THE CORPORATION OF THE TOWNSHIP OF KING
Report to Council

Monday, June 17, 2024

Public Works Department - Asset Management Division and Finance Department
Report Number PW-AMP-2024-001
Asset Management Plan – Non-Core Assets

RECOMMENDATION(S):

The Director of Public Works and Director of Finance respectfully submits the following recommendation(s):

1. Report Number PW-AMP-2024-001 be received.
2. Council approve the Township's Asset Management Plan for Non-Core Assets.
3. Council approve the updated Corporate Asset Management Policy.
4. Council authorize the Director of Public Works or Chief Administrative Officer to approve future Asset Management Policy updates.

REPORT HIGHLIGHTS:

- The 2024 Non-Core Asset Management Plan (AMP) meets the requirements of *Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure (O. Reg. 588/17*) prior to the July 1, 2024 deadline.
- Non-Core assets have an estimated replacement value of $305.8 million.
- Approximately 81% of the non-core assets are in "Fair" or better condition.
- Administrative updates were made to the Corporate Asset Management Policy. Authorizing the Director of Public Works and/or Chief Administrative Officer to make periodic updates will reduce administrative burden on Council while keeping the policy current.

PURPOSE:

To provide council with an asset management overview and to obtain approval of the Township's Non-Core Asset Management Plan (AMP) in addition to the updated Corporate Asset Management Policy in accordance with the provisions of O. Reg. 588/17. The Township's non-core asset's include sidewalks and paved pathways, regulatory and warning signs, fleet and equipment, facilities, and parks.

BACKGROUND:

What is Asset Management?

The Township's infrastructure systems support a range of municipal services that enable residents, businesses, and visitors to live, work and play within the Township. As these assets age, investments are required to maintain them in a state of good repair and ultimately replace the assets at the end of their service life. It is crucial to provide services safely, reliably, and efficiently while supporting a growing community.

Asset management refers to a planned approach for managing and investing in a municipality's infrastructure. Asset management is an ongoing and long-term process that involves strategic planning, budgeting, and decision-making to optimize asset performance while minimizing the lifecycle costs of owning, operating, and maintaining assets, with an appropriate level of risk.

Asset management supports municipalities in making well-informed investment decisions for infrastructure assets, involving the annual budget process and long-term financial planning.

Why is Asset Management Important?

Under O. Reg. 588/17, every municipality is required to prepare a Strategic Asset Management Policy, a plan to maintain municipal infrastructure, define current and proposed levels of service (LOS), lifecycle strategies, a long-term financial strategy, and a publicly accessible asset management plan.

The primary goal of asset management is to maximize the value of the Township's assets, balancing risk, performance, and cost. Staff conduct various activities that guide the process of making the best possible decisions regarding the building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets. One of those activities is the development of this AMP. The required components of the AMP include:

- **Asset Inventory** – Currently held in the Citywide Asset Management database.
- **Levels of Service** - Is a measure of what the Township is providing to the community and the nature and quality of that service. For example, the Township prioritizes the safety of its sidewalks and paved pathways which can be measured by comparing the number of outstanding sidewalk bay replacements to the total length of the sidewalk and paved pathways which is currently 2.6 per km.
- **Lifecycle Management Strategy** - Is how the service is provided. For example, conducting sidewalk/paved pathway inspections, marking deficiencies, and then repairing them, which can include grinding or full replacement of identified sections.
- **Financial Strategy** – Identifies the long-term funding required to maintain the desired LOS. A comprehensive long-term financial strategy will be provided in the next phase of the AMP update prior to the July 1, 2025 deadline.

What are the Regulation Requirements?

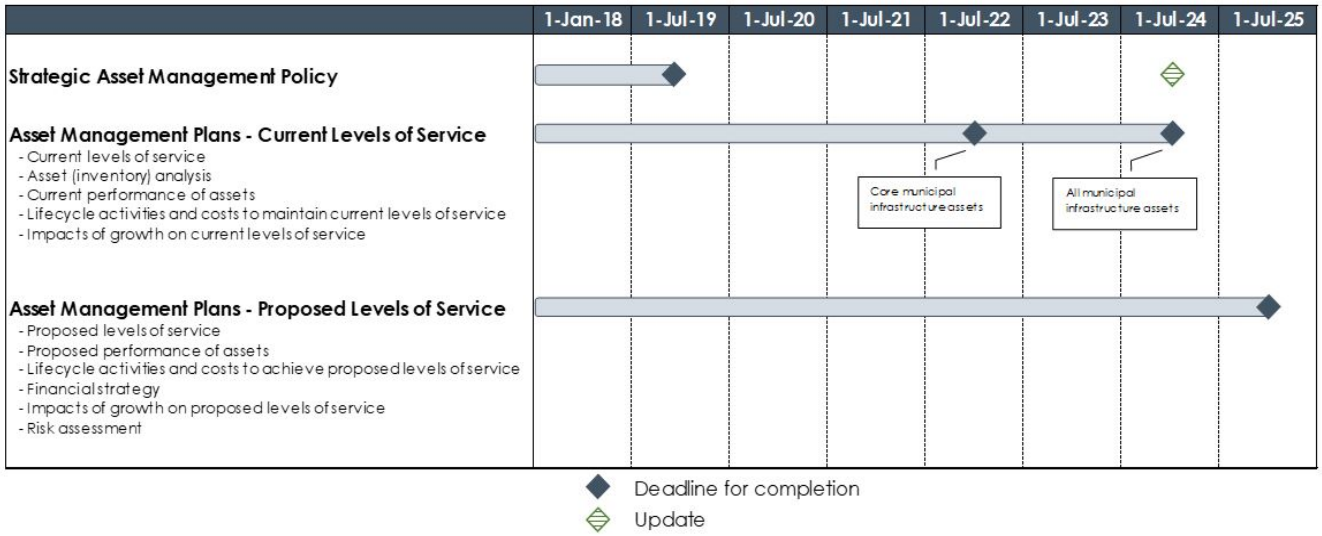
In 2017, The Province of Ontario enacted O. Reg. 588/17 under the *Infrastructure for Jobs and Prosperity Act,* which has four main requirements including three phases of the AMP. The timelines and main details associated with the regulation are outlined below.

Phase 1	Phase 2	Phase 3
AMP for core infrastructure assets that includes the following: • Summary information on core infrastructure assets; • Current levels of service being provided by core infrastructure assets; • Summary of lifecycle management strategies; • 10-year forecast of lifecycle activities related to core infrastructure assets to maintain current levels of service; and • Annual funding targets	AMP for non-core infrastructure assets that includes the following: • Summary information on non-core infrastructure assets; • Current levels of service being provided by non-core infrastructure assets; • Summary of lifecycle management strategies; • 10-year forecast of lifecycle activities related to non-core infrastructure assets to maintain current levels of service; and • Annual funding targets	AMP for all infrastructure assets that includes the following: • Establishment of proposed levels of service; • 10-year forecast of lifecycle activities related to all infrastructure assets to achieve the proposed levels of service; and • Financial strategy that outlines how the municipality plans to support the forecast of lifecycle activities and long-term lifecycle funding requirements.

