2025 Asset Management Plan

This Asset Management Program was prepared by:

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

Key Statistics

Replacement cost of asset portfolio

$104.5 million

Percentage of assets in fair or better condition

84%

Percentage of assets condition assessed

71%

Actual Reinvestment Rate

0.30%

Proposed Level of Service

Target Condition

Good

Proposed Level of Service

Continued Data Improvements

Proposed Level of Service

Target Reinvestment Rate

1.54%

Proposed Level of Service

Time to Sustainable Funding

<20 Years

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Executive Summary

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

The overall replacement cost of the asset categories owned by East Hawkesbury total $104.5 million. 84% of all assets analysed are in fair or better condition. Assessed condition data was available for 71% assets by replacement value. For the remaining assets, where assessed condition data was unavailable, asset age was used as a proxy, a common approach, though one that often misrepresents true asset conditions. This data gap underscores the importance of ongoing condition assessments, which remain a recurring recommendation across municipalities.

A sustainable financial strategy must be based on the analysis of whole lifecycle costs. The Township applied a combination of proactive lifecycle strategies (for roads) and replacement-only strategies (for other asset types) to identify the most cost-effective methods of maintaining existing service levels. Based on this analysis, the Township's proposed level of service is to maintain a target average asset condition of "Good".

To achieve this, the Township requires an average annual capital reinvestment of tax funded assets of $1.48 million and for the wastewater network assets $138 thousand. However, based on a historical review of sustainable funding sources, the Township is currently committing approximately $311 thousand per year to capital projects or reserves for tax funded assets and there is currently $0 allocated to the wastewater network capital. This results in the Township funding 20% of its annual capital needs, leaving a funding deficit of $1.16 million annually for tax funding and $138 thousand for the wastewater network.

Addressing annual infrastructure funding shortfalls is a difficult and long-term endeavour for municipalities. Considering the Township's current funding position, it will require many years to reach full funding for current assets. Short phase-in periods to meet these funding targets may place too high a burden on taxpayers too quickly, whereas a phase-in period beyond 20 years may see a continued deterioration of infrastructure, leading to larger backlogs.

To close annual deficits for capital contributions from tax revenues for asset needs, it is recommended the Township review the feasibility of implementing a 2.0% annual increase in revenues over a 17-year phase-in period, to be allocated in addition to the $311 thousand allocated from tax revenues and other sustainable sources.

To close annual deficit for capital contributions from wastewater revenues for asset needs, it is recommended the Township review the feasibility of implementing a 3.5% annual increase respectively in revenues over a 19-year phase-in period.

In addition to annual needs, there is also an infrastructure backlog of $3.8 million, comprising assets that remain in service beyond their estimated useful life. It is

highly unlikely that all such assets are in a state of disrepair, requiring immediate replacements or full reconstruction. This makes targeted and consistent condition assessments integral to refining long-term replacement and backlog estimates.

To guide decision-making, the Township has begun integrating risk frameworks and levels of service targets into its asset management system. These tools will support project prioritization and enable the selection of the right intervention—at the right time—for the right assets. Preliminary risk models have been developed and integrated with the Township's asset register, producing risk matrices that categorize assets based on their likelihood and consequence of failure.

Like many municipalities, East Hawkesbury faces significant infrastructure challenges. Addressing these will require sustained effort, long-term planning, and incremental progress. Key recommendations moving forward include:

- Ongoing improvement of infrastructure data to support accurate analysis and long-term planning.
- Refinement of risk and lifecycle models as new data becomes available, improving prioritization and strategic budgeting.
- Monitoring of key performance indicators (KPIs) for infrastructure systems, allowing for the regular calibration of levels of service.

The Township has made meaningful progress in advancing its asset management program, including the creation of a more complete and accurate asset register—a foundational achievement. Maintaining and enhancing this register will be essential to support fiscally responsible service delivery, strategic reinvestment, and the long-term sustainability of the community's infrastructure.

About this Document

The East Hawkesbury Asset Management Plan was developed in accordance with Ontario Regulation 588/17 ("O. Reg 588/17"). It contains a comprehensive analysis of East Hawkesbury's infrastructure portfolio. This is a living document that should be updated regularly as additional asset and financial data becomes available.

Ontario Regulation 588/17

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

Table 1 Ontario Regulation 588/17 Requirements and Reporting Deadlines

Requirement	2019	2022	2024	2025
Asset Management Policy	✓		✓	
Asset Management Plans		✓	✓	✓
• State of infrastructure for core assets		✓		
• State of infrastructure for all assets			✓	✓
• Current levels of service for core assets		✓		
• Current levels of service for all assets			✓	
• Proposed levels of service for all assets				✓
• Lifecycle costs associated with current levels of service		✓	✓	
• Lifecycle costs associated with proposed levels of service				✓
• Growth impacts		✓	✓	✓
• Financial strategy				✓

Scope

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

Limitations and Constraints

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

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

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

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

Overview of Asset Management

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

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

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

Foundational Documents

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

Strategic Plan

The strategic plan has a direct, and cascading impact on asset management planning and reporting, making it a foundational element. Developing alignment with corporate goals and objectives through service delivery and lifecycle management ensures the Township has line of sight to achieve their strategic objectives.

Asset Management Policy

An asset management policy represents a statement of the principles guiding the Township’s approach to asset management activities as well as their commitment. It aligns with the organization and provides clear directions to municipal staff on their roles and responsibilities.

Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than the policy on how the Township plans to achieve its asset management objectives through planned activities and decision-making criteria.

Key Technical Concepts

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

Asset Hierarchy and Data Classification

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

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

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

Estimated Useful Life & Service Life Remaining

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

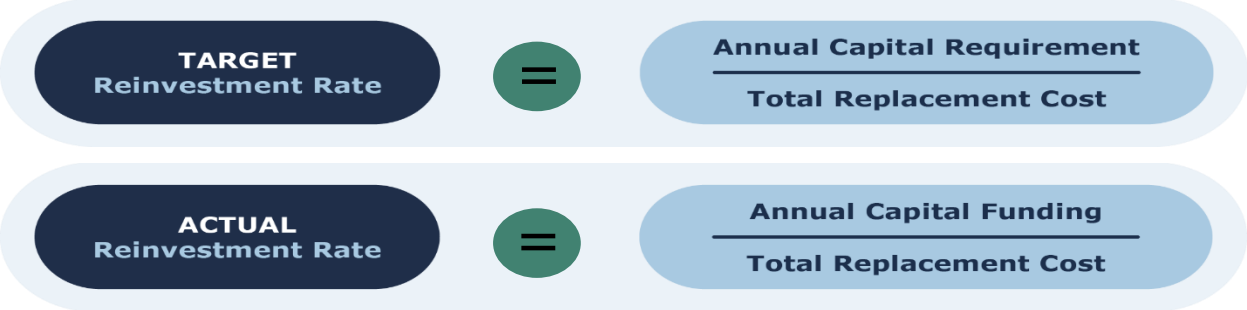
Figure 1 Service Life Remaining Calculation

Reinvestment Rate

As assets age and deteriorate, they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment

rate is a measurement of available or required funding relative to the total replacement cost. By comparing the actual vs. target reinvestment rate the Township can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

Figure 2 Target and Actual Reinvestment Calculations



By comparing the actual vs. target reinvestment rate the Township can determine the extent of any existing funding gap.

Asset Condition

Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Township's asset portfolio. The table below outlines the condition rating system used to determine asset condition. This rating system is aligned with the Canadian Infrastructure Report Card.

Table 2 Standard Condition Rating Scale

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

The analysis is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition. Appendix I: Condition Assessment Guidelines includes additional

information on the role of asset condition data and provides basic guidelines for the development of a condition assessment program.

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

Table 3 Lifecycle Strategy Example

Lifecycle Activity	Description	Example (Roads)	Cost
Maintenance	Activities that prevent defects or deteriorations from occurring	Crack Seal	$
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	Mill & Re-surface	$$
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	Full Reconstruction	$$$

Risk Management Strategies

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

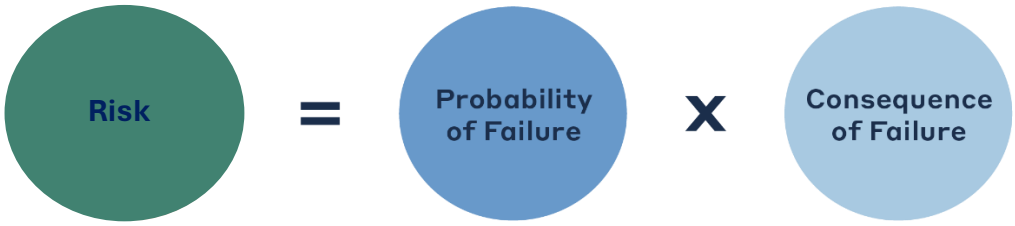
By identifying the various impacts of asset failure and the likelihood that it will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused. This AMP includes a high-level evaluation of asset risk and criticality through qualitative and quantitative methodologies.

Qualitative Approach to Risk

The qualitative risk assessment involves the documentation of risks to the delivery of services that the township faces given the current state of the infrastructure and asset management strategies. These risks can be understood as corporate level risks.

Quantitative Approach to Risk

Asset risk is defined using the following formula:



The probability of failure relates to the likelihood that an asset will fail at a given time. The probability of failure focuses on two highly imperative impacts for risk assessment – structural and functional impacts. Structural impacts are related to the structural aspects of an asset such as load carrying capacity, condition, or breaks; whereas the functional impacts can include parameters, slope, traffic count, and other impacts that can affect the performance of an asset.

The consequence of failure describes the overall effect that an asset's failure will have on an organization's asset management goals. Consequences of failure can range from non-eventful to impactful.

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.

Climate Change

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

The report revealed that between 1948 and 2016, the average temperature increase across Canada was 1.7°C; moreover, during this period, Northern Canada experienced a 2.3°C increase. The temperature increase in Canada has doubled that of the global average. If emissions are not significantly reduced, the temperature could increase by 6.3°C in Canada by the year 2100 compared to 2005 levels. Observed precipitation changes in Canada include an increase of approximately 20% between 1948 and 2012.

By the late 21st century, the projected increase could reach an additional 24%. During the summer months, some regions in Southern Canada are expected to experience periods of drought at a higher rate. Extreme weather events and climate conditions are more common across Canada. Recorded events include droughts, flooding, cold extremes, warm extremes, wildfires, and record minimum arctic sea ice extent.

The changing climate poses a significant risk to the Canadian economy, society, environment, and infrastructure. Physical infrastructure is vulnerable to damage and increased wear when exposed to these extreme events and climate variabilities. Canadian municipalities are faced with the responsibility to protect their local economy, citizens, environment, and physical assets. To achieve the sustainable delivery of services, climate change considerations should be incorporated into asset management practices.

Impacts of 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 Township 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.

As growth-related assets are constructed or acquired, they should be integrated into the Township's asset management program. While the addition of residential units will add to the existing assessment base and offset some of the costs associated with growth, the Township will need to review the lifecycle costs of growth-related infrastructure, and these costs should be considered in long-term funding strategies.

Levels of Service

A level of service (LOS) is a measure of what the Township is providing to the community and the nature and quality of that service. 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.

These measures include a combination of those that have been outlined in O. Reg. 588/17 in addition to performance measures identified by the Township as worth measuring and evaluating. The Township 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 (roads, bridges and culverts, wastewater, storm) the province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP. For non-core asset categories, the Township has determined the qualitative descriptions that will be used to determine the community level of service provided. These descriptions can be found in the Levels of Service subsection within each asset category.

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 Township's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories (roads, bridges and culverts, wastewater, storm network) the province, through O. Reg. 588/17, has provided technical metrics.

Current and Proposed Levels of Service

In developing an effective asset management plan, it is imperative to establish clear levels of service across key service areas to ensure the efficient and sustainable delivery of municipal services. The Township established current levels of service as well as proposed levels of service over a 10-year period, in accordance with O. Reg. 588/17.

Proposed levels of service are realistic and achievable within the timeframe outlined by the Township. They were determined with consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals, and long-term sustainability. The Township will identify a lifecycle management and financial strategy which will allow these targets to be achieved.

Annual Review

The annual review must address the township's progress in implementing its asset management plan, any factors impeding the township's ability to implement its asset management plan as well as a strategy to address any of the identified factors.

Community Profile

The Township of East Hawkesbury is a lower-tier municipality within the United Counties of Prescott and Russell, located in eastern Ontario along the Ottawa River. Its eastern boundary forms the border with Quebec, making it a key gateway between Ontario and the neighboring province. The township's strategic location, combined with its rural charm and rich cultural heritage, makes it a unique and attractive place to live and visit.

Figure 3 Township of East Hawkesbury Boundary Map –The United Counties of Prescott and Russell

Incorporated on January 1, 1850, East Hawkesbury is composed of three main villages: Chute-à-Blondeau, Sainte-Anne-de-Prescott, and Saint-Eugène. The township's natural landscape features rolling farmland, wooded areas, and scenic riverfront views. Agriculture is the backbone of the local economy, supported by numerous family-run farms and anchored by large-scale operations like the Stokidakis goat farm, known for its nationally distributed cheese and yogurt products.

The township is deeply rooted in Franco-Ontarian culture, with 58% of residents identifying French as their mother tongue. This heritage is celebrated through architecture, community events, and bilingual services under Ontario's French Language Services Act. Cultural landmarks such as the Macdonell-Williamson House—a designated National Historic Site—along with the St. Joachim Catholic Church and annual religious traditions in Sainte-Anne-de-Prescott, reflect the area's historical depth.

Saint-Eugène is notable for its World War II-era airfield and serves as the starting point of the 72-kilometre Prescott-Russell Recreational Trail. The township also includes Voyageur Provincial Park, a major recreational asset along the Ottawa River offering camping, hiking, swimming, and winter activities. These features make East Hawkesbury a destination for outdoor enthusiasts, history buffs, and cyclists.

East Hawkesbury's population has experienced modest growth, with a 3.7% increase between 2016 and 2021. The area appeals to families, retirees, and professionals seeking a peaceful rural lifestyle with convenient access to nearby urban centers like Ottawa and Montreal. Local infrastructure is evolving to meet resident needs, with investments such as the new Saint-Eugène community center.

The township's community development is guided by a commitment to sustainable infrastructure, agricultural resilience, and cultural preservation. Its position at the Ontario-Quebec border and along the Ottawa River enhances its role as a natural transit corridor and a welcoming entry point to the province.

Table 4 Township of East Hawkesbury & Ontario Census Information

Census Characteristic	Township of East Hawkesbury	Ontario
Population 2021	3,418	14,223,942
Population Change 2016-2021	3.7%	5.8%
Total Private Dwellings	1,507	5,929,250
Population Density	14.5/km2	15.9/km^2
Land Area	235.06 km2	892,411.76 km^2

Inventory & Valuation

The Township's inventory has an asset hierarchy of categories and segments as outlined below where the dark blue headings are the categories and the listings in grey are the segments.

Figure 4 Asset Hierarchy

State of the Infrastructure

The table below outlines the current state of each asset category as well as shows the current service trend. The service trend arrows show an overall downward trend based on current funding levels and average condition historical decline.

