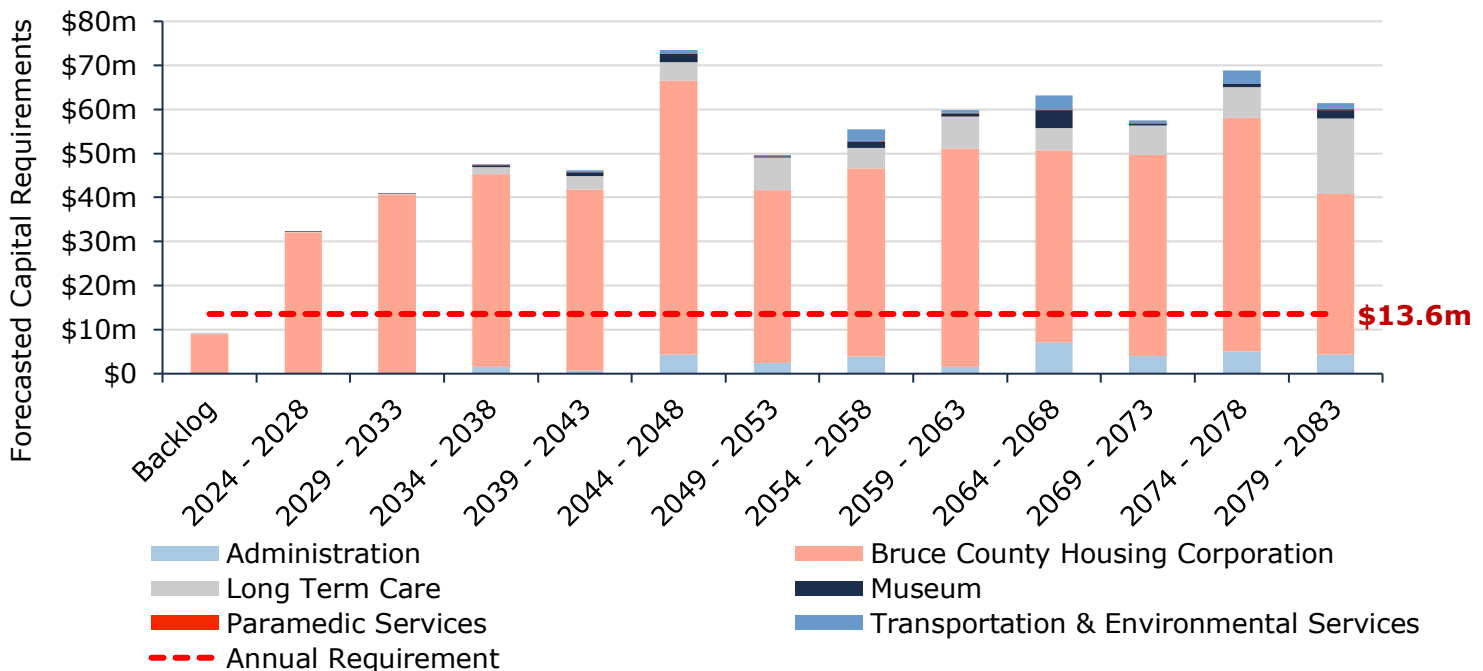


Figure 53 Forecasted Capital Replacement Needs: Buildings 2024-2083

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. Regular condition assessments and a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

8.6 Risk Analysis

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

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

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

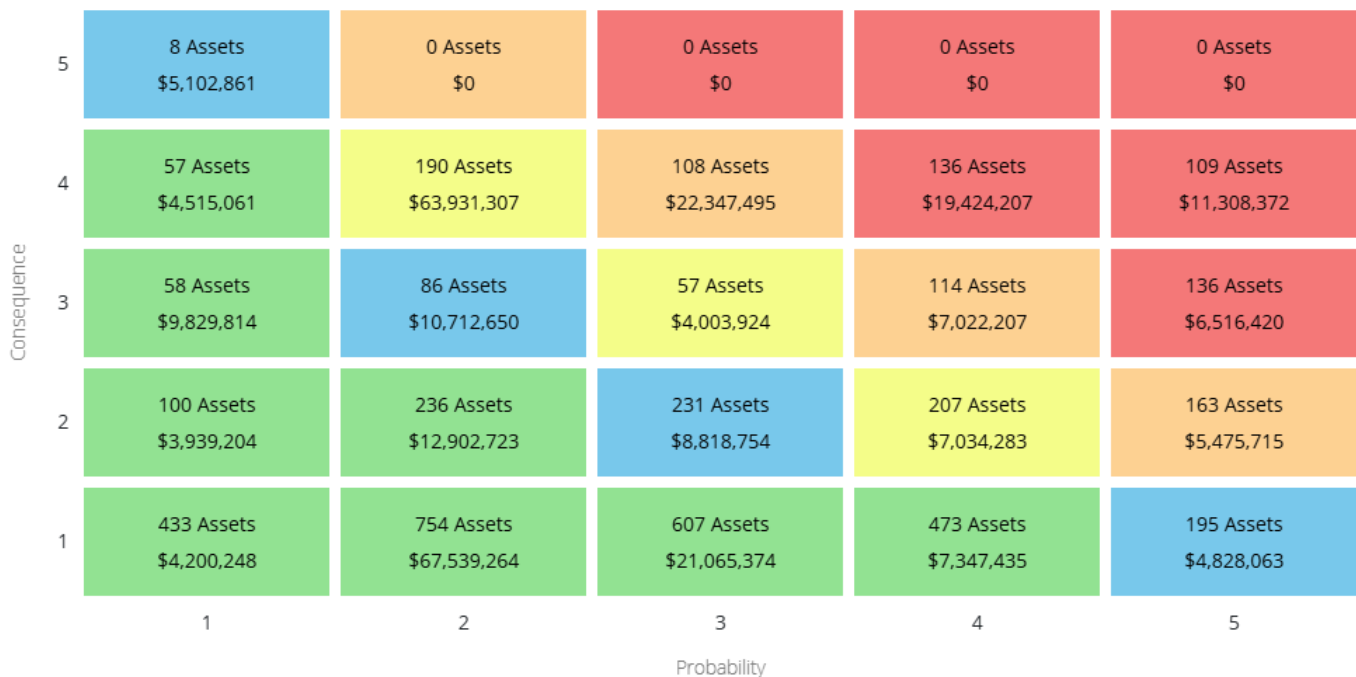


Figure 54 Risk Matrix: Buildings

8.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Legislation

Accessibility improvements could become a significant expense if new legislation mandates sudden enhancements without providing adequate time to budget for these changes. Without sufficient time to allocate financial resources, these unplanned expenses could strain the County's budget, impacting other essential services and maintenance projects. Proactive planning and funding allocation are crucial to mitigate the financial impact of these potential legislative changes.



Financial Reinvestment

Maintaining the County's buildings and delivering the desired levels of service requires the allocation of adequate financial resources. Fiscal capacity and budget constraints are constant concerns for staff across all departments as they manage the maintenance and rehabilitation of County buildings. Increasing operating costs often negatively impact capital funding.



Impacts of Climate

Heavy rainfall and higher temperatures significantly impact the service delivery of buildings. Excessive rainfall can lead to water damage, flooding, and mold growth, necessitating frequent repairs and increased maintenance costs. Higher temperatures can strain HVAC systems, leading to higher energy consumption and potential equipment failure. These weather conditions can disrupt operations, reduce building efficiency, and increase the financial burden on maintenance budgets, ultimately affecting the quality of service delivery.

8.7 Current Levels of Service

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

8.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	List of facilities, an explanation of uses, and the service areas supported by these assets. (accessible to the public)	Bruce County owns and maintains several buildings that provide key services to the community. These service area facilities include administrative offices, long term care facilities, paramedic services, housing corporation, museum and cultural centre. Refer to Appendix C – Levels of Service Supplemental Information for a detailed list of County owned buildings.
Performance	Description of the current condition of municipal facilities and the plans that are in place to maintain or improve the provided level of service	County buildings are generally in fair or better condition and are inspected annually through an internal assessment process. Health and safety inspections are completed regularly. The last comprehensive building assessments were completed in 2019 by FCAPX Inc.

Table 30 O. Reg. 588/17 Community Levels of Service: Buildings

8.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of buildings that are in fair or better condition	75%
	% of buildings that are in poor or very poor condition	25%
Safe & Regulatory	% of buildings where annual inspections have been completed	100%
	% of buildings where monthly workplace inspections have been completed	100%
Affordable	Total equivalent kWh energy consumption / ft ² of all buildings	85.77
	Target vs. Actual Capital Reinvestment Rate	4.4% vs. 1.2%

Table 31 O. Reg. 588/17 Technical Levels of Service: Buildings

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the buildings. Further PLOS analysis at the portfolio level can be found in Section 4. *Proposed Levels of Service Analysis*.

8.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Buildings capital funding maintained at \$3.7m/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Buildings capital funding gradually increases from \$3.7m/year to \$13.6m/year over a span of 13 years
Scenario 3: Specific Condition Targets	This scenario aims to maintain target conditions for the buildings portfolio of assets: ♦ Buildings condition target: 60% Funding limitation of \$1m/year increase to minimize spike

Table 32 Buildings PLOS Scenario Descriptions

8.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	52%	25%	14%	
	% Risk that is High and Very High	20%	33%	36%	
	Average Asset Risk	8.4	11.7	12.7	
	Annual Investment		\$3,669,000		This is the maintained parameter in this scenario
	Capital re-investment rate		1.2%		
Scenario 2	Average Condition	52%	41%	44%	
	% Risk that is High and Very High	20%	21%	20%	
	Average Asset Risk	8.4	9.5	9.1	
	Annual Investment		\$13,552,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		4.4%		
Scenario 3	Average Condition	52%	47%	58%	Target Condition of 60% ♦ Lifecycle Event Change: Trigger replacement when asset reaches 15% condition instead of 0%
	% Risk that is High and Very High	20%	17%	12%	
	Average Asset Risk	8.4	8.8	7.3	
	Annual Investment		\$15,162,000		Increase funding at a rate of approximately + \$1M/year
	Capital re-investment rate		4.9%		

Table 33 Buildings PLOS Scenario Analysis

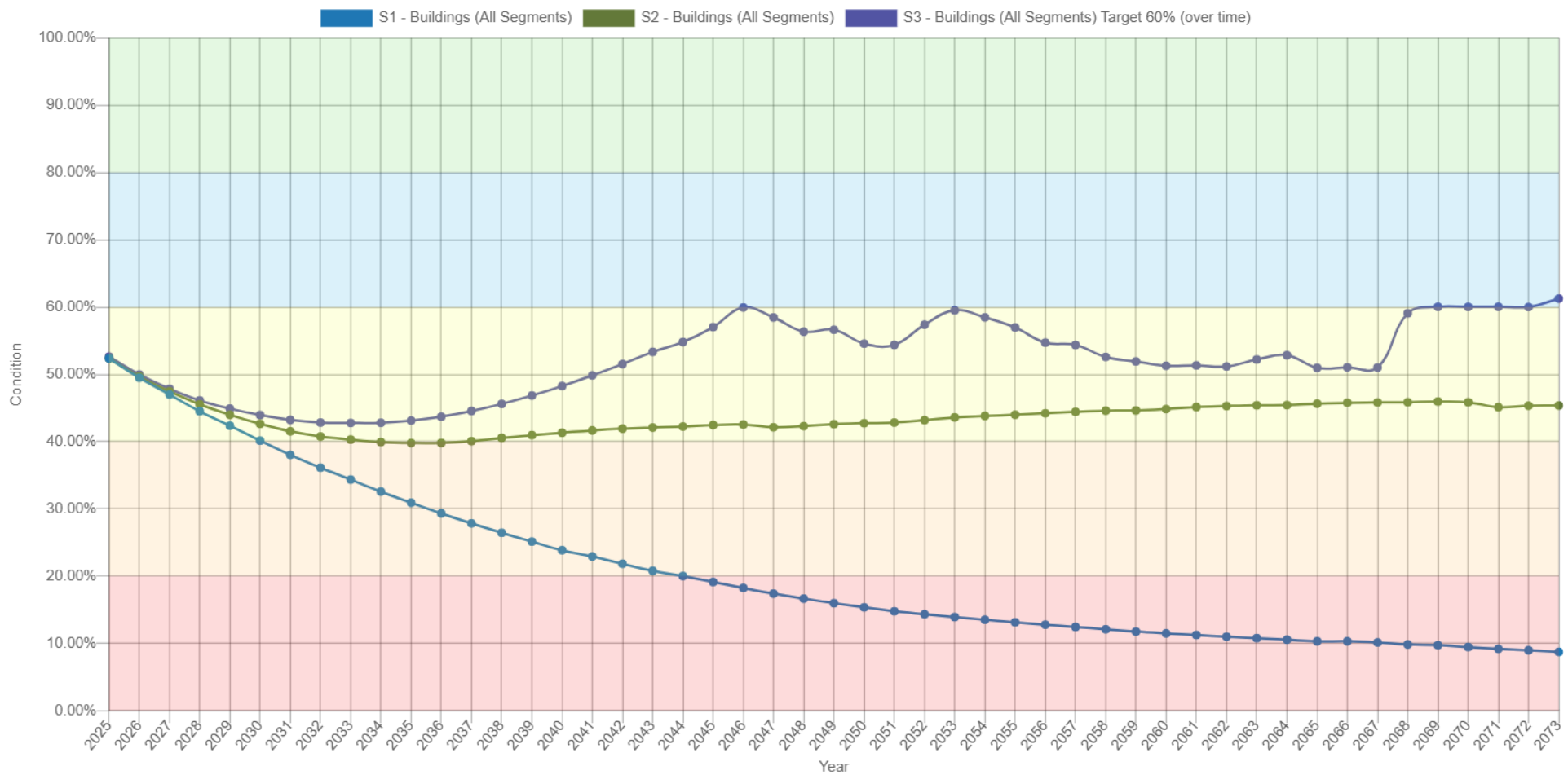


Figure 55 Buildings PLOS Scenario Condition Results

8.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the buildings if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m	\$15.2m
Projected Capital Spending	\$4.3m	\$5.0m	\$5.7m	\$6.4m	\$7.2m	\$7.9m	\$8.7m	\$9.5m	\$10.3m	\$11.2m
Funding Deficit	\$10.8m	\$10.2m	\$9.5m	\$8.7m	\$8.0m	\$7.2m	\$6.5m	\$5.7m	\$4.8m	\$4.0m
Target Reinvestment Rate	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
Projected Reinvestment Rate	1.4%	1.6%	1.9%	2.1%	2.3%	2.6%	2.8%	3.1%	3.4%	3.6%

Table 34 Buildings 10-Year PLOS Financial Projections

9. Land Improvements

Land Improvement Assets Snapshot



40+
Parking Lots



Site Drainage

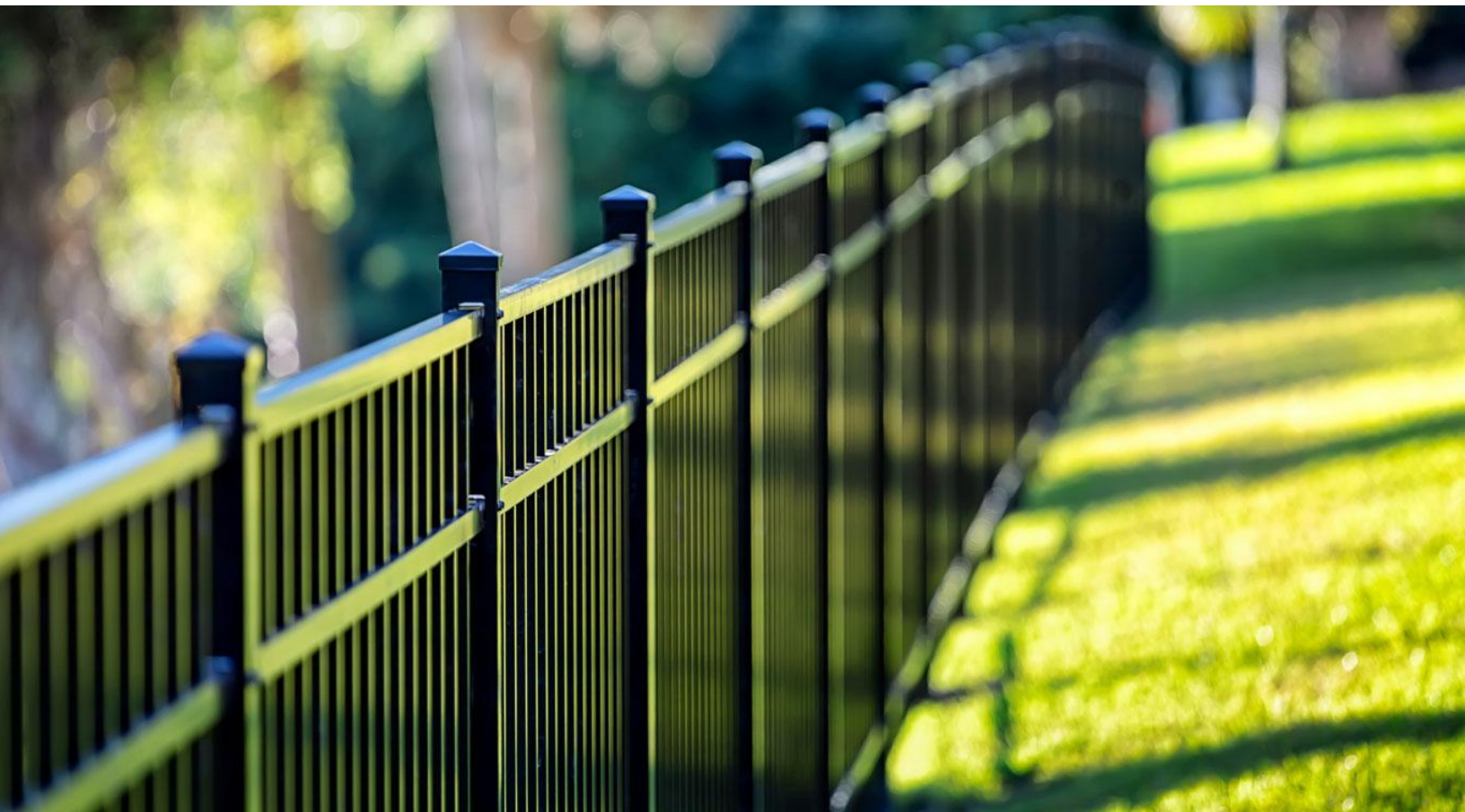


Fencing and Signage

Total Replacement Cost



\$19 million



9.1 Inventory & Valuation

Table 35 summarizes the quantity and current replacement cost of all land improvements assets available in the County's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administrative	26	Assets	\$1,335,000	CPI Tables
Bruce County Housing Corporation	54	Assets	\$1,859,000	CPI Tables
Long Term Care	21	Assets	\$13,221,000	CPI Tables
Museum	8	Assets	\$1,261,000	CPI Tables
Paramedic Services	2	Assets	\$17,000	CPI Tables
Transportation & Environmental Services	14	Assets	\$1,179,000	CPI Tables
TOTAL			\$18,871,000	

Table 35 Detailed Asset Inventory: Land Improvements

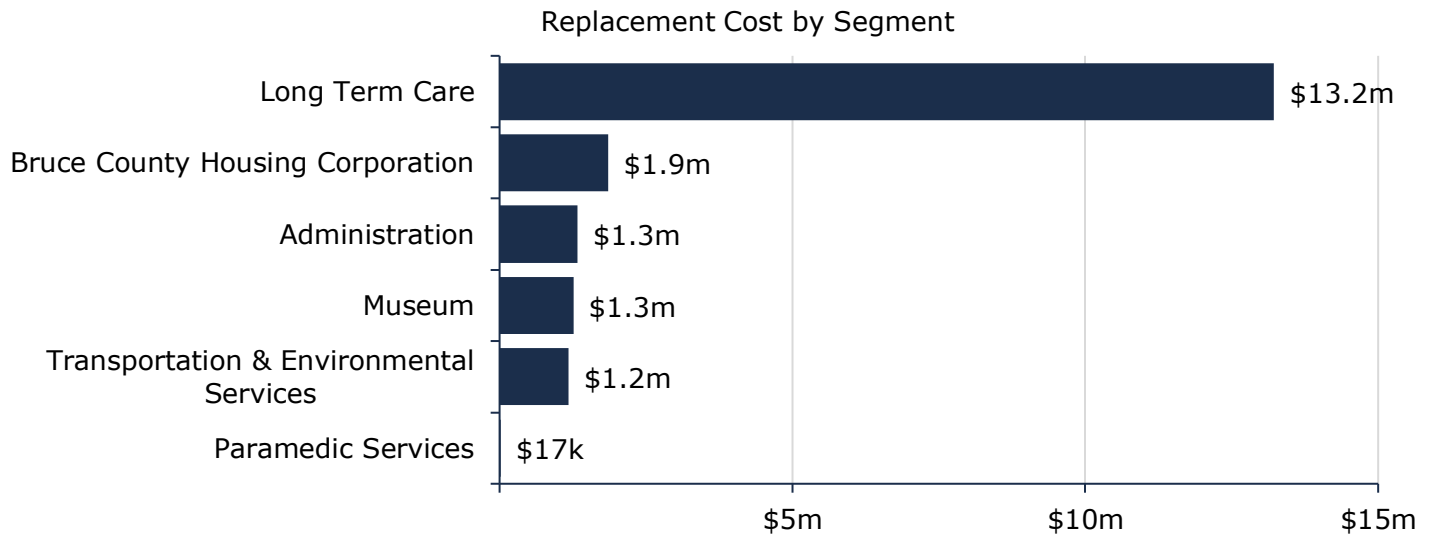


Figure 56 Portfolio Valuation: Land Improvements

9.2 Asset Condition

Figure 57 summarizes the replacement cost-weighted condition of the County's land improvements assets. Based on age data only, approximately 42% of assets are in poor to very poor condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

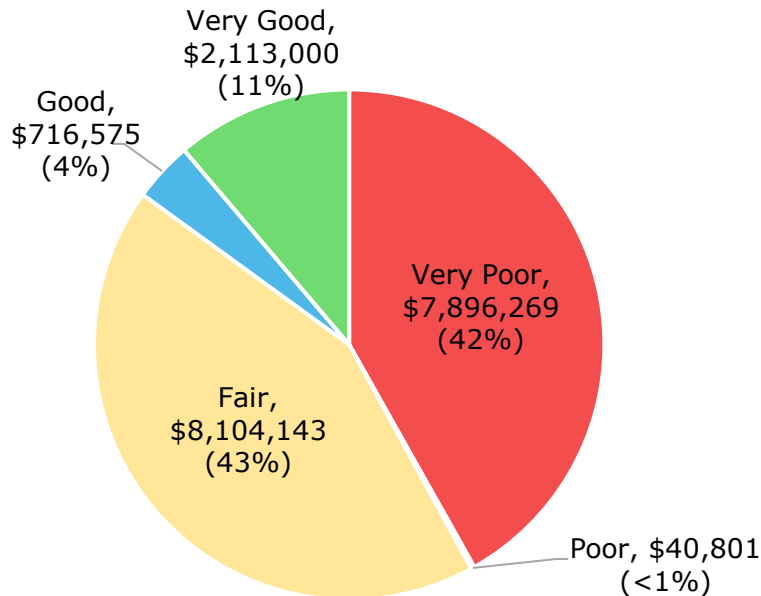


Figure 57 Asset Condition: Land Improvements Overall

Figure 58 summarizes the age-based condition of land improvements assets by segment. The analysis illustrates that the significant majority of land improvement assets for administration, museum, and paramedic services are in very poor condition. As age-based projections can exaggerate replacement needs, condition assessments are strongly recommended for more accurate capital forecasting.

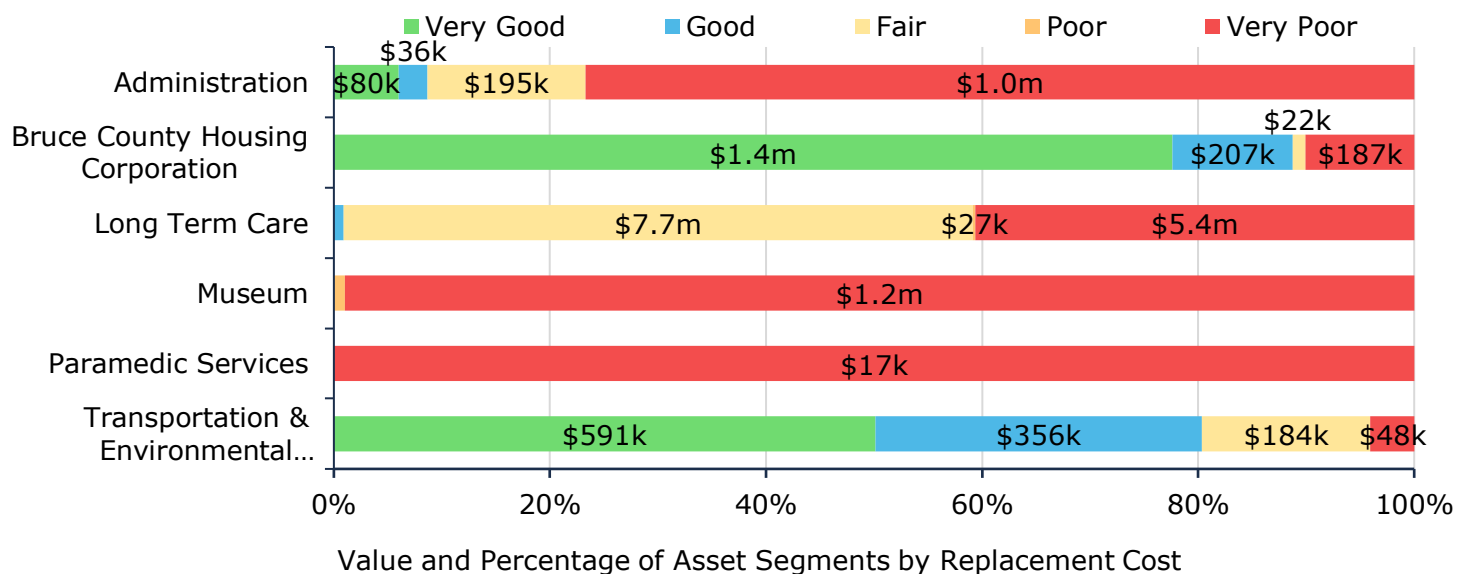


Figure 58 Asset Condition: Land Improvements by Segment

9.3 Age Profile

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

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

Figure 59 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

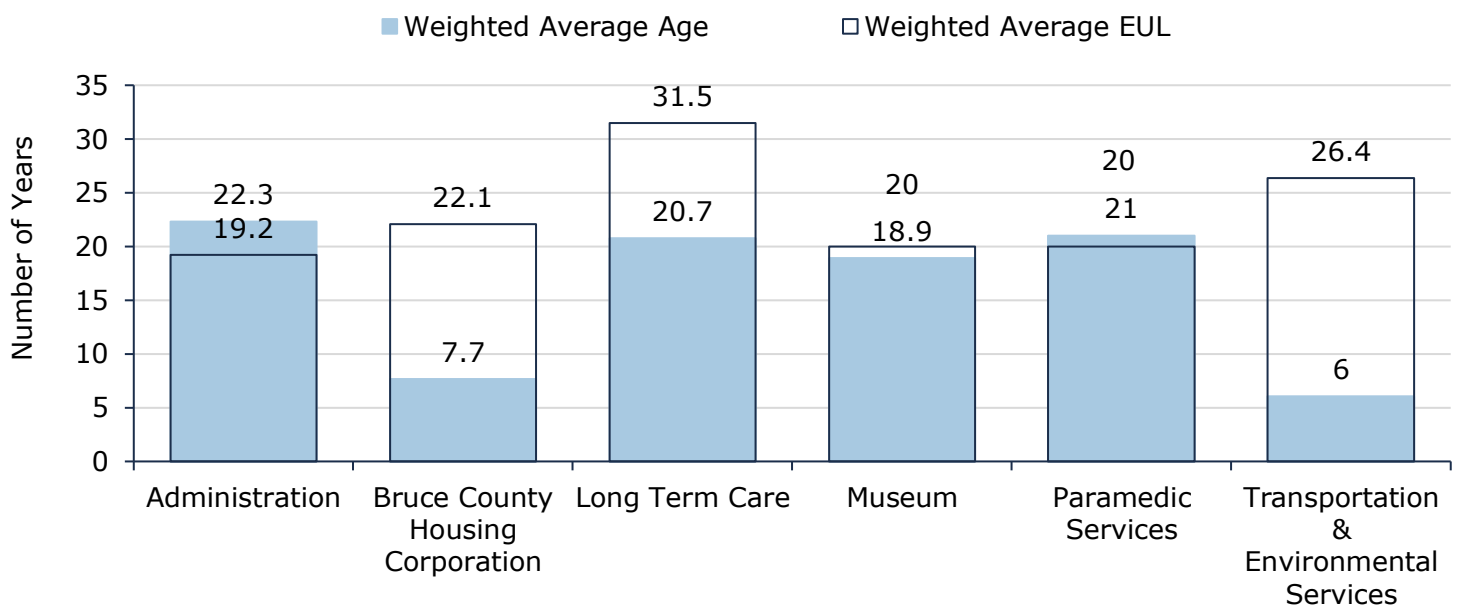


Figure 59 Estimated Useful Life vs. Asset Age: Land Improvements

Age analysis reveals that on average, administration and paramedic services land improvement assets have surpassed their expected useful life, while long term care assets are nearing the end of theirs. In contrast, transportation assets remain relatively new, with a low average age compared to their lifecycle.