What are the main objectives of the Non-Core Asset Management Plan?

- Bring the Township into compliance with the next phase of O. Reg. 588/17 (July 1, 2024 requirements).
- Use the Township's best available information to develop a long-term plan for systematically and efficiently managing the Township's non-core assets over their entire lifecycle.
- Develop a LOS framework for tracking performance and setting future targets for non-core assets.
- Establish a sustainable level of annual capital investment for non-core assets by examining their lifecycle needs.

What Progress has the Township Made in Fulfilling the Regulation Requirements?



Corporate Asset Management Policy**:** This policy outlines commitments to best practices and continuous improvement and was approved by Council June 24, 2019 (Report FR-2019-14 & By-law 2019-068).

Phase 1: Core AMP (current LOS)
The Township retained Watson & Associates Economists Ltd. (Watson) to assist in the development of its 2022 Core AMP which was approved by council January 10, 2022 (Report JR-2022-002).

Phase 2: Non-Core AMP (current LOS)
Watson has assisted in the development of the 2024 Non-Core AMP which is being presented in this report as required by the July 1, 2024 deadline.

Phase 3: Comprehensive AMP
Watson will assist the Township to build on Phase 1 and 2 to include the proposed levels of service, lifecycle management, and financial strategy.

- Staff will now begin developing the AMP update (core and non-core proposed LOS) and all other requirements to meet the July 1, 2025 deadline.
- Starting in 2025, Council will receive updates through an annual Corporate Asset Management Progress Report (process to be developed).

Types of Assets in King Township

Core Assets
Roads
Bridges and Structural Culverts
Water
Wastewater
Stormwater

Non-core Assets	
Asset Class	Asset Sub-class
Road-related Assets	Sidewalks and Paved Pathways
	Regulatory and Warning Road Signs
	Non-Structural Culverts
Fleet and Equipment	Plated Vehicles
	Non-Plated Equipment
Facilities	Municipal Facilities
	Recreation Facilities
	Libraries
Parks and Forestry	Park Furnishings and Built Infrastructure
	Sporting Fields

ANALYSIS:

What is the current state of the Townships Non-Core Assets?

1. **Asset Inventory and Replacement Cost**

The Township's non-core assets have an estimated current replacement value of $305.8 million, which is illustrated in Figure 1 below. Facilities comprise the largest share of this replacement cost ($216.8 million, 70.9%), followed by parks and forestry assets ($32.1 million, 10.5%), road-related assets ($29.8 million, 9.7%), and lastly, fleet and equipment assets ($27.2 million, 8.9%). The unit inventory measures were determined using the Township's Citywide Asset Management software as well as various condition assessments. The quantity of assets relating to the non-core asset classes are summarized in Figure 2 below.

Figure 1: Distribution of Replacement Cost by Non-Core Asset Class

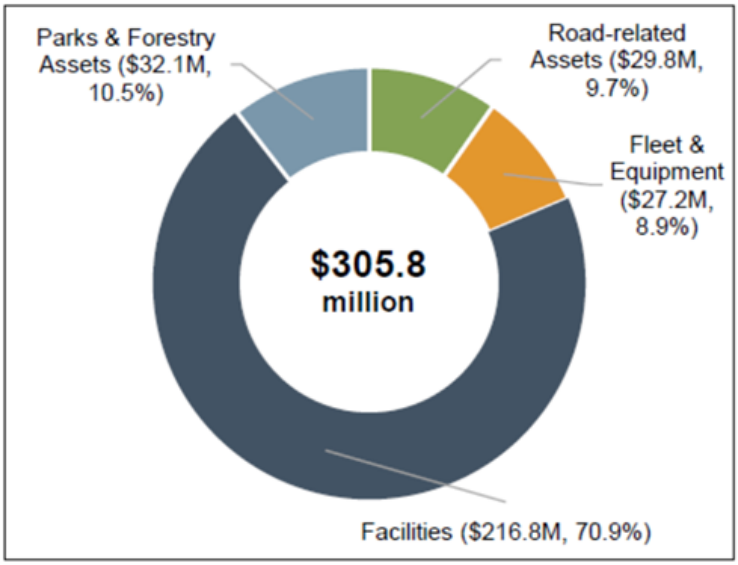
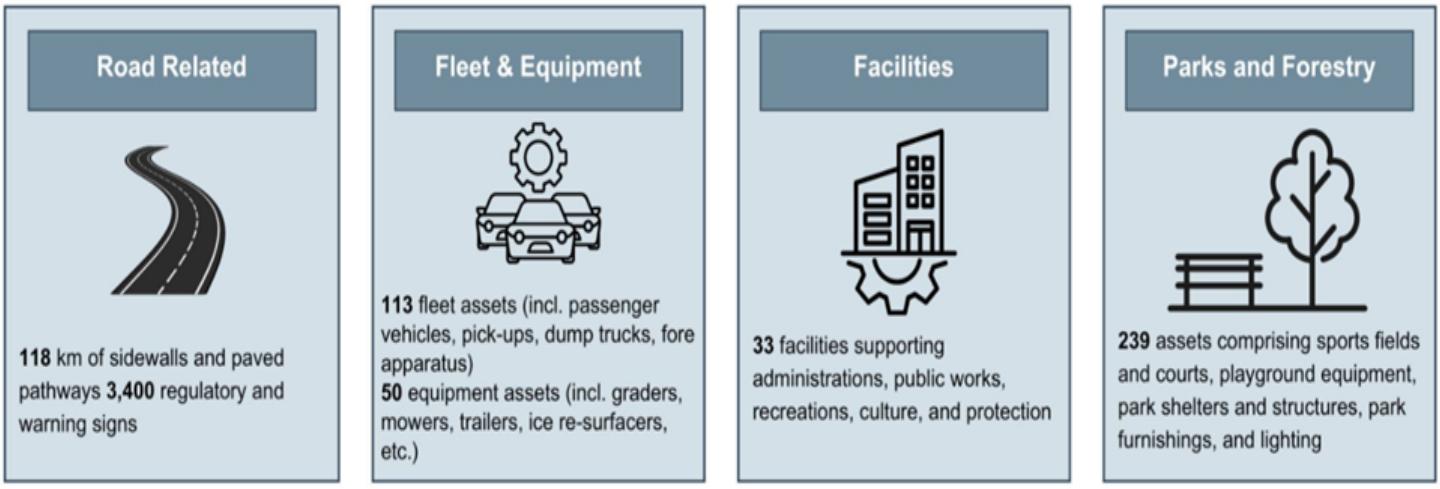