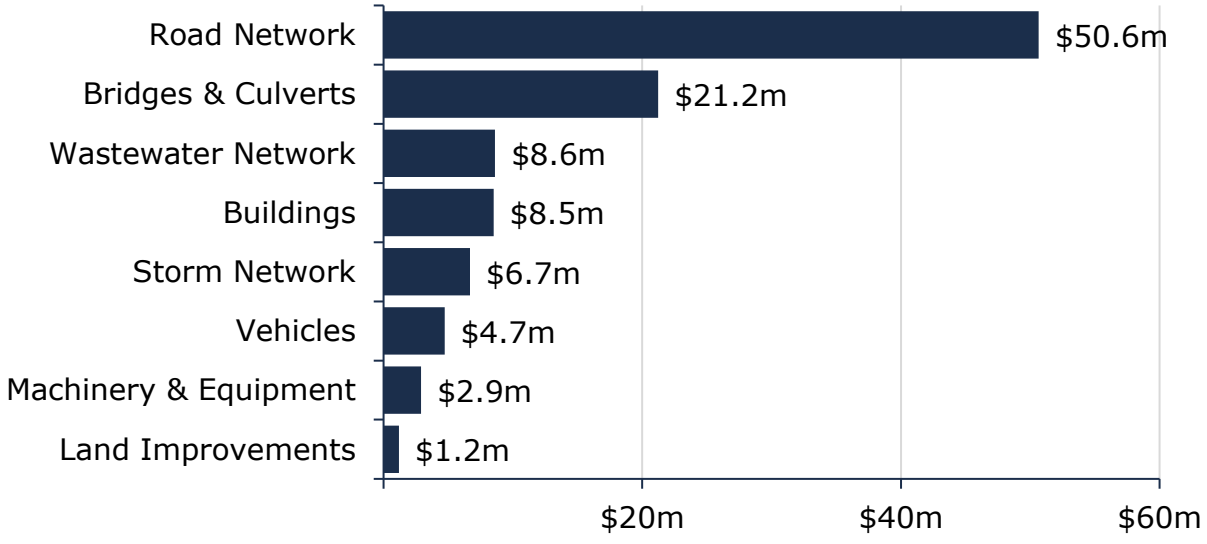
Table 5 State of the Infrastructure

Asset Category	Replacement Cost	Asset Condition	Service Trend
Road Network	$50,646,999	Fair	
Bridges & Culverts	$21,220,911	Fair	
Storm Network	$6,682,285	Good	
Buildings	$8,504,618	Very Good	
Land Improvements	$1,194,090	Fair	
Machinery & Equipment	$2,899,912	Fair	
Vehicles	$4,724,081	Good	
Wastewater	$57,267,273	Good	
Overall	**$104,568,034**	**Good (69%)**	

Total Replacement Cost

The asset categories analysed in this AMP have a total replacement cost of $105 million based on inventory data up to the end of 2025. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

Figure 5 Current Replacement Cost by Asset Category

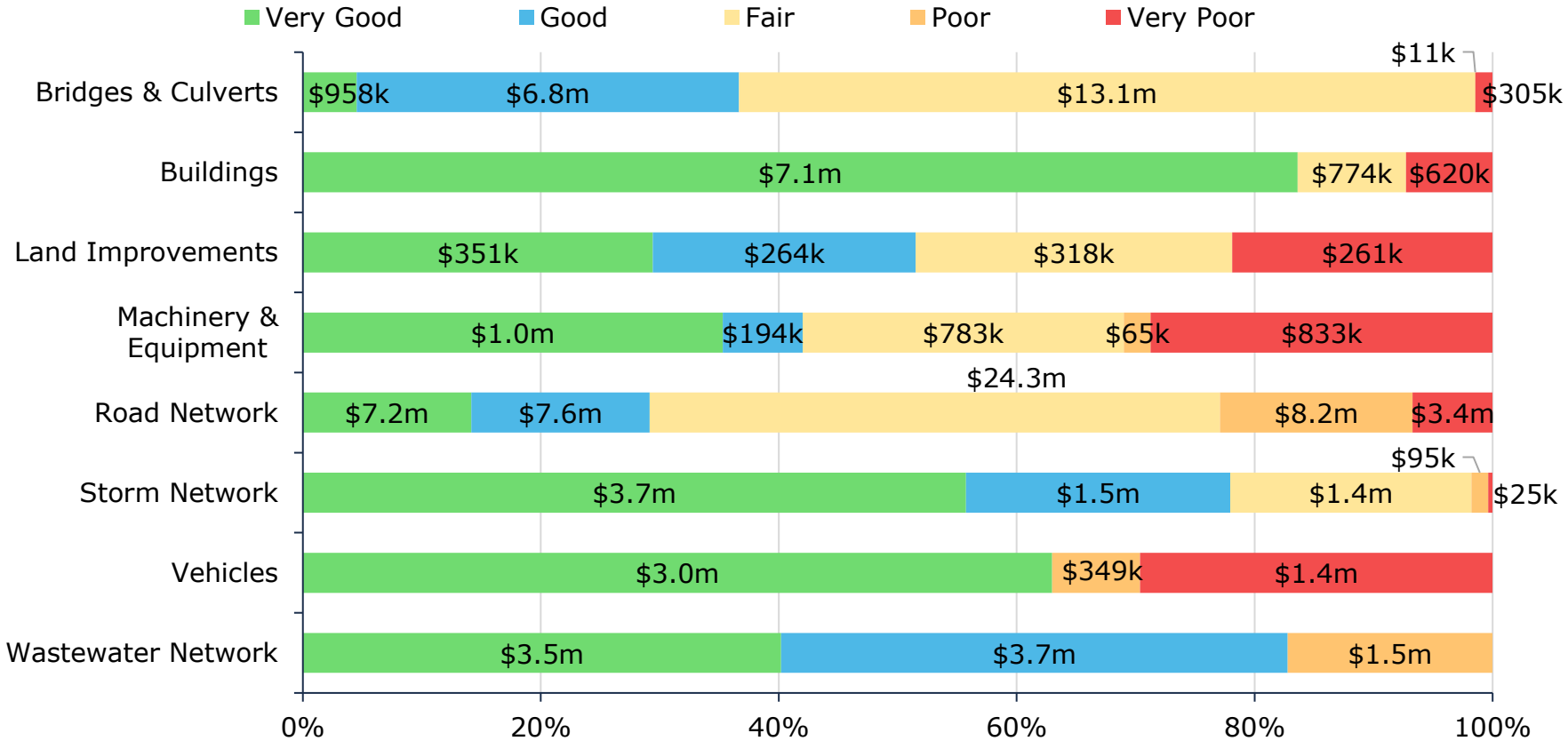


Condition & Age

Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 83% of assets in East Hawkesbury are in fair or better condition. This estimate relies on both age-based and field condition data. The breakdown of the condition of each asset category is shown in the figure below.

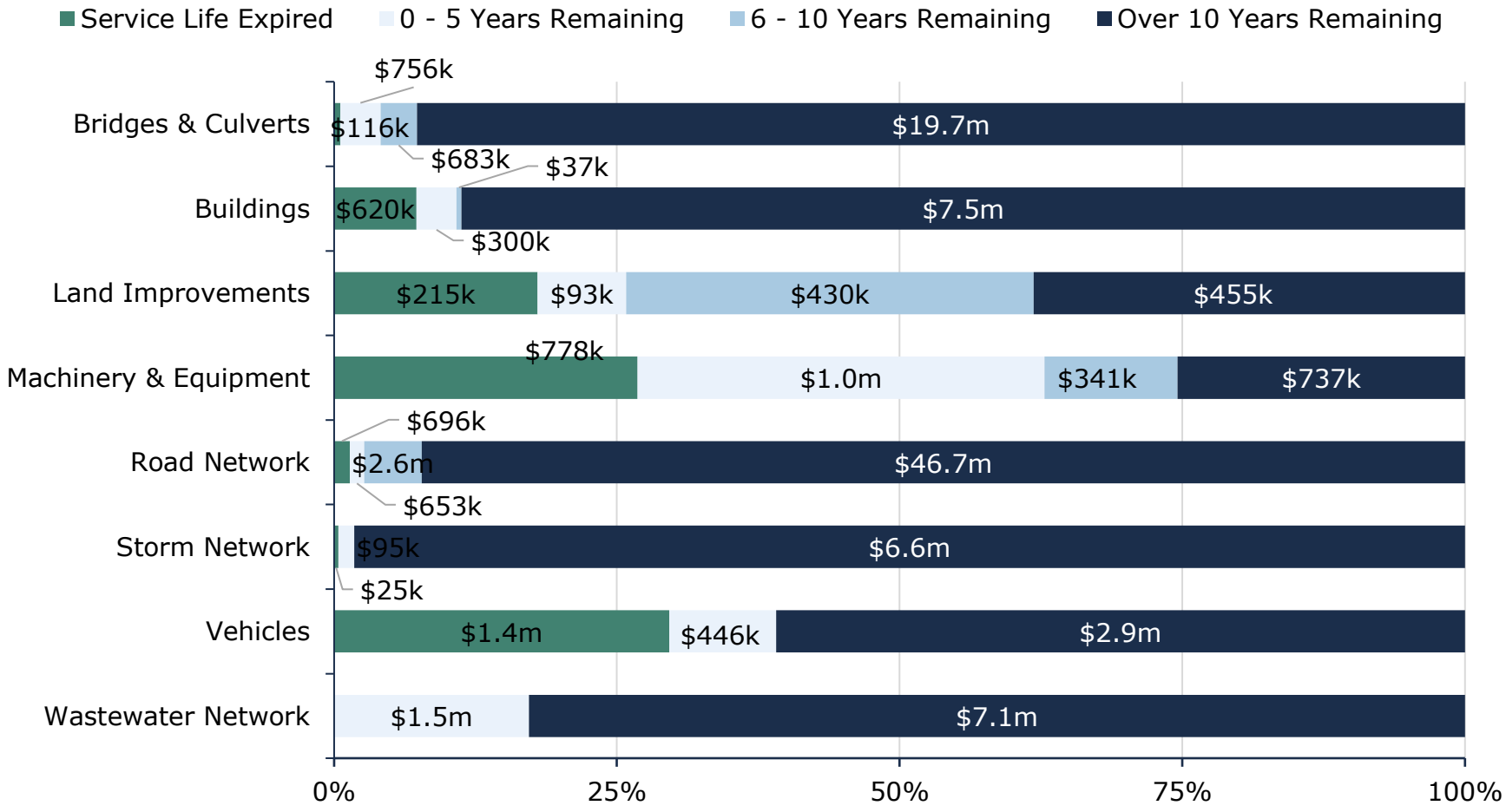
Figure 6 Asset Condition by Asset Category



Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 15% of the Township's assets will require replacement within the next 10 years. Details of the capital requirements are identified in each asset section and are based on the proposed levels of service.

Figure 7 Service Life Remaining by Category



Risk & Criticality

Qualitative Risk

The Township has noted key trends, challenges, and risks to service delivery that they are currently facing:

Lifecycle Management
The current lifecycle management strategies are considered more reactive than proactive. It is a challenge to find the right balance between maintenance, capital rehabilitation, and reconstruction. In the absence of mid-lifecycle rehabilitative events, most assets are simply maintained with the goal of full replacement once they reach end-of-life. These strategies will require sustainable annual funding to minimize the deferral of capital works.

Capital Funding Strategies
Major capital rehabilitation and replacement projects are often entirely dependent on the availability of grant funding opportunities. When grants are not available, rehabilitation and replacement projects are often deferred.

Quantitative Risk

The overall risk breakdown for East Hawkesbury's asset inventory is portrayed in the figure below.

Figure 8 Overall Asset Risk Breakdown

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$20,821,249	$35,253,067	$8,925,927	$26,904,566	$12,317,848
(20%)	(34%)	(9%)	(26%)	(12%)

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

Climate & Growth

East Hawkesbury Climate Profile

The Township of East Hawkesbury is in Eastern Ontario within the United Counties of Prescott and Russell, along the Ottawa River near the Quebec border. The Township is expected to face increasing climate change impacts, including rising temperatures, increased precipitation, and shifts in seasonal weather patterns. According to ClimateData.ca – a collaboration supported by Environment and Climate Change Canada (ECCC) – the Township of East Hawkesbury may experience the following climate trends under a high emissions scenario (RCP8.5):

Higher Average Annual Temperature:

- Between the years 1971 and 2000 the annual average temperature was 5.7ºC.
- Projected average annual temperatures:
  - 8.6 ºC for the 2021–2050 period
  - 10.6 ºC for the 2051–2080 period
  - 12.4 ºC for the 2081–2100 period
- These increases represent a projected rise of nearly 7 ºC by the end of the century, which could have widespread implications for agriculture, ecosystems, and community health.

Increase in Total Annual Precipitation:

- For the 1971–2000 period, the average annual precipitation was 1,017 mm.
- Under a high emissions scenario, East Hawkesbury. is projected to experience a 13% increase in precipitation by the year 2080 and an 17% increase by the end of the century.
- This could result in significantly wetter conditions, especially during certain seasons.

Increase in Frequency of Extreme Weather Events:

- East Hawkesbury is facing a clear trend toward more frequent and severe extreme weather events, including heat waves, intense storms, heavy precipitation, winter storms, and flooding. These changes are consistent with broader regional and national patterns linked to climate change.

Impacts of 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 Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

United Counties of Prescott and Russell Official Plan

The United Counties of Prescott and Russell Official Plan (approved in 2022) provide the regional policy framework for land use planning across all eight municipalities, including the Township of East Hawkesbury. The Plan covers a 25-year planning horizon and is designed to manage growth, protect natural and agricultural resources, and ensure the coordinated delivery of infrastructure and services.

The Plan identifies a hierarchy of settlement areas, including Urban Policy Areas, Community Policy Areas, Hamlet Policy Areas, and Rural Policy Areas. East Hawkesbury is predominantly classified as Rural and Hamlet, with key settlements—Saint-Eugène, Chute-à-Blondeau, and Sainte-Anne-de-Prescott—falling under the Hamlet Policy Area. These areas are intended to accommodate modest growth through infill development, low-density housing, and small-scale commercial uses.

Key directions of the Official Plan include:

- **Directing growth to existing serviced areas** to optimize infrastructure investments.
- **Preserving agricultural and natural heritage lands** by limiting scattered rural development.
- **Supporting housing diversity** through policies that promote a range of unit types and affordability levels.
- **Ensuring infrastructure and public services are financially sustainable**, with integration of asset management principles.
- **Protecting groundwater and surface water**, particularly in rural and agricultural zones.
- **Encouraging compact, mixed-use development** in appropriate locations to reduce land consumption and enhance livability.

Planning decisions in East Hawkesbury must conform to the Official Plan policies. Local zoning by-laws are used to implement these policies at the municipal level, while the UCPR Planning and Forestry Department acts as the approval authority for planning applications, including subdivisions and severances.

Township of East Hawkesbury Growth Profile

East Hawkesbury is projected to experience modest, steady growth over the coming decades, consistent with its rural character and limited development pressure. According to Statistics Canada and the *Growth Management Strategy Update (2023)* prepared for the United Counties of Prescott and Russell, the Township had a population of 3,418 in 2021, with projections indicating growth to approximately 4,180 by 2046.

This gradual growth trend is driven primarily by in-migration from larger urban centers, particularly Ottawa and surrounding municipalities, as affordability and remote work flexibility attract households to rural areas. However, the aging population and lower birth rates limit the pace of natural population increase.

Employment growth in East Hawkesbury is expected to remain stable and localized, largely rooted in agriculture, institutional services, and small-scale commercial activities. There are no major employment land expansions planned, and existing designated areas are considered sufficient to meet future demand.

Future residential development is anticipated to focus on infill and minor expansion within established settlement areas like Saint-Eugène, Chute-à-Blondeau, and Sainte-Anne-de-Prescott, which are identified as Hamlet Policy Areas under the Official Plan.