9.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance	Monthly health and safety inspections trigger maintenance inspections for land improvements. Routine maintenance includes monthly inspections and reporting. Cleaning and maintenance and minor repairs.
Rehabilitation/ Replacement	Based on inspection results and consultants' recommendations as well as being reviewed with internal staff. Replacement is considered when an asset's condition has deteriorated to the point that maintenance is no longer cost effective.

Table 36 Lifecycle Management Strategy: Land Improvements

9.5 Forecasted Long-Term Replacement Needs

Figure 60 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the County's land improvements assets. This analysis was run until 2063 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$750,000 per year** for all assets in the land improvements. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

The chart illustrates an age-based backlog of \$5.9 million, dominated by long term care. Major capital replacement spikes are forecasted for 2039–2048. As mentioned earlier, these projections are based on age data and should be further investigated for more accurate capital forecasting. These projections 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.

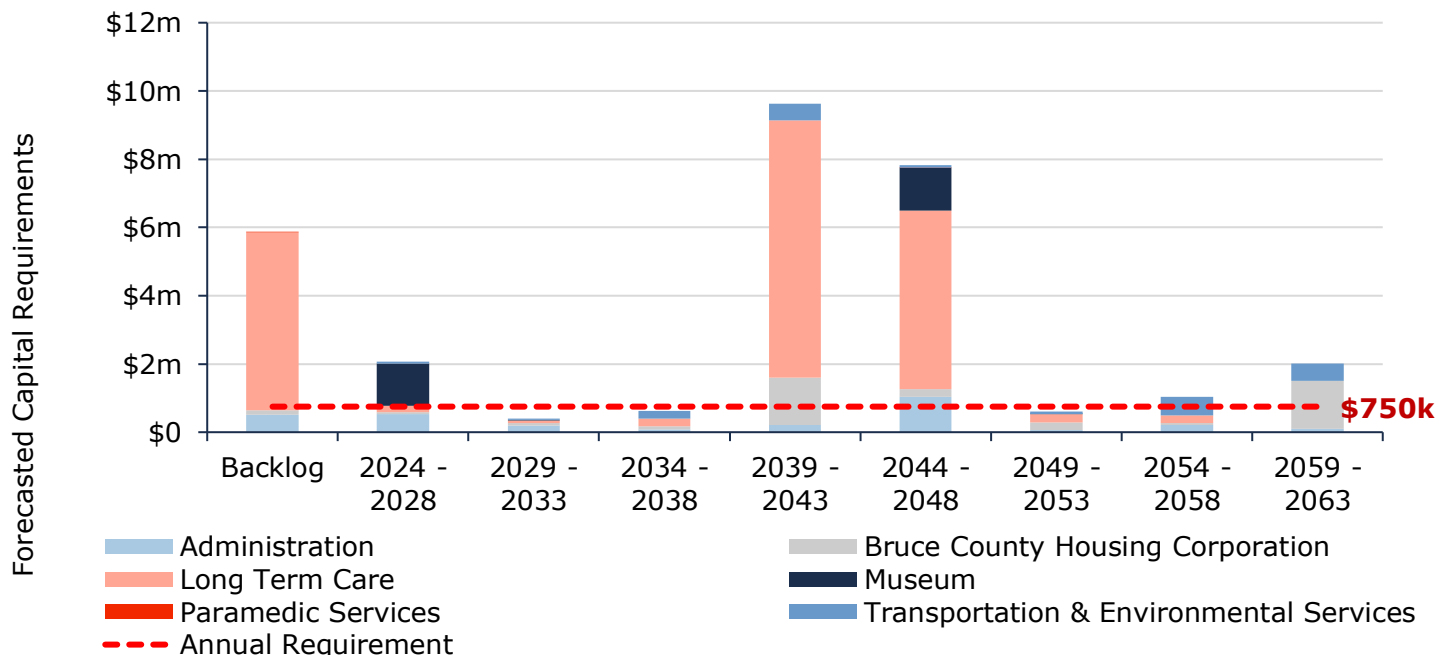


Figure 60 Forecasted Capital Replacement Needs Land Improvements 2024-2063

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. The inspections may also help reduce long-term projections by providing more accurate condition data for mains than age. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

9.6 Risk Analysis

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

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

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



Figure 61 Risk Matrix: Land Improvements

9.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Legislation

Accessibility improvements could become a significant expense if new legislation mandates sudden enhancements without providing adequate time to budget for these changes. Without sufficient time to allocate financial resources, these unplanned expenses could strain the County's budget, impacting other essential services and maintenance projects. Proactive planning and funding allocation are crucial to mitigate the financial impact of these potential legislative changes.

9.7 Current Levels of Service

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

9.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	List of land improvements, and explanation of uses and the service areas supported by these assets. (accessible to the public)	Bruce County owns and maintains several land improvements that provide services to the community. These service area land improvements include administrative offices, long term care facilities, paramedic services, housing corporation, museum and cultural center. Land improvements are generally tied to County buildings and a detailed list of buildings is provided in Appendix C – Levels of Service Supplemental Information.
Performance	Description of the current condition of land improvements and the plans that are in place to maintain or improve the provided level of service	County land improvements are generally in fair or better condition and are inspected annually through an internal assessment process. Health and safety inspections are completed regularly in conjunction with facility assessments. The last comprehensive building assessments including land improvements were completed in 2019 by FCAPX Inc.

Table 37 O. Reg. 588/17 Community Levels of Service: Land Improvements

9.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of land improvements that are in fair or better condition	58%
	% of land improvements that are in poor or very poor condition	42%
Safe & Regulatory	% of land improvements where annual inspections have been completed	100%
Affordable	Target vs. Actual Capital Reinvestment Rate	4.0% vs. 0%

Table 38 O. Reg. 588/17 Technical Levels of Service: Land Improvements

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for the land improvements. Further PLOS analysis at the portfolio level can be found in Section 4. *Proposed Levels of Service Analysis*.

9.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Land improvements capital funding maintained at \$0/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Land improvements capital funding gradually increases from \$0/year to \$750,000/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for land improvements. Scenario 3 was selected to mirror Scenario 2.

Table 39 Land Improvements PLOS Scenario Descriptions

9.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	31%	6%	0%	
	% Risk that is High and Very High	42%	57%	59%	
	Average Asset Risk	16.9	22.7	22.9	
	Annual Investment		\$0		This is the maintained parameter in this scenario
	Capital re-investment rate		0%		
Scenario 2	Average Condition	31%	23%	44%	
	% Risk that is High and Very High	42%	26%	27%	
	Average Asset Risk	16.9	19.6	14.5	
	Annual Investment		\$750,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		4.0%		
Scenario 3	Average Condition				
	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
	Annual Investment				
	Capital re-investment rate				

Table 40 Land Improvements PLOS Scenario Analysis

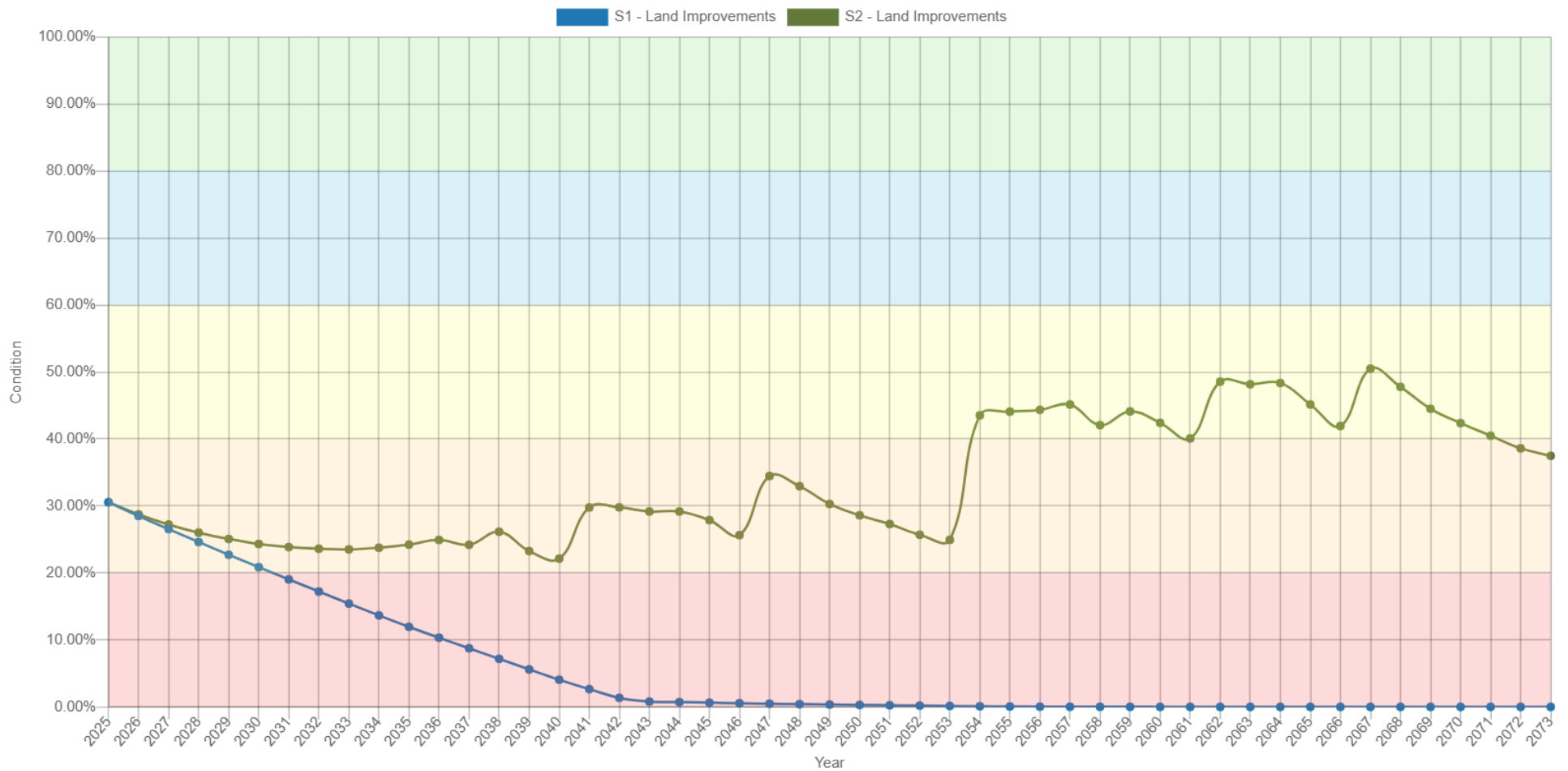


Figure 62 Land Improvements PLOS Scenario Condition Results

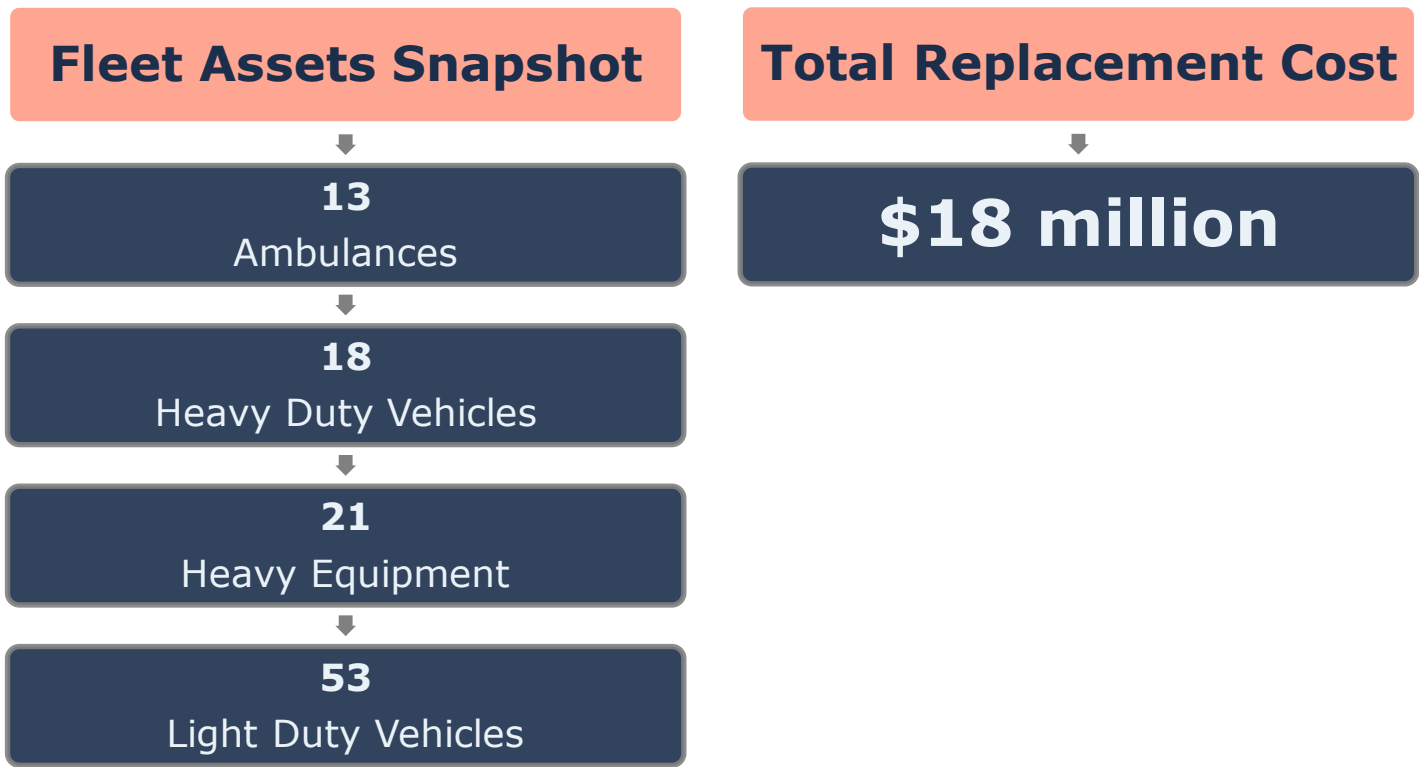
9.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the land improvements if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$750k	\$750k	\$750k	\$750k	\$750k	\$750k	\$750k	\$750k	\$750k	\$750k
Projected Capital Spending	\$43k	\$88k	\$133k	\$180k	\$228k	\$278k	\$329k	\$381k	\$435k	\$490k
Funding Deficit	\$707k	\$662k	\$617k	\$570k	\$522k	\$472k	\$421k	\$369k	\$315k	\$260k
Target Reinvestment Rate	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Projected Reinvestment Rate	0.2%	0.5%	0.7%	1.0%	1.2%	1.5%	1.7%	2.0%	2.3%	2.6%

Table 41 Land Improvements 10-Year PLOS Financial Projections

10. Fleet



10.1 Inventory & Valuation

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

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administration	8	Quantity	\$289,747	User-defined
Bruce County Housing Corporation	3	Quantity	\$183,000	User-defined
Library	3	Quantity	\$266,000	CPI Tables
Machinery	6	Quantity	\$86,000	User-Defined & CPI Tables
Paramedic Services	20	Quantity	\$3,938,000	User-Defined & CPI Tables
Transportation – Heavy Duty	18	Quantity	\$6,210,000	CPI Tables
Transportation – Light Duty	38	Quantity	\$2,174,000	CPI Tables
Transportation - Machinery	68	Quantity	\$5,283,000	CPI Tables
TOTAL			\$18,430,420	

Table 42 Detailed Asset Inventory: Fleet

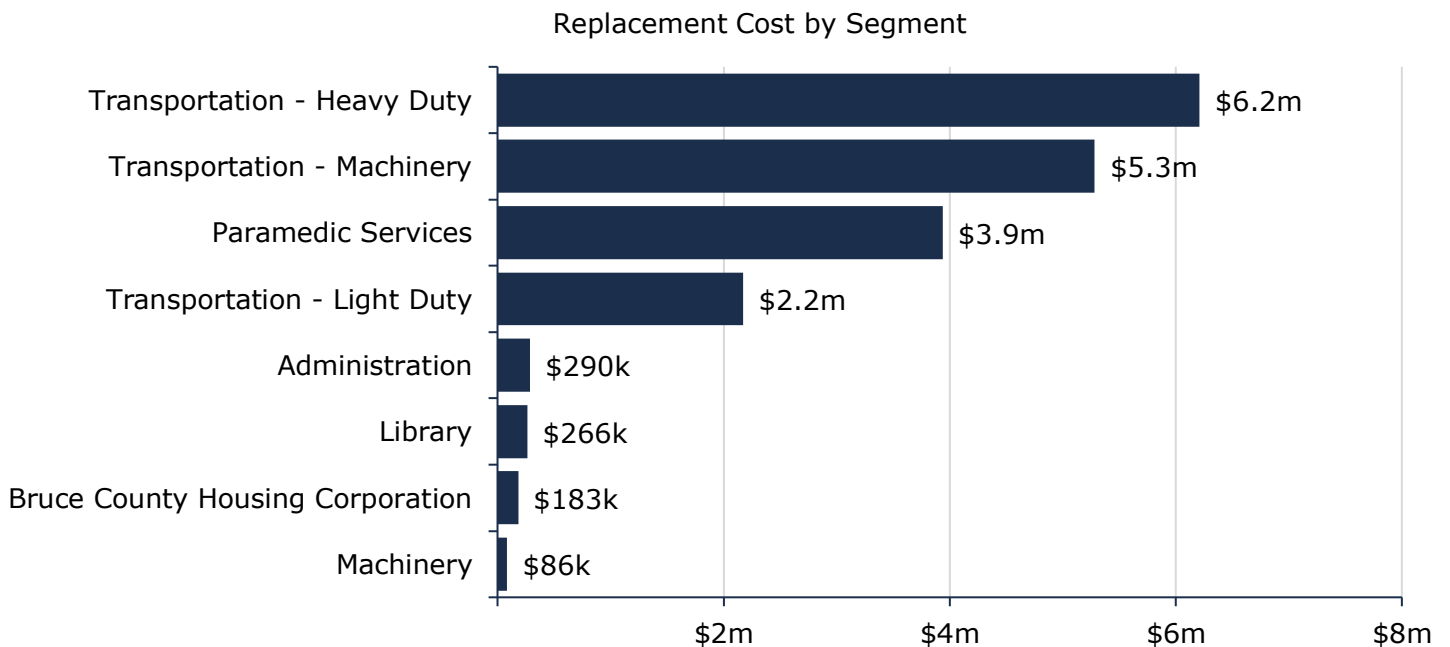


Figure 63 Portfolio Valuation: Fleet

10.2 Asset Condition

Figure 64 summarizes the replacement cost-weighted condition of the County's fleet portfolio. Based only on age data, 81% of fleet assets are in fair or better condition; however, 19%, with a current replacement cost of more than \$3.5 million are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

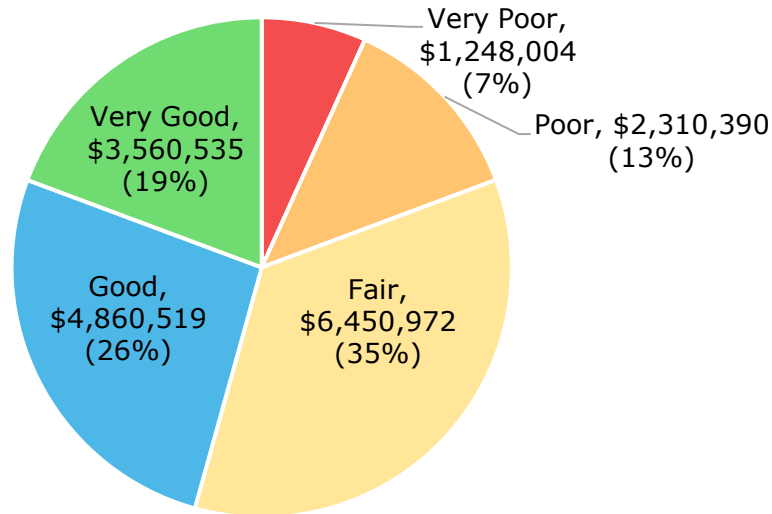


Figure 64 Asset Condition: Fleet Overall

Figure 65 summarizes the age-based condition of fleet by each department. Except for machinery, the majority of other asset segments are in a fair or better condition.

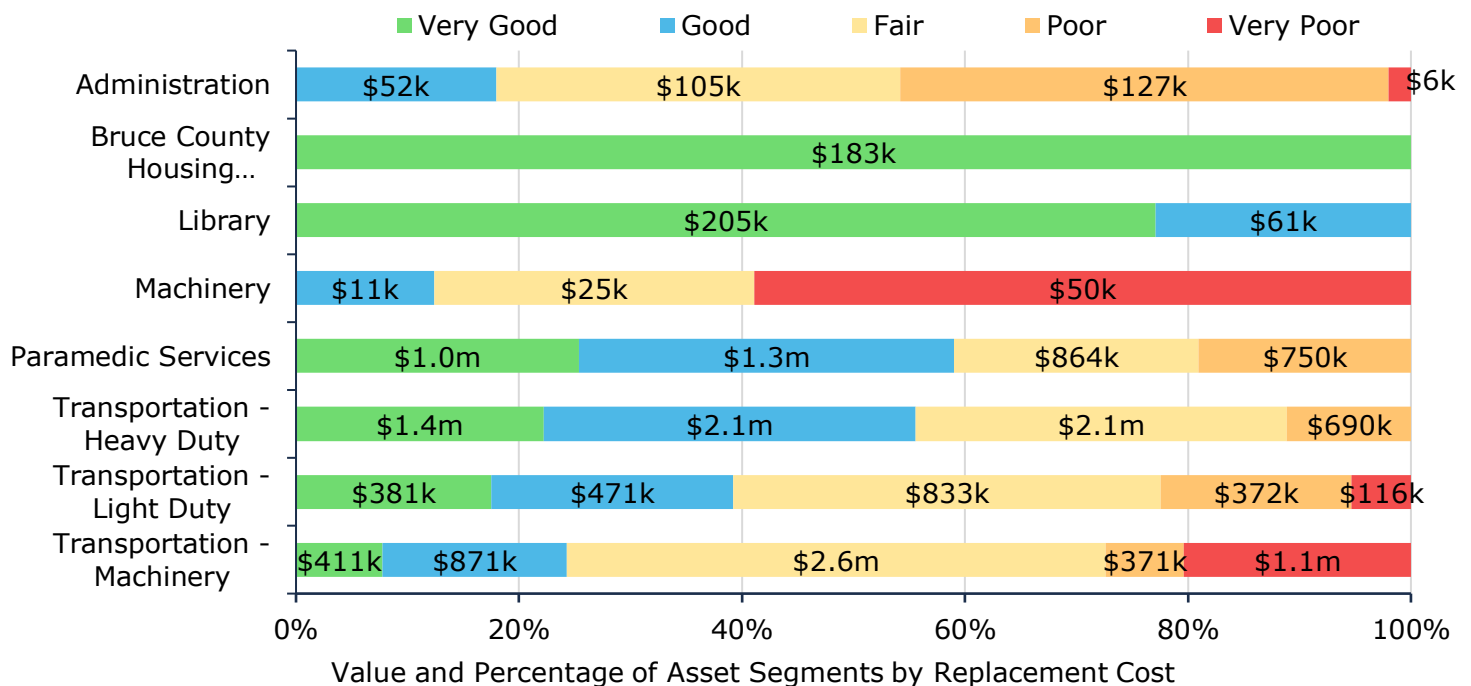


Figure 65 Asset Condition: Fleet by Segment

10.3 Age Profile

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

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

Figure 66 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

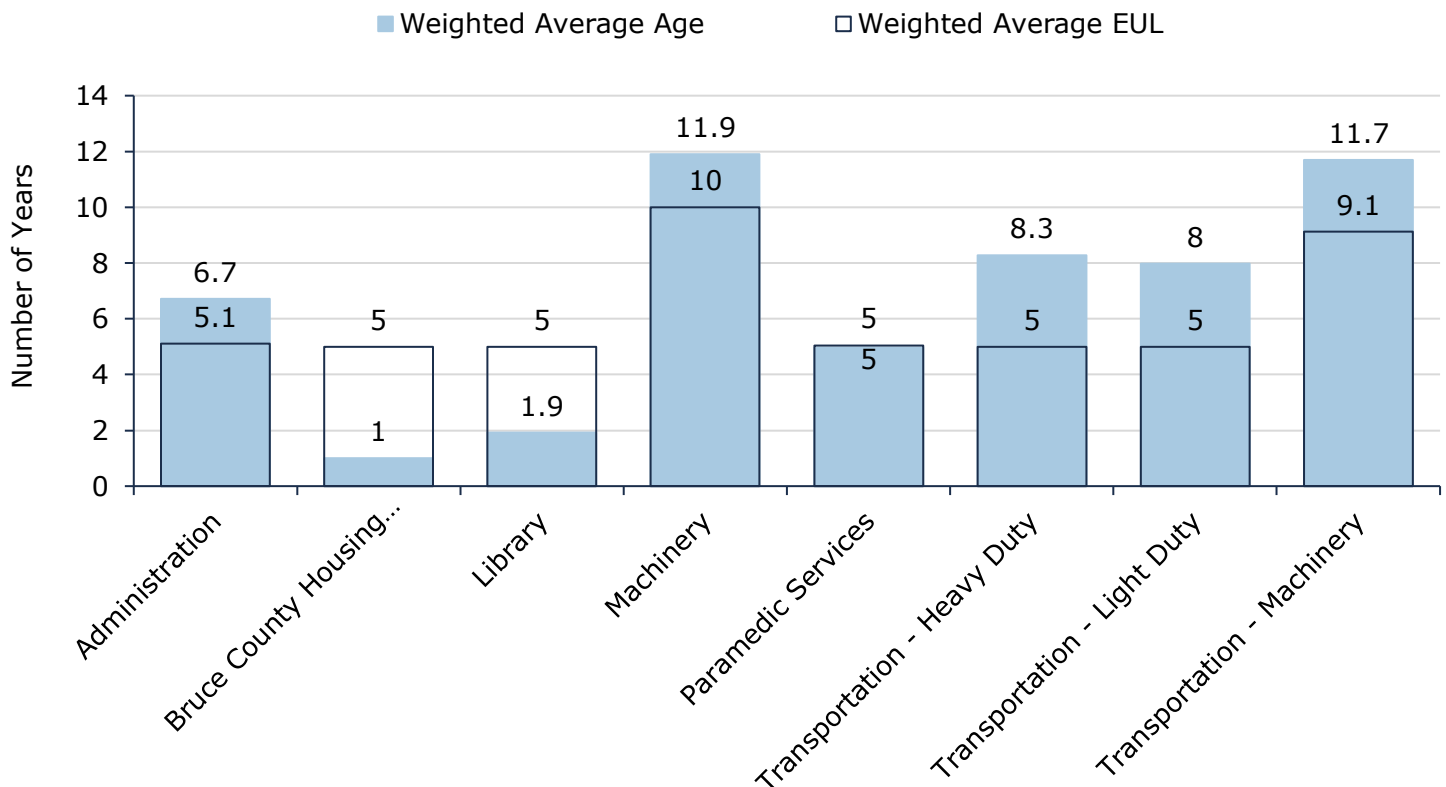


Figure 66 Estimated Useful Life vs. Asset Age: Fleet

Age analysis reveals that, on average, housing and library fleet assets are in the early stages of their serviceable life. In contrast, assets in administration, machinery, paramedic services, and all transportation categories have exceeded their originally expected useful life.