Figure 2: Non-Core Asset Inventory



2. Asset Condition

The Township's non-core assets were evaluated to determine their current condition. It was determined that 81% of the Township's non-core assets are in "Fair" or better condition. Two different methodologies were used for the condition assessments. The sources of the condition ratings are

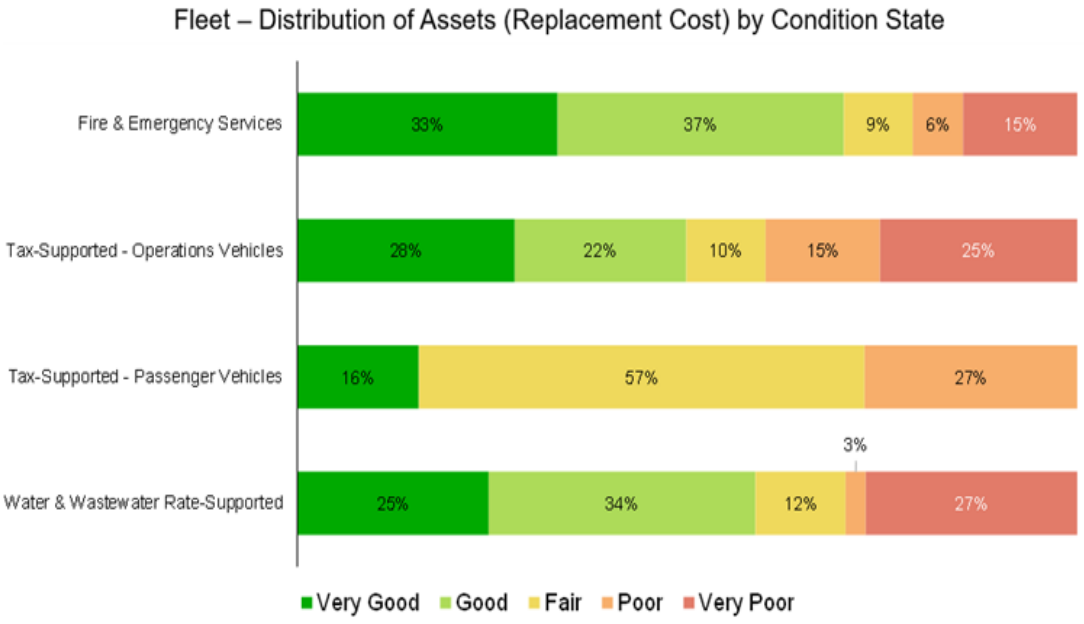
summarized in Table 1 below. For facilities, sidewalks and paved pathways, and regulatory and warning signs an inspection to assess current condition was conducted. For parks, fleet and equipment assets, calculations based on age relative to the percentage of useful service life consumed (ULC%) were used to determine their condition. For example, Truck 805-18 Ford F-250 XL is 5 years old based on its model year. The expected service life is 8 years which equates to an ULC% of 62.5% meaning that 62.5% of its typical life expectancy has been used. A ULC% of 62.5% translates to a “Good” condition rating for this asset based on the condition state index provided in Figure 3 below.

Table 1: Source of Condition Rating by Asset Sub-Class

Asset Class	Asset Sub-classes	Source of Condition Ratings
Road-related Assets	Sidewalks	2023 Sidewalk Assessment Report
	Regulatory and Warning Road Signs	2023 Retro-reflectivity Testing Report
Fleet & Equipment	Plated Vehicles	Age relative to useful service life (i.e., useful service life consumed percentage (ULC%))
	Non-plated Equipment	
Facilities	Municipal Facilities	FCI Ratings from 2024 Building Condition Assessments
	Recreation Facilities	
	Libraries	
Parks & Forestry	Park furnishing and built infrastructure	Age relative to useful service life (i.e., useful service life consumed percentage (ULC%))
	Sports fields	

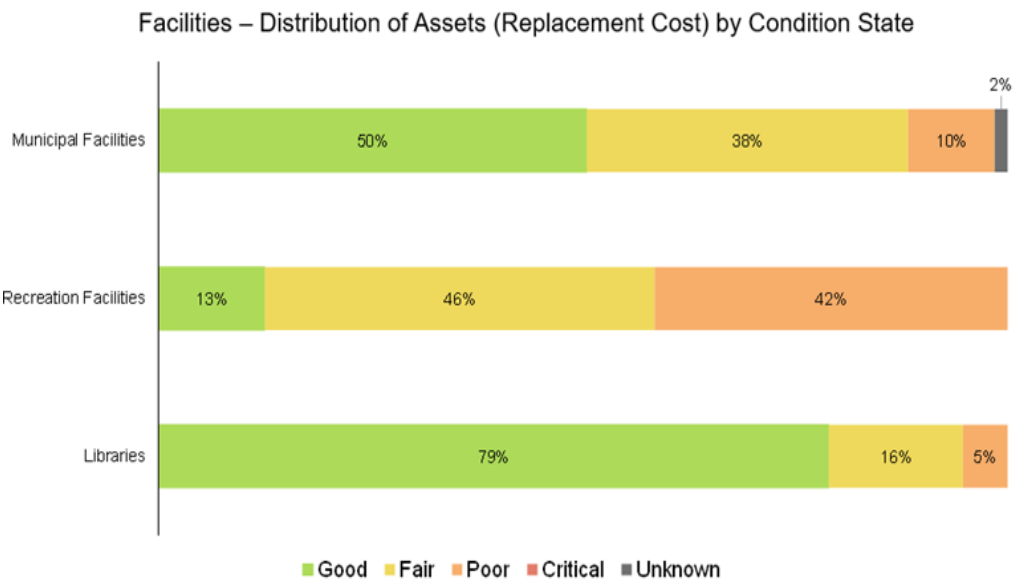
The distribution of assets (replacement cost) by condition state is provided in Figures 3 to 5 (below) for fleet, facilities, and parks. The average condition is weighted by the estimated current replacement cost of each asset. A weighted condition provides a higher weighting to the condition of assets with higher replacement costs as those assets are more likely to play a larger and more critical role in the provision of municipal services. This approach also helps ensure that assets with relatively low replacement costs do not unnecessarily skew the average condition of asset classes in the direction of their own condition ratings. By utilizing this approach, the average condition rating provides the Township with a key metric to assess the overall adequacy of assets in being able to meet service demands and to judge the success of lifecycle activities being undertaken to maintain assets in adequate condition.