Land needs assessments conducted at the County level confirm that East Hawkesbury has adequate capacity to accommodate its share of growth through to 2046. Growth will be coordinated with infrastructure investments and managed in a manner that aligns with long-term sustainability and asset management objectives.

Levels of Service

East Hawkesbury has defined their levels of service for each infrastructure category by aligning them with their identified service attributes. Each of these attributes are defined as follows:

Scope – Is a description of the services being provided and the assets that are utilized to provide the services.

Quality / Reliability – Is a description of how condition is measured as well as the current average condition of the assets utilized to provide the services. Also, for each asset category there are additional reliability measures included.

Sustainability – Is a description of how the Township is ensuring services are financially sustainable over the long term, balancing service needs, asset risk with fiscal responsibility.

Current Levels of Service

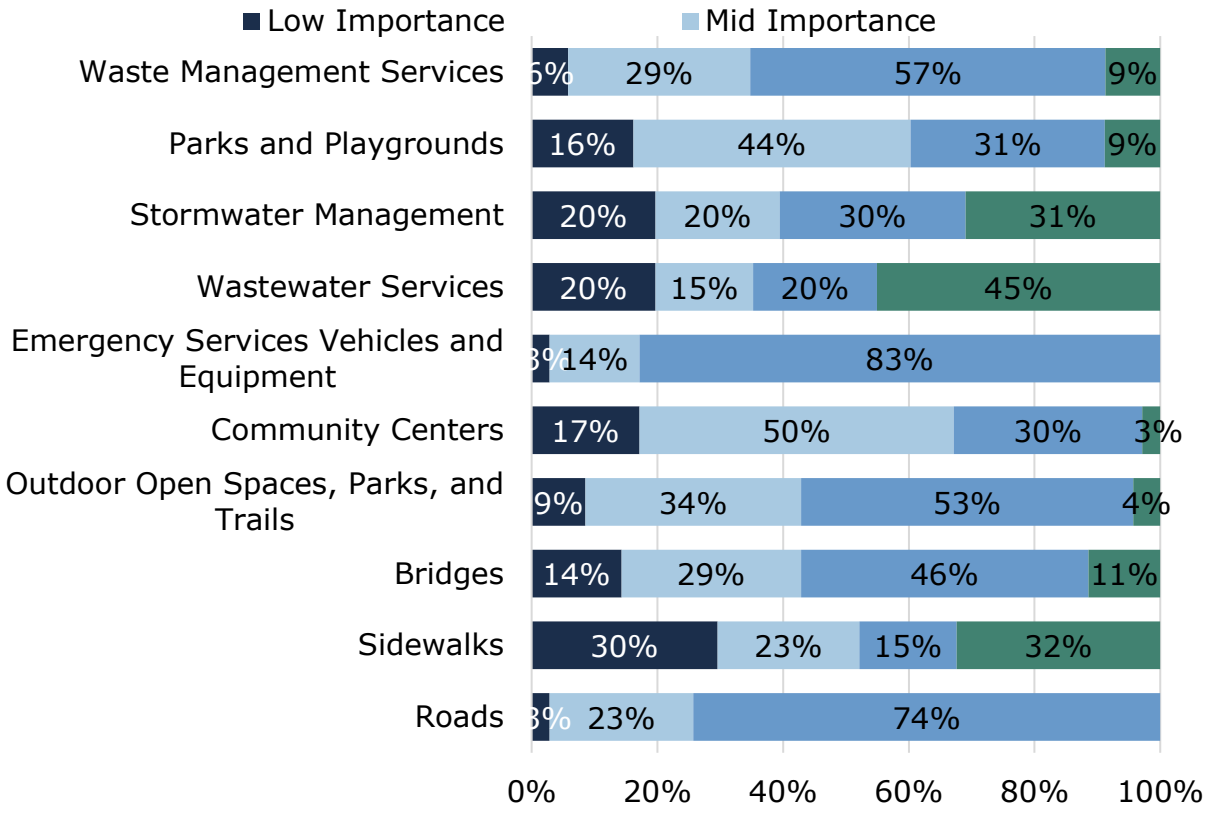
The Township of East Hawkesbury has defined their current levels of service for each infrastructure category by breaking it down into 3 service attributes scope, quality/reliability and sustainability. Each of these attributes are defined in the previous section. Based on an analysis of each asset category the current level of service is provided in each asset section in the appendix.

Stakeholder Engagement

The Township of East Hawkesbury conducted a community engagement survey to better understand resident perspectives on municipal services, infrastructure, and spending priorities. A total of 71 responses were received, with the majority identifying as full-time property owners (90%), followed by part-time residents and property owners (4%). Overall, the survey represents participation from just under 2% of the total municipal population. While this relatively low response rate limits the broader applicability of the results, the feedback still provides valuable insight into the perspectives of engaged residents.

Respondents were asked to rank the importance of various municipal services to their household. As illustrated below, many respondents assigned high importance to roads (74%), emergency services vehicles and equipment (83%), and waste management services (57%). The service with the lowest ratings is sidewalk (30%).

Figure 9 Municipal Services Ranked by Importance



Proposed Levels of Service

Through a comprehensive assessment the proposed levels of service for the Township have been developed. To ensure long-term sustainability and overall achievability the following were utilized / developed as part of the analysis.

Data-Driven Decision Making – Use data analytics to inform decision-making processes and identify areas for improvement.

Flexibility and Adaptability – Design the methodology to be flexible, allowing for adjustments based on evolving priorities.

Continuous Improvement – Establish a process for continuous review and improvement of the LOS methodology itself.

Scenarios

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included at least once. They are also all based on the data available in the asset management system which outlines estimated useful life, condition as well as replacement costs.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

Each scenario was then evaluated based on its financial impact on the Township, the resulting overall asset condition, and any anticipated risks associated with the outcomes.

Scenario 1: Current Capital Reinvestment

In this scenario, the Township continues its current capital investment level of $311 thousand per year. At this funding level, the asset inventory maintains an overall average condition of Poor, with an overall condition rating of approximately 28%. However, this level of investment is insufficient to prevent significant long-term deterioration.

Projections show that under this scenario, most asset categories will decline to a Very Poor condition within 30 years. As assets reach this critical state, the Township will face increased risks, including reduced service levels, higher maintenance costs, and potential service disruptions. Maintaining this underfunded investment strategy is not sustainable and will ultimately fail to support the delivery of adequate services to the community.

Table 6 Scenario 1 Results Current Capital Reinvestment

Asset Category	Current Annual Capital Reinvestment	Scenario Average Condition Results
Road Network	$271,729	46%
Bridges and Culverts	$0	11%
Storm Network	$2,415	22%
Land Improvements	$0	4%
Buildings	$14,943	30%
Machinery & Equipment	$22,000	12%
Vehicles	$0	7%
Tax Funded Total	**$311,087**	**29%**
Wastewater Network	$0	20%
Overall	**$311,087**	**28%**

Scenario 2: Maintaining Current Average Condition

Scenario 2 targets an overall average asset condition of Good, with a condition rating of approximately 70%. This approach prioritizes maintaining infrastructure at the current average condition level. To achieve this level of service, an estimated annual capital investment of $1.78 million is required. While this results in a significantly higher capital investment than that of scenario 1, it maintains the average condition at today's values.

This scenario supports maintaining service levels that are acceptable and consistent with current performance, while ensuring that infrastructure remains in a good state.

Table 7 Scenario 2 Results Maintaining Current Average Condition

Asset Category	Current Average Condition	Annual Capital Reinvestment Results
Road Network	69%	$661,393
Bridges and Culverts	74%	$386,348
Storm Network	77%	$85,526
Land Improvements	64%	$39,270
Buildings	78%	$158,712
Machinery & Equipment	59%	$122,889
Vehicles	65%	$180,871
Tax Funded Total	**70%**	**$1,635,009**
Wastewater Network	78%	$153,353
Overall	**71%**	**$1,788,362**

Scenario 3: Current Lifecycle Activities

Scenario 3 outlines the current lifecycle activities practiced across each asset category. Under this scenario, the asset inventory is maintained at an overall good condition level, with an average condition rating of 75%. This results in low-risk exposure due to well-maintained assets. However, achieving this condition requires high annual capital funding—approximately $2.02 million per year.

While this scenario ensures a strong state of asset health, it represents a cost-intensive approach to asset management. The trade-off here is excellent asset condition at the expense of affordability.

Table 8 Scenario 3 Results Current Lifecycle Activities

Asset Category	Scenario Average Condition Results	Annual Capital Reinvestment Results
Road Network	69%	$688,554
Bridges & Culverts	81%	$445,539
Storm Network	77%	$85,526
Land Improvements	77%	$48,019
Buildings	78%	$158,712
Machinery & Equipment	78%	$195,689
Vehicles	78%	$229,089
Tax Funded Total	**75%**	**$1,851,128**
Wastewater Network	78%	$153,353
Overall	**75%**	**$2,004,481**

Scenario 4: Target Condition Good

Scenario 4 targets an average asset condition of Good, with a condition rating of approximately 60%. This represents a balanced approach that maintains infrastructure in a state of good repair, while reducing the financial burden.

Achieving this level of service requires an estimated annual capital investment of $1.63 million. Although the resulting asset condition is at the lower end of the range of Good condition, the capital requirement is approximately 10% less than maintain the current condition and 20% lower than the current lifecycle activities, making this a more financially sustainable option. This scenario allows the Township to minimize long-term risks associated with asset deterioration, while ensuring that service levels remain acceptable and infrastructure performance is reliable.

Table 9 Scenario 4 Results Target Condition Good

Asset Category	Scenario Average Condition Results	Annual Capital Reinvestment Results
Road Network	61%	$592,571
Bridges & Culverts	65%	$339,744
Storm Network	63%	$67,549
Land Improvements	65%	$40,235
Buildings	66%	$113,663
Machinery & Equipment	64%	$145,928
Vehicles	64%	$175,849
Tax Funded Total	**63%**	**$1,475,539**
Wastewater Network	71%	$138,225
Overall	**64%**	**$1,613,764**

Proposed Level of Service Summary

The Township of East Hawkesbury is adopting a strategic, data-driven approach to ensure the long-term sustainability of its municipal services. By placing a strong emphasis on infrastructure condition and evidence-based decision-making, the Township aims to balance service quality with cost-efficiency—avoiding both over-investment and the risks associated with premature asset failure. Significant progress has been made in enhancing the accuracy and reliability of the Township's asset management system, which now provides a solid foundation for long-term financial planning and capital investment decisions.

As part of this improved framework, the Township has set a target of achieving an average asset condition of "Good" (approximately 60%). This strategic target has enabled a reduction in annual capital requirements by approximately 20% compared to full lifecycle strategies, allowing the Township to move toward a sustainable funding level more quickly positioning the Town to reach a sustainable funding level more quickly, while continuing to deliver reliable services that meet the evolving needs of the community.

Financial Management

Financial Strategy

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

This financial strategy is designed for the Township's existing asset portfolio and is premised on two key inputs: the average annual capital requirements and the average annual funding typically available for capital purposes. The annual requirements are based on the replacement cost of assets and their serviceable life, and the target proposed level of service of maintaining an average condition of good. This figure is calculated for each individual asset and aggregated to develop category-level values.

The annual funding available is determined by the amount of revenue that is allocated consistently to either that years capital program or to reserves for future capital purposes. For East Hawkesbury, the approved 2025 budget values were used to project available funding going forward.

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

- Revenue from taxation allocated to reserves for capital purposes
- Revenue from wastewater rates allocated to capital reserves
- The Canada Community Building Fund (CCBF)
- The Ontario Community Infrastructure Fund (OCIF)

Although provincial and federal infrastructure programs can change with evolving policy, CCBF and OCIF are considered as permanent and predictable. Through the development of proposed levels of service, the Township has established the long-term target of maintaining the target average condition of the infrastructure at good (approximately 60%).

Annual Capital Requirements

The annual requirements represent the amount the Township should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs, and achieve long-term sustainability.

The table below outlines the total average annual capital requirements for existing assets in each asset category, based on the proposed levels of service selected to maintain the target average condition of good, at approximately 60 for all asset categories.

Table 10 Annual Capital Requirements

Asset Category	PLOS Scenario 4 Average Condition Results	Annual Capital Requirements
Road Network	61%	$592,571
Bridges & Culverts	65%	$339,744
Storm Network	63%	$67,549
Land Improvements	65%	$40,235
Buildings	66%	$113,663
Machinery & Equipment	64%	$145,928
Vehicles	64%	$175,849
Tax Funded Total	**63%**	**$1,475,539**
Wastewater Network	71%	$138,225
Overall	**64%**	**$1,613,764**

Current Funding Levels

The table below summarizes how current funding levels compare with funding required for each asset category. At existing levels, the Township is funding almost 20% of its annual capital requirements for all infrastructure analyzed. This creates a total annual funding deficit of $1.32 million.

Table 11 Current Funding Levels

Asset Category	Annual Capital Requirements	Annual Funding Available	Annual Infrastructure Deficit
Road Network	$592,571	$271,729	$320,842
Bridges & Culverts	$339,744	$0	$339,744
Storm Network	$67,549	$2,415	$65,134
Land Improvements	$40,235	$0	$40,235
Buildings	$113,663	$14,943	$98,720
Machinery & Equipment	$145,928	$22,000	$123,928
Vehicles	$175,849	$0	$175,849
Tax Funded Total	**$1,475,539**	**$311,087**	**$1,164,452**
Wastewater Network	$138,225	$0	$138,225
Overall	**$1,613,764**	**$311,087**	**$1,302,677**

Closing the Gap

Eliminating annual infrastructure funding shortfalls is a difficult and long-term endeavour for municipalities. Considering the Township's current funding position, it will require many years to reach full funding for current assets.

This section outlines how East Hawkesbury can close the annual funding deficits using own-source revenue streams, i.e., property taxation and wastewater rates. Funding 100% of annual capital requirements ensures that major capital events, including replacements, are completed as required. Under this scenario, projects are unlikely to be deferred to future years. This delivers the proposed level of service of maintaining target average condition good at 60.

Full Funding Requirements Tax Revenues

In 2025, East Hawkesbury will have an annual tax revenue of $2,850,754. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding would require a 41.3% tax increase over time.

While shorter phase-in periods may place too high a burden on taxpayers, a phase-in period beyond 20 years may see a continued deterioration of infrastructure, leading to larger backlogs. Several scenarios have been developed using phase-in periods ranging from five to twenty years; this is outlined in the table below.

Table 12 Full Funding Requirements Tax Revenues

Phase In Period	5 Years	10 Years	15 Years	20 Years
% Increase in Annual Taxation	7.2%	3.5%	2.3%	1.7%

Full Funding Requirements Wastewater Rate Revenues

For 2025, East Hawkesbury's forecasted wastewater rate revenues total $147,787. Annual capital requirements for wastewater total $138,225, against available funding of $0. This creates a funding deficit of $138,225 or the full requirement. To close this annual gap, the Township's wastewater revenues would need to increase by 103.8%.

As with tax revenues, short phase-in periods may require excessive rate increases, whereas more protracted timeframes may lead to larger backlogs and more unpredictable spending on emergency repairs and replacements.