10.4 Current Approach to Lifecycle Management

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

Table 43 outlines the County's current lifecycle management strategies for various departments or asset types.

Activity Type	Paramedic Services - Description of Current Strategy
Maintenance	Every 8,000 KM (+/- 20%): Lubricate chassis and parking brake, replace engine oil and filter, check and inspect various components including fluid levels, leaks, suspension, belts, hoses, transmission, exhaust system, battery, tires, steering components, backup alarm, and operational elements like wipers and lights. Conduct a road test before and after maintenance.
	Every 16,000 KM (+/- 10%): Inspect brakes and record the remaining pad and shoe thickness.
	Every 24,000 KM (+/- 10%): Change the fuel filter(s) if applicable.
	Every 48,000 KM (+/- 10%): Change the transmission fluid and filter.
	Every 96,000 KM (+/- 10%): Flush the cooling and brake systems, change the differential fluid, and replace spark plugs.
	MTO Inspection (Every 8 to 12 months): Perform a MTO inspection, provide a new yellow sticker, and remove the old one, often in conjunction with other maintenance sections.
Rehabilitation/ Replacement	Provincial regulations determine the replacement schedule of Paramedic Services vehicles. Ambulances are replaced every 6 years with component rehabilitations performed as needed. Community Paramedicine and Supervisor vehicles are scheduled on a similar timeline or may be replaced as needed.

Table 43 Lifecycle Management Strategy: Fleet (Paramedic)

Activity Type	Electric Vehicles - Description of Current Strategy
Maintenance	Every 15,000 KM (+/- 20%): Check all fluid levels, tire condition and air pressure, drive unit fluid, and operation of key fob (if equipped). Inspect all lights, heaters, defrost, air conditioning, wipers, washer dispenser, and horn. Lubricate doors, latches, and hinges, test door locks, rotate tires, and conduct a road test before and after service. Measure and record tire tread depth.
	Every 30,000 KM (+/- 10%): Perform brake service by cleaning and lubricating calipers and slides, replace wiper blades, and check wheel alignment.
	Every 60,000 KM (+/- 10%): Replace the cabin filter.
	Every 120,000 KM (+/- 10%): Replace the brake fluid.
Rehabilitation/ Replacement	Electric vehicles are scheduled for replacement every 6 years with component rehabilitations performed as needed.

Table 44 Lifecycle Management Strategy: Fleet (EV)

Activity Type	All Other Fleet - Description of Current Strategy
Maintenance	All County fleet assets are subject to inspections and routine maintenance activities at regular intervals. Lifecycle strategies are dependent on asset type and estimated service life.
Rehabilitation/ Replacement	County fleet assets are reviewed for replacement on a schedule but may be replaced more frequently if needed based on condition assessments. Replacement intervals vary by asset type. Component rehabilitations are performed as needed.

Table 45 Lifecycle Management Strategy: Fleet (All Other Fleet)

10.5 Forecasted Long-Term Replacement Needs

Figure 67 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the County's fleet portfolio. This analysis was run until 2038 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$3.2 million per year** for all fleet. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to remain stable over the next few decades, fluctuating between \$15.1 million and \$17.3 million per period. The chart also shows a backlog of \$978,000. These projections and estimates are based on current asset records, their 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.

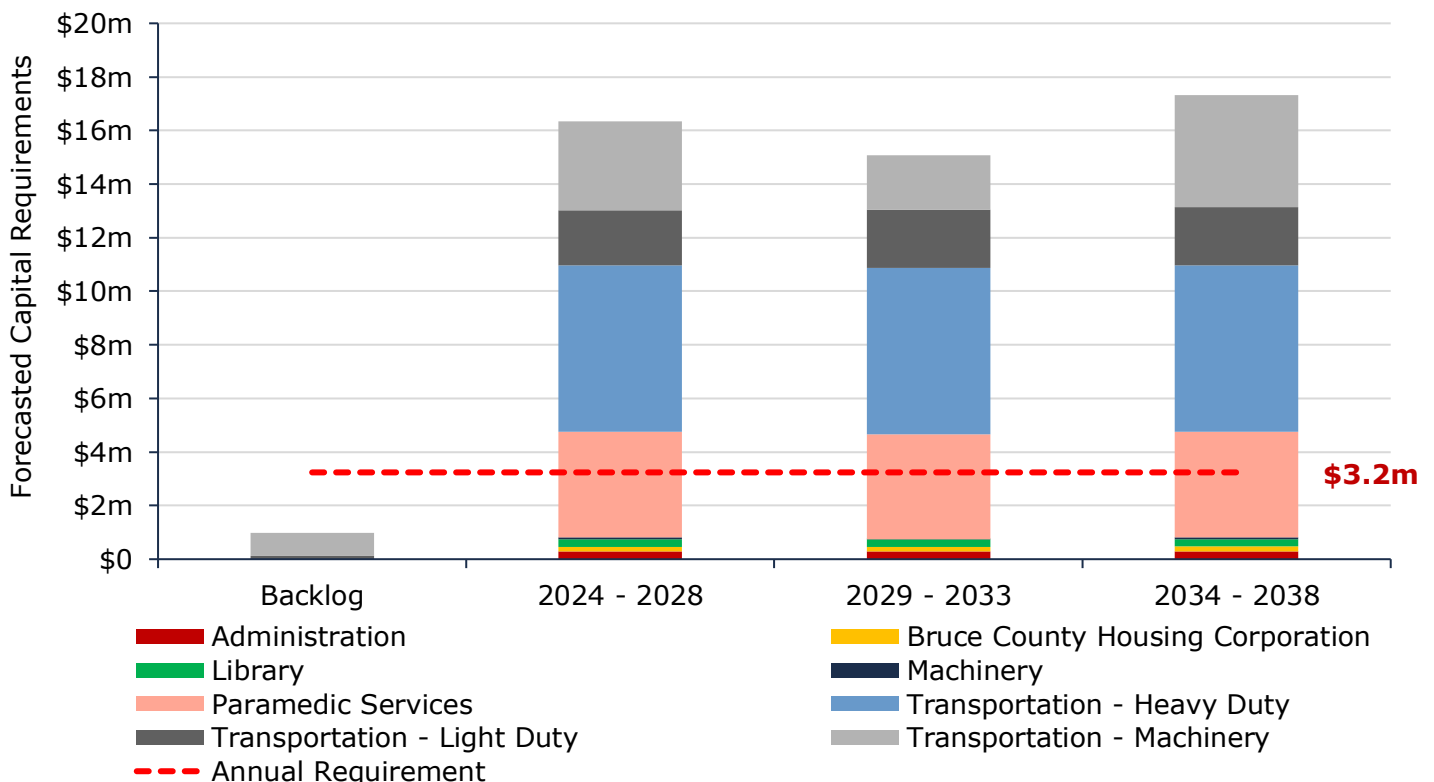


Figure 67 Forecasted Capital Replacement Needs Fleet 2024-2038

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements. In the case of buildings and facilities, detailed componentization is necessary to develop more reliable lifecycle forecasts that reflect the needs of individual elements and components.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

10.6 Risk Analysis

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

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

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

Consequence	5	0 Assets \$0	4 Assets \$1,000,000	4 Assets \$983,327	3 Assets \$750,000	3 Assets \$750,000
	4	2 Assets \$690,000	4 Assets \$1,400,121	13 Assets \$4,366,400	7 Assets \$2,306,000	4 Assets \$984,375
	3	3 Assets \$319,173	3 Assets \$226,304	3 Assets \$303,165	2 Assets \$113,647	1 Asset \$84,700
	2	14 Assets \$562,362	6 Assets \$186,793	16 Assets \$752,273	16 Assets \$878,326	30 Assets \$1,353,248
	1	3 Assets \$183,000	5 Assets \$62,635	1 Asset \$24,500	2 Assets \$20,001	15 Assets \$130,070
		1	2	3	4	5
		Probability				

Figure 68 Risk Matrix: Fleet

10.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Financial Reinvestment

Maintaining the County's fleet and providing desired levels of service requires the allocation of adequate financial resources. Fiscal capacity and budget constraints are a constant concern for staff across all departments attempting to manage the maintenance and rehabilitation of County fleet. In recent years, replacement capacity has been negatively impacted by significant cost increases for fleet assets while re-investment has been challenged by notable production backlogs.

10.7 Current Levels of Service

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

10.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description of the fleet inspection process and maintenance strategy	The lifecycle strategy for paramedic vehicles involves routine maintenance checks and replacements at specified intervals to ensure optimal performance. The lifecycle strategy for electric vehicles (EVs) involves regular maintenance checks and services at specified intervals to ensure their longevity and performance. All other fleet assets are inspected at least annually by certified mechanic. Repairs are completed as needed based on inspections and asset servicing requirements
Performance	Description of the current condition of fleet	The County's fleet assets range in condition from very good to very poor and on average are in fair (53%) condition.

Table 46 Community Levels of Service: Fleet

10.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of fleet that are in fair or better condition	81%
	% of fleet that are in poor or very poor condition	19%
Safe & Regulatory	% of fleet where routine inspections have been completed	100%
Affordable	Target vs. Actual Capital Reinvestment Rate	17.6% vs. 9.9%

Table 47 Technical Levels of Service: Fleet

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for fleet. Further PLOS analysis at the portfolio level can be found in Section 4. *Proposed Levels of Service Analysis*.

10.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Fleet capital funding maintained at \$1.8m/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Fleet capital funding gradually increases from \$1.8m/year to \$3.2m/year over a span of 13 years
Scenario 3: Specific Condition Targets	This scenario aims to maintain target conditions for the fleet portfolio of assets: ♦ Fleet condition target: 60% Funding limitation of \$200k/year increase to minimize spike

Table 48 Fleet PLOS Scenario Descriptions

10.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	42%	22%	24%	
	% Risk that is High and Very High	48%	63%	63%	
	Average Asset Risk	14.5	16.4	15.6	
	Annual Investment		\$1,831,000		This is the maintained parameter in this scenario
	Capital re-investment rate		9.9%		
Scenario 2	Average Condition	42%	40%	42%	
	% Risk that is High and Very High	48%	39%	40%	
	Average Asset Risk	14.5	12.9	12.6	
	Annual Investment		\$3,239,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		17.6%		
Scenario 3	Average Condition	42%	48%	56%	Target Condition 60% ♦ Lifecycle Event Change: Trigger replacement when asset reaches 15% condition instead of 0%
	% Risk that is High and Very High	48%	31%	27%	
	Average Asset Risk	14.5	12.5	10.2	
	Annual Investment		\$3,622,000		Increase funding at a rate of approximately + \$200k/year until sustainable
	Capital re-investment rate		19.7%		

Table 49 Fleet PLOS Scenario Analysis

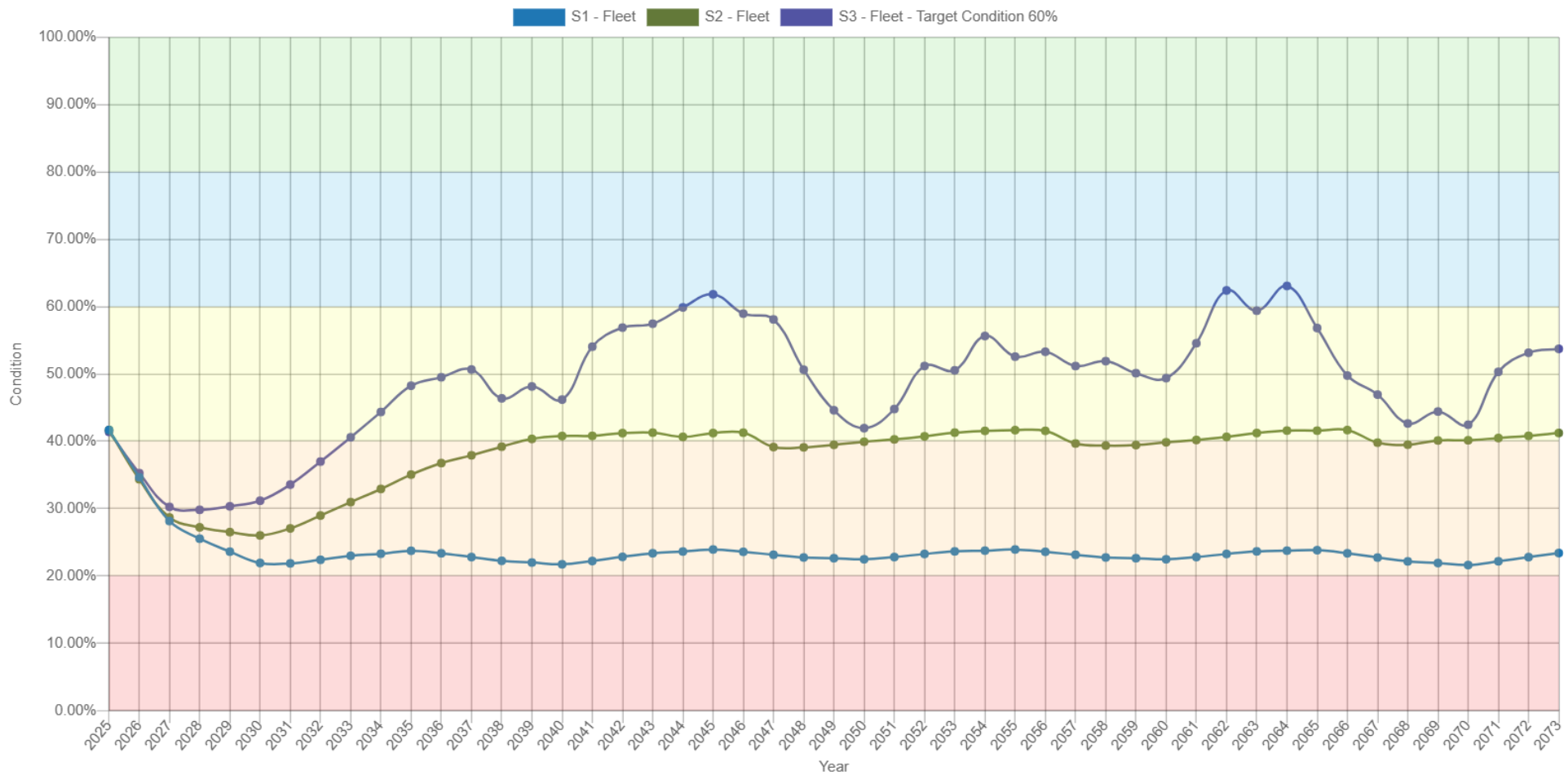


Figure 69 Fleet PLOS Scenario Condition Results

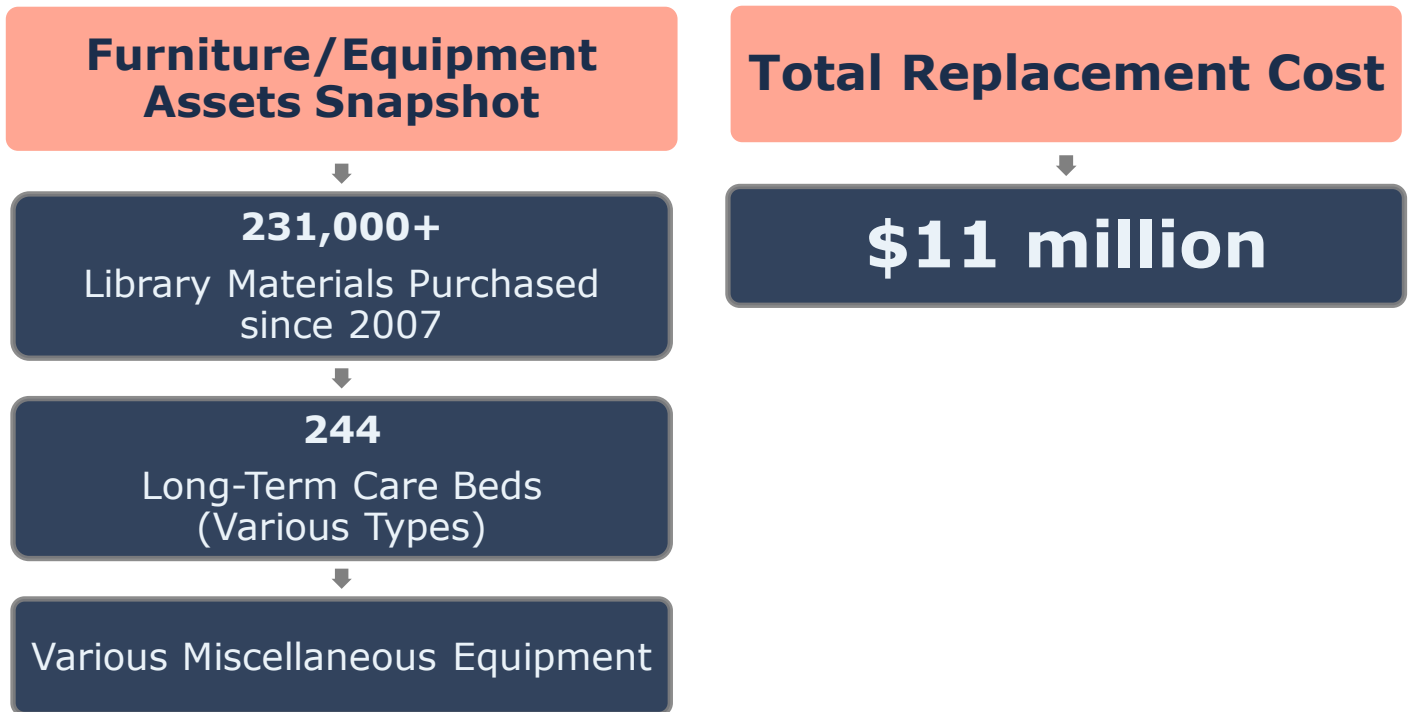
10.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for fleet if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m	\$3.6m
Projected Capital Spending	\$1.9m	\$2.0m	\$2.1m	\$2.3m	\$2.4m	\$2.5m	\$2.6m	\$2.7m	\$2.9m	\$3.0m
Funding Deficit	\$1.7m	\$1.6m	\$1.5m	\$1.4m	\$1.2m	\$1.1m	\$1.0m	\$881k	\$753k	\$620k
Target Reinvestment Rate	19.7%	19.7%	19.7%	19.7%	19.7%	19.7%	19.7%	19.7%	19.7%	19.7%
Projected Reinvestment Rate	10.5%	11.1%	11.7%	12.3%	12.9%	13.5%	14.2%	14.9%	15.6%	16.3%

Table 50 Fleet 10-Year PLOS Financial Projections

11. Furniture & Equipment



11.1 Inventory & Valuation

Table 51 summarizes the quantity and current replacement cost of all furniture and equipment assets available in the County's asset register. The library accounts for the largest share of the furniture and equipment asset group.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Administrative	310	Assets	\$772,000	CPI
Bruce County Housing Corporation	12	Assets	\$69,000	CPI
Library	195,444	Assets	\$3,903,000	CPI
Long Term Care	834	Assets	\$2,563,000	CPI
Museum	63	Assets	\$1,023,000	CPI
Paramedic Services	121	Assets	\$2,224,000	CPI
Transportation & Environmental Services	38	Assets	\$537,000	CPI
TOTAL			\$11,090,000	

Table 51 Detailed Asset Inventory: Furniture & Equipment

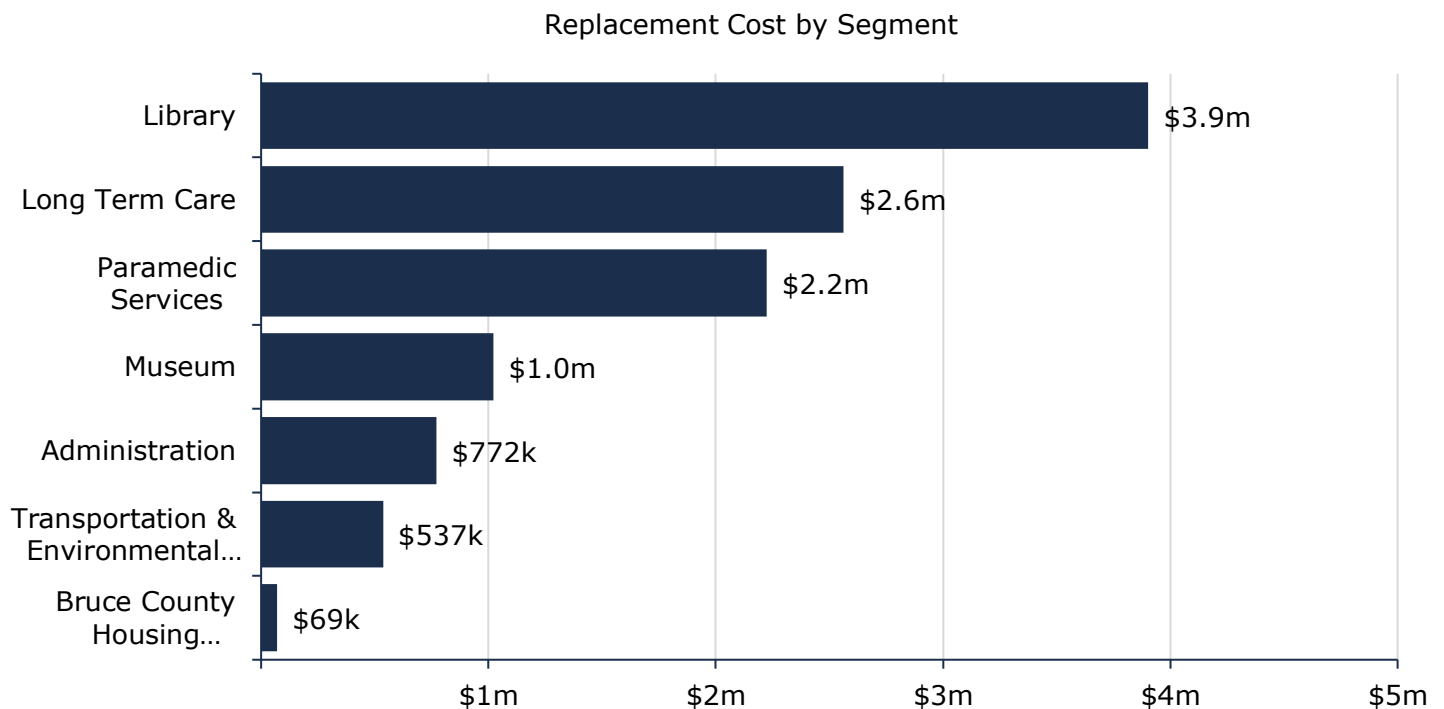


Figure 70 Portfolio Valuation: Furniture & Equipment

11.2 Asset Condition

Figure 71 summarizes the replacement cost-weighted condition of the County's furniture and equipment portfolio. Based only on age data, 41% of assets are in fair or better condition, the remaining 56% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

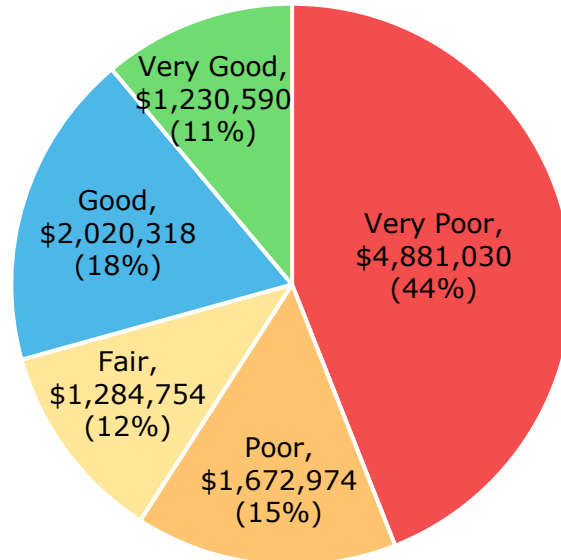


Figure 71 Asset Condition: Furniture & Equipment Overall

Figure 72 summarizes the age-based condition of furniture and equipment by each department. Assets in poor or worse condition are concentrated primarily in administration, housing corporation, long term care, and museum.

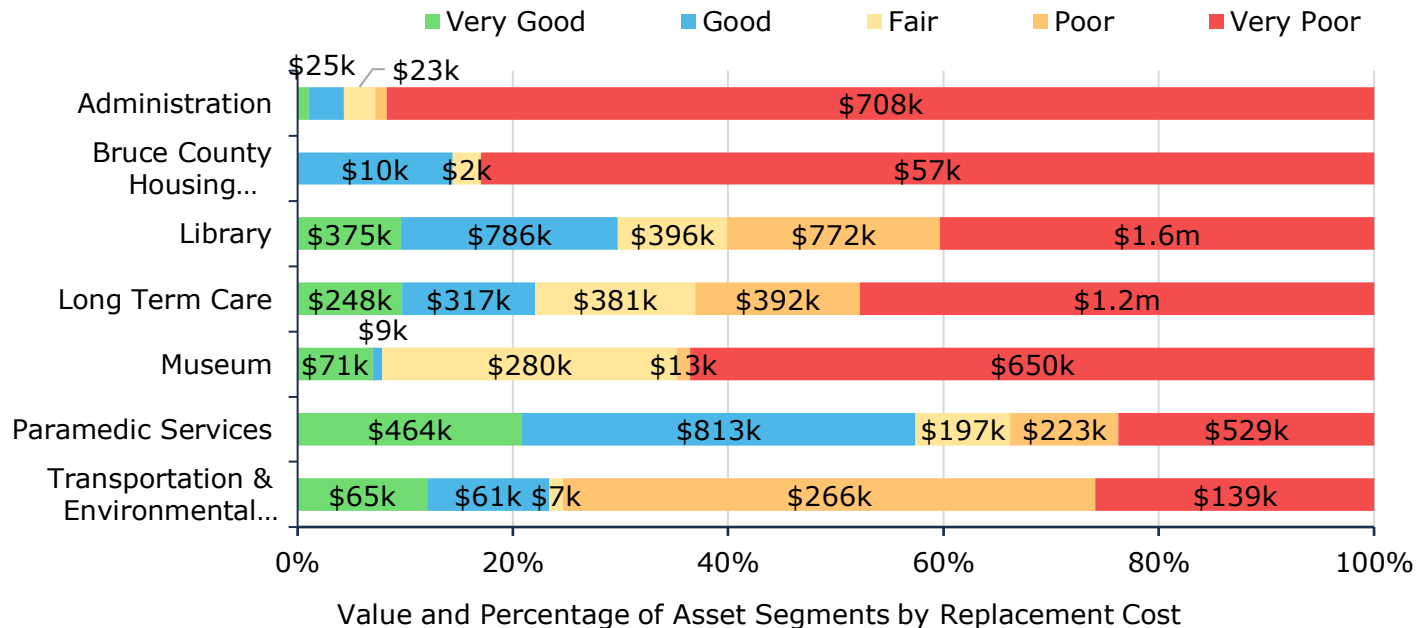


Figure 72 Asset Condition: Furniture & Equipment by Segment

11.3 Age Profile

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

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

Figure 73 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

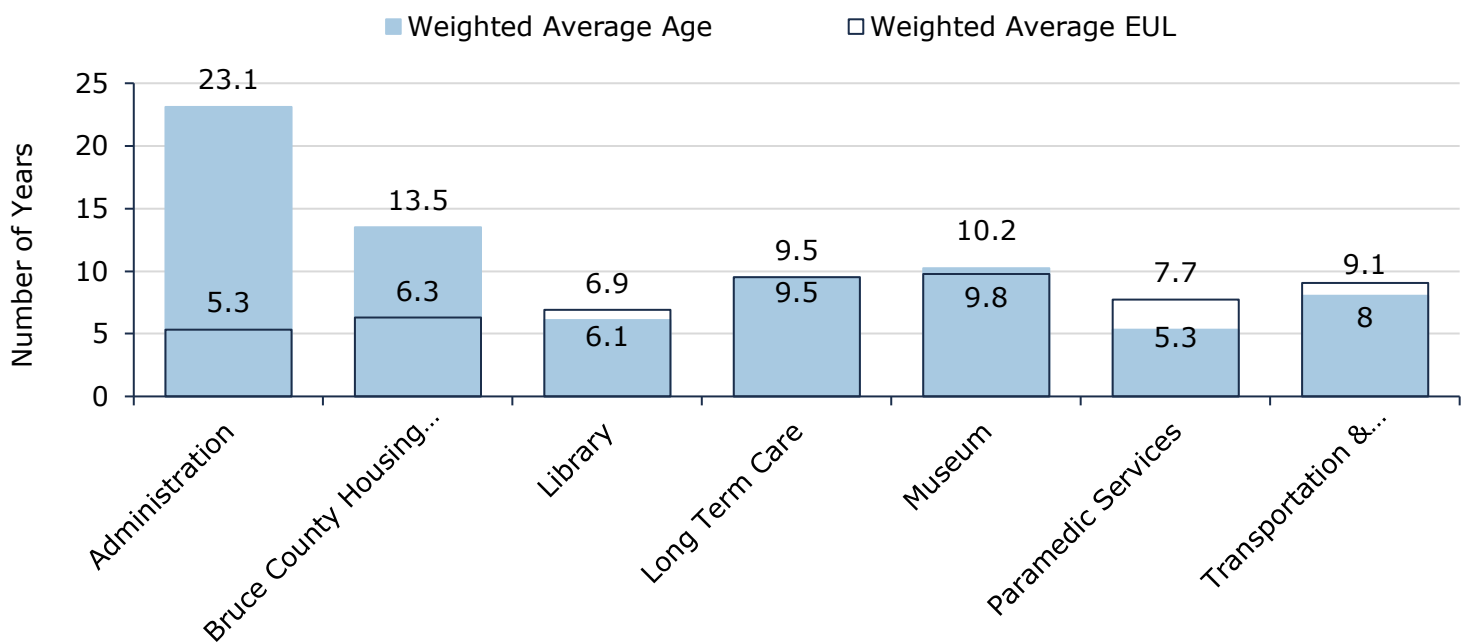


Figure 73 Estimated Useful Life vs. Asset Age: Furniture & Equipment

Age analysis reveals that administration and Bruce County Housing Corporation assets have significantly exceeded their expected useful life. The remaining segments are quickly approaching or recently surpassed their originally expected lifespans. This age analysis results from either underestimated original useful lives, inaccurate asset disposal/replacement tracking, or chronic underinvestment in the furniture and equipment category.