Figure 3: Condition of Fleet Assets



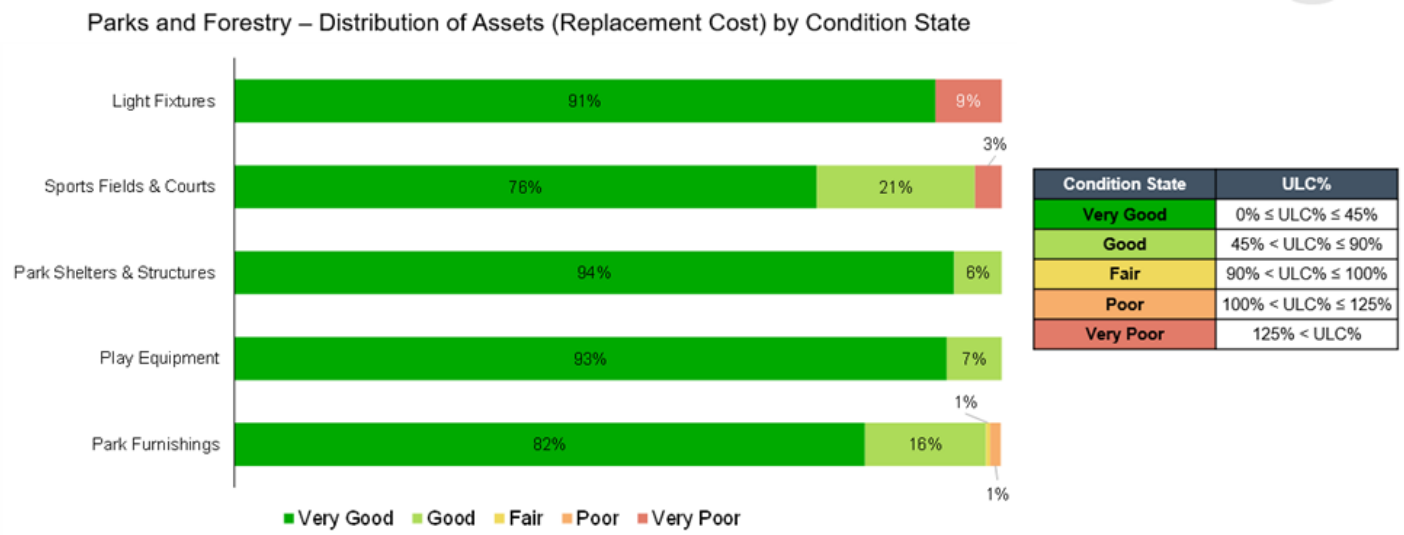
Condition State	ULC%
Very Good	0% ≤ ULC% ≤ 45%
Good	45% < ULC% ≤ 90%
Fair	90% < ULC% ≤ 100%
Poor	100% < ULC% ≤ 125%
Very Poor	125% < ULC%

Figure 4: Condition of Facilities Assets



Condition State	FCI
Good	0% ≤ FCI% < 5%
Fair	5% ≤ FCI% < 10%
Poor	10% ≤ FCI% ≤ 30%
Critical	30% ≤ FCI%

Figure 5: Condition of Parks and Forestry Assets



The Asset Management Plan helps define Current Levels of Service

The Levels of Service (LOS) in an asset management context is a measure of what the Township is providing to the community and the nature and quality of that service. A fully developed LOS framework allows the township to:

- communicate its objectives to stakeholders;
- inform stakeholders of any planned changes;
- track performance against objectives to identify trends, and
- make budget decisions that are linked to LOS outcomes.

To comply with the July 1, 2024 requirements of O. Reg. 588/17, asset management plans must identify the current LOS being provided for each in-scope asset class. Whereas O. Reg. 588/17 prescribes several community and technical LOS that must be included in asset management plans for core assets, it makes no such prescription for non-core assets. The Township has established its own LOS frameworks for its non-core assets to describe both qualitatively and quantitatively the objectives it intends its assets to deliver. Included within the LOS framework are performance measures that the Township will continue to track over time. For example, under the service attribute for safety, the Township prioritizes the safety of its road users by ensuring that its regulatory and warning road signs are maintained up to adequate standards. The current performance is the percentage of regulatory and warning road signs that passed annual retro-reflectivity testing which is 85.1%.

The Asset Management Plan defines Current Lifecycle Management Activities

Lifecycle management forms a vital part of asset management because it represents a plan for how to manage activities related to an asset over its full lifecycle. The lifecycle management framework involves determining which lifecycle activities need to be planned for and performed on assets to optimize asset service life, reduce lifecycle costs, and mitigate risk. For example, current lifecycle management activities for parks includes inspections and condition assessments on playground

equipment and splash pads. It also includes ongoing grass, trail and irrigation system maintenance, in addition to rehabilitation and replacement projects for parks and playgrounds.

Developing Lifecycle Management Activities has an important relationship to the LOS. Ensuring the LOS and lifecycle management activities work together can balance the Township's asset rehabilitation, replacement, and growth-related needs with its spending capacity.

Lifecycle management activities allow a municipality to:

- ensure that the right intervention is made at the right time to deliver the desired LOS at the lowest average annual cost
- set a foundation for medium- and long-term capital budget forecasting
- assist front-line decisions about managing assets

Table 2 - Lifecycle Management Activities

Category	Definition
Inspections and Condition Assessments	Outlines the Township's approach to assessing the performance of its assets and determining asset maintenance, rehabilitation, and replacement needs
Major Lifecycle Activities – Operating	Summarizes the significant lifecycle activities that the Township funds through its operating budgets. These lifecycle activities generally pertain to the maintenance required to preserve asset service lives and ensure assets continue performing as intended
Major Lifecycle Activities – Capital	Summarizes the significant lifecycle activities that the Township funds through its capital budgets. These lifecycle activities generally pertain to rehabilitation and replacement projects undertaken to extend or renew asset service lives
Prioritization of Short-term Lifecycle Needs	Outlines how the Township prioritizes short-term lifecycle requirements of its assets and addresses emerging issues
Growth-related Lifecycle Needs	Describes the Township's methodology for assessing the impact of population and demographic shifts on the long-term sustainability of levels of service and the lifecycle requirements of assets

The Asset Management Plan Identifies Annual Lifecycle Funding Targets

Building on the LOS and Lifecycle Management Strategies an Annual Lifecycle Funding Target is calculated. The annual lifecycle funding target is the amount of funding required annually to fully finance a lifecycle management strategy over the long-term. By planning to achieve this annual funding level, the Township would be able to fully fund capital works as they arise. In practice,

however, capital needs are often characterized by peaks and valleys due to the value of works being undertaken changing year-to-year. By planning to achieve this level of funding over the long-term, the periods of relatively low capital needs would allow for the building up of lifecycle reserve funds that could be drawn upon in times of relatively high capital needs.

As summarized in Table 3 (below), the Non-Core AMP forecasted an asset needs profile with an annual contribution of $8,923,000 million for King's non-core assets. Currently, the Township funds $2,640,000 million (or 30%) for non-core infrastructure, which creates a funding gap of $6,283,000 million. The Township will need to incorporate increased investment or consider changes to proposed LOS to meet the requirements of the legislation.