Table 13 Full Funding Requirements Wastewater Rate Revenues

Phase In Period	5 Years	10 Years	15 Years	20 Years
% Increase in Annual Taxation	14.1%	6.8%	4.5%	3.4%

Financial Recommendations

The recommended long-term financial strategy is to reach full sustainable funding levels within 20 years. To achieve this, East Hawkesbury should consider implementing dedicated annual capital increases of 2% for tax revenues and 3.5% for wastewater rate revenues. With these dedicated increases in place, tax-funded assets are projected to reach sustainable funding levels in approximately 17 years, while wastewater assets would reach sustainability in about 19 years.

Ten-Year Financial Plan

The Township is working with a clear long-term financial strategy aimed at reaching sustainable funding levels for its tax-funded assets, and wastewater services in less than 20-years. The Township is still operating with an infrastructure deficit until full funding is reached. The table below shows a 10-year capital projection for each asset category. The proposed funding projection only incorporates capital increases; it does not include any increases necessary due to operational needs or any growth projections. Integration with the budget will help to ensure alignment between the asset management program forecasts and operations.

Table 14 Ten-Year Financial Plan from Citywide

Category	Backlog	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Bridges & Culverts	$116k	-	$189k	-	-	$567k	-	-	-	$11k	$221k
Buildings	$620k	-	-	$70k	-	$230k	$5k	-	-	-	$37k
Land Improvements	$215k	-	-	$93k	-	-	$182k	-	$94k	$155k	-
Machinery & Equipment	$778k	$66k	$200k	$11k	$745k	$21k	$229k	$150k	$11k	$8k	$243k
Road Network	$696k	$393k	$415k	$578k	$300k	$73k	$1.1m	$148k	$2.5m	$205k	$132k
Storm Network	$25k	-	-	-	-	$95k	-	-	-	-	-
Vehicles	$1.4m	$349k	-	-	$97k	-	-	-	-	$150k	-
Tax Funded Total	**$3.8m**	**$809k**	**$804k**	**$752k**	**$1.1m**	**$986k**	**$1.5m**	**$298k**	**$2.6m**	**$527k**	**$632k**
Wastewater Network	-	-	$1.5m	-	-	-	-	-	-	-	-
Total	**$3.8m**	**$834k**	**$2.3m**	**$659k**	**$1.2m**	**$986k**	**$1.5m**	**$298k**	**$2.5m**	**$527k**	**$632k**

Table 15 Proposed Funding 10-year Projection

Funding	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Tax	$368k	$426k	$486k	$546k	$608k	$671k	$735k	$800k	$867k	$935k
Wastewater	$3k	$6k	$9k	$12k	$15k	$19k	$22k	$25k	$29k	$32k

The tax funding projection includes the OCIF and CCBF value for 2025 and all values are in today's dollars; there is no inflation incorporated.

Recommendations

Financial Strategies

Review feasibility of adopting a full-funding scenario that achieve 100% of average annual requirements for the asset categories analyzed. This involves:

- Implementing an additional 2.0% annual tax increase over a 17-year phase-in period and allocating the full increase in revenue toward capital expenditures
- Implementing an additional 3.5% rate increase for wastewater over a 19-year period
- Continued allocation of OCIF and CCBF funding as previously outlined

NOTE: Although difficult to capture, inflation costs, supply chain issues, and fluctuations in commodity prices will also influence capital expenditures.

Asset Data

- Continuously review, refine, and calibrate lifecycle and risk profiles to better reflect actual practices and improve capital projections. In particular:
- the timing of various lifecycle events, the triggers for treatment, anticipated impacts of each treatment, and costs
- the various attributes used to estimate the likelihood and consequence of asset failures, and their respective weightings
- Asset management planning is highly sensitive to replacement costs. Periodically update replacement costs based on recent projects, invoices, or estimates, as well as condition assessments, or any other technical reports and studies.
- Like replacement costs, an asset's established serviceable life can have dramatic impacts on all projections and analyses, including condition, long-range forecasting, and financial recommendations. Periodically reviewing and updating these values to better reflect in-field performance and staff judgement is recommended.

Risk and Levels of Service

- Risk models 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. As the data evolves and new attribute information is obtained, these models should also be refined and updated.
- The annual review requirements in O.Reg. 588/17 state the Township must address their progress in implementing its asset management plan, any factors impeding the ability to implement its asset management plan as well as a strategy to address any of the identified factors.

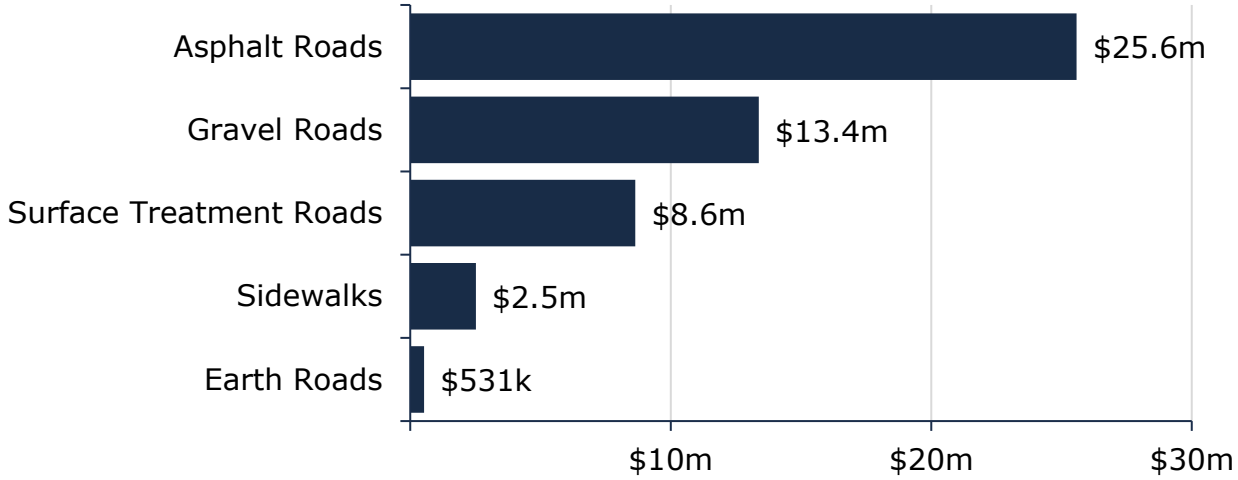
Appendix A: Road Network

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

Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's road network infrastructure inventory.

Figure 10 Portfolio Valuation: Road Network

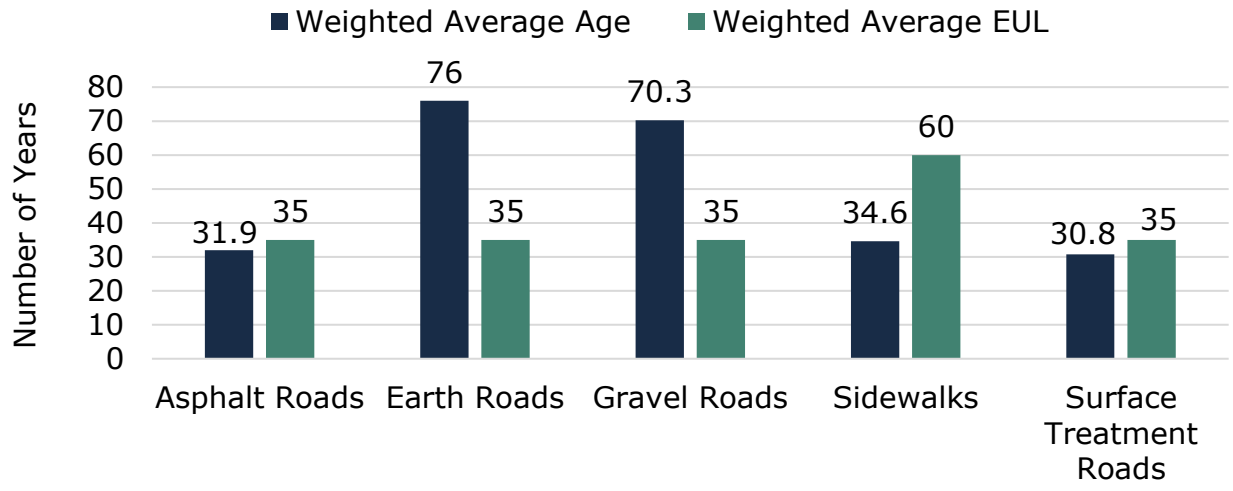


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

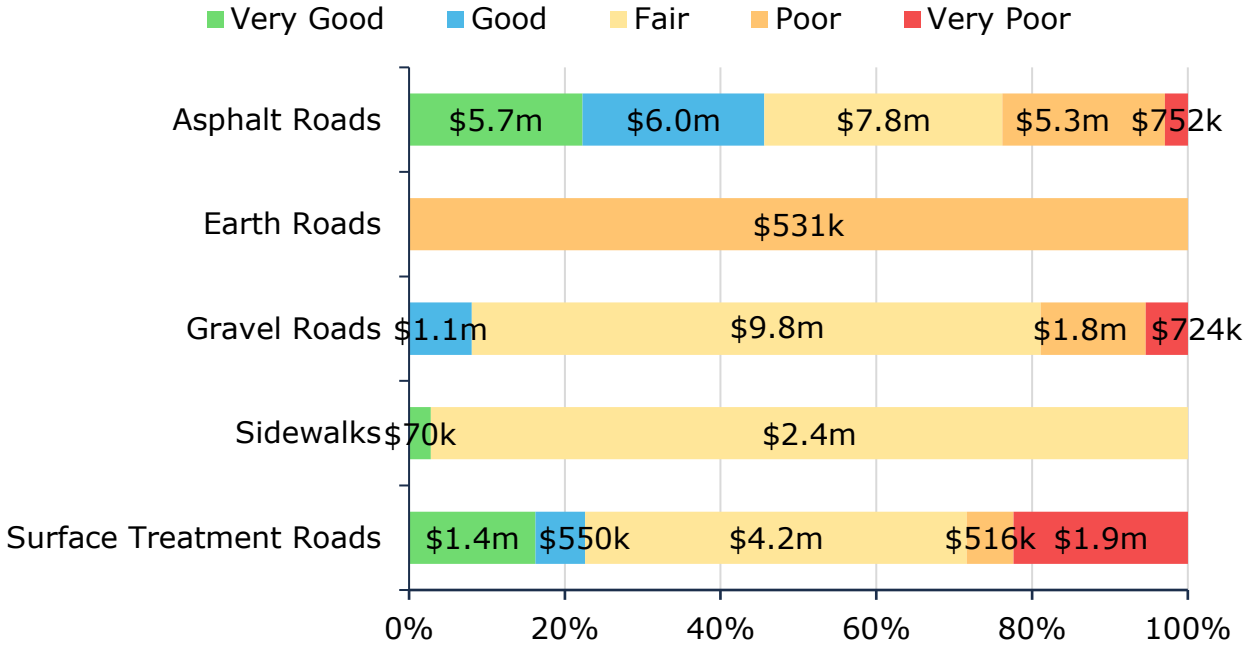
The graph below identifies the average age, and the estimated useful life for each asset segment. It is all weighted by replacement cost.

Figure 11 Road network Average Age vs Average EUL



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

Figure 12 Road network Condition Breakdown



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

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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Township's current approach:
Staff review the roads condition on an annual basis and utilizing specialized software scenarios are run to optimize the lifecycle activities

The following rating criteria is used to determine the current condition of road segments and forecast future capital requirements:

Table 16 Condition Scale: Roads

Condition	Rating	
Very Good	90-100	
Good	75-90	
Fair	50-75	
Poor	35-50	
Very Poor	0-35	

Lifecycle Management Strategy

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

Table 17 Road network Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Cold patching and pot hole repairs are completed on an as-needed basis when identified during road patrols.
	Regular re-gravelling and dust control is completed on gravel roads in the township.
Rehabilitation	For HCB roads surface replacement is done on regular interval. For LCB roads single overlays and surface replacements.
Replacement	Road replacements are in coordination with underground infrastructure replacement projects is also a large factor in determining when to replace a road.

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 13 Risk Breakdown: Road Network

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$3,229,564	$23,651,350	$7,201,775	$13,706,600	$2,857,710
(6%)	(47%)	(14%)	(27%)	(6%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the road network are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with staff.

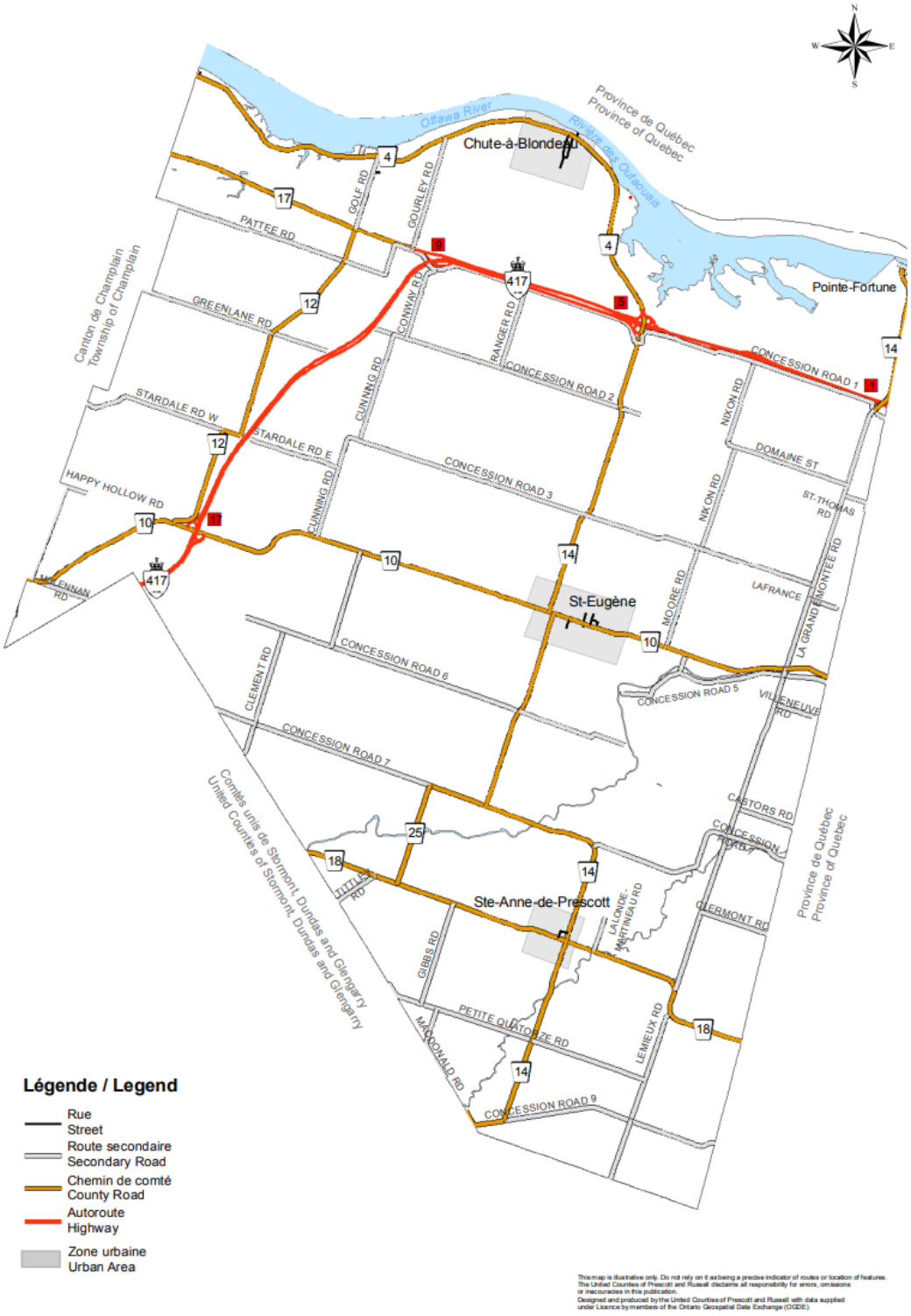
Current Levels of Service

The following tables identify the Township's current level of service for the road network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 18 Current Levels of Service: Road network

Community LOS		Service Attribute	Technical LOS	
Description, which may include maps, of the road network in the township and its level of connectivity	*Refer to Figure 14 Road Network Map*	Scope	Replacement Cost	$50,646,999
			Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km2)	0
			Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km2)	24.4 lane km / 235.06 km2 = 0.104
			Lane-km of local roads (MMS classes 5 and 6) per land area (km/km2)	109.8 lane km / 235.06 km2 = 0.467
Description or images that illustrate the different levels of road class pavement condition	Roads support comfortable passage of vehicles. Descriptions of roads in different condition states are provided in Table 16 Condition Scale: Roads	Quality	For paved roads in the Township, the average pavement condition index value	69
			For unpaved roads in the Township, the average surface condition	61
			Average Condition	Fair (66%)
			% Condition > Fair	77%
Sustainability	Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.	Sustainability	% Very High Risk	6.0%
			Annual Capital Reinvestment	$271,729

Figure 14 Road Network Map



Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Road Network.