11.4 Current Approach to Lifecycle Management

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

Table 52 outlines the County's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	This category contains a wide variety of asset types which may require no maintenance (e.g., office furniture). Typically, these assets are run to failure or obsolescence.
Replacement	Assets are replaced on an as needed basis or as part of a larger replacement program. Replacement is generally based on the asset's age relative to its expected useful life or in the event of asset failure. Other considerations also include the users' needs and whether existing assets can meet that need.

Table 52 Lifecycle Management Strategy: Furniture & Equipment

11.5 Forecasted Long-Term Replacement Needs

Figure 74 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the County's furniture and equipment portfolio. This analysis was run until 2038 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$1.5 million per year** for all furniture and equipment. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to rise over the next 15 years, starting with a \$4.0 million backlog (meaning these assets have already surpassed their expected useful life) and rising to a peak of \$8.9 million between 2034 and 2038. 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.

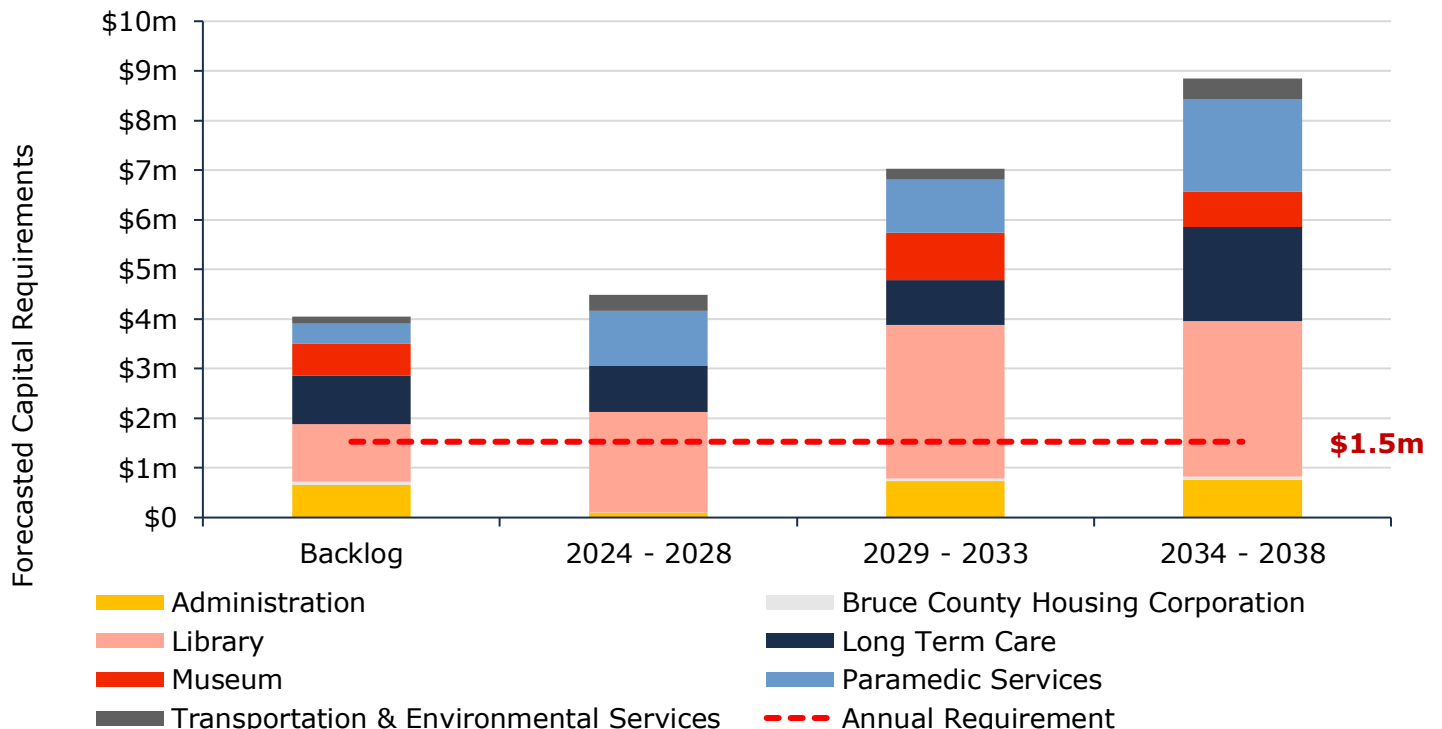


Figure 74 Forecasted Capital Replacement Needs: Furniture & Equipment 2024-2038

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

11.6 Risk Analysis

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

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

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

Consequence	5	0 Assets \$0	1 Asset \$538,830	0 Assets \$0	2 Assets \$56,000	4 Assets \$112,000
	4	2 Assets \$155,398	1 Asset \$68,371	0 Assets \$0	15 Assets \$419,371	23 Assets \$579,236
	3	13 Assets \$718,082	9 Assets \$901,028	12 Assets \$676,233	15 Assets \$1,124,197	23 Assets \$1,277,899
	2	32 Assets \$314,185	41 Assets \$450,749	40 Assets \$542,597	19 Assets \$121,257	188 Assets \$2,001,888
	1	7 Assets \$42,925	12 Assets \$61,340	11 Assets \$65,924	3 Assets \$8,149	89 Assets \$854,007
		1	2	3	4	5
		Probability				

Figure 75 Risk Matrix: Furniture & Equipment

11.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Capitalization Thresholds

Capitalization thresholds for asset inclusion can result in certain assets being excluded from the inventory if their initial costs fall below the set limits. However, over time, due to changes in pricing or valuation, these same assets might reach the thresholds for inclusion. This fluctuation can complicate asset tracking and financial planning, as assets may move in and out of the inventory, necessitating periodic reassessment and adjustment of the capitalization policy to ensure accurate and consistent asset management.

11.7 Current Levels of Service

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

11.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description of the furniture & equipment and primary service areas of use	Bruce County owns and maintains furniture and equipment assets that provide services to the community. These service areas include administrative offices, long term care facilities, paramedic services, housing corporation, museum and cultural centre.
Performance	Description of the current condition of furniture & equipment and the plans that are in place to maintain or improve the provided level of service	Furniture and equipment assets range in condition from very good to very poor. On average, office equipment and furnishing assets are in poor (34%) condition.

Table 53 Community Levels of Service: Furniture & Equipment

11.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of furniture and equipment that are in fair or better condition	41%
	% of furniture and equipment that are in poor or very poor condition	59%
Safe & Regulatory	% of medical equipment where routine inspections have been completed	100%
Affordable	Target vs. Actual Capital Reinvestment Rate	13.8% vs. 5.7%

Table 54 Technical Levels of Service: Furniture & Equipment

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for furniture and equipment. Further PLOS analysis at the portfolio level can be found in section 4. *Proposed Levels of Service Analysis*.

11.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Furniture and equipment capital funding maintained at \$627k/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Furniture and equipment capital funding gradually increases from \$627k/year to \$1.5m/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for furniture and equipment. Scenario 3 was selected to mirror Scenario 2.

Table 55 Furniture & Equipment PLOS Scenario Descriptions

11.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	24%	18%	18%	
	% Risk that is High and Very High	28%	32%	33%	
	Average Asset Risk	12.7	13.0	13.7	
	Average Annual Investment		\$627,000		This is the maintained parameter in this scenario
	Average Capital re-investment rate		5.6%		
Scenario 2	Average Condition	24%	41%	41%	
	% Risk that is High and Very High	28%	15%	25%	
	Average Asset Risk	12.7	10.3	10.3	
	Average Annual Investment		\$1,528,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Average Capital re-investment rate		13.8%		
Scenario 3	Average Condition				
	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
	Average Annual Investment				
	Average Capital re-investment rate				

Table 56 Furniture & Equipment PLOS Scenario Analysis

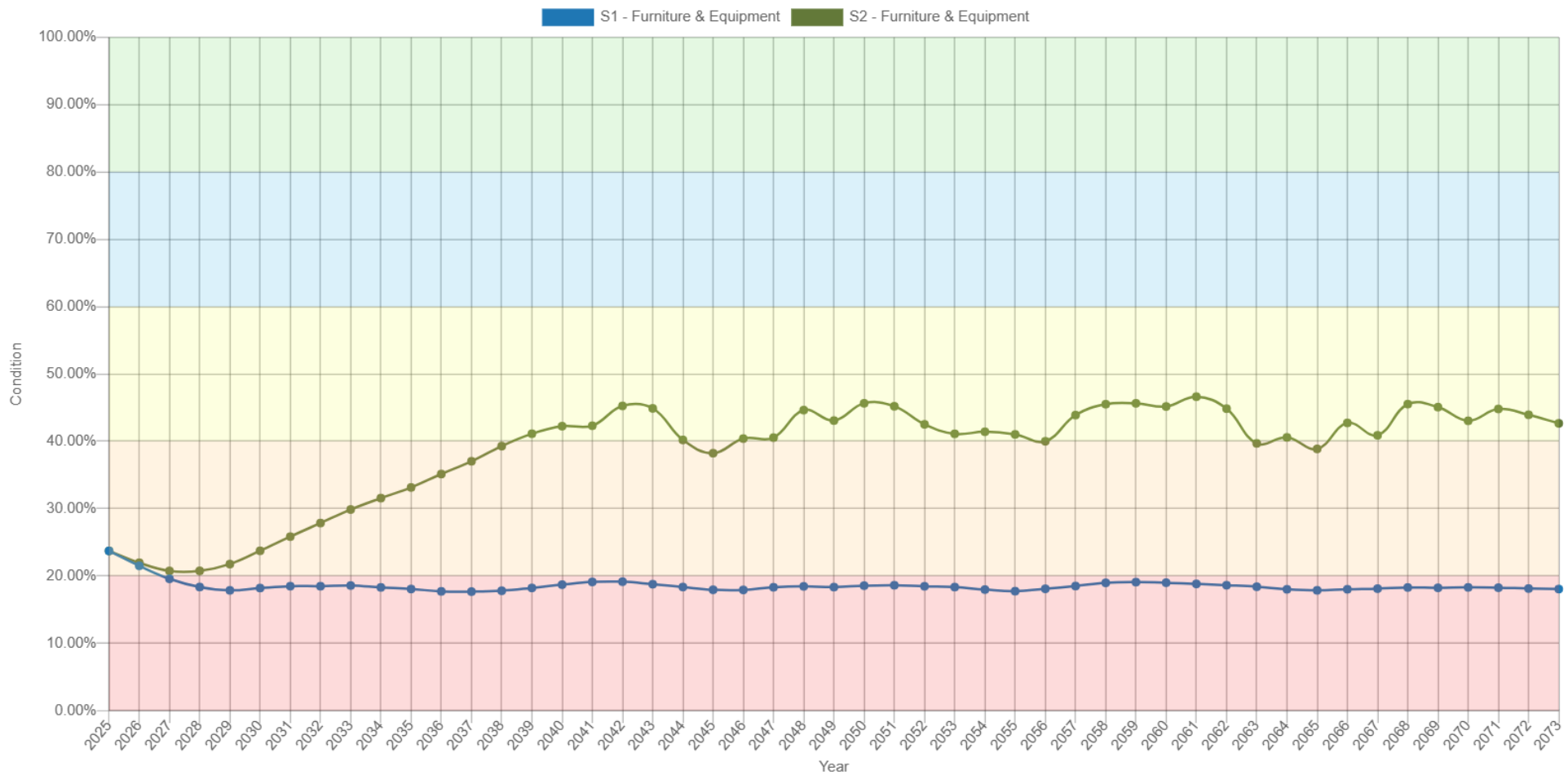


Figure 76 Furniture & Equipment PLOS Scenario Condition Results

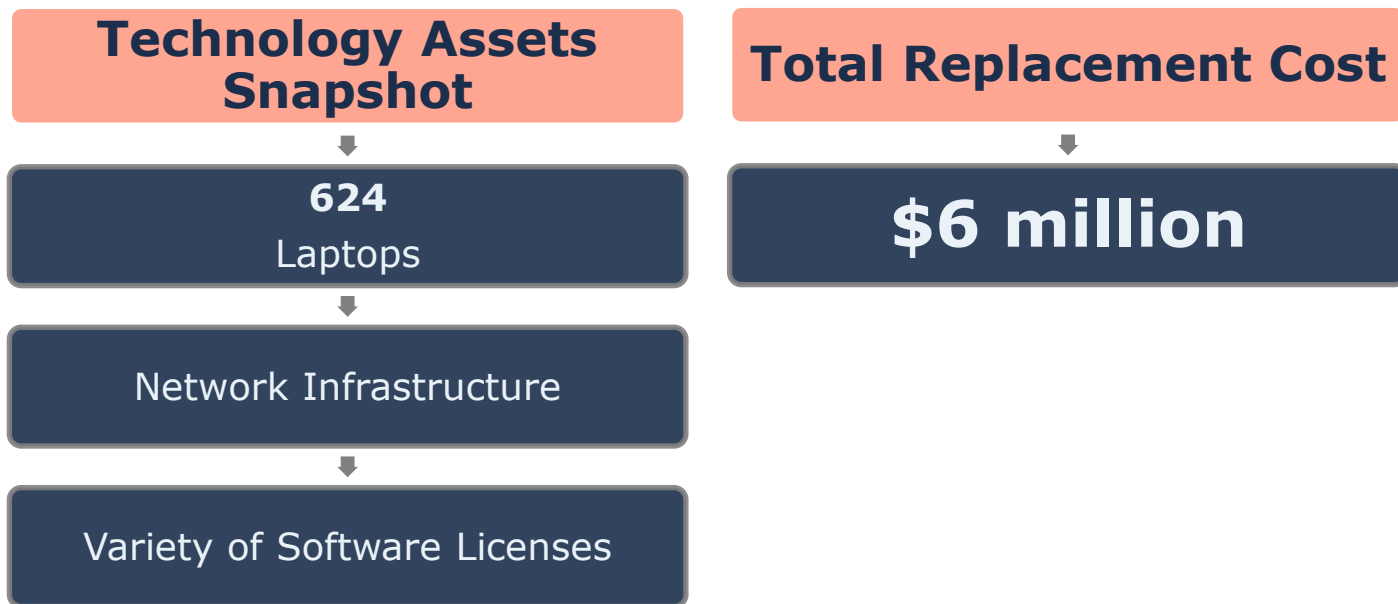
11.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for the furniture and equipment if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m	\$1.5m
Projected Capital Spending	\$679k	\$732k	\$787k	\$843k	\$901k	\$961k	\$1.0m	\$1.1m	\$1.1m	\$1.2m
Funding Deficit	\$849k	\$796k	\$741k	\$685k	\$627k	\$567k	\$506k	\$443k	\$379k	\$312k
Target Reinvestment Rate	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%
Projected Reinvestment Rate	6.1%	6.6%	7.1%	7.6%	8.1%	8.7%	9.2%	9.8%	10.4%	11.0%

Table 57 Furniture & Equipment 10-Year PLOS Financial Projections

12. Technology & Communication



12.1 Inventory & Valuation

Table 58 summarizes the quantity and current replacement cost of all technology and communication assets available in the County's asset register. Hardware accounts for the largest share of the technology and communication portfolio.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Communication	40	Assets	\$557,000	CPI
Hardware	1,677	Assets	\$2,454,000	CPI
Network	325	Assets	\$1,132,000	CPI
Software	334	Assets	\$1,970,000	CPI
TOTAL			\$6,114,000	

Table 58 Detailed Asset Inventory: Technology & Communication

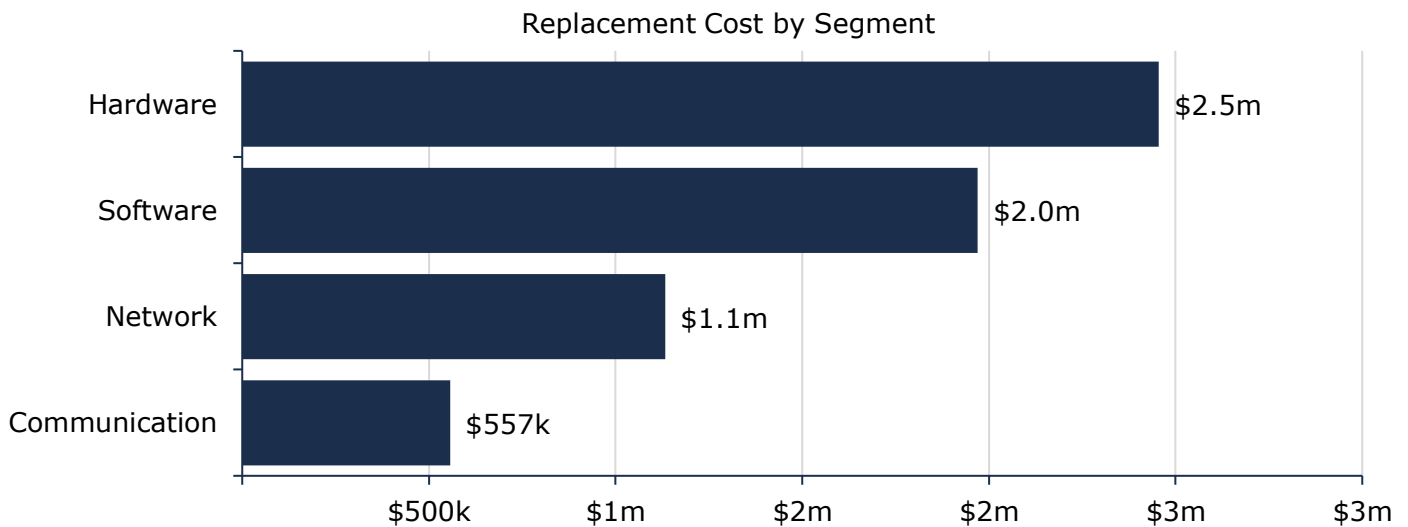


Figure 77 Portfolio Valuation: Technology & Communication

12.2 Asset Condition

Figure 78 summarizes the replacement cost-weighted condition of the County's technology and communication portfolio. Based primarily on age data, a third of technology and communication are in fair or better condition, with the remaining two thirds being in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition. Condition data was available for only 2% of technology and communication, based on replacement costs; age relative to expected useful life was used to estimate the condition of the remaining 98% of assets.

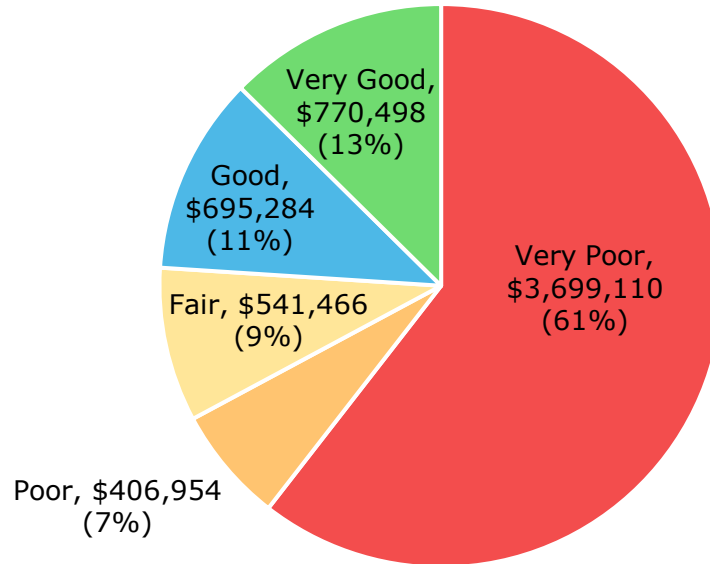
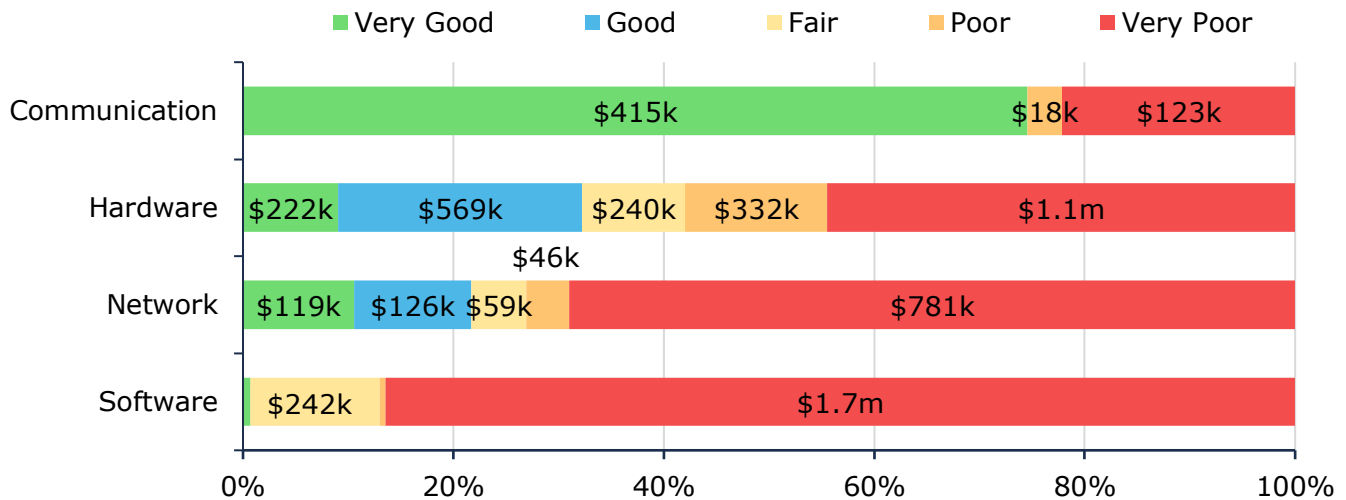


Figure 78 Asset Condition: Technology & Communication Overall

Figure 79 summarizes the condition of technology and communication by segment. The majority of communication assets are in fair or better condition. Assets in poor or worse condition are concentrated primarily in network and software segments.



Value and Percentage of Asset Segments by Replacement Cost

Figure 79 Asset Condition: Technology & Communication by Segment

12.3 Age Profile

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

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

Figure 80 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

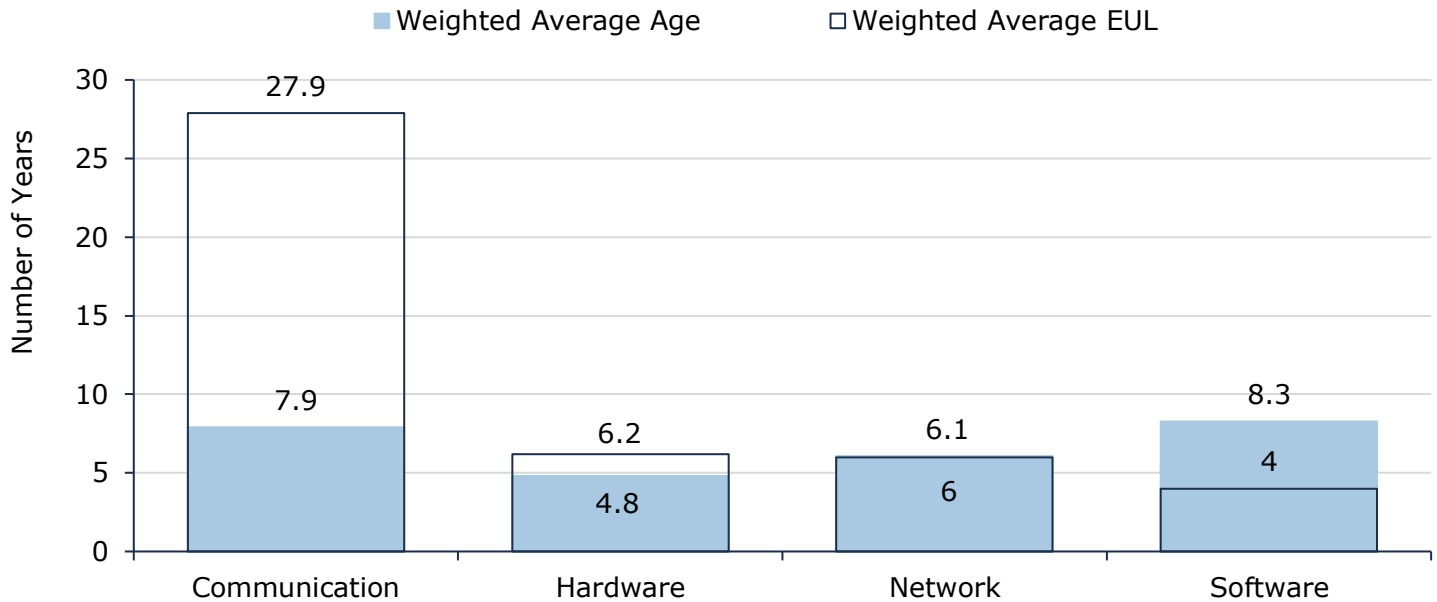


Figure 80 Estimated Useful Life vs. Asset Age: Technology & Communication

Age analysis reveals that, on average, hardware and network assets are in the latter stages of their expected life, with their weighted average age closely approaching their expected useful lives. However, software assets have significantly exceeded their established useful life. As software is a difficult asset to estimate a useful life for, the exceedance of an originally established useful life should not necessarily be cause for concern, but regular review of whether existing software systems are meeting the County's needs should be conducted.

12.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Maintenance	This category contains a wide variety of asset types which may require minimal maintenance. Typically, these assets are run to failure or obsolescence.
Replacement	Asset are replaced on an as needed basis or as part of a larger replacement program. Replacement is generally based on the asset's age relative to its expected useful life or in the event of asset failure. Other considerations also include the users' needs and whether existing assets can meet that need.

Table 59 Lifecycle Management Strategy: Technology & Communication

12.5 Forecasted Long-Term Replacement Needs

Figure 81 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the County's technology and communication portfolio. This analysis was run until 2053 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$1.2 million per year** for all technology and communication assets. Although actual spending may fluctuate substantially from year to year, this figure is a useful benchmark value for annual capital expenditure targets (or allocations to reserves) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to rise in the near term, averaging between \$5 million and \$6 million per 5-year timeframe, with a spike predicted in 2044-2048. There is also \$3.4 million in the backlog, reflecting assets which are overdue for replacement. These projections 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.