The gap between current and planned funding can be addressed by traditional sources of municipal funds (tax levies, user fees, capital levies, reserves) non-traditional sources (reallocated budgets, partnerships, procurement methods) and the use of Senior Government Funds (provincial grants, federal grants). It can also be addressed by disposing of assets (decommissioning or removal of infrastructure no longer serving its purpose) and investing the proceeds in the infrastructure reserve to cover future costs of retained assets. For some asset classes, the gap can also be reduced by changing the level of service or changing from an owning to a leasing strategy. These strategies and the risks associated with them will be explored more in the Phase 3 AMP which requires Council to approve the final funding strategy for both core and non-core assets.

Table 3: Annual Lifecyle Funding Targets by Asset Class

Asset Class	Examples of Lifecycle Activities	Annual Lifecycle Funding Target*	2024 Asset Renewal Budget	% Funded
Road-related Assets	Timely replacements of sidewalk bays beyond repair due to substantial defects (e.g., defects causing ponding of water, hole defects, etc.).	$643,000	$200,000	31%
Fleet and Equipment	Timely replacements of fleet and equipment assets that have reached the end of their service lives, are unable to meet annual certification requirements, or have uneconomical repair costs.	$2,370,000	$1,011,000	43%
Facilities	Timely rehabilitation and replacement of facility components such as heating and cooling units, roofs, doors, sanitary waste piping systems, lighting, electrical components, etc.	$4,552,000**	$1,171,000	26%
Parks and Forestry	Timely rehabilitation and replacement of parks and forestry assets that have reached the end of their service lives, are not performing as originally intended, and/or have uneconomical repair and maintenance costs.	$1,358,000	$258,000	19%
Total		**$8,923,000**	**$2,640,000**	**30%**

**Annual Lifecycle Funding Target does not include incremental lifecycle costs for growth-related capital.*

***Annual Lifecycle Funding Target does not include lifecycle costs for King City Lions Arena (due to be demolished).*

Updates to the Corporate Asset Management Policy

The Corporate Asset Management Policy was updated to better reflect current asset management practices in the township and to better align with the update of asset management policy requirements of O. Reg. 588.17. The regulation requires the policy be reviewed and if necessary, updated at least every five years. Asset management best practices and regulations are expected to evolve and it is recommended that Council, delegate authority for future policy updates to the Director of Public Works and/or Chief Administrative Officer.

FINANCIAL CONSIDERATIONS:

Approval of the Non-Core AMP will help inform future capital planning and funding requirements for infrastructure replacement going forward. The Non-Core AMP recommends the incorporation of a set of strategies for the Township's future budget planning processes.

Currently, the Township contributes $7.3 million a year to fund capital projects and contribute to the Capital Tax Levy Reserve and Infrastructure Reserve Fund. This is to address all assets both core and non-core. The Township does have a significant amount in reserve funds with a balance as of December 31, 2023, of $29.2 million with commitments of $22.1 million and an uncommitted balance of $7.1 million. To address the gap in funding the service level of each asset type needs to be determined and the amount required to meet that service level.

Additional investments will need to be in place for future replacement and rehabilitation of assets. The detailed long-term financial strategy that forms a part of the Phase 3 AMP will be presented to council in draft, with key assumptions, options and recommendations to inform Council's final decisions, prior to the July 1, 2025 deadline. The outcomes of this strategy are expected to identify potential impacts to tax and user rates to fund shortfalls in long-term infrastructure funding. It will also make recommendations to assist in managing exposure to the currently identified funding gap. Other options can include asset disposal, LOS adjustment and other strategies. A balance will need to be developed to bridge the funding gap.

ALIGNMENT TO STRATEGIC PLAN:

The 2023-2026 Corporate Strategic Plan (CSP) was adopted by Council on June 12, 2023. The CSP reflects the priorities of upmost importance to the community and defines the obligations and commitments of the Township of King to its citizens and to the public. The CSP is aligned with the Townships long-term vision defined in the "Our King" Official Plan. The CSP also aims to ensure that staff initiatives focus on and work towards supporting King's Vision, Mission and Values.

This report is in alignment with the CSP's Priority Area(s), and/or associated Objective(s) and/or Key Results(s):

Sustainable Asset Management

Develop asset-funding strategies which ensure long-term fiscal sustainability.

- Finalize and implement the Asset Management Program by 2025.

This is a direct relationship to the key goal of a sustainable asset management plan and meeting the goals of the corporation and the provincial regulation as well.

CONCLUSION:

The Township's Non-Core AMP (Phase 2) is being presented for Council's information and approval to achieve compliance with O. Reg. 588/17. The analysis contained in this report will be used to inform the ongoing work in the prioritization of capital investment needs and potential funding strategies as part of the development of capital budgets and forecasts and will inform the next phase of the AMP. To comply with the July 1, 2025 requirements of O. Reg. 588/17, Phase 3 of the AMP will set targets for LOS performance measures and develop a detailed financial strategy that outlines how capital and significant operating expenditures will be funded over the forecast period and how existing funding gaps will be addressed. The Township will also need to establish a process and format for regular updates to Council and the public on its on-going asset management progress.

Moving forward, Township staff will work to continue to advance its asset management processes in line with best practices. Township departments responsible for asset management will continue to work collaboratively to develop long-term financial sustainability strategies that balance LOS, costs, and risks.

ATTACHMENTS:

COR-POL-132 - Corporate Asset Management Policy
Township of King Asset Management Plan - Non-Core Assets DRAFT - 4

Prepared By:

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Recommended By:

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Approved for Submission By:

Daniel Kostopoulos
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KING TOWNSHIP
CORPORATE POLICY
~~STRATEGIC~~ ASSET MANAGEMENT

POLICY NO.: COR-POL-132

Finance Department	Issue Date:	6/24/2019
	Issue No.:	1
	Next Revision:	6/30/2024

1 PURPOSE STATEMENT

1.1 The purpose of this ~~Strategic~~ Asset Management Policy (*the "Policy"*) is to outline the Township of King's commitment to corporate asset management planning through defined principles and processes, and to ensure alignment and integration of asset management into strategic planning processes.

1.2 This Policy is established to embed asset management principles into ongoing capital, operations, and maintenance activities, through the Township's Asset Management Plan (AMP).

2 POLICY OBJECTIVE

2.1 Asset Management is an integrated business approach at the Township of King that aims to minimize lifecycle costs of owning, operating, and maintaining assets, at an acceptable level of risk, while continuously delivering established levels of service to its citizens and stakeholders.

2.2 The Township's Asset Management Program aims to improve and support asset management processes across the organization.