Table 19 Proposed Levels of Service: Road Network

Road Network	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$36,736,174	Average = 46 Maximum = 66 Minimum = 35	$271,729
Scenario 2 - Maintain Current Condition	$36,736,174	Average = 66 Maximum = 70 Minimum = 54	$661,393
Scenario 3 – Lifecycle	$36,736,174	Average = 69 Maximum = 86 Minimum = 44	$688,554
Scenario 4 – Condition 60	$36,736,174	Average = 61 Maximum = 66 Minimum = 60	$592,571

Note: Gravel and Earth Roads are not included in the analysis they are only operating expenses - considered to never have to be replaced if they are maintained – replacement cost value $13.9 million.

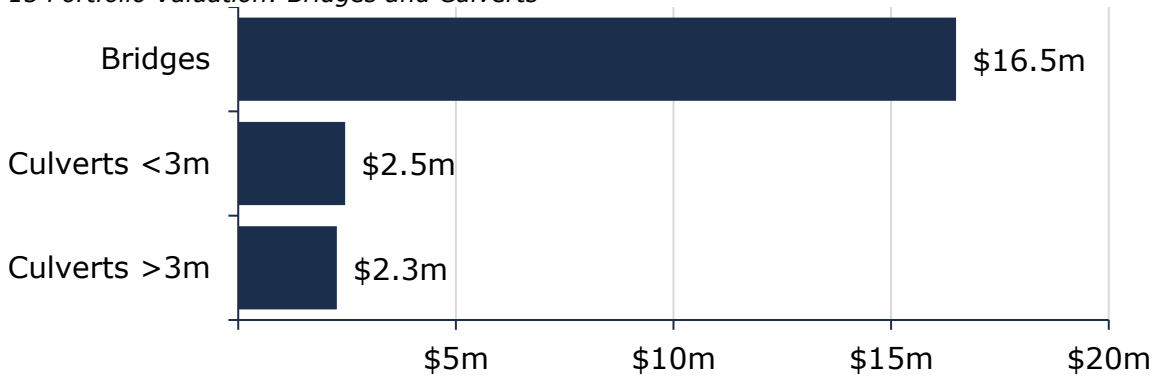
Appendix B: Bridges and Culverts

East Hawkesbury has 10 bridges, 2 structural culverts (>3m) and 234 cross road culverts (<3m) are part of the transportation network allowing passage of vehicle and other traffic over water barriers. They serve the same users as road network assets (i.e., vehicle traffic, pedestrians and cyclists).

Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's bridges and culverts inventory.

Figure 15 Portfolio Valuation: Bridges and Culverts

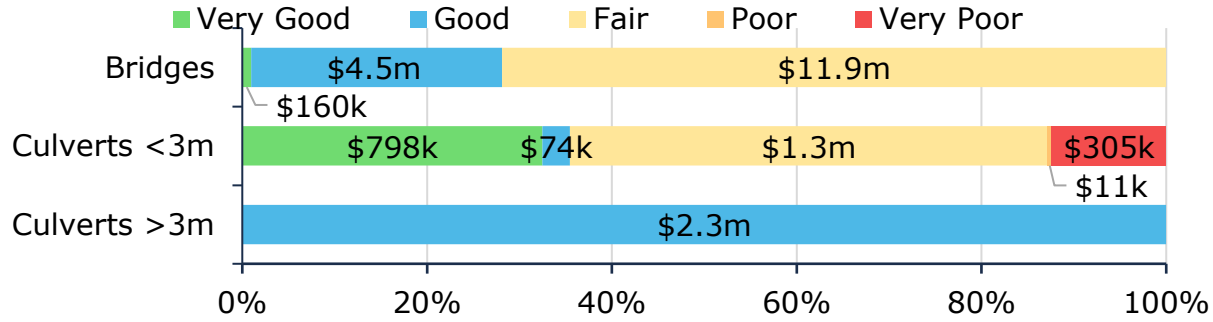


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

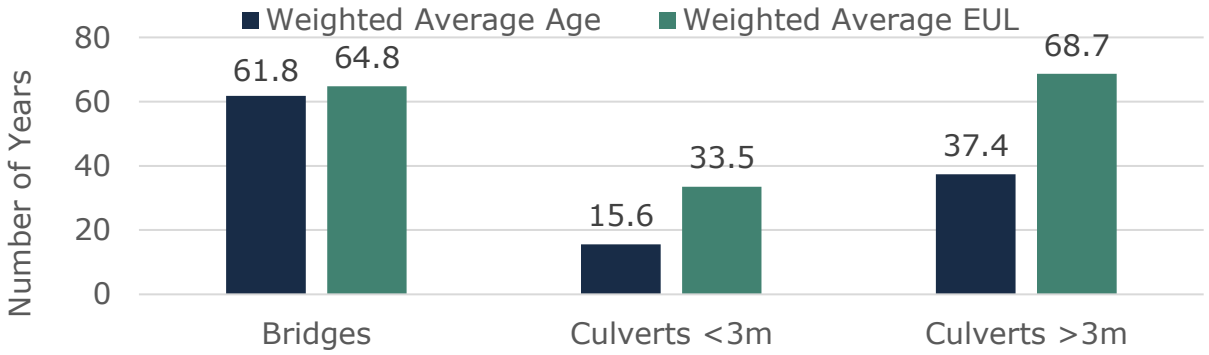
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 16 Asset Condition: Bridges and Culverts by Segment



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

Figure 17 Estimated Useful Life vs. Asset Age: Bridges and Culverts



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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to determine the remaining service life of assets and identify the most cost-effective approach to managing assets. East Hawkesbury's current approach is to assess all bridges and culverts every 2 years in accordance with the Ontario Structure Inspection Manual (OSIM).

The condition scale for bridges and culverts utilized is from 0 to 100 from Very Poor to Very Good.

Figure 18: Bridges and Culverts Condition Images

Condition	Rating	
Very Good	90-100	No examples
Good	75-90	
Fair	50-75	
Poor	35-50	No examples
Very Poor	0-35	No examples

Lifecycle Management Strategy

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

Table 20 Bridges and Culverts Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	All maintenance and repair activities are driven by the results of inspections competed according to the Ontario Structure Inspection Manual (OSIM)
Replacement	Replacement occurs upon OSIM inspection recommendation and is subject to the availability of funding

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 19 Risk Breakdown: Bridges and Culverts

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	Low	Moderate	High	Very High
$2,154,769 (10%)	$1,297,502 (6%)	$1,593,460 (8%)	$12,251,022 (58%)	$3,924,158 (18%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.

The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the bridges and culverts are documented in Appendix J: Risk Rating Criteria. The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for the bridges and culverts. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 21 Current Levels of Service: Bridges and Culverts

Community LOS		Service Attribute	Technical LOS	
Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	Bridges and culverts serve a wide range of users, including passenger vehicles, emergency responders, pedestrians, cyclists, and heavy transport vehicles.	Scope	Replacement Cost	$22,720,736
			Number of bridges in the municipal network	10
			Number of Structural Culverts in the municipal network	2
Description or images of the condition of bridges & culverts and how this would affect use of the bridges & culverts	Refer to Figure 18: Bridges and Culverts Condition Images	Quality / Reliability	Average bridge condition index value for bridges in the Township	70
			Average bridge condition index value for structural culverts in the Township	83
			% of bridges in the Township with loading or dimensional restrictions	0%
			Average Condition	Fair (71%)
			% Condition > Fair	99%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	18%
			Annual Capital Reinvestment	$0

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's bridges and culverts.

Table 22 Proposed Levels of Service: Bridges and Culverts

Bridges & Culverts	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$21,220,911	Average = 11 Maximum = 71 Minimum = 0	$0
Scenario 2 - Maintain Current Condition	$21,220,911	Average =74 Maximum = 84 Minimum = 51	$386,348
Scenario 3 – Lifecycle	$21,220,911	Average = 81 Maximum = 92 Minimum = 38	$445,539
Scenario 4 – Condition 60	$21,220,911	Average = 65 Maximum = 78 Minimum = 53	$339,744

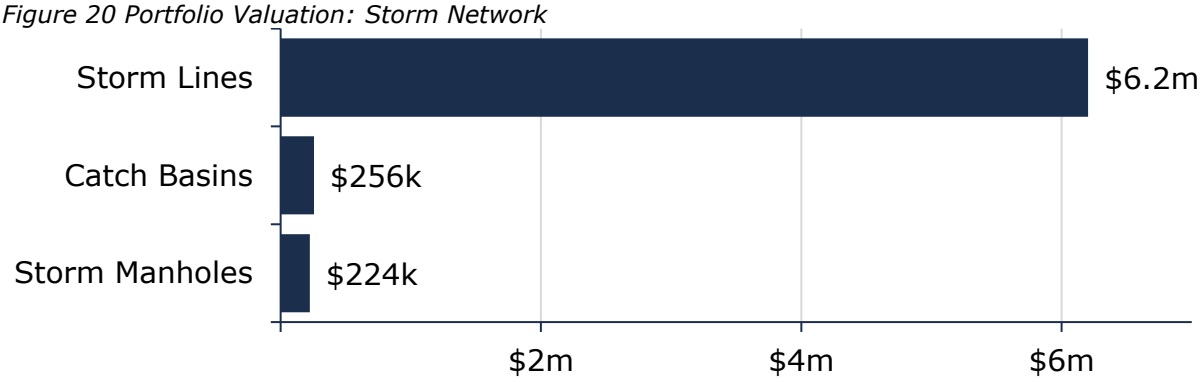
Appendix C: Storm Network

The Township is responsible for a stormwater network of 5.1 kms of storm sewer mains, catch basins and manholes.

Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's stormwater network inventory.

Figure 20 Portfolio Valuation: Storm Network

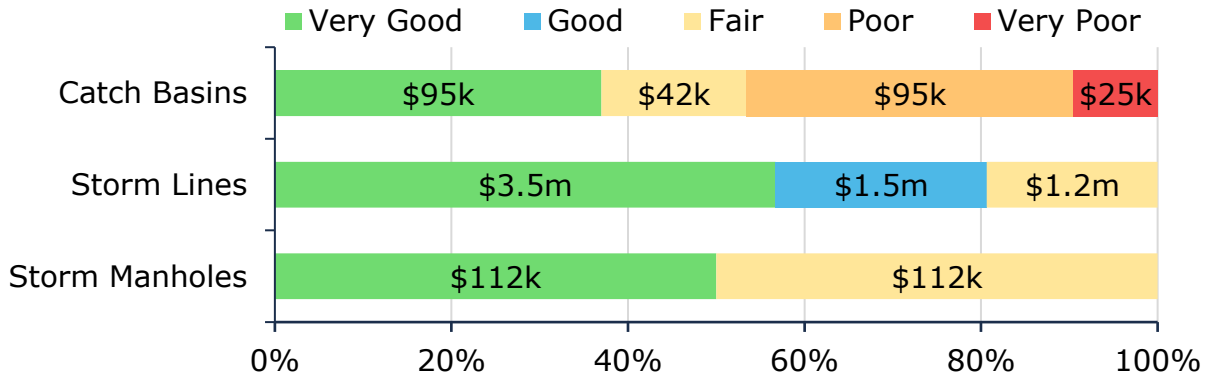


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

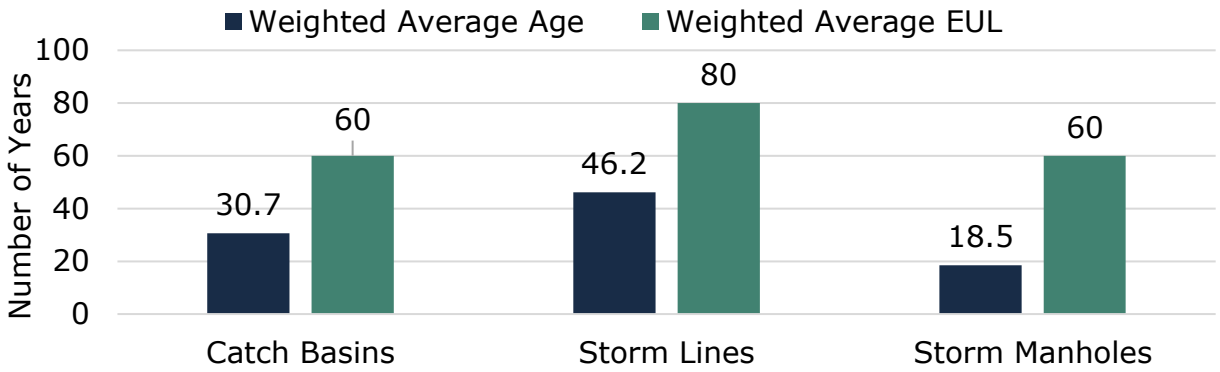
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 21 Asset Condition: Storm Network by Segment



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

Figure 22 Estimated Useful Life vs. Asset Age: Storm network



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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The Township's current approach is to utilize CCTV inspections to assess the condition of the mains.

The following rating criteria is used to determine the current condition of storm network segments and forecast future capital requirements:

Figure 23 Condition Scale: Storm Network

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Lifecycle Management Strategy

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

Table 23 Stormwater Network Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Maintenance activities include storm main flushing and catch basin cleaning completed on an as-needed basis.
Replacement	Replacements are coordination with other infrastructure

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 24 Risk Breakdown: Storm network

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$5,535,800	$876,500	-	-	-
(86%)	(14%)	(0%)	(0%)	(0%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the stormwater network are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following table identify the Township's current level of service for the stormwater network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 24 Current Levels of Service: Storm Network

Community LOS		Service Attribute	Technical LOS	
Description, which may include map, of the user groups or areas of the township that are protected from flooding, including the extent of protection provided by the municipal storm sewer system	Storm system is in urban areas.	Scope	Replacement Cost	$6,682,285
			Quantity (Meters of main)	5.1km
Description or images of the condition of storm network assets	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service	Quality / Reliability	% of properties in township resilient to a 100-year storm	100%
			% of the municipal storm sewer management system resilient to a 5-year storm	100%
			Average condition for the storm network system	77
			% Condition > Fair	98%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	0%
			Annual Capital Reinvestment	$2,415

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's storm network.