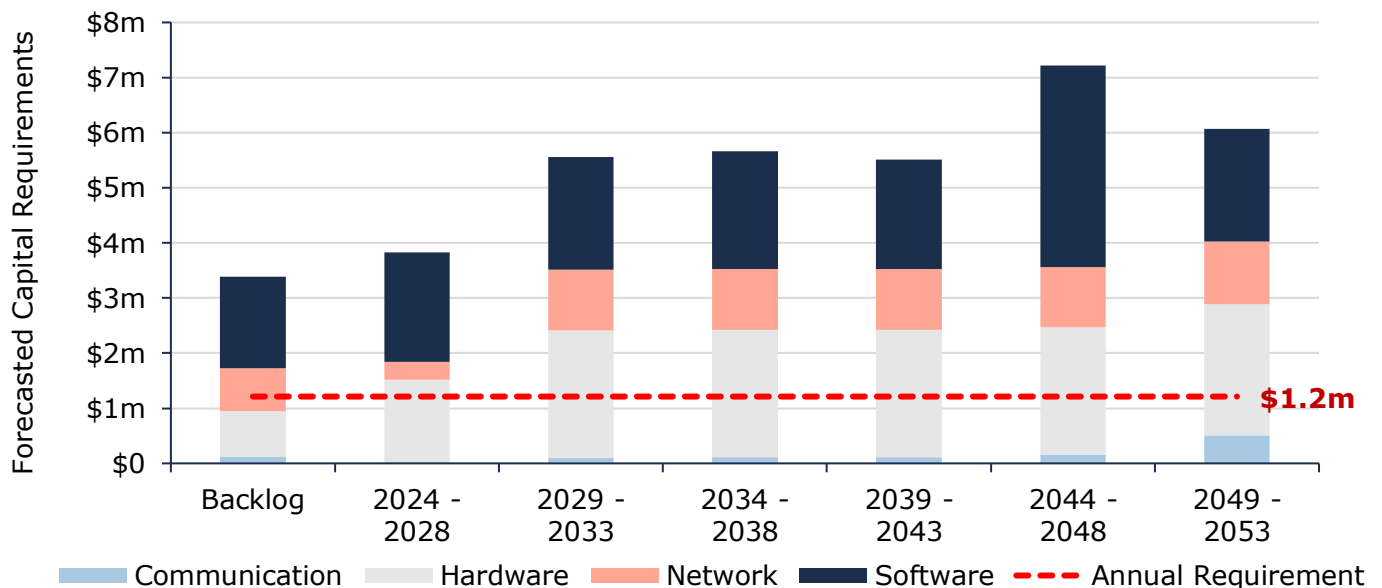


Figure 81 Forecasted Capital Replacement Needs: Technology & Communication 2024-2053

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition,

a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

12.6 Risk Analysis

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

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

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

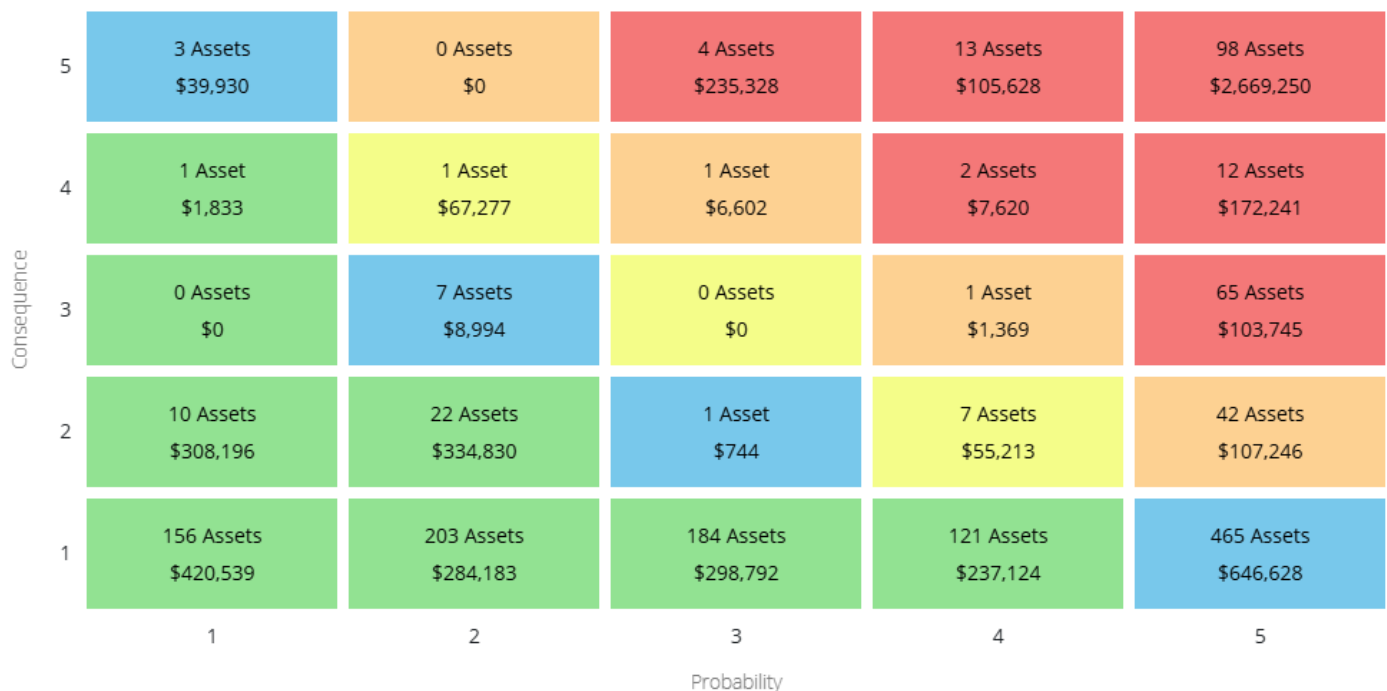


Figure 82 Risk Matrix: Technology & Communication

12.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Changing Technology

The County embraces rapidly evolving technologies, recognizing the potential to significantly enhance services and operations. The County is committed to acquiring the necessary resources and skills to support these advancements. While both financial and non-financial capacities present challenges, they also drive innovation and creative solutions to meet and exceed service expectations.

As part of the commitment to cyber security best practices, the County ensures that capital assets are replaced on schedule through responsible asset lifecycle activities. This proactive approach not only enhances cyber security posture but also ensures the organization is consistently equipped with the latest and most effective technological tools.

12.7 Current Levels of Service

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

12.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description of the technology and communication used in supporting county services	Bruce County owns and maintains technology and communication assets that provide services to the community. These service areas include administrative offices, long term care facilities, paramedic services, housing corporation, museum and cultural centre.
Performance	Description of the current condition of technology and communication	The County's technology & communication assets range in conditions from very good to very poor and on average are in poor (26%) condition.

Table 60 Community Levels of Service: Technology & Communication

12.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of technology & communication that are in fair or better condition	33%
	% of technology & communication that are in poor or very poor condition	67%
Affordable	Target vs. Actual Capital Reinvestment Rate	19.8% vs. 11.0%

Table 61 Technical Levels of Service: Technology & Communication

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for technology and communication. Further PLOS analysis at the portfolio level can be found in section 4. *Proposed Levels of Service Analysis.*

12.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. ♦ Technology and communication capital funding maintained at \$673k/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. ♦ Technology and communication capital funding gradually increases from \$673k/year to \$1.2m/year over a span of 13 years
Scenario 3: Specific Condition Targets	The County opted to only analyze two scenarios for furniture and equipment. Scenario 3 was selected to mirror Scenario 2.

Table 62 Technology & Communication PLOS Scenario Descriptions

12.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	22%	23%	20%	
	% Risk that is High and Very High	12%	13%	13%	
	Average Asset Risk	14.6	13.8	14.1	
	Annual Investment		\$673,000		This is the maintained parameter in this scenario
	Capital re-investment rate		11.0%		
Scenario 2	Average Condition	22%	40%	41%	
	% Risk that is High and Very High	12%	9%	9%	
	Average Asset Risk	14.6	11.0	11.3	
	Annual Investment		\$1,212,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		19.8%		
Scenario 3	Average Condition				
	% Risk that is High and Very High				
	Average Asset Risk		Same as Scenario 2		
	Annual Investment				
	Capital re-investment rate				

Table 63 Technology & Communication PLOS Scenario Analysis

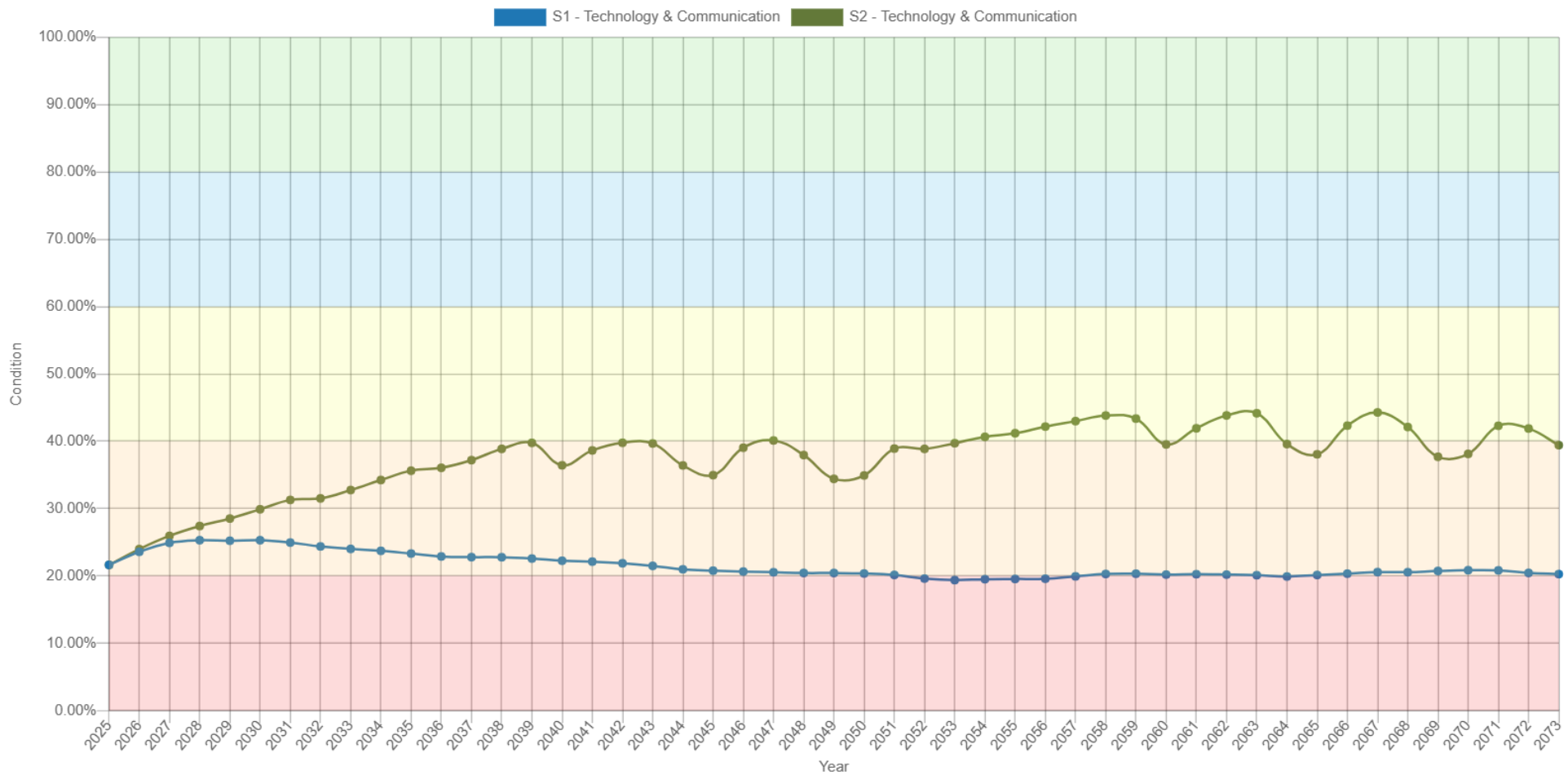


Figure 83 Technology & Communication PLOS Scenario Condition Results

12.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for technology and communication if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m	\$1.2m
Projected Capital Spending	\$704k	\$736k	\$769k	\$802k	\$837k	\$873k	\$909k	\$947k	\$986k	\$1.0m
Funding Deficit	\$508k	\$476k	\$443k	\$410k	\$375k	\$339k	\$303k	\$265k	\$226k	\$187k
Target Reinvestment Rate	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%
Projected Reinvestment Rate	11.5%	12.0%	12.6%	13.1%	13.7%	14.3%	14.9%	15.5%	16.1%	16.8%

Table 64 Technology & Communication 10-Year PLOS Financial Projections

13. Trail Network

Road Assets Snapshot

↓
131 km
Trails

↓
30
Pieces of Supporting Infrastructure

Total Replacement Cost

↓
\$12 million



13.1 Inventory & Valuation

Table 65 summarizes the quantity and current replacement cost of all trail network assets available in the County's asset register.

Segment	Quantity	Unit of Measure	Replacement Cost	Primary RC Method
Infrastructure	30	Quantity	\$10,375,000	CPI Tables
Trails	131	Kilometers	\$1,646,000	CPI Tables
TOTAL			\$12,021,000	

Table 65 Detailed Asset Inventory: Trail Network

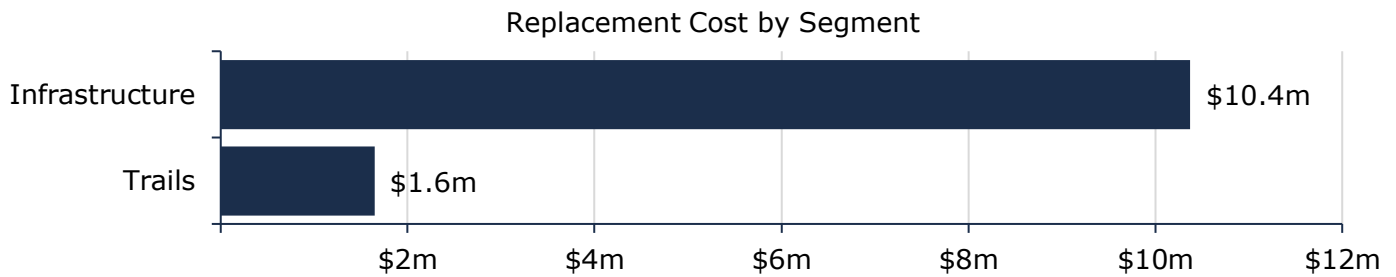


Figure 84 Portfolio Valuation: Trail Network

13.2 Asset Condition

Figure 85 summarizes the replacement cost-weighted condition of the County's trail network portfolio. Based only on age data, 53% of assets are in fair or better condition; the remaining 47% are in poor or worse condition. These assets may be candidates for replacement in the short term; similarly, assets in fair condition may require rehabilitation or replacement in the medium term and should be monitored for further degradation in condition.

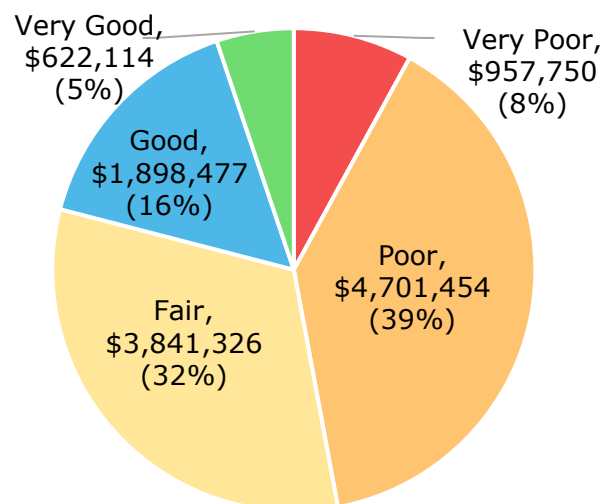


Figure 85 Asset Condition: Trail Network Overall

Figure 86 summarizes the age-based condition of trail network, broken into segments. The majority of supporting infrastructure assets are in fair or better condition. On the contrary, the trails themselves are predominantly in very poor condition.

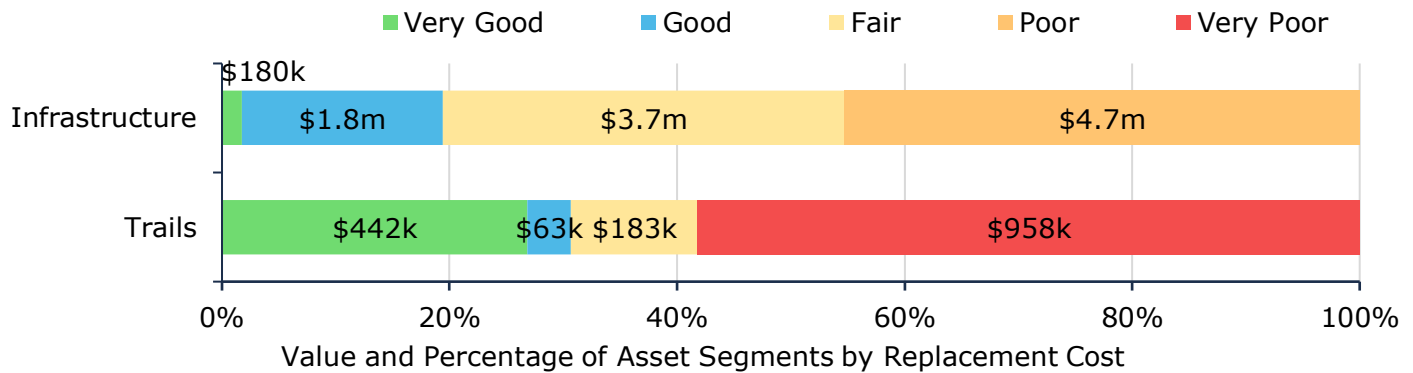


Figure 86 Asset Condition: Trail Network by Segment

13.3 Age Profile

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

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

Figure 87 illustrates the average current age of each asset type and its estimated useful life. Both values are weighted by the replacement cost of individual assets.

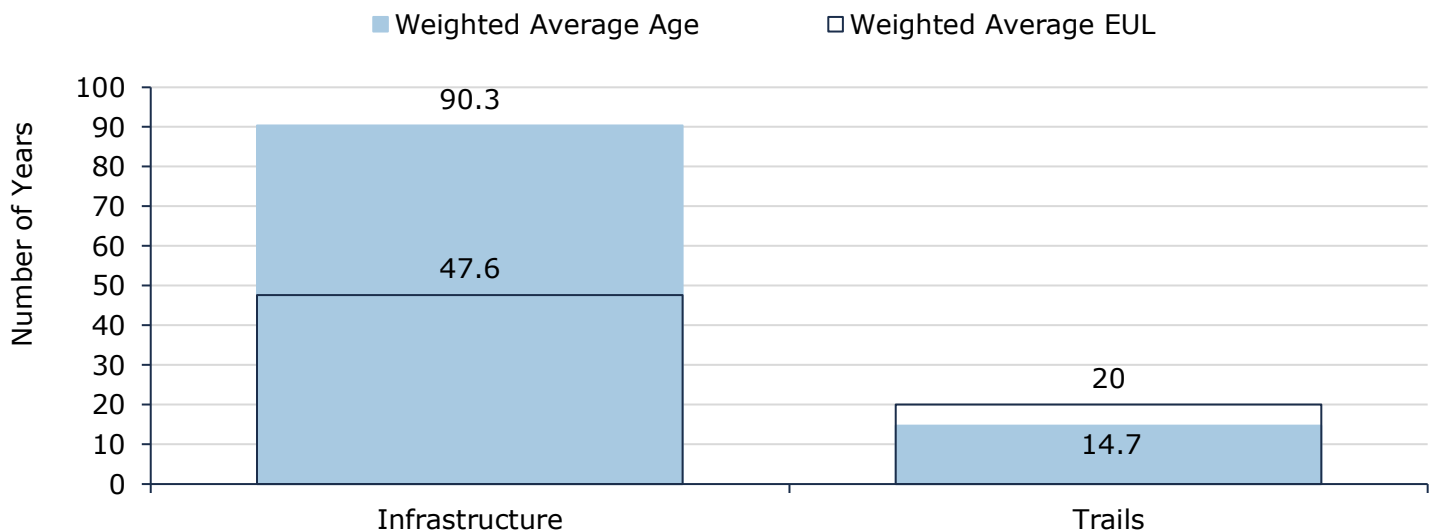


Figure 87 Estimated Useful Life vs. Asset Age: Trail Network

Age analysis reveals that, on average, supporting infrastructure assets have a weighted average age of 90.3 years, significantly exceeding their average expected useful life of 47.6 years. In contrast, trails have a weighted average age of 14.7 years relative to an expected lifespan of 20 years.

13.4 Current Approach to Lifecycle Management

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

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

Activity Type	Description of Current Strategy
Inspection & Maintenance	All trail inspection reports are to be completed following an inspection of a trail. These reports outline potential hazards or maintenance requirements to be completed before the following inspection.
	Each trail is to be assessed yearly to determine if the trail meets the level of difficulty designation and recorded on the Property Assessment Form.
Rehabilitation/ Replacement	Most County trails undergo scheduled rehabilitation, and sections are often replaced every 8-10 years. Trails are also rehabilitated as needed from inspection results.

Table 66 Lifecycle Management Strategy: Trail Network

13.5 Forecasted Long-Term Replacement Needs

Figure 88 illustrates the cyclical short-, medium- and long-term infrastructure replacement requirements for the County's trail network portfolio. This analysis was run until 2058 to capture at least one iteration of replacement for the longest-lived asset in Citywide Assets, the County's primary asset management system and asset register. The County's average annual requirements (red dotted line) total **\$314,000 per year** for all trail 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) to ensure projects are not deferred and replacement needs are met as they arise.

Replacement needs are forecasted to fluctuate significantly over the 35-year horizon, with a notable peak of \$4.9 million between 2039–2043. 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.

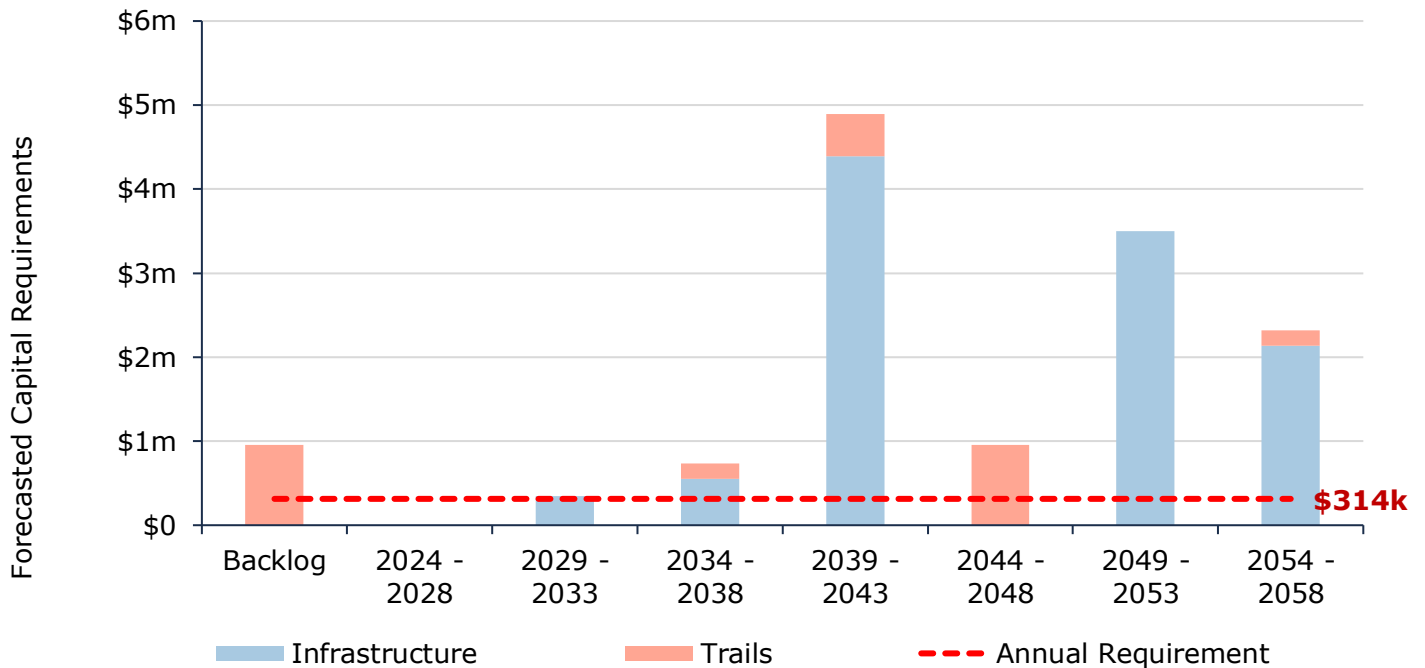


Figure 88 Forecasted Capital Replacement Needs: Trail Network 2024-2058

Often, the magnitude of replacement needs is substantially higher than most municipalities can afford to fund. In addition, most assets may not need to be replaced. However, quantifying and monitoring these spikes is essential for long-term financial planning, including establishing dedicated reserves. In addition, a robust risk framework will ensure that high-criticality assets receive proper and timely lifecycle intervention, including replacements.

A summary of the 10-year replacement forecast can be found in Appendix B – 10-Year Capital Requirements.

13.6 Risk Analysis

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

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

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

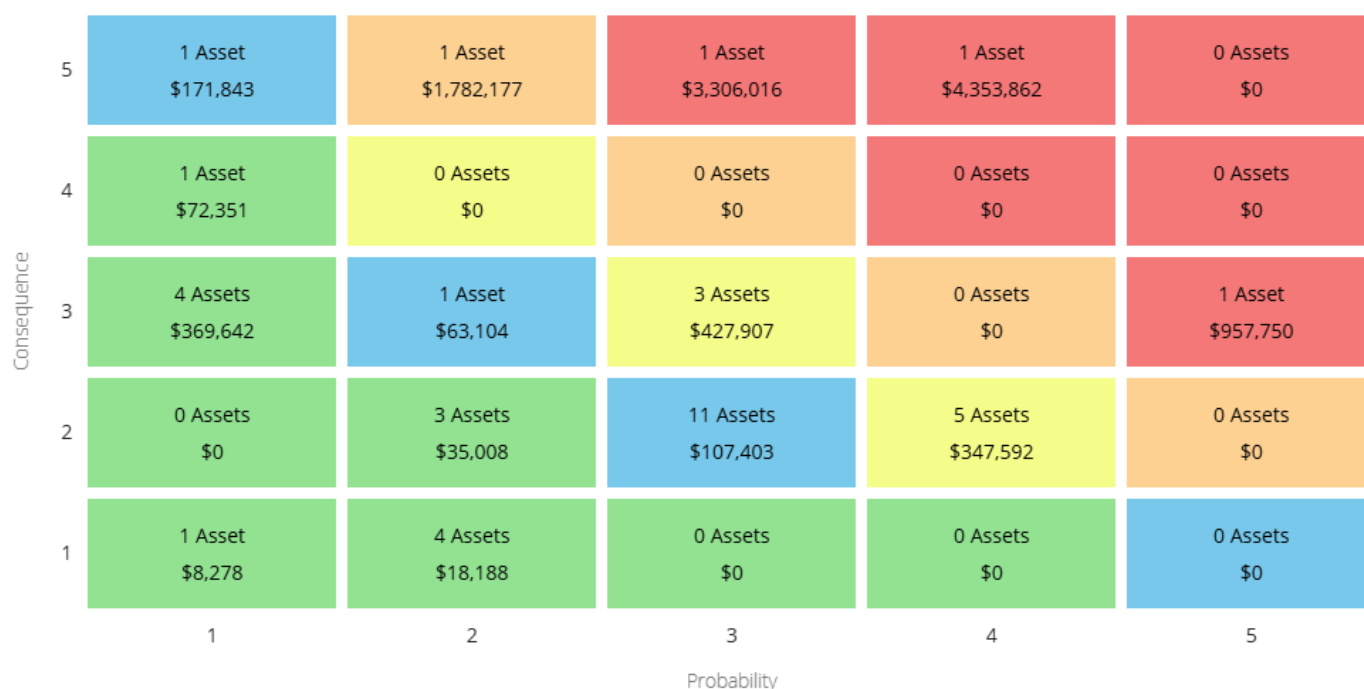


Figure 89 Risk Matrix: Trail Network

13.6.1 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the County is currently facing:



Resources

Maintaining the County's Trail Network and providing desired levels of service requires the allocation of adequate resources. Limited labour and equipment resources along with budget constraints are a constant concern for staff managing the maintenance and rehabilitation of the County trail network.



Significant Weather Events

The County's trail network is impacted by significant weather events. These events create challenges and cause delays in trail improvements. Large storms can further strain the County's financial, labour and equipment resources in regard to the trail network.

13.7 Current Levels of Service

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

13.7.1 Community Levels of Service

Service Attribute	Qualitative Description	Current LOS (2023)
Availability	Description, which may include maps, of the trail network in the County and its level of connectivity	Refer to Appendix C – Levels of Service Supplemental Information for a summary of the trail network. Further details to the trail network connectivity and map can be viewed found at https://trails.brucecounty.on.ca/map/
Performance	Description of the current condition of the Trail Network and the plans that are in place to maintain or improve the provided level of service	The current condition of the trail network is on average in fair (46%) or better condition.