2.3 This Policy will codify asset management processes such that infrastructure needs can be prioritized over time, while ensuring municipal assets are maintained in a condition that minimizes repair and rehabilitation costs. ~~in accordance with the guiding principles set forth within the Township's Integrated Community Sustainability Plan, 2012 and Provincial regulations.~~

2.4 This Policy conforms to prescribed requirements from Ontario Regulation 588/17 (O. Reg. 588/17), as amended.

~~2.5 The Township's Integrated Community Sustainability Plan, 2012 (ICSP) set forth four key pillars of sustainability: Environmental; Financial; Socio-Cultural; and Economic. The guiding principles of the ISCP are:~~

~~2.5.1 Protecting the natural environment;~~

~~2.5.2 Changing our behaviour to consume less resources;~~

~~2.5.3 Thinking about and preparing for global changes;~~

~~2.5.4 Finding creative solutions that work for King;~~

~~2.5.5 The Township's rural economy;~~

~~2.5.6 Providing more transportation options;~~

~~2.5.7 Supporting our farmers and the agricultural sector;~~

~~2.5.8 Celebrating our natural and cultural assets;~~

~~2.5.9 Cultivating a strong sense of community;~~

~~2.5.10 Evaluating the long-term effects of our actions;~~

~~2.5.11 Making smart decisions about community design, land use planning and infrastructure while connecting our neighbourhoods and village cores;~~

~~2.5.12 Thinking long-term about the effects of our financial decision making;~~

~~2.5.13 Thinking differently, being more innovative and collaborative; and~~

~~2.5.14 Creating a cohesive community that respects the identity and uniqueness of all King Township's villages and hamlets.~~

3 APPLICATION/SCOPE

3.1 As required by O. Reg 588/17, the Township will adopt the required principles from the *Infrastructure for Jobs and Prosperity Act, 2015*. ~~Refer to Schedule "1" for details.~~

3.2 This Policy includes all assets owned or leased by the Township, including assets supporting the provision of Township services, owned or leased by boards and agencies of the Township, where the assets rely on or impact Township services.

3.3 This Policy also provides the framework to identify and prioritize investments in existing and future infrastructure assets, and to ensure each investment is capable of supporting the desired needs of the Township.

4 DEFINITIONS

4.1 **Asset Management ~~Steering Committee~~Working Group:** The Township's ~~steering committee~~working group has been established ~~as the Executive Lead~~ to help guide the implementation of asset management initiatives and ensure the AMP is maintained and complies with all Provincial legislation. The committee includes: Director of ~~Engineering,~~ Public Works ~~(the Executive Lead) and Building~~; Director of ~~Parks, Recreation and Culture~~Community Services; Director of ~~Planning~~Growth Management Services; Director of Finance & Treasurer; Manager of Budget & Financial Reporting/Deputy Treasurer~~Manager of Financial Planning and Reporting/ Deputy Treasurer~~; Manager of Revenue / Deputy Treasurer; Manager of Information Technology; Supervisor of Data Systems & Analytics, GIS Coordinator; and the ~~Project Manager, Asset Management~~Strategic Policy and Asset Management Coordinator. The Directors and Senior Managers ***may delegate alternate representation on the Asset Management ~~Steering Committee~~Working Group, as appropriate.***

4.2 **Asset:** An item, thing or entity that has potential or actual value to an organization. Value can be tangible or intangible, financial or non-financial. Asset can be either tangible such as equipment or intangible such as licenses, brands or agreements.

4.3 **Asset Management**: Coordinated activity of an organization to realize value from assets.

4.4 **Asset Management Plan (AMP):** Documented information that specifies the activities,

resources, and timescales required for an individual asset, or a grouping of assets, to achieve the organization's asset management objectives.

4.5 **Asset Management Program:** The people, processes, tools and other resources involved in the delivery of asset management.

4.6 **Asset System:** Set of assets that interact or are interrelated.

4.7 **Asset Management Portfolio:** Group of assets within the scope of an asset management system.

4.8 **Level of Service:** Parameters or combination of parameters, which reflect social, political, environmental and economic outcomes that the organization delivers. The parameters can relate to safety, customer satisfaction, quality, quantity, reliability, capacity, reliability, responsiveness, environmental acceptability, cost and availability.

4.9 **Lifecycle:** Various stages involved in the management of an asset.

4.10 **Risk:** Probability and/or effect of uncertainty on objectives.

4.11 **Stakeholder:** Person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity.

4.12 **Township of King (Township):** Is the Corporation of the Township of King.

5 RESPONSIBILITIES

5.1 Development and continuous support of the Township's Asset Management Program requires a wide range of duties and responsibilities. The following outline the persons responsible for these tasks:

5.2 **Council**

5.2.1 Approves the Policy and provides input / direction of the Asset Management Program through the Township's AMP.

5.2.2 Maintain adequate organizational capacity to support the core practices of the asset management program.

5.2.3 Prioritize effective stewardship of assets in adoption and periodic review of this Policy and AMP.

5.2.4 Annual review and approval of budgets (operating and capital).

5.3 **Directors and Senior ~~Management~~ Leadership Team**

5.3.1 Development and updates to this Policy.

5.3.2 Provide corporate oversight to goals and directions and ensure the Asset Management Program aligns with the Township's strategic plans.

5.3.3 Ensure that adequate resources are available to implement and maintain core asset management practices.

5.3.4 Develop and monitor levels of service and make recommendations to Council.

5.3.5 Track, analyze and report on asset management program progress and results.

5.3.6 Provide organization-wide leadership in asset management practices and concepts.

5.4 **Departmental Staff**

5.4.1 Implement new business processes and technology tools as part of the Asset Management Program.

5.4.2 Participate in ~~implementation task teams~~ working groups to carry-out asset management activities.

5.4.3 Implement and maintain level of service standards for all capital asset classes.

5.4.4 Manage budgets based on lifecycle activities and financial management strategies.

5.5 **Public**

5.5.1 Solicit input through surveys and public engagement relating to level of service expectations.

5.5.2 Understand dynamic nature of relationships between performance, cost, and risk of assets to deliver desired levels of service.

6 ASSET MANAGEMENT COMMITMENT

6.1 The Township of King shall:

6.1.1 **Integrate with the Township's ~~ICSP~~ Corporate Strategic Plan, Official Plan, Business plans, Financial plans, ~~and~~ Master Plans, Development Charges Background Studies and Annual reports** to ensure alignment between asset decision-making and the Township's strategic objectives, as well as growth and service demand forecasts.

6.1.2 **Manage municipal infrastructure assets using an integrated business approach** that delivers desired levels of service by planning, coordinating and investing in infrastructure within the context of expectations approved by Council.

6.1.3 **Provide opportunities for citizens, businesses and other stakeholders** to provide input in asset management planning.

6.1.4 **Coordinate planning for management of assets shared with other governmental agencies**, including the Regional Municipality of York, neighbouring municipalities, school boards and the Conservation Authority.

6.1.5 **Align asset management planning activities to water and wastewater financial plans, including any financial plans prepared under the *Safe Water Drinking Act, 2002*,** through collaboration between Finance and Public Works staff to ensure adequate / appropriate long-term fiscal sustainability of these critical assets.