Table 25 Proposed Levels of Service: Storm Network

Storm Network	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$6,682,285	Average = 22 Maximum = 77 Minimum = 2	$2,415
Scenario 2 - Maintain Current Condition	$6,682,285	Average =77 Maximum = 93 Minimum = 58	$85,526
Scenario 3 – Lifecycle	$6,682,285	Average = 77 Maximum = 93 Minimum = 58	$85,526
Scenario 4 – Condition 60	$6,682,285	Average = 63 Maximum = 77 Minimum = 59	$67,549

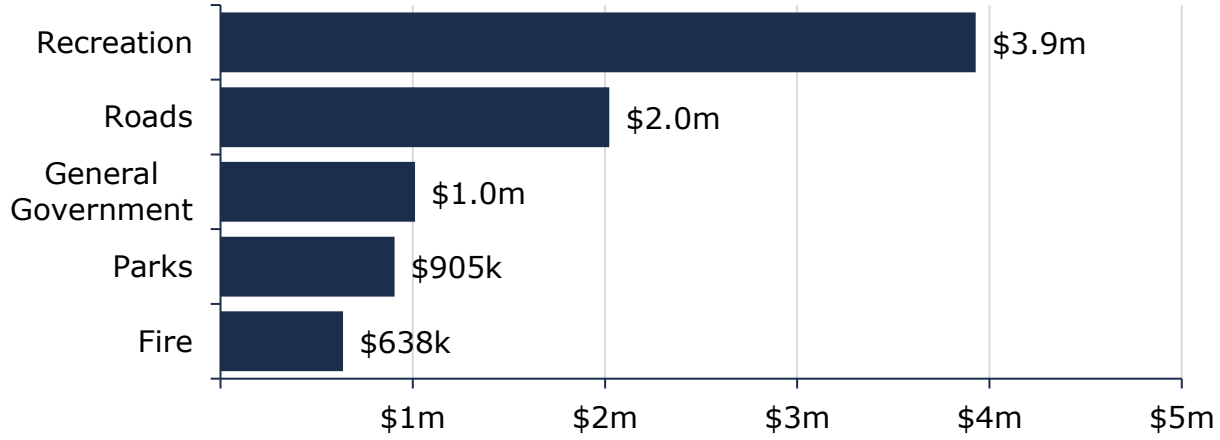
Appendix D: Buildings

The Township's buildings are used by a variety of users, including municipal staff, residents, visitors, and cultural organizations. The Township currently manages 14 buildings with a combined replacement cost of $8.5 million. Note: this section does not include wastewater buildings they are in the wastewater section.

Asset Inventory & Costs

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

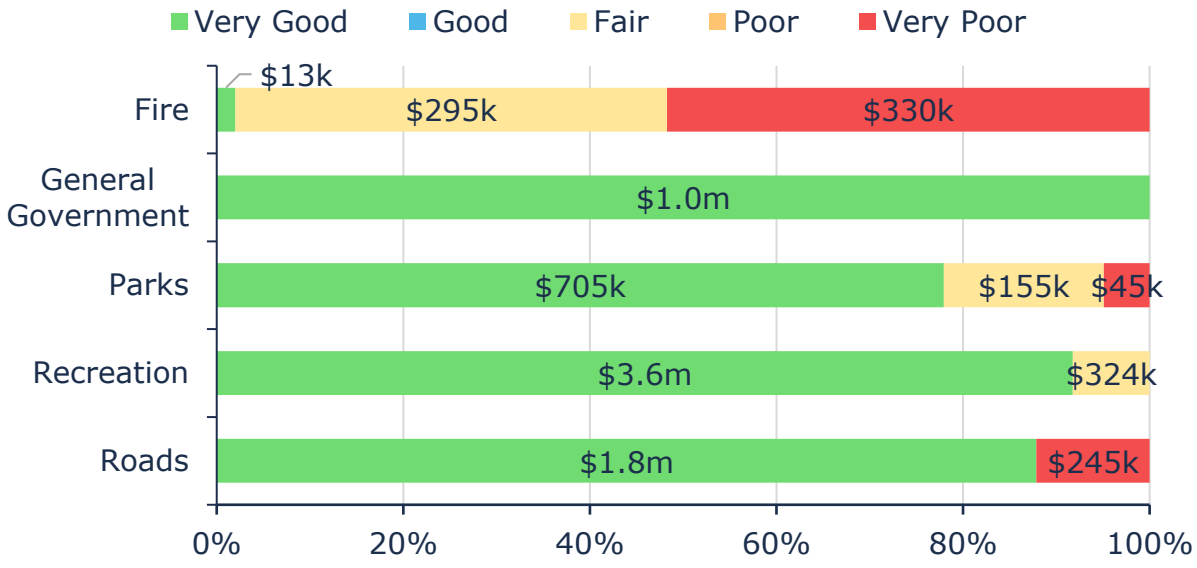
Figure 25 Portfolio Valuation: Buildings



Asset Condition & Age

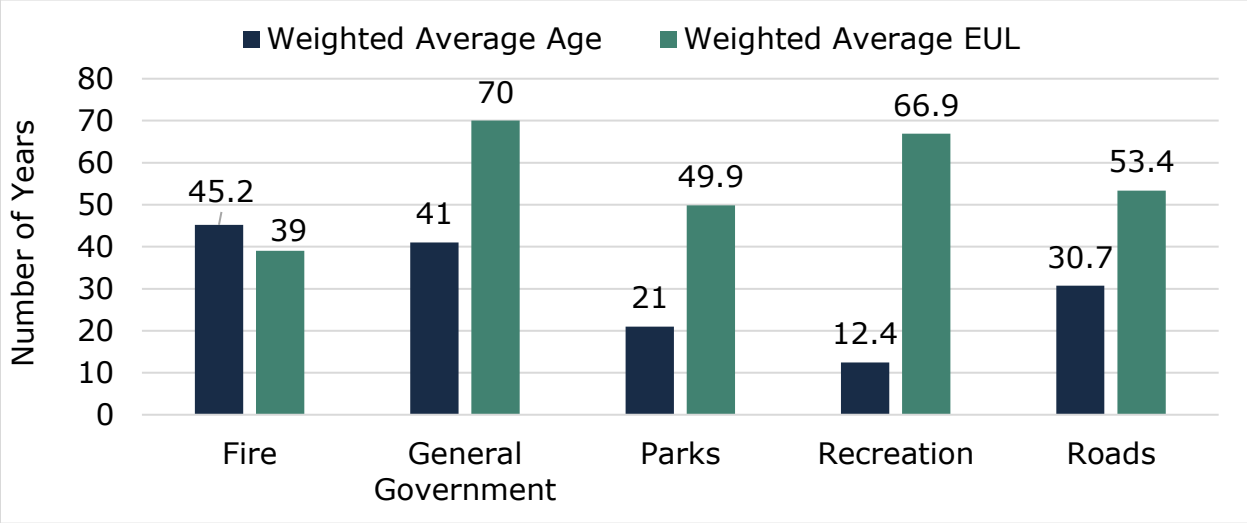
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 26 Asset Condition: Buildings by Service Area



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

Figure 27 Estimated Useful Life vs. Asset Age: Buildings



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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. There are no formal condition assessment programs in place for buildings. The following rating criteria is used to determine the current condition of buildings assets and forecast future capital requirements:

Table 26 Condition Scale: Buildings

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Asset Management Strategies

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 Township's current lifecycle management strategy.

Table 27 Buildings Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Maintenance activities include regulatory inspection and maintenance by contractors annually on required systems.
Rehabilitation/ Replacement	Without the availability of up-to-date condition assessment information replacement activities are purely reactive in nature

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2024 inventory data.

Figure 28 Risk Breakdown: Buildings

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	Low	Moderate	High	Very High
$7,110,862	$9,147	-	$531,487	$853,122
(84%)	(<1%)	(0%)	(6%)	(10%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the stormwater network are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for buildings. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 28 Current Levels of Service: Buildings

Community LOS		Service Attribute	Technical LOS	
High-level description of buildings and their intended use	The Township's buildings are used by a variety of users, including municipal staff, residents, visitors, and cultural organizations.	Scope	Replacement Cost	$8,504,618
			% of buildings that are accessible	100%
			Number of buildings	14
Description or images of the condition of facility assets	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service	Quality / Reliability	Average condition of buildings	81
			% Condition > Fair	93%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	10%
			Annual Capital Reinvestment	$14,943

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's buildings.

Table 29 Proposed Levels of Service: Buildings

Buildings	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$8,504,618	Average = 30 Maximum = 82 Minimum = 3	$14,943
Scenario 2 - Maintain Current Condition	$8,504,618	Average =78 Maximum = 93 Minimum = 58	$158,712
Scenario 3 – Lifecycle	$8,504,618	Average = 78 Maximum = 90 Minimum = 63	$158,712
Scenario 4 – Condition 60	$8,504,618	Average = 66 Maximum = 84 Minimum = 60	$113,663

Appendix E: Vehicles

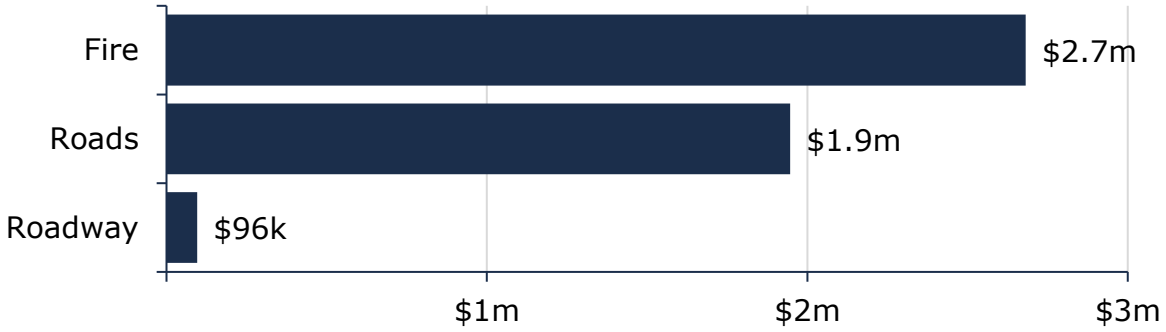
The vehicles allow staff to efficiently deliver municipal services and personnel. The Municipal vehicles are used to support several service areas, including:

- Snowplows for winter control activities
- fire rescue vehicles to provide emergency services
- pick-up trucks to support the maintenance of the transportation network

Asset Inventory & Costs

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

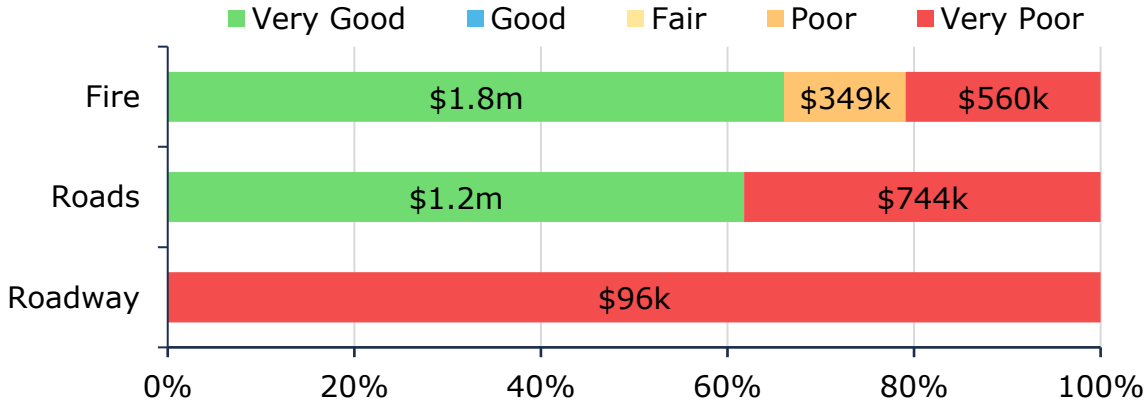
Figure 29 Portfolio Valuation: Vehicles



Asset Condition & Age

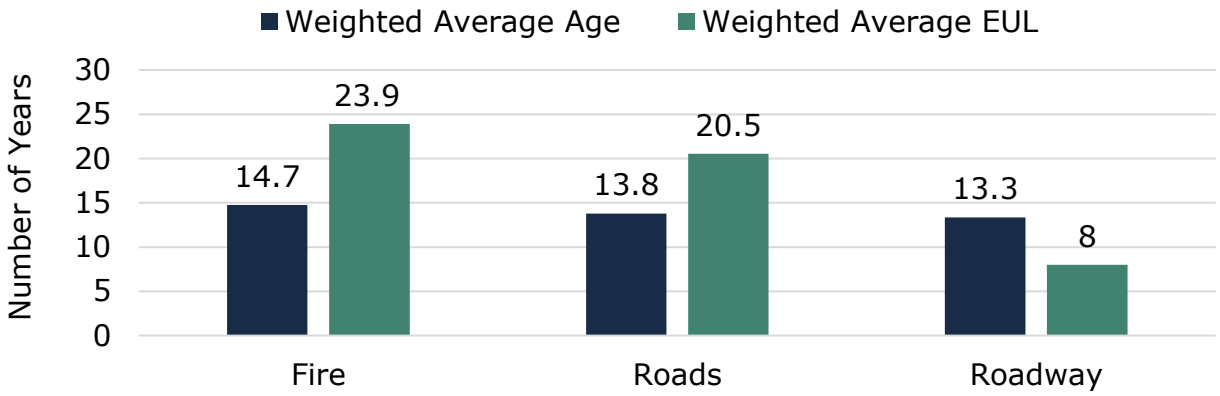
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 30 Asset Condition: Vehicles by Segment



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

Figure 31 Estimated Useful Life vs. Asset Age: Vehicles



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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. There are no formal condition assessment programs in place for the vehicles assets.

The following rating criteria is used to determine the current condition of vehicles assets and forecast future capital requirements:

Figure 32 Conditon Scale: Vehicles

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Asset Management Strategies

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 Township's current lifecycle management strategy.

Table 30 Vehicles Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Vehicles are maintained based on mileage.
Replacement	Based on life expectancy, maintenance cost and condition.

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2024 inventory data.

Figure 33 Risk Breakdown: Vehicles

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$97,257	$2,877,528	-	-	$1,749,296
(2%)	(61%)	(0%)	(0%)	(37%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the stormwater network are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for the stormwater network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 31 Current Levels of Service: Vehicles

Community LOS		**Service Attribute**	**Technical LOS**	
Description of services provided by municipally owned vehicles	Vehicles assets are used by the Township's staff to support delivery of a variety of services mainly transportation and fire.	Scope	Replacement Cost	$4,724,081
			Total Number of Vehicles	11
Description or images of the condition of vehicles assets	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service	Quality / Reliability	Average condition of vehicles	61
			% of vehicles > Fair	63%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	37%
			Annual Capital Reinvestment	$0

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's vehicles.