Table 67 Community Levels of Service: Trail Network

13.7.2 Technical Levels of Service

Service Attribute	Technical Metric	Current LOS (2023)
Sustainable	% of the trail network that is in fair or better condition	58%
	% of the trail network that is in poor or very poor condition	42%
Safe & Regulatory	% of the trail network where routine inspections have been completed	100%
Affordable	Target vs. Actual Capital Reinvestment Rate	2.6% vs. 1.0%

Table 68 Technical Levels of Service: Trail Network

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 County's ability to afford the PLOS.

The below tables and graphs explain the proposed levels of service scenarios that were analyzed for trail network. Further PLOS analysis at the portfolio level can be found in Section 4. *Proposed Levels of Service Analysis*.

13.8.1 PLOS Scenarios Analyzed

Scenario	Description
Scenario 1: Maintain Current Funding Level	This scenario maintains existing capital funding levels for those categories that are underfunded. Trail network capital funding maintained at \$673k/year
Scenario 2: Achieving 100% Target Funding in 13 Years	This scenario assumes gradual tax increases of ~2.8%/year, stabilizing at 100% funding across all asset categories in 13 years. Trail network capital funding gradually increases from \$673k/year to \$1.2m/year over a span of 13 years
Scenario 3: Specific Condition Targets	This scenario aims to maintain target conditions for the trail network's portfolio of assets: Trails condition target: 60%

Table 69 Trail Network PLOS Scenario Descriptions

13.8.2 PLOS Analysis Results

Scenario	Technical LOS Outcomes	Initial Value (2025)	15 Year Projection (2039)	30 Year Projection (2054)	Comments
Scenario 1	Average Condition	41%	20%	9%	
	% Risk that is High and Very High	16%	24%	32%	
	Average Asset Risk	15.9	19.8	21.7	
	Annual Investment		\$109,000		This is the maintained parameter in this scenario
	Capital re-investment rate		0.9%		
Scenario 2	Average Condition	41%	25%	37%	
	% Risk that is High and Very High	16%	21%	29%	
	Average Asset Risk	15.9	19.3	16.0	
	Annual Investment		\$314,000		This parameter is increased incrementally to reach a target portfolio investment of \$44.9M over 13 years
	Capital re-investment rate		2.6%		
Scenario 3	Average Condition	41%	55%	63%	Target Condition 60% ♦ Lifecycle Event Change: Trigger replacement when asset reaches 15% condition instead of 0%
	% Risk that is High and Very High	16%	11%	29%	
	Average Asset Risk	15.9	12.0	10.0	
	Annual Investment		\$324,000		
	Capital re-investment rate		2.7%		

Table 70 Trail Network PLOS Scenario Analysis

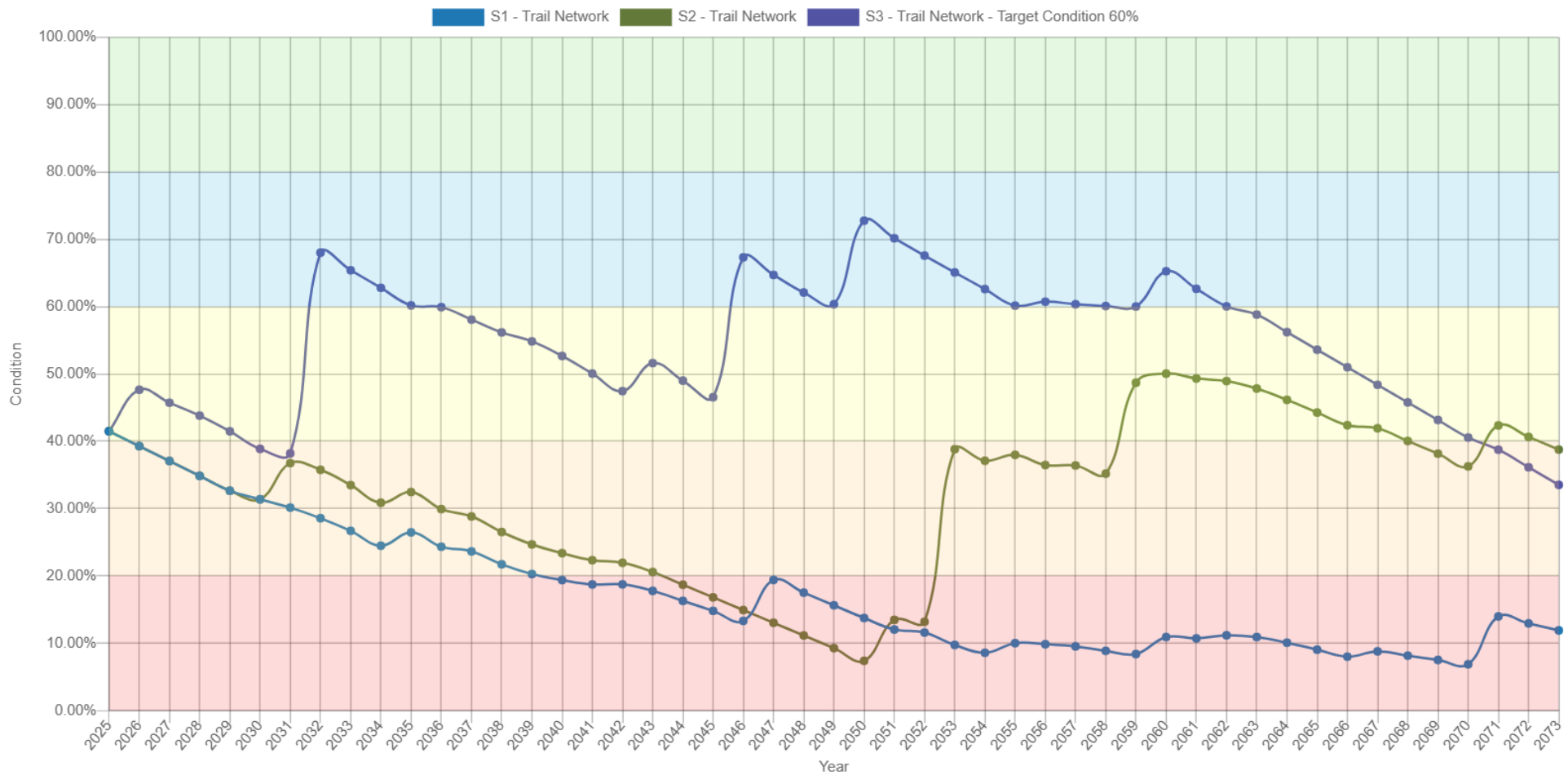


Figure 90 Trail Network PLOS Scenario Condition Results

13.8.3 10-Year PLOS Financial Projections

As outlined in Section 4. *Proposed Levels of Service Analysis*, Bruce County selected Scenario 3 as their preferred proposed levels of service. The main objective is to increase spending gradually to reach a more sustainable funding level to manage the County's current inventory of assets. The following table outlines the funding trajectory over the next 10 years for trail network if the financial strategy for Scenario 3 is implemented.

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Targeted Capital Spending	\$324k	\$324k	\$324k	\$324k	\$324k	\$324k	\$324k	\$324k	\$324k	\$324k
Projected Capital Spending	\$127k	\$139k	\$152k	\$165k	\$179k	\$192k	\$207k	\$221k	\$236k	\$252k
Funding Deficit	\$197k	\$185k	\$172k	\$159k	\$145k	\$132k	\$117k	\$103k	\$88k	\$72k
Target Reinvestment Rate	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
Projected Reinvestment Rate	1.1%	1.2%	1.3%	1.4%	1.5%	1.6%	1.7%	1.8%	2.0%	2.1%

Table 71 Trail Network 10-Year PLOS Financial Projections

Strategies

14. Growth

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

14.1 Bruce County Official Plan

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 Official Plan was approved by the Ontario Municipal Board on November 16th, 1999, and the Five-Year Review was approved by the Minister of Municipal Housing Affairs on June 21st, 2010. The most recent consolidation was published in September 2021.

Note: As of the writing of this AMP, Bruce County is currently reviewing their Official Plan to update the documenting guiding their long-term growth and development through to 2046, locally referring to the process as "Plan the Bruce". The updated plan was not completed in time for inclusion in this AMP. There would be exceptional value to further review growth projections once the Official Plan is adopted by the Council.

Bruce County consists of eight lower tier municipalities, each providing a variety of economic, social, and physical attributes which give Bruce County a unique appeal. The Official Plan takes into account the desire to preserve the diversity and uniqueness of the County by balancing the demands for new development with the need to preserve existing attributes. A moderate population growth is expected in the County due to the expected expansion of Bruce Power, and the continued growth in tourism and retirement population.

Much of the anticipated growth in the County will occur in Primary Communities, Secondary Communities and Hamlet Communities, to ensure the impacts on heritage and agricultural features in the County are minimized. The policies in the Official Plan also consider the need to balance population growth with employment opportunities by ensuring County Council encourages economic development and promotes the County as a desirable location for new business development.

Population projections supplied in the Bruce County Housing Study anticipated a population of 63,130 permanent residents by 2021, representing a growth of 5,238 people (8.2%) from 2001 to 2021. Employment projections provided in the Official Plan anticipated a total of 36,335 jobs in the county by 2021, a growth of 940 jobs from 2001.

Table 72 outlines the population and employment forecasts allocated to the Bruce County in the Official Plan.

	2011	2016	2021
Historical & Forecasted Population	66,101	67,818	67,866
Historical & Forecasted Employment	35,390	36,309	36,335

Table 72 Population & Employment Forecasts

The above projections are based on the Bruce County Census Update (Housing Study) from 2009, and 2006 Census data. More recent population statistics from the 2016 and 2021 Census exceed the suggested projections. The recorded population in the County was 68,147 in 2016 and 73,396 in 2021.

14.2 Impact of Growth on Lifecycle Activities

As mentioned above, the historical growth in Bruce County has outpaced projections in the last few decades. Although new official projections will be provided in the next iteration of the Official Plan, it is assumed that Bruce County will see population growth of +20,000 in the next two decades. With rising population comes rising demands for municipal services. The County will need to review the potential for service expansion, changes to maintenance needs, and review opportunities for optimization of its infrastructure and facilities to meet community needs while simultaneously ensuring long-term financial sustainability.

Below is an overview of the impact of growth on key services managed by the County, focusing on lifecycle activities such as capital investments, operational costs, human resource needs, and long-term sustainability. Note: not all asset categories are included in this overview, however, the County can generally assume that population growth will ultimately affect all infrastructure within the County.

14.2.1 Roads and Transportation Infrastructure

- ◆ **Capital Costs:**

While further expansion of road networks in the rural areas of the County are not anticipated, it is likely with the increase in population that further build out of semi-rural and urban areas will be required. Depending on provincial consultation, there may also be potential for the construction of by-passes around primary and secondary urban communities.

- ◆ **Operational Costs:**

Increasing the kilometers of roadways maintained by the County will increase maintenance costs for asphalt/gravel maintenance, snow removal, traffic signal operations, etc.

- ◆ **Human Resources:**

Bruce County administration has already indicated a struggle to keep up with maintenance demands at current staffing levels in the transportation department. Additional public works staff for road repairs, maintenance crews for winter operations, and transportation planners will likely need to be considered in future operating budgets.

14.2.2 Stormwater Management and Climate Resilience

- ◆ **Capital Costs:**

Where urban expansion is considered, the increase in developed areas will require upgrades to existing drainage systems, implementing green stormwater infrastructure, and increasing stormwater retention capacity.

- ◆ **Operational Costs:**

Expanded network coverage will require an expansion of regular inspections, dredging of stormwater ponds, maintenance of culverts, and monitoring flood-prone areas.

- ◆ **Human Resources:**

While staffing is currently considered adequate by administration, more engineering and maintenance staff for stormwater asset management and climate adaptation planning may be required to keep up with expansion in the network.

14.2.3 Community Facilities

◆ **Capital Costs:**

Population growth will trigger necessary expansions to services that are supported by facility assets. Examples of this are already being seen, such as the new paramedic services facility constructed in 2024 (note: this facility was not included in the current levels of service section of this AMP due to the year-end cut-off of 2023). Additional consideration should include the age demographics within the population projections, as a higher number of seniors will result in increased needs for long-term care facilities.

◆ **Operational Costs:**

New technologies and new facilities will require an increase to annual facility maintenance budgets including routine maintenance, security, energy efficiency systems, etc.

◆ **Human Resources:**

Increased facilities will require additional manpower to maintain these facilities. Anecdotally, County administration has felt there was a severe lack of maintenance planning in the past but that improvements have been made. Consideration of dedicated maintenance planners may be necessary to increase the longevity of facility assets.

14.2.4 Parks, Trails, and Open Spaces

◆ **Capital Costs:**

Population increases in more urban areas may result in the expansion of green spaces and park amenities. While it is expected that developers will assume the initial financial burden, replacement of these facilities will need to be incorporated into future capital plans.

◆ **Operational Costs:**

Population increases will result in additional traffic on existing trails and likely result in a desire for trail network expansion. Increased traffic will require more frequent trail maintenance, waste collection, etc.

◆ **Human Resources:**

Higher usage of parks, and the subsequent increased operations and maintenance needs, will result in an increased need for trail maintenance personnel. This would likely materialize as an increase to seasonal maintenance workers as opposed to full-time staff.

15. Financial Strategy

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

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

1. The financial requirements for:
 - a. Existing assets
 - b. Existing service levels
 - c. Requirements of contemplated changes in service levels (*refer to Section 4. Proposed Levels of Service Analysis*)
 - d. Requirements of anticipated growth (none identified for this plan)
2. Use of traditional sources of municipal funds:
 - a. Tax levies
 - b. User fees
 - c. Debt
 - d. Development charges
3. Use of non-traditional sources of municipal funds:
 - a. Reallocated budgets
 - b. Partnerships
 - c. Procurement methods
4. Use of Senior Government Funds:
 - a. Canada Community-Building Fund (CCBF)
 - b. Annual grants

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

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

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

15.1 Annual Requirements & Capital Funding

15.1.1 Annual Requirements

The annual requirements represent the amount the County should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs and achieve long-term sustainability based on the proposed levels of service outlined in Section 4. In total, the County must allocate approximately \$47 million annually to address capital requirements to meet the proposed levels of service for the assets included in this AMP.

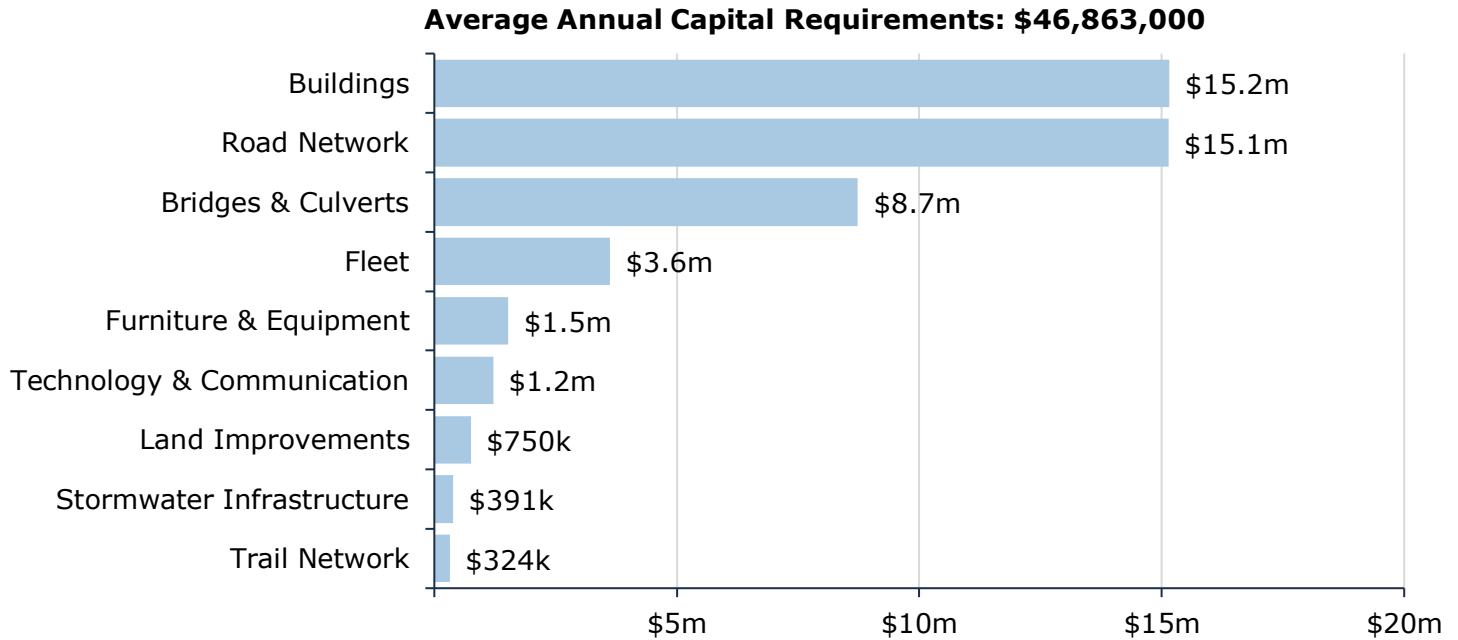


Figure 91 Annual Capital Funding Requirements by Asset Category

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 of the County’s roads. 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:

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

Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Lifecycle Strategy)	Difference
Road Network	\$18,446,000	\$15,140,000	\$3,306,000

Table 73 Lifecycle Strategies Annual Savings

The implementation of a proactive lifecycle strategy for roads leads to a potential annual cost avoidance of \$3.3 million for the road network. This represents an overall reduction of the annual requirements of 18%. As the lifecycle strategy scenario represents the lower cost option available to the County, we have used these annual requirements in the development of the financial strategy.

15.1.2 Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the County is committing approximately \$15.3 million towards capital projects each year. Given the annual capital requirement of \$46.9 million to achieve the proposed levels of service, there is currently a funding gap of \$31.6 million annually.

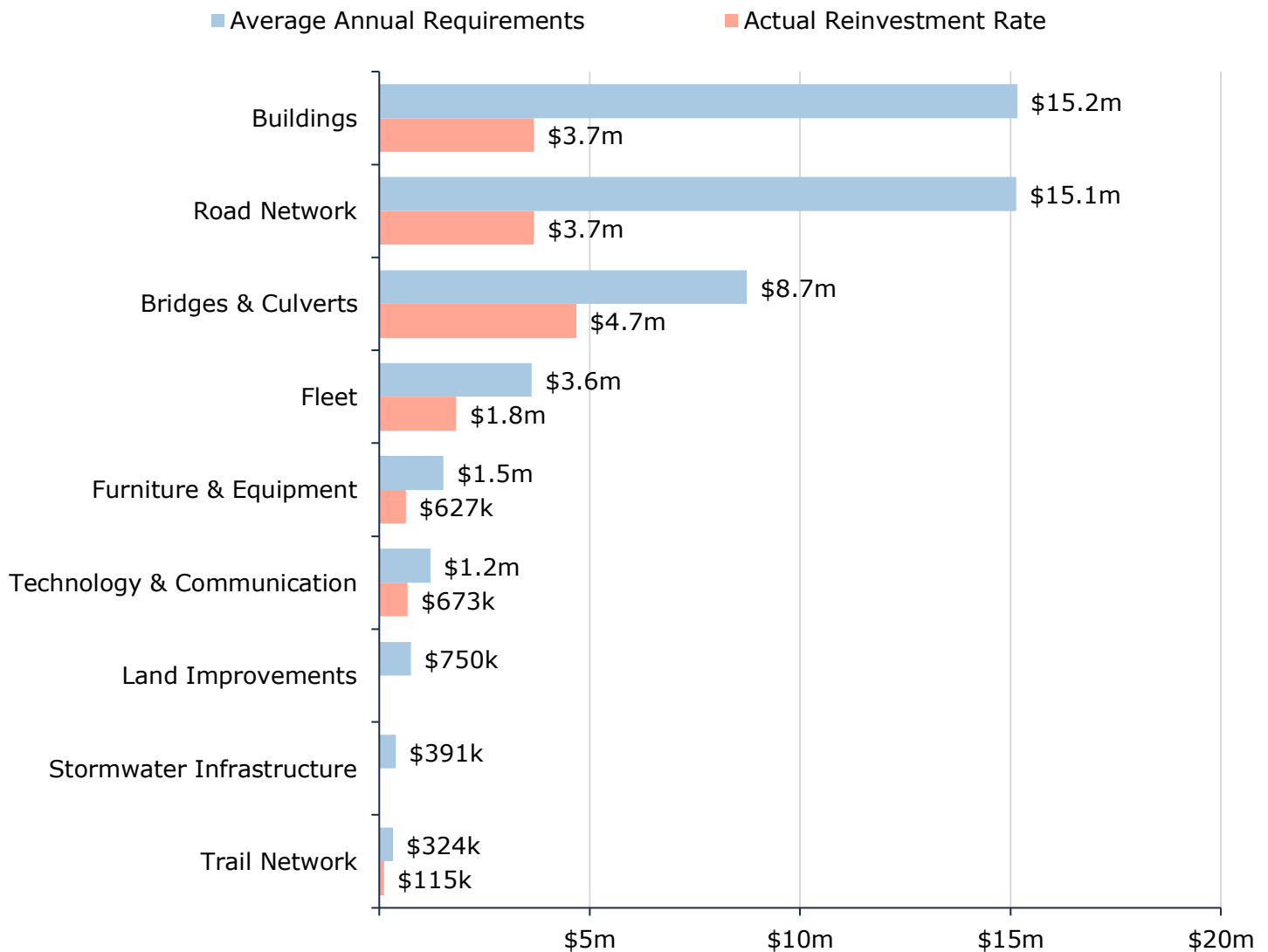


Figure 92 Annual Requirements vs. Capital Funding Available

15.2 Funding Objective

We have developed a scenario that would enable Bruce County to achieve full funding within 1-20 years for the following assets:

1. **Tax Funded Assets:** Road Network, Bridges & Culverts, Stormwater Infrastructure, Buildings, Land Improvements, Fleet, Furniture & Equipment, Technology & Communication, and Trail Network
2. **Rate-Funded Assets:** *No rate funded assets owned/operated by Bruce County*

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

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

15.3 Financial Profile

15.3.1 Current Funding Position

The following tables show, by asset category, Bruce County's average annual asset investment requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Avg. Annual Requirement	Annual Funding Available				Annual Deficit
		Taxes	CCBF	OCIF	Total Available	
Road Network	15,140,000	2,766,252	0	909,748	3,676,000	11,464,000
Bridges & Culverts	8,734,000	2,206,062	2,200,458	273,386	4,679,906	4,054,094
Stormwater Infrastructure	391,000	0	0	0	0	391,000
Buildings	15,162,000	3,669,048	0	0	3,669,048	11,492,952
Land Improvements	750,000	0	0	0	0	750,000
Fleet	3,622,000	1,830,896	0	0	1,830,896	1,791,104
Furniture & Equipment	1,528,000	627,151	0	0	627,151	900,849
Technology & Communication	1,212,000	673,030	0	0	673,030	538,970
Trail Network	324,000	115,000	0	0	115,000	209,000
Total	46,863,000	11,887,439	2,200,458	1,183,134	15,271,031	31,591,969

Table 74 Annual Available Funding for Tax Funded Assets

The average annual investment requirement for the above categories is \$46.9 million. Annual revenue currently allocated to these assets for capital purposes is \$15.3 million leaving an annual deficit of \$31.6 million. Put differently, these infrastructure categories are currently funded at 33% of their long-term requirements of the proposed levels of service.

15.3.2 Full Funding Requirements

In 2023, Bruce County had budgeted annual tax revenues of approximately \$63.4 million. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding of the proposed levels of service would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding
Road Network	18.1%
Bridges & Culverts	6.4%
Stormwater Infrastructure	0.6%
Buildings	18.1%
Land Improvements	1.2%
Fleet	2.8%
Furniture & Equipment	1.4%
Technology & Communication	0.9%
Trail Network	0.3%
Total	49.8%

Table 75 Tax Increase Requirements for Full Funding

The following changes in costs and/or revenues over the next number of years are not being considered in the financial strategy as they are already committed in the County's long-term financial plans, but are worth highlighting:

- a) Bruce County's debt payments for these asset categories will be decreasing by \$240,000 within the next 5 years and by \$1.2 million in the next 10 years.

As mentioned above, scenario modeling does not include capturing the above changes and allocating them to the infrastructure deficit outlined above. The table below presents several phase-in period lengths for achieving the proposed levels of service:

	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	31,591,969	31,591,969	31,591,969	31,591,969
Tax Increase Required	49.8%	49.8%	49.8%	49.8%
Annually:	8.5%	4.2%	2.8%	2.1%

Table 76 Tax Increase Options 5-20 Years

15.3.3 Financial Strategy Recommendations

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

- a) increasing tax revenues by 2.8% each year for the next 15 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP.
- b) allocating the current CCBF and OCIF revenue as outlined previously.
- c) Allocating the scheduled OCIF grant increases to the infrastructure deficit as they occur.
- d) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

- 1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. We have included OCIF formula-based funding, if applicable, since this funding is a multi-year commitment⁴.
- 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.
- 3. Due to existing financial commitments, reallocations of debt payments for capital expenditures are not included in this strategy. It is recommended that the County consider this in the future when planning reallocations of debt payments.

Although this option achieves full funding of proposed levels of service on an annual basis in 15 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of \$31.3 million, concentrated mainly in buildings (\$9.2 million), land improvements (\$5.9 million), and the road network (\$4.6 million). Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

15.4 Use of Reserves

15.4.1 Available Reserves

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

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

⁴ The County 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.

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

Asset Category	Balance at December 31, 2023	Target Balances per Policy
Road Network	\$5,498,904	\$13,950,000
Bridges & Culverts	\$1,917,843	\$9,600,000
Stormwater Infrastructure	\$0	\$870,000
Buildings	\$9,520,364	\$12,320,000
Land Improvements	\$0	\$760,000
Fleet	\$1,910,247	\$2,700,000
Furniture & Equipment	\$1,403,313	\$1,650,000
Technology & Communication	\$1,738,384	\$1,080,000
Trail Network	\$16,294	\$480,000
Total Tax Funded:	\$22,005,349	\$43,410,000

Table 77 Bruce County Reserve Balances

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

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

These reserves are available for use by applicable asset categories during the phase-in period to full funding. This coupled with Bruce County's judicious use of debt in the past, allows the scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

16. Recommendations & Key Considerations

16.1 Financial Strategies

1. Review the feasibility of adopting the proposed levels of service summarized in Section 4. to achieve the funding requirements for desired service levels for the asset categories analyzed. This includes increasing taxes by 2.8% per year over a period of 15 years.
2. Continued allocation of OCIF and CCBF funding as previously outlined.
3. Reallocating appropriate revenue from categories in a surplus position to those in a deficit position.
4. Increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.
5. Continue to apply for project specific grant funding to supplement sustainable funding sources.

16.2 Asset Data

1. Continuously review, refine, and calibrate asset data to better reflect the current state and improve capital projections. Though not a comprehensive list, the following data considerations should be investigated for the noted categories:
 - a. Road Network
 - i. Continue to review and refine the road network's asset inventory to ensure new assets and betterments are reflected and attributes are detailed.
 - ii. Review road culverts inventory to determine whether all County assets within this asset category have been accounted for.
 - b. Bridges & Culverts
 - i. Continue to review and validate assessed condition data and replacement costs for all bridges and structural culverts upon the completion of OSIM inspections every 2 years.
 - ii. This AMP only includes capital costs associated with the reconstruction of bridges and culverts. The County should work towards identifying projected capital rehabilitation and renewal costs for bridges and culverts and integrating these costs into long-term planning.
 - c. Stormwater Infrastructure
 - i. The County's stormwater infrastructure inventory is a newly developed inventory relying on a combination of historical construction drawings, lower-tier municipality data, internal professional knowledge, and filed data capture. It is highly recommended staff continue to review and validate stormwater infrastructure inventory data.
 - ii. The Ministry of Conservation, Energy and Parks has downloaded the approvals for stormwater infrastructure to municipalities with monitoring and maintenance requirements that will be adopted by Bruce County.
 - d. Buildings
 - i. Through the 2019-2020 comprehensive facility assessments completed by FCAPX, the County has achieved a componentized centralized asset inventory for all County

buildings. Facilities consist of several separate capital components that have unique estimated useful lives and require asset-specific lifecycle strategies. Staff should review and update the building inventory annually to maintain data accuracy and integrity.