6.1.6 **Commit to ~~consider~~ integrating the AMP recommendations** when developing municipal budgets (operating and capital) and long-term financial plans. Township staff will review the AMP during the annual budget planning process to:~~.~~

a) Assess progress made on the plan to identify potential gaps and prioritize spending needs;
b) Determine appropriate levels of service to plan for;
c) Forecast spending needs identified in the plan;
d) Prioritize capital projects.

6.1.7 **Commit to consider risks, including those related to climate change**, when reporting asset management planning needs.

6.2 The Township commits to provide annual asset management reports to Council and the public to ensure they are informed of the progress in implementing the Asset Management Program.

6.3 The Township's AMP will be maintained by the Asset Management ~~Steering Committee~~Working Group as set forth in the Definitions section of this Policy.

7 ASSET MANAGEMENT – POLICY STATEMENTS

7.1 The following are to be considered by the Township when planning long-term acquisition, maintenance/refurbishment and replacement of municipally owned infrastructure.

7.1.1 The Township will implement an enterprise-wide asset management program through all departments. The program will promote lifecycle and risk management of all municipal infrastructure assets, with the goal of achieving the lowest total cost of ownership while meeting desired levels of service.

7.1.2 The Township's approach to ~~will implement~~ continuous improvement includes implementing protocols and ~~adopt~~ adopting best practices regarding asset management planning, including;

a. Complete and Accurate Asset Data;
b. Condition Assessment Protocols;
c. Risk and Criticality Models;
d. Lifecycle Management;
e. Financial Strategy Development; and
f. Level of Service Framework

7.1.3 The Township will develop and maintain an asset inventory of all municipal infrastructure assets which include, at a minimum, a unique asset ID, description, location information, value (historical and replacement), performance characteristics and/or condition, estimated remaining life and estimated repair, rehabilitation or replacement date, estimated cost repair, rehabilitation or replacement costs.

7.1.4 The Township will develop an AMP that incorporates all infrastructure categories and municipal infrastructure assets that are necessary to the provision of services. This may include assets that fall below their respective capitalization thresholds as outlined in the Township's Tangible Capital Asset Policy (~~COR-POL-133~~ADM-POL-168). The scope of these assets will be determined, according to relevance, based on the professional judgment of the Asset Management ~~Steering Committee~~Working Group.

7.1.5 The AMP will be reviewed annually to address the Township's progress in implementing its AMP and updated at least every five years in accordance with O. Reg. 588/17 requirements, to promote, document and communicate continuous improvement of the Asset Management Program.

7.1.6 The Township's AMP will be updated per legislated requirements contained in O. Reg. 588/17~~:, to address;~~

~~a. Core assets by July 1, 2021~~

~~b. All other assets by July 1, 2023~~

~~c. After 2023 the AMP will be updated every 5 years~~

7.1.7 The Township will integrate asset management plans and practices with its long-term financial planning and budgeting strategies by reviewing the AMP during the annual budget planning process. This includes the development of financial plans that determine the level of funding required to achieve short-term operating and maintenance needs, in addition to long-term funding needs to replace and/or renew municipal infrastructure assets based on full lifecycle costing.

7.1.8 The Township will explore innovative funding and service delivery opportunities, including but not limited to grant programs, public-private partnerships (P3), alternative financing and procurement (AFP) approaches, and shared provision of services, as appropriate.

7.1.9 The Township will consider the risks and vulnerabilities of municipal infrastructure assets to climate change and the actions that may be required including, but not limited to, anticipated costs that could arise from these impacts, adaptation opportunities, mitigation approaches, disaster planning and contingency funding. Impacts may include matters relating to operations, levels of service and lifecycle management.

7.1.10 The Township will develop meaningful performance metrics and reporting tools to transparently communicate and display the current state of asset management practice to Council and the community.

7.1.11 ~~The~~ With the collaboration between Finance and Public Works staff the Township will ensure that all financial plans are coordinated and align with the established Asset Management Plan and any other applicable legislation including;

a. Financial reports relating to water assets including plans prepared under the *Safe Drinking Water Act, 2002;*

b. Wastewater Asset Plans;

c. Water/Wastewater Rate Study;

d. Stormwater Management Rate Study;

~~d~~e. Development Charge Study; and

~~e~~f. Long Range financial plans, including the 10-Year Capital Plan.

7.1.12 ~~The~~By referencing the direction established in the Township's Official Plan the Township will align all asset management planning with the Province of Ontario's land-use planning framework, including any relevant policy statements issued under section 3(1) of the *Planning Act*; shall conform with the provincial plans that are in effect on that date; and, shall be consistent with all municipal official plans.

7.1.13 The Township will coordinate planning for interrelated municipal infrastructure assets with separate ownership structures by pursuing collaborative opportunities with neighbouring municipalities and jointly-owned municipal bodies wherever viable and beneficial.

7.1.14 The Township will develop processes and provide opportunities for municipal residents and other interested parties to offer input into asset management planning wherever and whenever possible.

8 REVIEW OF POLICY

8.1 This Policy has been reviewed by and will be maintained by the Asset Management ~~Steering Committee~~Working Group, with departmental support, input and assistance.

8.2 This Policy shall be reviewed and, if necessary, updated at least every five years.

9 RELATED DOCUMENTATION

9.1 ~~Schedule 1 -~~ Infrastructure for Jobs and Prosperity Act, 2015 ~~Guiding Principles for Asset Management Policy~~

9.2 ~~Appendix A – Excerpt of~~ *O. Reg. 588/17* *Asset Management Planning For Municipal Infrastructure*

~~9.3 Finance Committee Report - FR-2019-14~~

~~9.4 King Integrated Community Sustainability Plan, 2012~~

~~9.5 King Asset Management Plan, 2016~~

~~9.6 King Township Official Plan and all infrastructure related Master Plans~~

~~9.7 King Tangible Capital Asset Policy – COR-POL-133~~

~~9.8 *Infrastructure for Jobs and Prosperity Act, 2015,*~~

~~9.9 *O.Reg. 588/17 - Asset Management Planning for Municipal Infrastructure*, Sections 3 and 4, *Strategic Asset Management Policy*~~

~~9.10 ISO 55000 Asset management, 2014(E) including Terms and Definitions~~

10 APPROVAL AUTHORITY

Council	By-law #2019-068	**Original Signed-**	**June 24, 2019**
Authority	**By-law**	**Township Clerk**	**Date**

~~Schedule "1" – Guiding Principles for Asset Management Policy~~

~~The Township shall consider the following principles as outlined in section 3 of the *Infrastructure for Jobs and Prosperity Act, 2015*, when making decisions regarding asset management:~~