Table 32 Proposed Levels of Service: Vehicles

Vehicles	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$4,724,081	Average = 7 Maximum = 61 Minimum = 0	$0
Scenario 2 - Maintain Current Condition	$4,724,081	Average =65 Maximum = 73 Minimum = 61	$180,871
Scenario 3 – Lifecycle	$4,724,081	Average = 78 Maximum = 95 Minimum = 53	$229,089
Scenario 4 – Condition 60	$4,724,081	Average = 64 Maximum = 73 Minimum = 60	$175,849

Appendix F: Machinery and Equipment

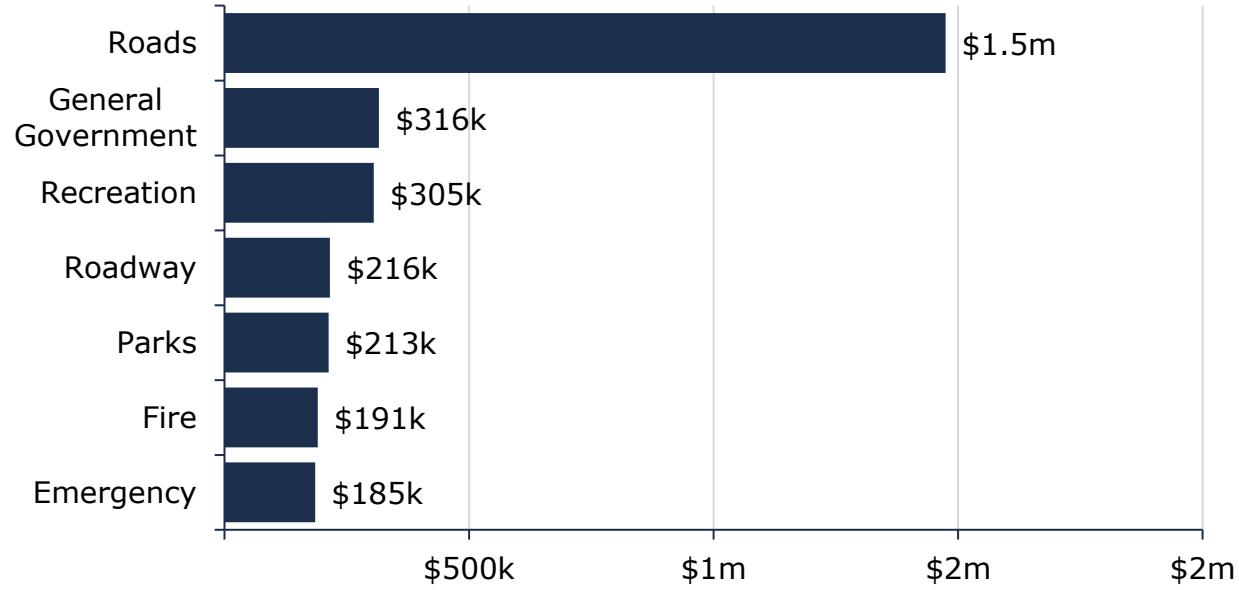
To maintain the high quality of public infrastructure and support the delivery of services, Municipal staff own and employ various types of machinery and equipment. This includes:

- General government equipment including computers and office equipment
- Recreational equipment
- Fire equipment to support the delivery of emergency services
- Plows to provide winter control activities

Asset Inventory & Costs

The township's machinery and equipment assets have a total replacement cost of $2.9 million.

Figure 34 Portfolio Overview: Machinery and Equipment

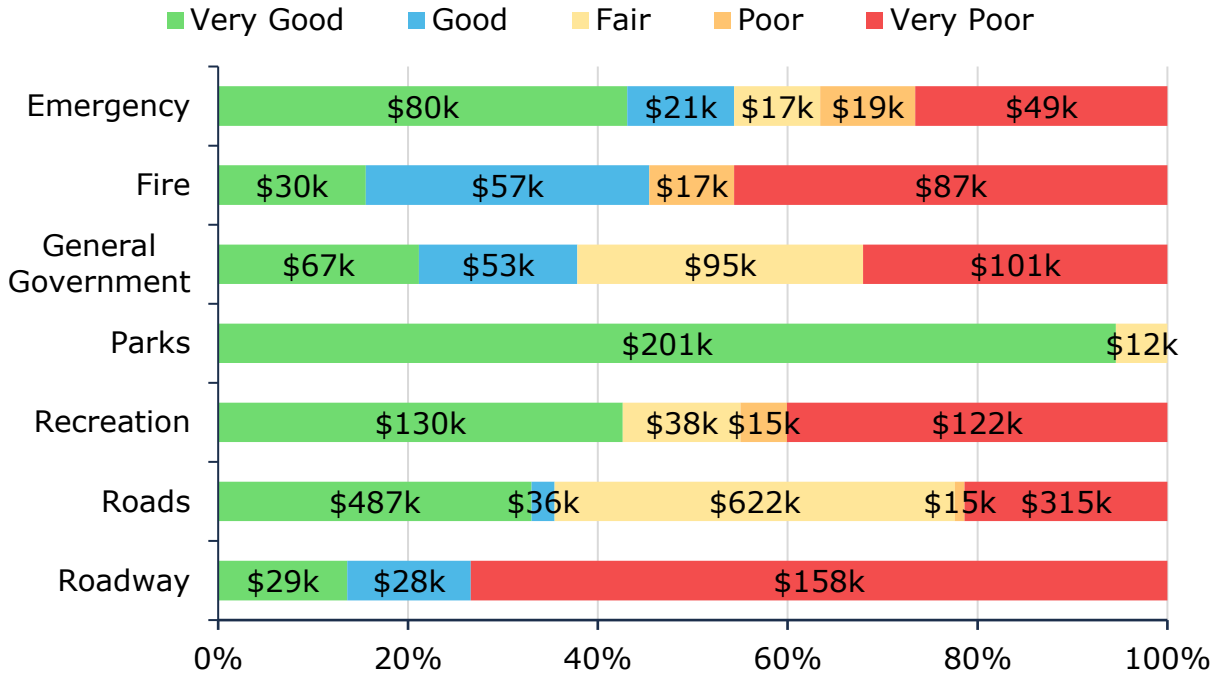


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

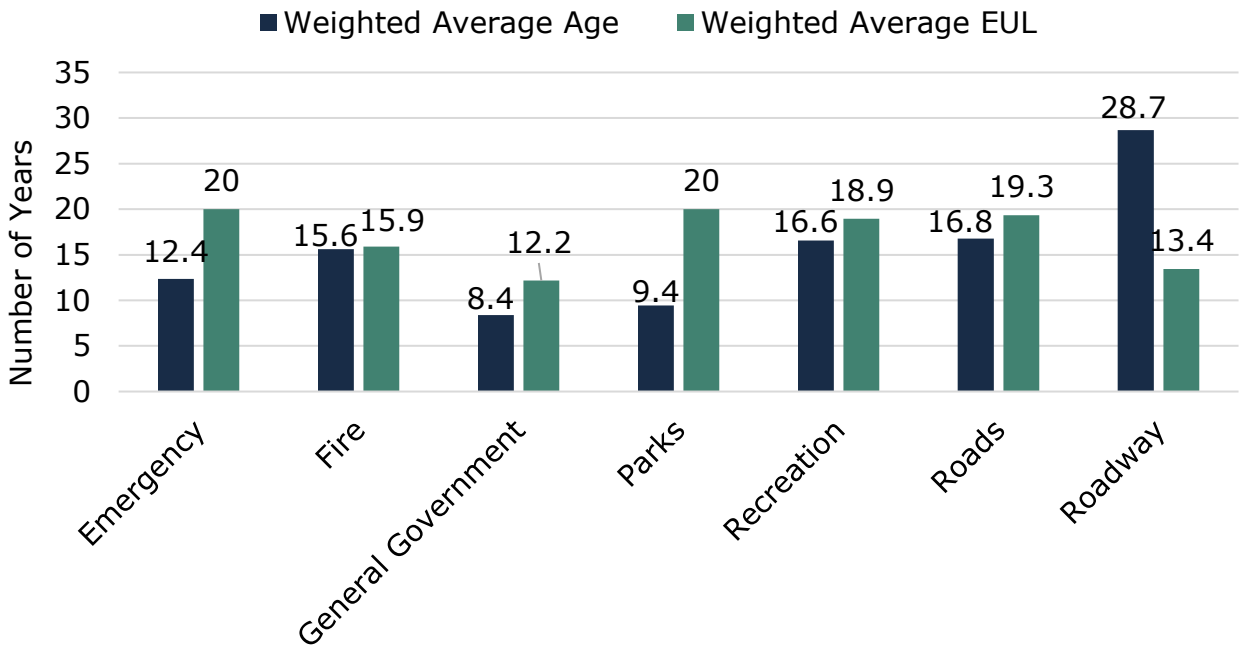
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 35 Asset Condition: Machinery and Equipment by Segment



To ensure that the Township's machinery and equipment continue to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the machinery and equipment. The graph below displays the average weighted age in comparison to the weighted average estimated useful life for each asset segment.

Figure 36 Estimated Useful Life vs. Asset Age: Machinery and Equipment



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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. There are no formal condition assessment programs in place for the machinery and equipment.

The following rating criteria is used to determine the current condition of machinery and equipment assets and forecast future capital requirements:

Figure 37 Condition Scale: Machinery and equipment

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Asset Management Strategies

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 Township's current lifecycle management strategy.

Table 33 Machinery and equipment Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Machinery and equipment are maintained as needed
Replacement	Based on life expectancy and staff inspection when available

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 38 Risk Breakdown: Machinery and equipment

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	**Low**	**Moderate**	**High**	**Very High**
$650,308 (22%)	$866,899 (30%)	$35,542 (1%)	$415,457 (14%)	$931,706 (32%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding

of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the machinery and equipment assets are documented in the Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for the machinery and equipment network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 34 Current Levels of Service: Machinery and equipment

Community LOS		Service Attribute	Technical LOS	
Description of services provided by municipally owned machinery and equipment	Machinery and equipment are used by the Township's staff in all departments to support their work.	Scope	Replacement Cost	$2,899,912
			Number of Assets	850
Description or images of the condition of machinery and equipment assets	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service	Quality / Reliability	Average condition of machinery and equipment	54
			% of machinery and equipment condition > Fair	69%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	6.6%
			Annual Capital Reinvestment	$22,000

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's machinery and equipment.

Table 35 Proposed Levels of Service: Machinery & Equipment

Machinery & Equipment	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$2,899,912	Average = 12 Maximum = 54 Minimum = 7	$22,000
Scenario 2 - Maintain Current Condition	$2,899,912	Average =59 Maximum = 75 Minimum = 54	$122,889
Scenario 3 – Lifecycle	$2,899,912	Average = 78 Maximum = 89 Minimum = 55	$195,689
Scenario 4 – Condition 60	$2,899,912	Average = 64 Maximum = 81 Minimum = 60	$145,928

Appendix G: Land Improvements

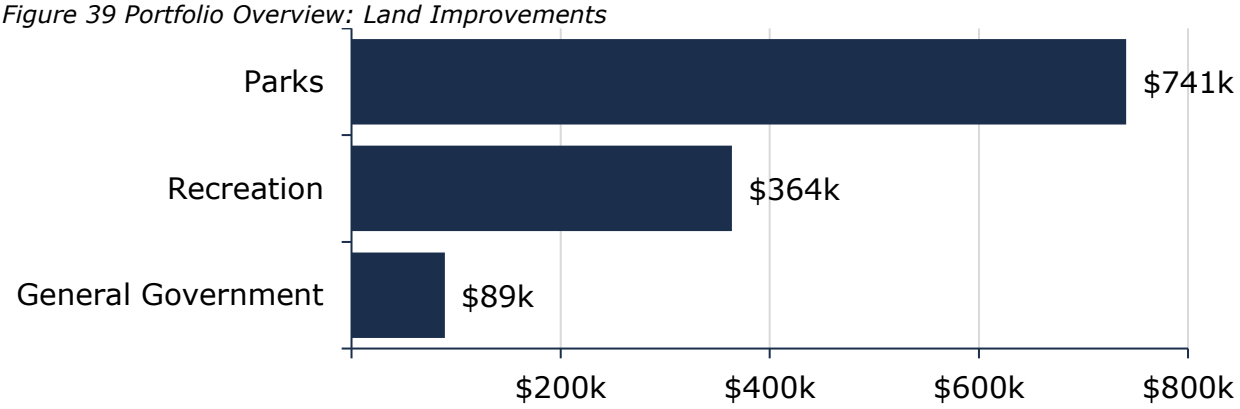
The Township of East Hawkesbury owns a small number of assets that are considered land improvements. This category includes:

- Parking lots for municipal buildings
- Fencing and signage
- Parks

Asset Inventory & Costs

The township's land improvement assets have a replacement cost of $6.8 million.

Figure 39 Portfolio Overview: Land Improvements

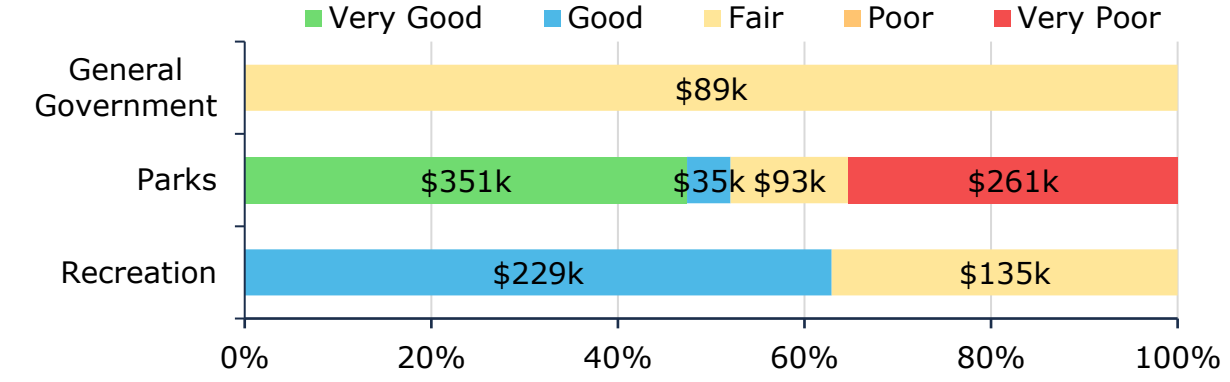


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

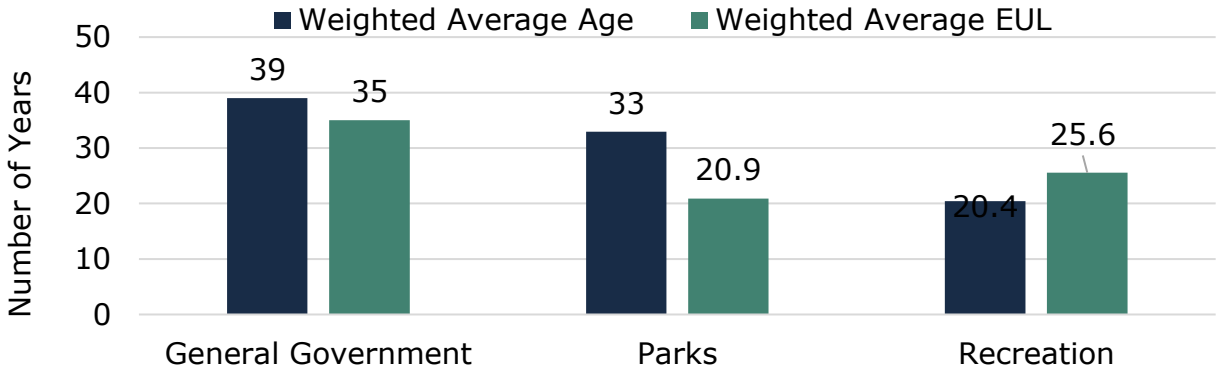
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor.

Figure 40 Asset Condition: Land Improvements



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

Figure 41 Estimated Useful Life vs. Asset Age: Land Improvements



of the land improvements. The graph displays the average weighted age in comparison to the weighted average estimated useful life for each asset segment.