- e. Equipment
 - i. The County assesses critical equipment where regulated or required, however the data is not necessarily captured within the County's centralized asset registry. Alignment of equipment assessment data to the County's centralized asset management system is critical to gain maximum system functionality and value from data.
- f. All Other Non-Core Assets
 - i. All non-core asset inventory data should be analyzed regularly to ensure end users have confidence in the accuracy, consistency, integrity, and outputs of data.
 - ii. Where asset replacement costs were not available, historical costs have been inflated using Provincial CPI tables. These costs should be evaluated to determine their accuracy and reliability.
 - iii. Replacement costs should be updated every 3–5 years according to the best available information on the cost to replace the asset in today's value.

2. Condition assessment data is vital to accurate capital projections and to reduce the number of unexpected asset failures. The following recommendations relate to each of the noted categories and their condition assessment strategies:

- a. Road Network
 - i. A recent comprehensive assessment of the road network was completed in 2023. Consider completing an updated assessment of all roads at regular intervals.
 - ii. Develop and conduct condition assessment programs for all other road network assets such traffic signals, signs, and non-structural culverts.
- b. Stormwater Infrastructure
 - i. The confirmation of a comprehensive asset inventory should be followed by a system-wide assessment of the condition of all stormwater infrastructure assets through CCTV or zoom camera inspections.
- c. Buildings
 - i. The County should implement regular internal condition assessments for all buildings and associated components to better inform short- and mid-term capital requirements.
 - ii. The County should consider comprehensive building assessments for all buildings on a 5-10 year cycle to better inform and update the short- and long-term capital requirements.
- d. Fleet
 - i. Fleet assets are inspected regularly and the associated data should be appended to fleet assets within the County's centralized asset management system.
- e. All Other Non-Core Assets
 - i. Identify condition assessment strategies for all non-core high value and high risk assets.
 - ii. Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain

in-service. Adjust the service life and/or condition ratings for these assets accordingly.

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. Continue to track metrics related to each asset category included in this AMP to improve annual reporting of asset management progress. Service levels should be reviewed regularly to ensure they are meeting the needs of the community, administration, and council as needs inevitably change over time.

Appendices

Appendix A – Infrastructure Report Card

Appendix B – 10-Year Capital Requirements

Appendix C – Levels of Service Supplemental Information

Appendix D – Risk Rating Criteria

Appendix A – Infrastructure Report Card

Asset Category	Replacement Cost	Average Condition	Financial Capacity ⁵		% Funded
Road Network	\$465 m	Fair	Annual Requirement:	\$15,140,000	24%
			Funding Available:	\$3,676,000	
			Annual Deficit: \$11,464,000		
Bridges & Culverts	\$320 m	Good	Annual Requirement:	\$8,734,000	54%
			Funding Available:	\$4,680,000	
			Annual Deficit: \$4,054,000		
Stormwater Infrastructure	\$29 m	Very Good	Annual Requirement:	\$391,000	0%
			Funding Available:	\$0	
			Annual Deficit: \$391,000		
Buildings	\$308 m	Fair	Annual Requirement:	\$15,162,000	24%
			Funding Available:	\$3,669,000	
			Annual Deficit: \$11,493,000		
Land Improvements	\$19 m	Poor	Annual Requirement:	\$750,000	0%
			Funding Available:	\$0	
			Annual Deficit: \$750,000		
Fleet	\$18 m	Good	Annual Requirement:	\$3,622,000	51%
			Funding Available:	\$1,831,000	
			Annual Deficit: \$1,791,000		
Furniture & Equipment	\$11 m	Poor	Annual Requirement:	\$1,528,000	41%
			Funding Available:	\$627,000	
			Annual Deficit: \$901,000		
Technology & Communication	\$6 m	Poor	Annual Requirement:	\$1,212,000	56%
			Funding Available:	\$673,000	
			Annual Deficit: \$539,000		
Trail Network	\$12 m	Fair	Annual Requirement:	\$324,000	35%
			Funding Available:	\$115,000	
			Annual Deficit: \$209,000		
TOTAL	\$1,189 m	Fair	Annual Requirement:	\$46,863,000	33%
			Funding Available:	\$15,271,000	
			Annual Deficit: \$31,592,000		

⁵ Annual requirements refer to proposed levels of service

Appendix B – 10-Year Capital Requirements

Capital Requirements for Current Levels of Service

The tables below summarize the projected cost of lifecycle activities (rehabilitation and replacements) that may be undertaken over the next 10 years to support current levels of service. They do not consider any proposed levels of service, or available funding, and are projected based on ideal conditions. **Note: These projections do not consider the availability of funding.**

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 roads. For all remaining assets, only age was used to determine forthcoming replacement needs.

The projections can be different from actual capital forecasts. Consistent data updates, particularly condition, replacement costs, and regular upkeep of lifecycle models, will improve the alignment between the system generated expenditure requirements, and the County's capital expenditure forecasts.

Road Network

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Asphalt Rural	-	\$8.2m	\$6.4m	\$7.0m	\$13.1m	\$5.9m	\$7.7m	\$5.6m	\$1.5m	\$3.4m	\$2.9m
Asphalt Urban	-	\$1.2m	\$654k	\$273k	\$557k	\$595k	\$939k	\$310k	\$285k	\$278k	\$225k
Road Base	\$3.7m	-	\$376k	-	-	\$1.5m	\$206k	-	-	-	\$1.4m
Signs	-	-	\$412k	\$4k	\$82k	-	\$121k	\$164k	\$47k	-	\$11k
Surface Treated	-	-	\$2.4m	\$5.6m	\$6.2m	\$4.1m	\$1.4m	\$581k	\$216k	-	\$2.4m
Traffic Signals	\$849k	\$38k	-	-	-	-	-	-	-	-	-
Total	\$4.6m	\$9.5m	\$10.2m	\$12.9m	\$19.9m	\$12.1m	\$10.4m	\$6.6m	\$2.0m	\$3.7m	\$6.9m

Table 78 System Generated 10-Year Capital Replacement Forecast: Road Network

Bridges & Culverts

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bridges	\$1.8m	\$34.1m	\$2.9m	\$14.4m	\$12.7m	\$13.7m	\$13.3m	\$13.0m	\$12.2m	\$8.0m	\$11.6m
Culverts	\$493k	\$12.8m	\$566k	\$1.3m	\$1.5m	\$1.2m	\$3.4m	\$1.4m	\$3.4m	\$3.2m	\$10.2m
Total	\$2.3m	\$46.8m	\$3.5m	\$15.8m	\$14.2m	\$14.9m	\$16.7m	\$14.4m	\$15.6m	\$11.2m	\$21.8m

Table 79 System Generated 10-Year Capital Replacement Forecast: Bridges & Culverts

Stormwater Infrastructure

No stormwater infrastructure capital expenditures are forecasted in the next 10 years.

Buildings

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	\$16k	-	\$24k	-	-	-	-	-	-	\$12k	\$6k
Bruce County Housing Corporation	\$9.0m	\$1.8m	\$1.9m	\$8.1m	\$5.3m	\$14.8m	\$6.2m	\$7.0m	\$7.3m	\$17.3m	\$2.9m
Long Term Care	\$233k	-	\$110k	-	\$123k	\$4k	-	-	\$22k	\$107k	\$4k
Museum	-	-	\$7k	-	\$2k	-	-	-	-	-	\$12k
Paramedic Services	-	-	-	-	-	-	-	-	-	-	\$14k
Transportation & Environmental Services	-	-	-	-	-	-	-	-	\$38k	\$5k	\$93k
Total	\$9.2m	\$1.8m	\$2.0m	\$8.1m	\$5.4m	\$14.8m	\$6.2m	\$7.0m	\$7.4m	\$17.4m	\$3.0m

Table 80 System Generated 10-Year Capital Replacement Forecast: Buildings

Land Improvements

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	\$515k	\$146k	-	\$339k	\$27k	\$14k	-	\$129k	\$18k	-	\$51k
Bruce County Housing Corporation	\$127k	-	\$3k	-	\$57k	-	-	-	\$63k	-	-
Long Term Care	\$5.2m	-	-	\$9k	-	\$172k	\$19k	-	-	-	\$67k
Museum	-	-	\$1.2m	\$32k	-	-	-	-	\$13k	-	-
Paramedic Services	\$17k	-	-	-	-	-	-	-	-	-	-
Transportation & Environmental Services	-	\$24k	-	-	-	\$24k	-	-	-	-	\$42k
Total	\$5.9m	\$169k	\$1.2m	\$380k	\$85k	\$210k	\$19k	\$129k	\$93k	-	\$160k

Table 81 System Generated 10-Year Capital Replacement Forecast: Land Improvements

Fleet

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	\$6k	\$87k	-	\$145k	\$52k	-	\$87k	-	\$145k	\$52k	-
Bruce County Housing Corporation	-	-	-	-	-	\$183k	-	-	-	-	\$183k
Library	-	-	-	\$61k	-	\$205k	-	-	\$61k	-	\$205k
Machinery	-	\$30k	-	\$20k	-	\$25k	-	-	\$11k	-	-
Paramedic Services	-	\$750k	\$832k	\$1.1m	\$1.3m	-	\$750k	\$832k	\$1.1m	\$1.2m	-
Transportation - Heavy Duty	-	\$690k	\$2.1m	\$2.1m	\$690k	\$690k	\$690k	\$2.1m	\$2.1m	\$690k	\$690k
Transportation - Light Duty	\$116k	\$372k	\$833k	\$471k	\$116k	\$265k	\$488k	\$833k	\$471k	\$116k	\$265k
Transportation - Machinery	\$856k	\$3k	\$328k	\$350k	-	\$2.6m	\$756k	\$819k	\$52k	\$122k	\$289k
Total	\$978k	\$1.9m	\$4.1m	\$4.2m	\$2.1m	\$4.0m	\$2.8m	\$4.6m	\$3.9m	\$2.2m	\$1.6m

Table 82 System Generated 10-Year Capital Replacement Forecast: Fleet

Furniture & Equipment

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Administration	\$661k	\$43k	\$12k	\$23k	\$25k	\$2k	\$669k	\$12k	\$23k	\$25k	\$2k
Bruce County Housing Corporation	\$57k	-	-	\$2k	-	-	\$50k	-	\$12k	-	-
Library	\$1.2m	\$403k	\$391k	\$415k	\$400k	\$414k	\$491k	\$349k	\$1.4m	\$430k	\$407k
Long Term Care	\$972k	\$228k	\$25k	\$368k	\$92k	\$218k	\$291k	\$79k	\$269k	\$134k	\$132k
Museum	\$645k	\$4k	-	-	-	\$7k	\$624k	\$21k	\$1k	\$175k	\$132k
Paramedic Services	\$407k	\$66k	\$59k	\$70k	\$233k	\$659k	\$645k	\$3k	\$229k	\$134k	\$59k
Transportation & Environmental Services	\$138k	\$1k	-	-	\$266k	\$63k	\$35k	\$27k	\$34k	\$94k	\$25k
Total	\$4.0m	\$746k	\$488k	\$877k	\$1.0m	\$1.4m	\$2.8m	\$490k	\$2.0m	\$992k	\$757k

Table 83 System Generated 10-Year Capital Replacement Forecast: Furniture & Equipment

Technology & Communication

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Communication	\$123k	-	\$18k	-	-	\$12k	\$71k	\$18k	-	\$12k	-
Hardware	\$821k	\$270k	\$268k	\$240k	\$569k	\$147k	\$1.2m	\$268k	\$176k	\$570k	\$146k
Network	\$779k	\$2k	\$46k	\$59k	\$126k	\$82k	\$781k	\$46k	\$59k	\$126k	\$82k
Software	\$1.7m	\$35k	\$79k	\$174k	\$14k	\$1.7m	\$95k	\$174k	\$14k	\$1.7m	\$79k
Total	\$3.4m	\$307k	\$411k	\$473k	\$709k	\$1.9m	\$2.1m	\$506k	\$249k	\$2.4m	\$307k

Table 84 System Generated 10-Year Capital Replacement Forecast: Technology & Communication

Trail Network

Segment	Back-log	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Infrastructure	-	-	-	-	-	-	-	\$114k	\$118k	\$76k	\$40k
Trails	\$958k	-	-	-	-	-	-	-	-	-	-
Total	\$958k	-	-	-	-	-	-	\$114k	\$118k	\$76k	\$40k

Table 85 System Generated 10-Year Capital Replacement Forecast: Trail Network

Capital Requirements for Proposed Levels of Service

The following capital forecasts are based on the criteria outlined in each asset category's proposed levels of service section.

Categories with Targeted Condition:

- ♦ Buildings Target: 60%
- ♦ Fleet Target: 60%
- ♦ Trail Network Target: 60%

Categories with Targeted 100% Funding

- ♦ Road Network
- ♦ Bridges & Culverts
- ♦ Stormwater Infrastructure
- ♦ Land Improvements
- ♦ Furniture & Equipment
- ♦ Technology & Communication

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Road Network	\$3.6m	\$4.4m	\$5.1m	\$5.9m	\$6.8m	\$7.6m	\$8.5m	\$9.4m	\$10.2m	\$11.3m
Bridges & Culverts	\$1.8m	\$4.9m	\$5.2m	\$5.4m	\$5.8m	\$6.0m	\$6.4m	\$6.7m	\$7.0m	\$7.4m
Stormwater Infrastructure	-	-	-	-	-	-	-	-	-	-
Buildings	\$3.5m	\$4.0m	\$5.6m	\$6.6m	\$7.6m	\$8.6m	\$9.6m	\$10.6m	\$11.6m	\$12.6m
Land Improvements	-	\$46k	\$94k	\$149k	\$203k	\$243k	\$314k	\$370k	\$418k	\$501k
Fleet	\$1.4m	\$2.1m	\$2.2m	\$2.5m	\$2.7m	\$2.9m	\$3.1m	\$3.3m	\$3.5m	\$3.7m
Furniture & Equipment	\$627k	\$682k	\$740k	\$805k	\$871k	\$934k	\$1.0m	\$1.1m	\$1.1m	\$1.2m
Technology & Communication	\$673k	\$706k	\$740k	\$780k	\$819k	\$856k	\$898k	\$940k	\$980k	\$1.0m
Trail Network	-	\$1.1m	\$96k	\$98k	\$40k	-	\$275k	\$4.6m	-	-
Total	\$11.7m	\$17.9m	\$19.8m	\$22.3m	\$24.8m	\$27.2m	\$30.1m	\$36.9m	\$34.8m	\$37.8m

Table 86 System Generated Proposed LOS 10-Year Capital Replacement Forecast: All Categories

Appendix C – Levels of Service Supplemental Information

Road Network

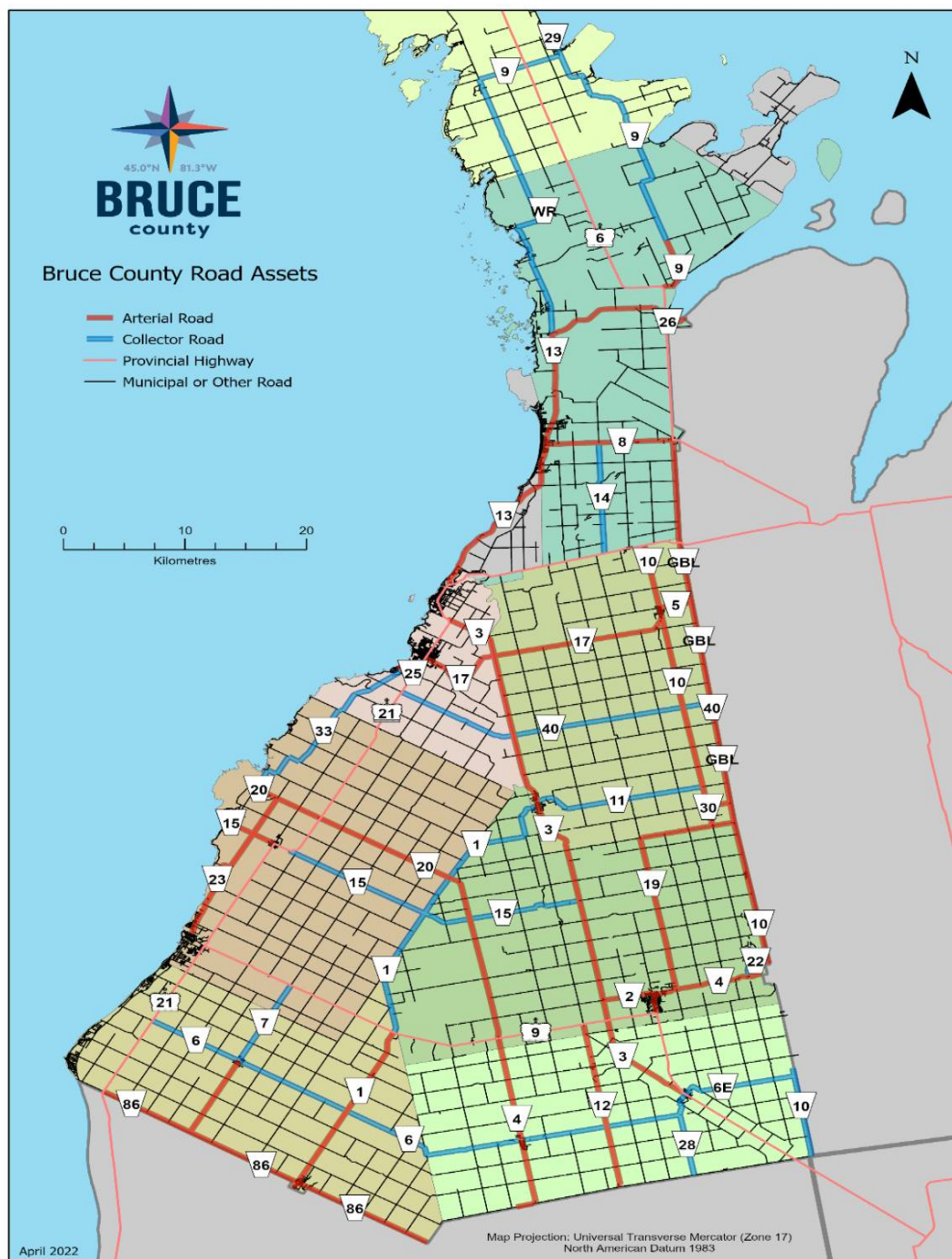


Figure 93 Bruce County Road Network Connectivity

Bridges & Culverts

GBL00200 – Scone Boundary Bridge

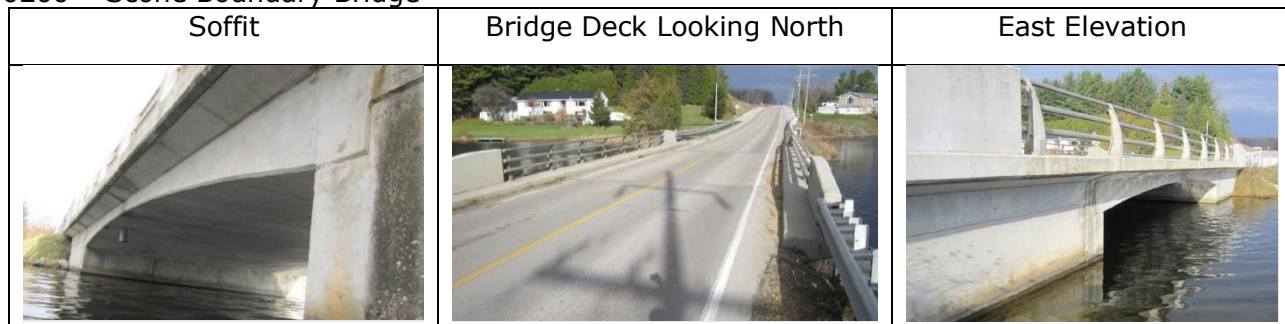


Figure 94 Bridge in Good Condition (74 BCI)

1216000 – Greenock Creek Culvert

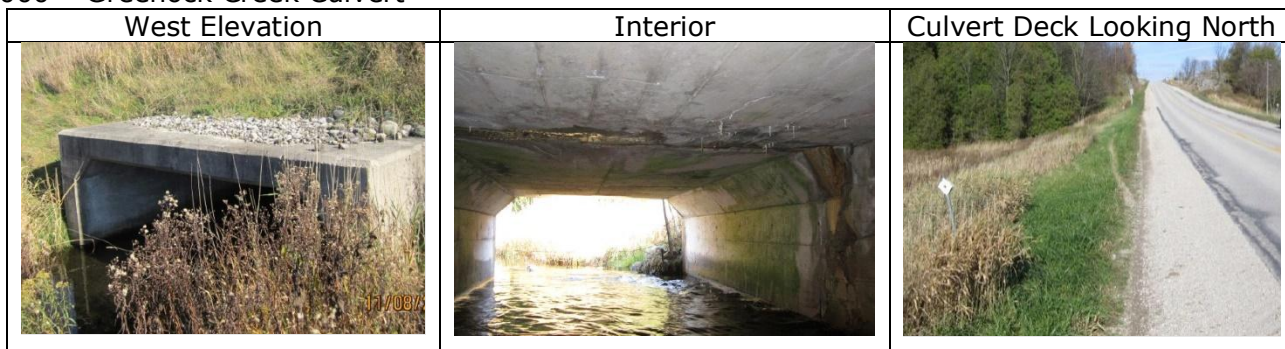


Figure 95 Bridge Culvert in Fair Condition (52 BCI)

8612150 – Lucknow West



Figure 96 Bridge in Poor Condition (45 BCI)

166

Stormwater Infrastructure

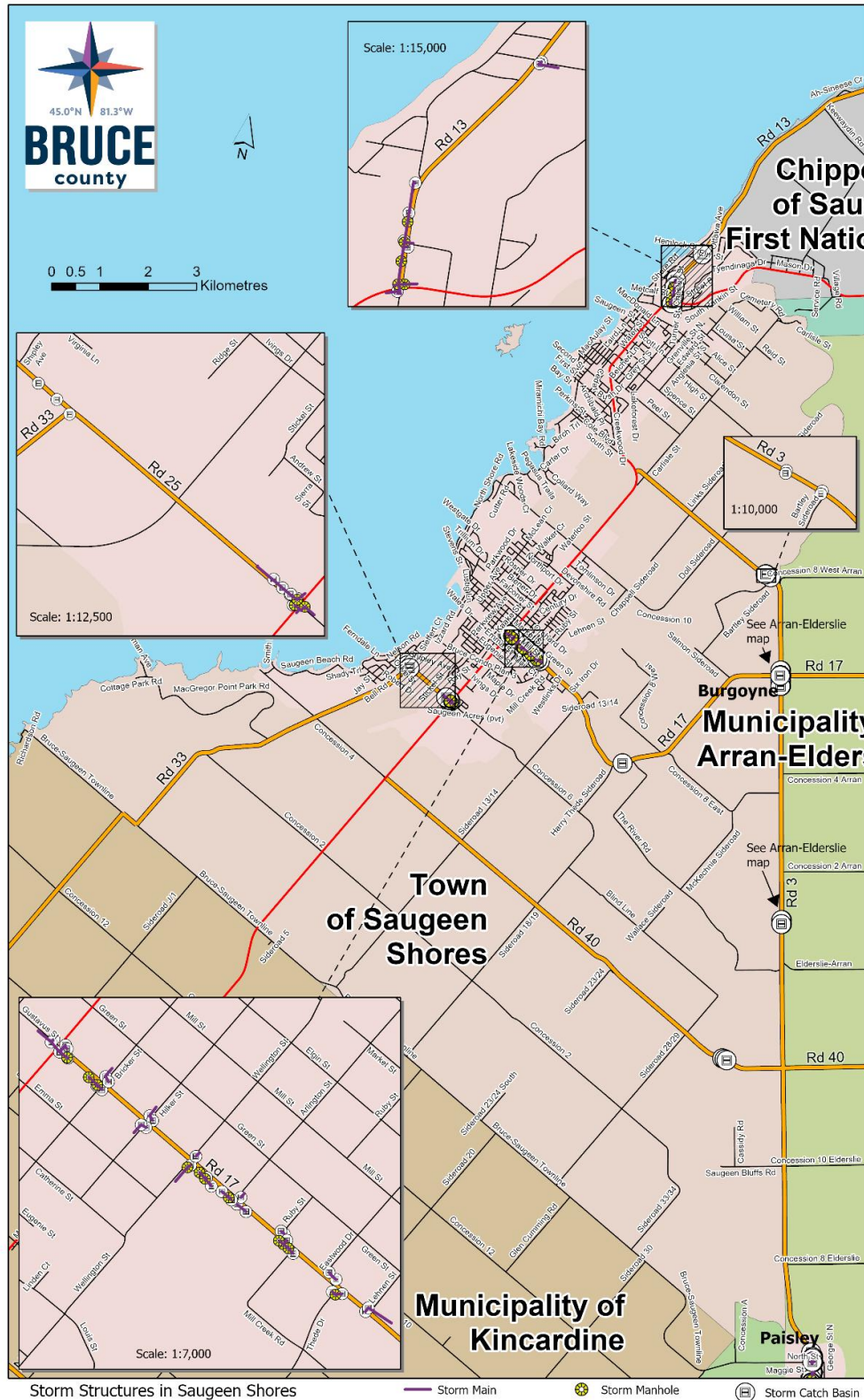


Figure 98 Saugeen Shores Stormwater Structures

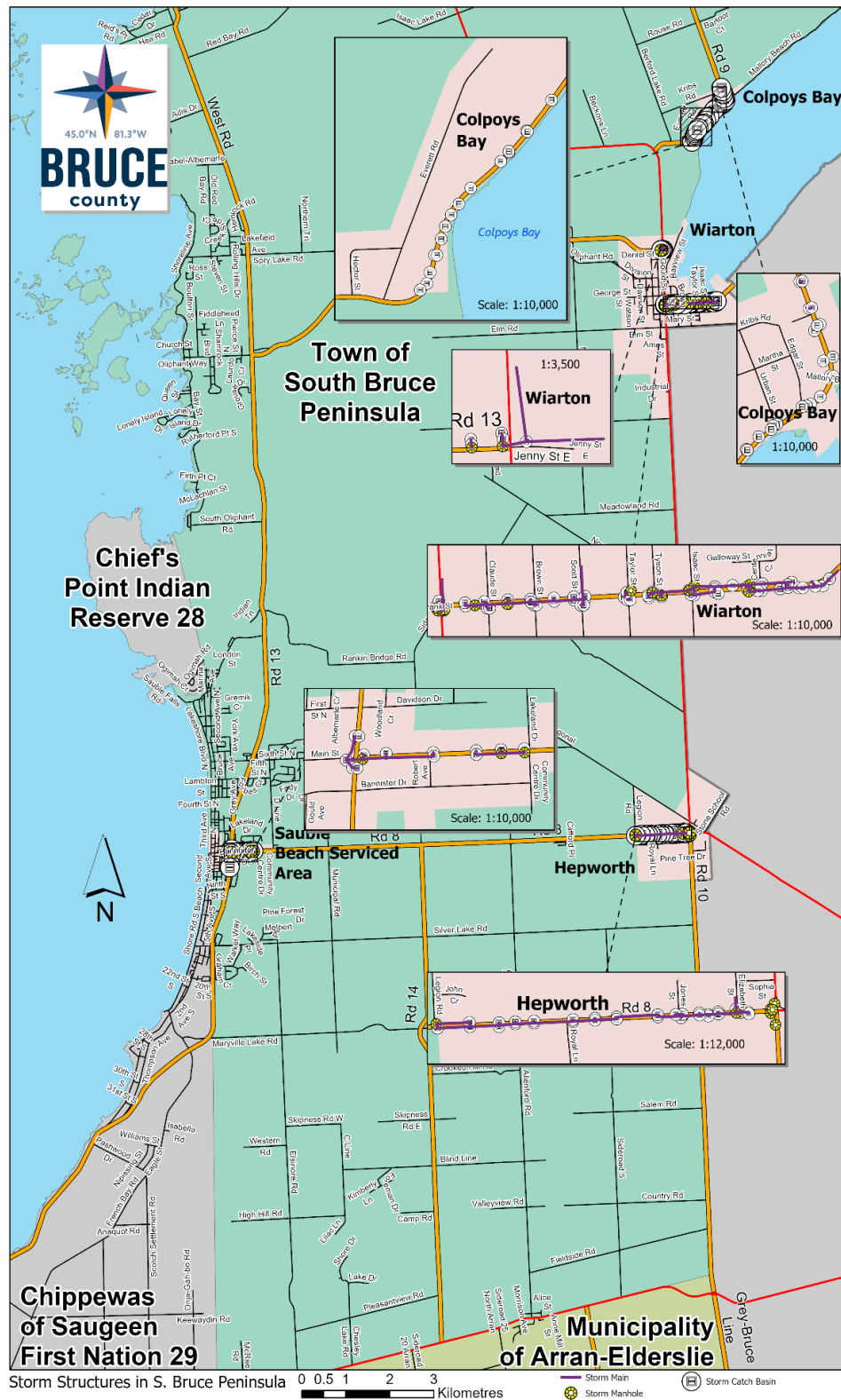


Figure 99 South Bruce Peninsula Stormwater Structures



Figure 100 Northern Bruce Peninsula Stormwater Structures

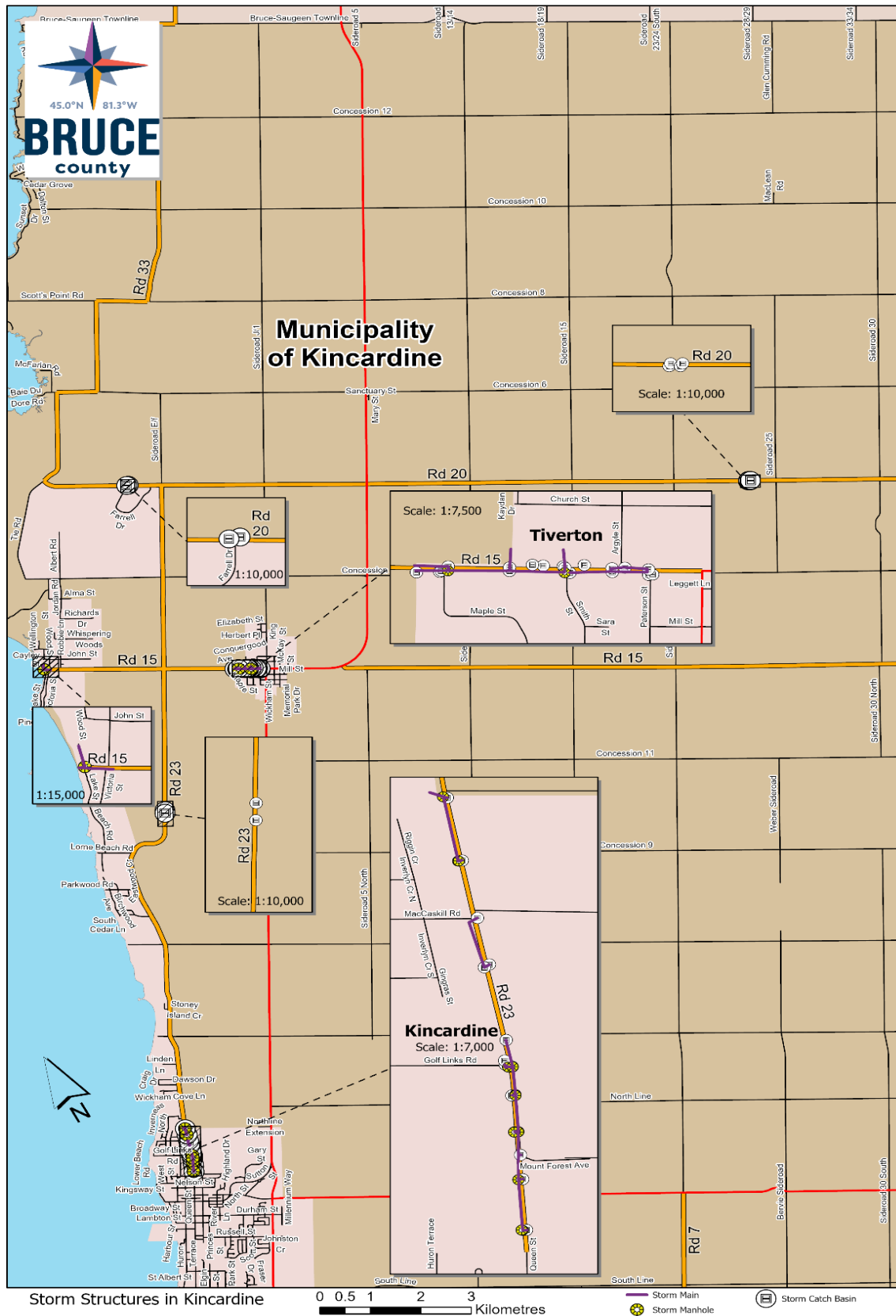


Figure 101 Kincardine Stormwater Structures

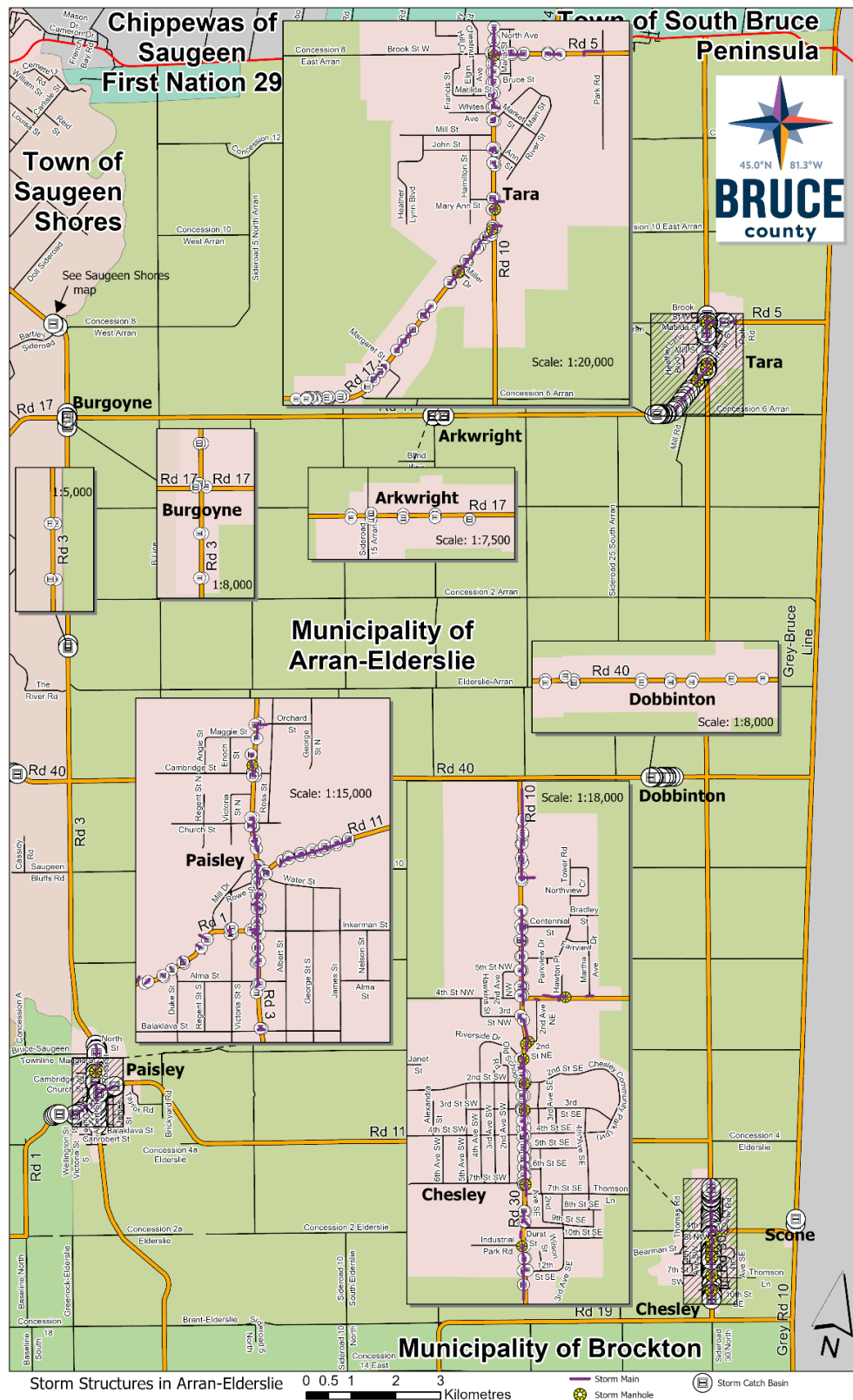


Figure 102 Arran-Elderslie Stormwater Structures

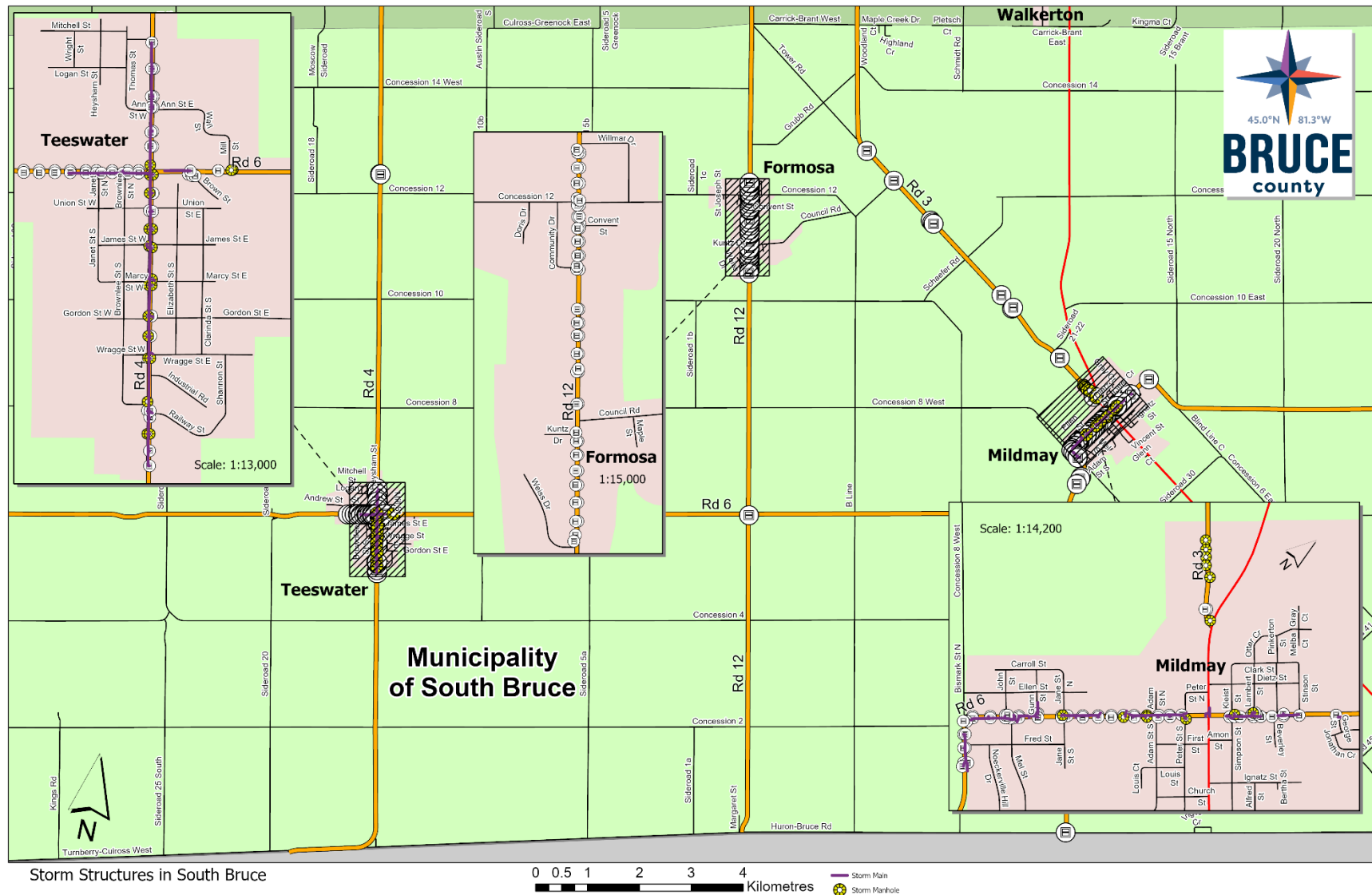


Figure 103 South Bruce Stormwater Structures

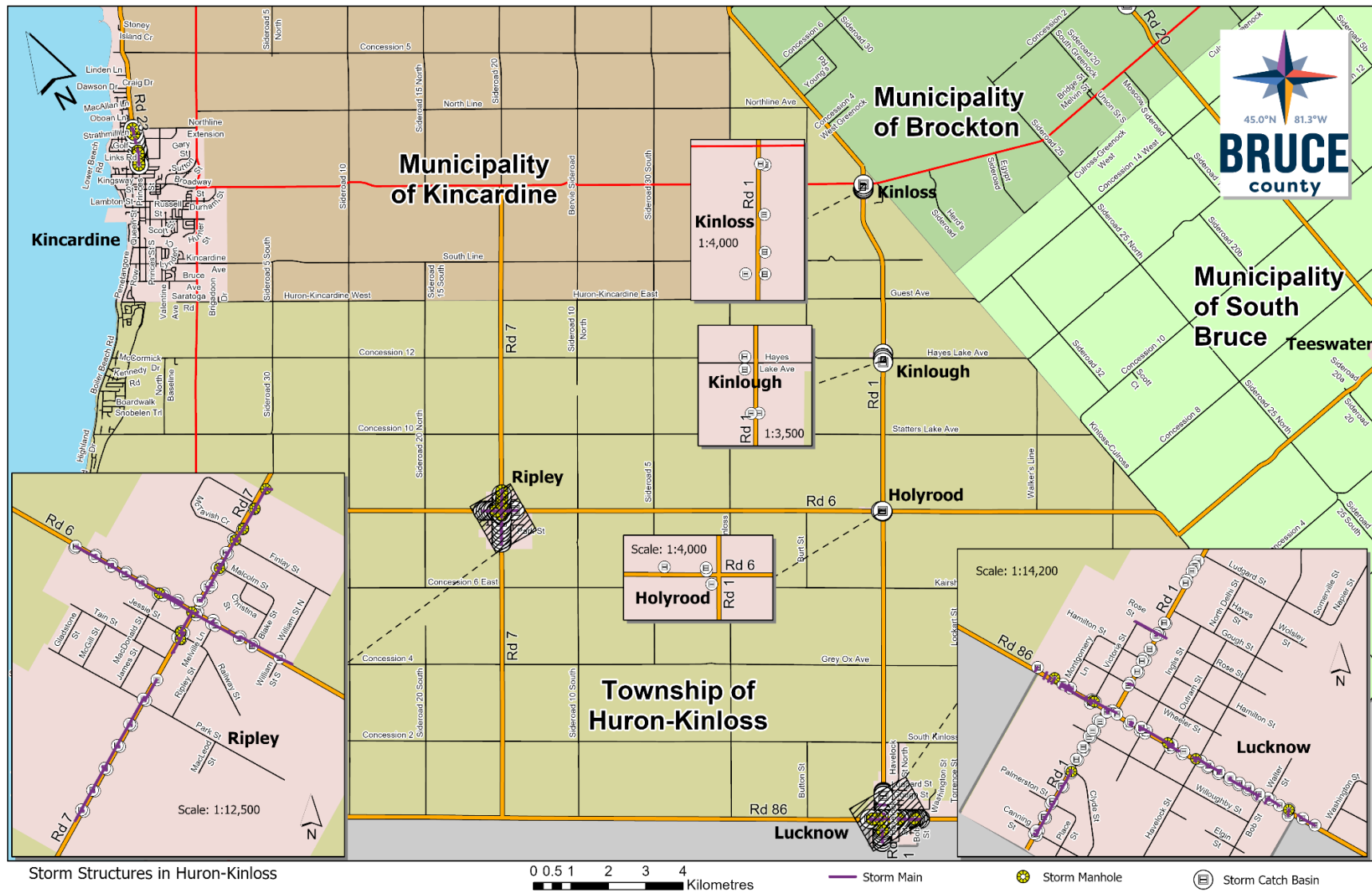


Figure 104 Huron-Kinloss Stormwater Structures

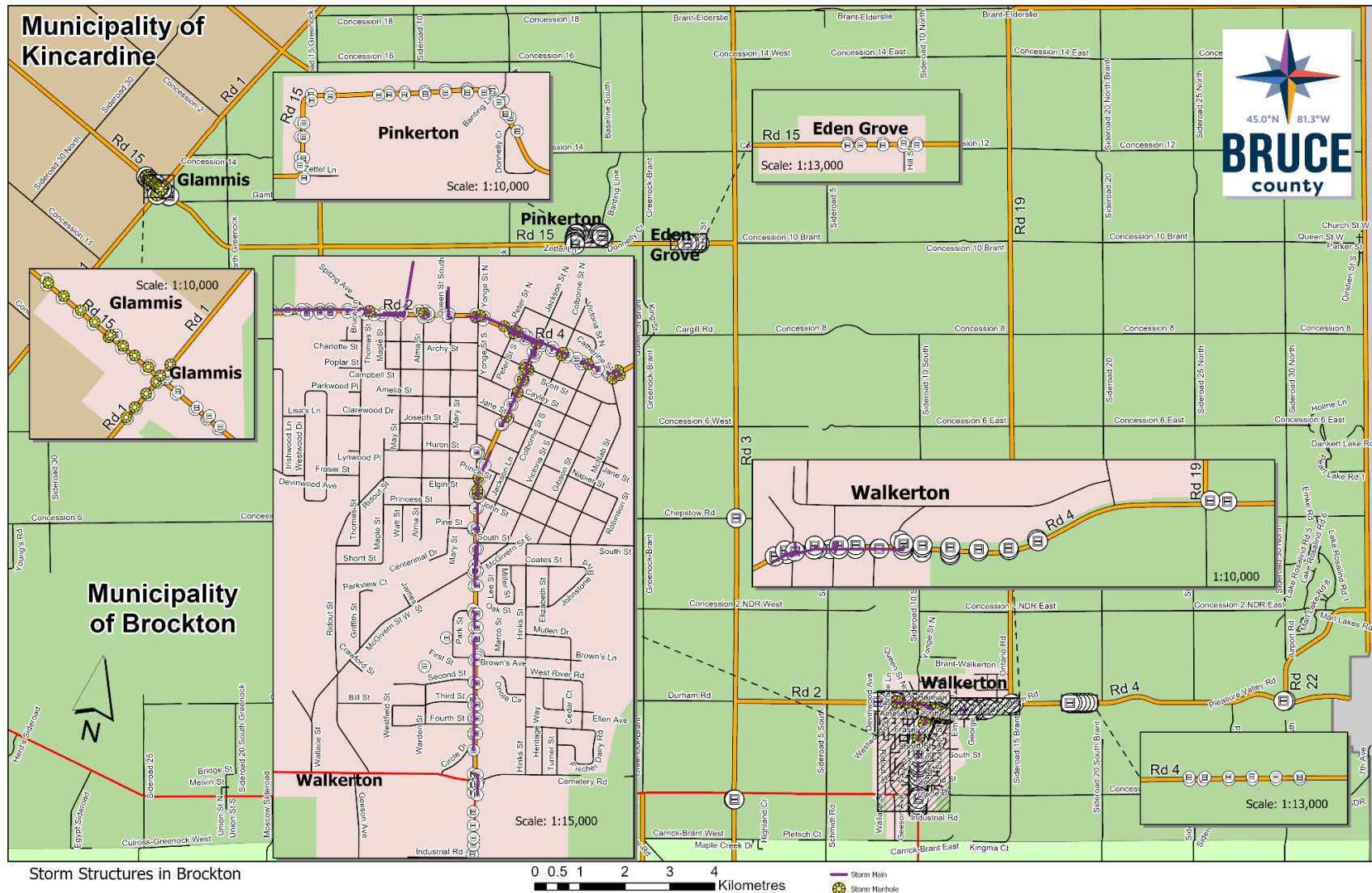


Figure 105 Brockton Stormwater Structures

Buildings

Building Name	Address	Function
Inland Hub	30 Park Street, Walkerton	Administration
Lakeshore Hub	1243 MacKenzie Drive, Port Elgin	Administration
Peninsula Hub	268 Berford Street, Wiarton	Administration
Court House	207-209 Cayley Street, Walkerton	Administration
Crown Attorney's Office	215 Cayley Street, Walkerton	Administration
Jail	209 Cayley Street, Walkerton	Administration
Land Registry	201-203 Cayley Street, Walkerton	Administration
BCHC A01	535 Walter Street, Lucknow	Housing
BCHC A02	314-326 Queen Street, 321-327 Alice Street, 282-288 Kincardine Avenue, Kincardine	Housing
BCHC A03	295 Frank Street, Wiarton	Housing
BCHC A04	22 James Street, Teeswater	Housing
BCHC A05	59 4 th Street, Chesley	Housing
BCHC A06	116 Albert Street, Southampton	Housing
BCHC A07	308 John Street, Walkerton	Housing
BCHC A08	647-659 Arlington Street, Port Elgin	Housing
BCHC A09	510 Wellington Street, Port Elgin	Housing
BCHC A10	83 rd 2 nd Street, Chesley	Housing
BCHC A11	1065 Huron Terrace, Kincardine	Housing
BCHC A12	403-409 Mary Street, 209-211 McNab Street, Walkerton	Housing
BCHC A13	81 st 2 nd Street, Chesley	Housing
BCHC A15	50 Park Street, Ripley	Housing
BCHC A16	4 Adam Street, Mildmay	Housing
BCHC A20	915 Huron Terrace, Kincardine	Housing
BCHC A21	711-743 Wellington Street, Port Elgin	Housing
BCHC B01	286 Albert Street, Paisley	Housing
BCHC B02	52 Maria Street, Tara	Housing
BCHC B03	401 Cayley Street, Walkerton	Housing
BCHC B04	621 Mary Street (1), Wiarton	Housing
BCHC B05	7432 Highway 6, Tobermory	Housing
BCHC B06	5 Railway Street, Teeswater	Housing
BCHC B07	550 Willoughby Street, Lucknow	Housing
BCHC B08	621 Mary Street (2), Wiarton	Housing

Building Name	Address	Function
BCHC B09	920 Old Durham Road, Walkerton	Housing
BCHC D01	757 Wellington Street, Port Elgin	Housing
BCHC E01	539 Ivings Drive, Port Elgin	Housing
Penetangore Hub	529 Gary Street	Housing
Brucelea Haven	41 McGivern Street, Walkerton	Long-Term Care
Gateway Haven	671 Frank Street, Wiarton	Long-Term Care
Museum – Original	33 Victoria Street North, Southampton	Museum
Museum – 2005 Addition	33 Victoria Street North, Southampton	Museum
Log House	33 Victoria Street North, Southampton	Museum
Log School	33 Victoria Street North, Southampton	Museum
Paramedic Station	11 Nicholas Street, Tobermory	Paramedic Services
Lucknow Shop	545 Ludgard Street, Lucknow	Transportation Depot
Paisley Shop	242 Canrobert Street, Paisley	Transportation Depot
Walkerton Shop	94 Bruce Road 2, Walkerton	Transportation Depot
Warton Shop	890 Berford Street, Warton	Transportation Depot
Lindsay Tract Shed	4025 Highway 6, Lion's Head	Trails Shed

Table 87 Detailed List of County Buildings

Trail Network

Trail Name	Length (km)	Infrastructure Type	Trail Type
Brant Tract-Paisley	16+	Trails, Bridges & Boardwalks	Non-motorized
Lindsay Tract-Miller Lake	16+	Trails, Viewing Platform	Non-motorized
Carrick Tract-Mildmay	8+	Trails, Infrastructure	Non-motorized
Albemarle Tract-Wiarton	12+	Trails, Infrastructure	Non-motorized
Kinloss Tract-Lucknow	5+	Trails, Bridges & Boardwalks	Non-motorized
Kinloss Tract-Lucknow	3+	Trails, Infrastructure	Motorized
Culross Tract-Teeswater	3+	Trails, Infrastructure	Motorized
Amabel Tract-Sauble Beach	5+	Trails, Infrastructure	Motorized
Bruce County Rail Trail	80+	Trails & Bridges	Motorized

Table 88 Trail Network Summary

Appendix D – Risk Rating Criteria

Probability of Failure

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Road Network (Roads)	Condition	80%	85+	1
			70-84	2
			50-69	3
			30-49	4
			0-29	5
	Service Life Remaining (Years)	20%	21 years+	1
			11-20 years	2
			6-10 years	3
			1-5 years	4
			<1 year	5
Bridges & Culverts	Condition	80%	70+	1
			60-69	2
			50-59	3
			40-49	4
			0-39	5
	Service Life Remaining (Years)	20%	25 years+	1
			10-25 years	2
			5-10 years	3
			1-5 years	4
			<1 year	5
Road Network (Appurtenances)	Condition	100%	80+	1
Stormwater Network			60-79	2
Buildings			40-59	3
Land Improvements				

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Fleet			20-39	4
Furniture & Equipment				
Technology & Communication			0-19	5
Trail Network				

Table 89 Probability of Failure Risk Scores

Consequence of Failure

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Road Network (Roads)	Economic (25%)	Number of Lanes (50%)	2	3
			3	4
			4	5
		Roadside Environment (50%)	Rural	3
			Urban	5
	Operational (15%)	Maintenance Class (100%)	Class 5	2
			Class 4	3
			Class 3	4
			Class 1, Class 2	5
	Social (20%)	Design Class (100%)	Collector	3
			Arterial	5
	Strategic (40%)	Emg Detour Route (35%)	NO	3
			EDR	5
		Preferred Super Load Route (35%)	NO	3
			Oversized Load Route	5
		Load Posted Roads (30%)	Restricted Load	3
			Full Load	5
Road Network (Appurtenances)	Economic (100%)	Replacement Cost (100%)	\$0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
Bridges & Culverts	Economic (80%)	Replacement Cost (100%)	\$0-\$100,000	1
			\$100,000-\$250,000	2

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Stormwater Network (Linear Infrastructure)	Social (20%)		\$250,000-\$750,000	3
			\$750,000-\$1,500,000	4
			\$1,500,000+	5
		Detour Length (km)	0-2	1
			3-5	2
			6-8	3
			9-10	4
			11+	5
		Forecast AADT	0-100	1
			101-250	2
			251-750	3
			751-1500	4
			1501+	5
	Economic (70%)	Replacement Cost	\$0-\$100,000	1
			\$100,000-\$250,000	2
			\$250,000-\$500,000	3
			\$500,000-\$1,000,000	4
			\$1,000,000+	5
	Strategic (30%)	Pipe Size	0-150	1
			151-300	2
			301-450	3
			451-600	4
			601+	5
Stormwater Network (Point Infrastructure)	Economic (100%)	Replacement Cost	\$0-\$100,000	1
			\$100,000-\$250,000	2
			\$250,000-\$500,000	3
			\$500,000-\$1,000,000	4

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Buildings	Economic (70%)	Replacement Cost (100%)	\$1,000,000+	5
			0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
	Strategic (30%)	Service Area (100%)	Museum	2
			Administration, Bruce County Housing Corporation	3
			Transportation & Environmental Services	4
			Long Term Care, Paramedic Services	5
Land Improvements	Economic (70%)	Replacement Cost (100%)	0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
	Strategic (30%)	Service Area (100%)	Library	1
			Museum	2
			Administration, Bruce County Housing Corporation	3
			Transportation & Environmental Services	4
			Long Term Care, Paramedic Services	5
Fleet	Economic (60%)	Replacement Cost (100%)	\$0-\$25,000	1
			\$25,000-\$75,000	2

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
	Strategic (40%)	Service Area (100%)	\$75,000-\$125,000	3
			\$125,000-\$200,000	4
			\$200,000+	5
			Leased	1
			Administration	2
			Parks	3
			T&E services	4
			Paramedic services	5
			0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
Furniture & Equipment	Economic (70%)	Replacement Cost (100%)	\$100,000+	5
			Library	1
			Museum	2
			Administration, Bruce County Housing Corporation	3
			Transportation & Environmental Services	4
			Long Term Care, Paramedic Services	5
			0-\$10,000	1
Technology & Communication	Economic (70%)	Replacement Cost (100%)	\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
			Startegic	Asset Type
			Hardware, Software	2

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Trail Network	(30%)	(100%)	Hardware/Peripheral, Radio Equipment, Other	3
			Peripherals, Telephone Equipment	4
	Economic (70%)	Replacement Cost (100%)	0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
	Strategic (30%)	Asset Type (100%)	CN Trail	1
			Signs	2
			Fencing	4
			Bridges for Recreation (Deck, Super Structure)	5

Table 90 Consequence of Failure Risk Scores