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

Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. There are no formal condition assessment programs in place for the land improvements.

The following rating criteria is used to determine the current condition of land improvement assets and forecast future capital requirements:

Figure 42 Condition Scale: Land Improvements

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Asset Management Strategies

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 Township's current lifecycle management strategy.

Table 36 Land Improvements Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Maintenance and repairs are as needed depending on the asset.
Replacement	Based on life expectancy and staff inspection when available.

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 43 Risk Breakdown: Land Improvements

1 - 4	5 - 7	8 - 9	10 - 14	15 - 25
Very Low	Low	Moderate	High	Very High
$36,589	$545,613	$95,150	-	$516,738
(3%)	(46%)	(8%)	(0%)	(43%)

This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of Land Improvements are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for the land improvement assets. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 37 Current Levels of Service: Land Improvements

Community LOS		Service Attribute	Technical LOS	
Description of services provided by municipally owned land improvement assets	Land improvements consist mainly of outdoor assets at parks that support recreational activities of residents and visitors and parking lots.	Scope	Replacement Cost	$1,194,090
			Number of Assets	15
Description or images of the condition of land improvement assets	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service	Quality / Reliability	Average condition of land improvements	59
			% of land improvements condition > Fair	78%
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.		Sustainability	% Very High Risk	43%
			Annual Capital Reinvestment	$0

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's land improvements.

Table 38 Proposed Levels of Service: Land Improvements

Land Improvements	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$1,194,090	Average = 4 Maximum = 38 Minimum = 0	$0
Scenario 2 - Maintain Current Condition	$1,194,090	Average = 64 Maximum = 72 Minimum = 59	$39,270
Scenario 3 – Lifecycle	$1,194,090	Average = 77 Maximum = 94 Minimum = 53	$48,019
Scenario 4 – Condition 60	$1,194,090	Average = 65 Maximum = 73 Minimum = 60	$40,235

Appendix H: Wastewater

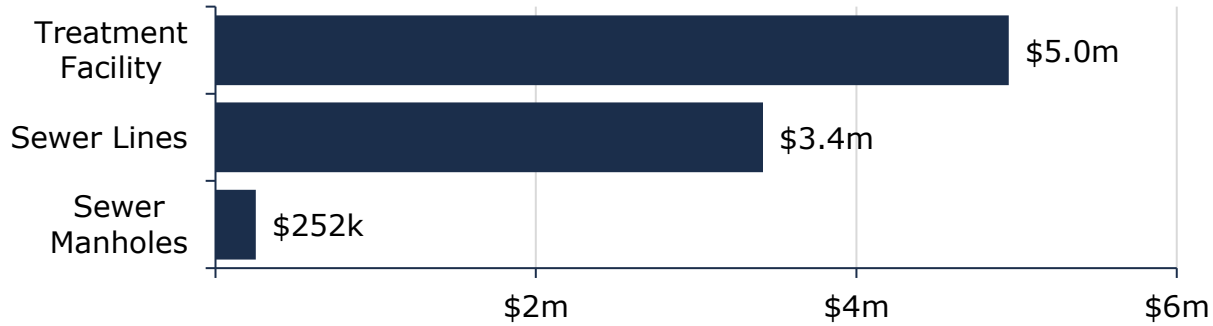
The wastewater system provided by the Township includes the following:

- A treatment facility
- Sewer lines
- Manholes

Asset Inventory & Costs

The Township's wastewater inventory has an overall replacement cost of $8.6 million, with the collection system defined as 43% by replacement cost and the treatment facility as 57% of the overall value.

Figure 44 Portfolio Overview: Wastewater

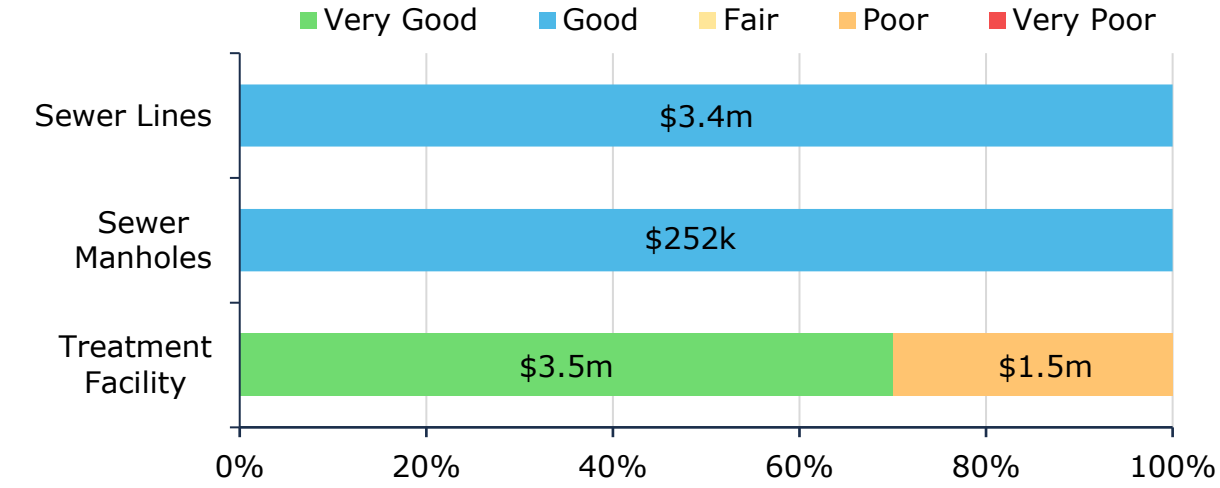


Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurate represent realistic capital requirements.

Asset Condition & Age

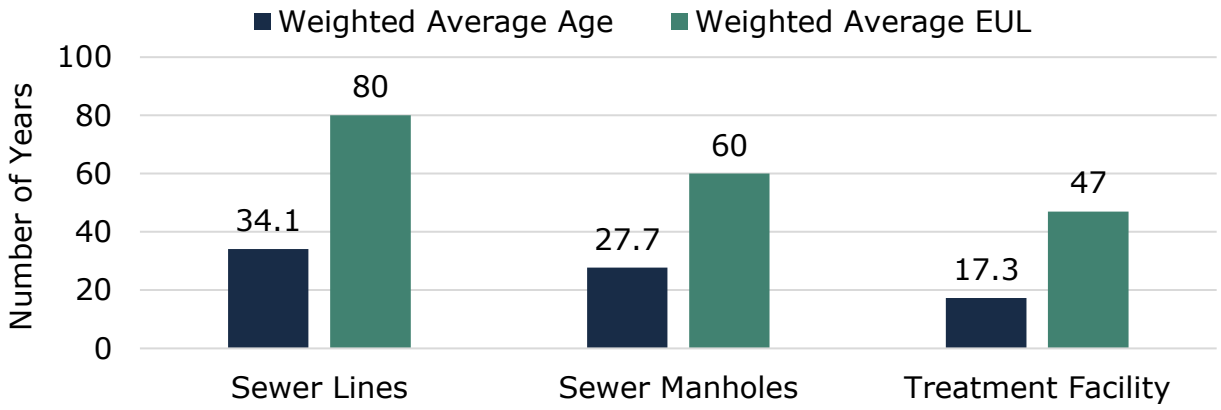
The average condition (%) is a weighted value based on replacement cost. The graph below visually illustrates the average condition for each asset segment on a very good to very poor scale.

Figure 45 Asset Condition: Wastewater by Segment



To ensure that the Township's wastewater system continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the wastewater system. The graph below displays the average weighted age in comparison to the weighted average estimated useful life for each asset segment.

Figure 46 Estimated Useful Life vs. Asset Age: Wastewater



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

Current Approach to Condition Assessment

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

- A condition assessment was completed on the Sanitary Buildings in 2016 by an external contracted, but not the equipment and underground infrastructure
- There are no formal condition assessment programs in place for the sanitary mains

The following rating criteria is used to determine the current condition of sewer network assets and forecast future capital requirements:

Figure 47 Condition Scale: Wastewater

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

Lifecycle Management Strategy

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

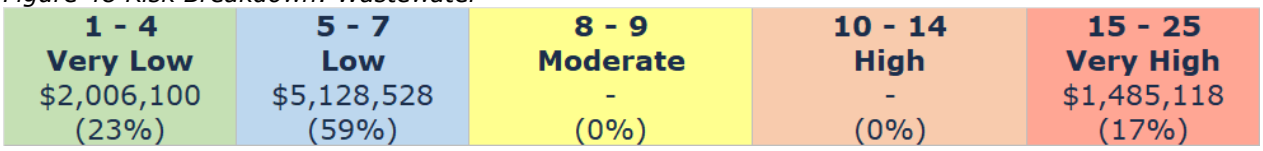
Table 39 Wastewater Lifecycle Strategy

Activity Type	Description of Current Strategy
Maintenance	Main flushing is completed on the system on an as-needed basis
Replacement	In the absence of mid-lifecycle rehabilitative events, most mains are simply maintained with the goal of full replacement once it reaches its end-of-life.

Risk & Criticality

The following risk breakdown provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2025 inventory data.

Figure 48 Risk Breakdown: Wastewater



This is a high-level model developed for the purposes of this AMP and Municipal staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure. The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the wastewater assets are documented in Appendix J: Risk Rating Criteria.

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

Levels of Service

The framework created by the Township for levels of service is a valuable tool for assessing and managing the performance of their assets and/or services provided by their assets. Proposed levels of service for the Township have been developed through engagement with Municipal staff.

Current Levels of Service

The following tables identify the Township's current level of service for the wastewater system. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected.

Table 40 Current Levels of Service: Wastewater

Community LOS		Service Attribute	Technical LOS	
Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system	The Township has paper maps of municipal wastewater infrastructure	Scope	Replacement Cost	$8,619,746
			Quantity of main	2.28 km
			Quantity (# of Plants)	1
			% of properties connected to the municipal wastewater system	10%
Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes	Stormwater can enter sanitary sewers due to cracks or joints in sanitary mains or into manhole lids	Quality / Reliability	# of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the system	No Combined Sewers
Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to stormwater infiltration	Based on engineering design standards		# of connection-days per year having wastewater backups compared to the total number of properties connected to the system	0 days
Description of the effluent that is discharged from sewage treatment plants in the system	The Environmental Compliance Approval (ECA) identifies the effluent criteria for the treatment plant.		# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the system	0 violations
Description of the condition of the wastewater network	Condition Description • Very Good - Fit for the future • Good - Adequate for now • Fair - Requires attention • Poor - Increased potential of affecting service • Very Poor - Unfit for sustained service		Average Condition	76
			% Condition > Fair	83%

Community LOS	Service Attribute	Technical LOS	
Services are meeting present needs without compromising the ability of future generations to meet their own, by prioritizing long-term planning, resource efficiency, and responsible decision-making.	Sustainability	% Risk that is High and Very High	39%
		Annual reinvestment	$0

Proposed Levels of Service

The scenarios that were used to analyse East Hawkesbury inventory were run for 100-years to ensure all the lifecycles were included. They are also all based on the data available in the asset management system which outlines estimated useful life and condition as well as replacement costs which all the results are based on.

Scenario 1: Current Capital Reinvestment Rate

This scenario utilizes the current capital reinvestment within each asset category. The current annual investment was held, and the average condition was determined.

Scenario 2: Maintaining Current Average Condition

This scenario utilizes the current average condition of the infrastructure of each category and maintains it over the scenario. The condition value was held, and the annual investment was then determined.

Scenario 3: Current Lifecycle Activities

This scenario utilizes the current lifecycle activities outlined as current practice within each asset category. The condition and annual investment were then determined.

Scenario 4: Target Condition Good

This scenario utilizes a target average condition of the infrastructure of good (at 60%). The condition value was held, and the annual investment was then determined.

Results

The table below outlines the results for each scenario for the Township's wastewater network.

Table 41 Proposed Levels of Service: Wastewater Network

Wastewater Network	Replacement Cost	Average Condition	Annual Capital Reinvestment
Scenario 1 - Current Capital Investment Rate	$8,619,746	Average = 20 Maximum = 76 Minimum = 0	$0
Scenario 2 - Maintain Current Condition	$8,619,746	Average = 78 Maximum = 99 Minimum = 51	$153,353
Scenario 3 – Lifecycle	$8,619,746	Average = 78 Maximum = 99 Minimum = 51	$153,353
Scenario 4 – Condition 60	$8,619,746	Average = 71 Maximum = 94 Minimum = 54	$138,225

Appendix I: Condition Assessment Guidelines

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

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

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

Role of Asset Condition Data

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

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

Guidelines for Condition Assessment

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

Condition assessments must include a quantitative or qualitative assessment of the current condition of the asset, collected according to specified condition rating criteria, in a format that can be used for asset management decision-making. As a result, it is important that staff adequately define the condition rating criteria that should be used and the assets that require a discrete condition rating. When

engaging with external consultants to complete condition assessments, it is critical that these details are communicated as part of the contractual terms of the project.

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

Developing a Condition Assessment Schedule

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

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

Appendix J: Risk Rating Criteria

Probability of Failure

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Roads, Bridges & Culverts	Condition	80%	80-100	1
			65-80	2
			50-65	3
			25-50	4
			0-25	5
	% Service Life Remaining	20%	>40%	1
			30 - 40%	2
			20 – 30%	3
			10 – 20%	4
			<10%	5
All Others	Condition	50%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	% Service Life Remaining	50%	>40%	1
			30 - 40%	2
			20 – 30%	3
			10 – 20%	4
			<10%	5

Consequence of Failure

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Roads	Economic (50%)	AMP Segment	Gravel Roads	2
			Surface Treatment Roads	3
			Asphalt roads	4
	Operational (50%)	Classification	Seasonal	1
			Rural	3
			Local	4
		Maintenance Class	6	1
			5	2
			4	3
			3	4
			1&2	5
Machinery & Equipment, Land Improvements, Vehicles, Sidewalks	Economic (100%)	Replacement Cost ($)	< 15,000	1
			15,000-40,000	2
			40,000-65,000	3
			65,000-100,000	4
			100,000<	5

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Bridges & Culverts	Economic (50%)	Replacement Cost ($)	< 15,000	1
			15,000-40,000	2
			40,000-65,000	3
			65,000-100,000	4
			100,000<	5
	Operational (50%)	AMP Segment		1
			Culverts<3m	2
			Culverts>3m	3
			Bridges	4
				5
Wastewater Linear	Economic (50%)	Diameter (mm)		1
			100	2
			250 / 200	3
			300	4
				5
Wastewater Non-Linear	Economic (50%)	Replacement Cost ($)	< 30,000	1
			30,000-80,000	3
			80,000-130,000	5
			130,000-200,000	4
			200,000<	5
	Operational (50%)	AMP Segment		1
			Sewer Manholes	2
				3
				4
			Treatment Facility	5

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Buildings	Economic (50%)	Replacement Cost ($)	< 15,000	1
			15,000-40,000	2
			40,000-65,000	3
			65,000-100,000	4
			100,000<	5
	Operational (50%)	AMP Segment		1
			General Government / Parks	2
			Recreation	3
			Roads / Fire	4

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Storm Linear	Economic (100%)	Diameter (mm)		1
			0-300	2
			300 - 500	3
			500 - 800	4
			> 800	5
Storm Non-Linear	Economic (50%)	Replacement Cost ($)	< 15,000	1
			15,000-40,000	3
			40,000-65,000	5
			65,000-100,000	4
			100,000<	5
	Operational (50%)	AMP Segment	Storm Manholes	3
			Catchbasins	2