1. ~~Infrastructure planning and investment should take a long-term view, and decision-makers should consider the needs of citizens by being mindful of, among other things, demographic and economic trends.~~
2. ~~Infrastructure planning and investment should consider any applicable budgets or fiscal plans.~~
3. ~~Infrastructure priorities should be clearly identified in order to better inform investment decisions respecting infrastructure.~~
4. ~~Infrastructure planning and investment should ensure the continued provision of core public services, such as safe drinking water and reliable transportation services.~~
5. ~~Infrastructure planning and investment should promote economic competitiveness, productivity, job creation and training opportunities.~~
6. ~~Infrastructure planning and investment should ensure that the health and safety of workers involved in the construction and maintenance of infrastructure assets is protected.~~
7. ~~Infrastructure planning and investment should foster innovation by creating opportunities to make use of innovative technologies, services and practices, particularly where doing so would utilize technology, techniques and practices developed in Ontario.~~
8. ~~Infrastructure planning and investment should be evidence based and transparent, and, subject to any restrictions or prohibitions under an Act or otherwise by law on the collection, use or disclosure of:~~
    i. ~~investment decisions respecting infrastructure should be made on the basis of information that is either publicly available or is made available to the public, and~~
    ii. ~~information with implications for infrastructure planning should be shared between the Township and broader public sector entities and should factor into investment decisions respecting infrastructure.~~
9. ~~Where provincial or municipal plans or strategies have been established in Ontario, under an Act or otherwise, but do not bind or apply to the Township, as the case may be, the Township should nevertheless be mindful of those plans and strategies and make investment decisions respecting infrastructure that support them, to the extent that they are relevant.~~

10. ~~Infrastructure planning and investment should promote accessibility for persons with disabilities.~~
11. ~~Infrastructure planning and investment should minimize the impact of infrastructure on the environment and respect and help maintain ecological and biological diversity, and infrastructure should be designed to be resilient to the effects of climate change.~~
12. ~~Infrastructure planning and investment should endeavour to make use of acceptable recycled aggregates.~~
13. ~~Infrastructure planning and investment should promote community benefits, being the supplementary social and economic benefits arising from an infrastructure project that are intended to improve the well-being of a community affected by the project, such as local job creation and training opportunities, improvement of public space within the community, and any specific benefits identified by the community.~~

~~Appendix "A"~~

~~O. Reg. 588/17 Asset Management Planning For Municipal Infrastructure~~

~~ONTARIO REGULATION 588/17~~

~~made under the~~

~~INFRASTRUCTURE FOR JOBS AND PROSPERITY ACT, 2015~~

~~Made: December 13, 2017~~
~~Filed: December 27, 2017~~
~~Published on e-Laws: December 27, 2017~~
~~Printed in *The Ontario Gazette*: January 13, 2018~~

~~ASSET MANAGEMENT PLANNING FOR MUNICIPAL INFRASTRUCTURE~~

~~CONTENTS~~

~~INTERPRETATION AND APPLICATION~~

~~Definitions~~

~~1.~~ ~~(1) In this Regulation,~~

~~"Asset category" means a category of municipal infrastructure assets that is,~~

~~(a) an aggregate of assets described in each of clauses (a) to (e) of the definition of core municipal infrastructure asset, or~~

~~(b) composed of any other aggregate of municipal infrastructure assets that provide the same type of service; ("catégorie de biens")~~

~~"Core municipal infrastructure asset" means any municipal infrastructure asset that is a,~~

(a) water asset that relates to the collection, production, treatment, storage, supply or distribution of water,

(b) wastewater asset that relates to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater,

(c) stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater,

(d) road, or

(e) bridge or culvert; ("bien d'infrastructure municipale essentiel")

"ecological functions" has the same meaning as in Ontario Regulation 140/02 (Oak Ridges Moraine Conservation Plan) made under the *Oak Ridges Moraine Conservation Act, 2001*; ("fonctions écologiques")

"green infrastructure asset" means an infrastructure asset consisting of natural or human-made elements that provide ecological and hydrological functions and processes and includes natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces and green roofs; ("bien d'infrastructure verte")

"hydrological functions" has the same meaning as in Ontario Regulation 140/02; ("fonctions hydrologiques")

"joint municipal water board" means a joint board established in accordance with a transfer order made under the *Municipal Water and Sewage Transfer Act, 1997*; ("conseil mixte de gestion municipale des eaux")

"lifecycle activities" means activities undertaken with respect to a municipal infrastructure asset over its service life, including constructing, maintaining, renewing, operating and decommissioning, and all engineering and design work associated with those activities; ("activités relatives au cycle de vie")

"municipal infrastructure asset" means an infrastructure asset, including a green infrastructure asset, directly owned by a municipality or included on the consolidated financial statements of a municipality, but does not include an infrastructure asset that is managed by a joint municipal water board; ("bien d'infrastructure municipale")

"municipality" has the same meaning as in the *Municipal Act, 2001*; ("municipalité")

"operating costs" means the aggregate of costs, including energy costs, of operating a municipal infrastructure asset over its service life; ("frais d'exploitation")

"service life" means the total period during which a municipal infrastructure asset is in use or is available to be used; ("durée de vie")

"significant operating costs" means, where the operating costs with respect to all municipal infrastructure assets within an asset category are in excess of a threshold amount set by the municipality, the total amount of those operating costs. ("frais d'exploitation importants")

(2) In Tables 1 and 2,

"connection-days" means the number of properties connected to a municipal system that are affected by a service issue, multiplied by the number of days on which those properties are affected by the service issue. ("jours-branchements")

(3) In Table 4,

"arterial roads" means Class 1 and Class 2 highways as determined under the Table to section 1 of Ontario Regulation 239/02 (Minimum Maintenance Standards for Municipal Highways) made under the *Municipal Act, 2001*; ("artères")

"collector roads" means Class 3 and Class 4 highways as determined under the Table to section 1 of Ontario Regulation 239/02; ("routes collectrices")

"lane-kilometre" means a kilometre-long segment of roadway that is a single lane in width; ("kilomètre de voie")

"local roads" means Class 5 and Class 6 highways as determined under the Table to section 1 of Ontario Regulation 239/02. ("routes locales")

(4) In Table 5,

"Ontario Structure Inspection Manual" means the Ontario Structure Inspection Manual (OSIM), published by the Ministry of Transportation and dated October 2000 (revised November 2003 and April 2008) and available on a Government of Ontario website; ("manuel d'inspection des structures de l'Ontario")

"structural culvert" has the meaning set out for "culvert (structural)" in the Ontario Structure Inspection Manual. ("ponceau structurel")

Application

2. For the purposes of section 6 of the Act, every municipality is prescribed as a broader public sector entity to which that section applies.

STRATEGIC ASSET MANAGEMENT POLICIES

Strategic asset management policy

3. (1) Every municipality shall prepare a strategic asset management policy that includes the following:

1. Any of the municipality's goals, policies or plans that are supported by its asset management plan.
2. The process by which the asset management plan is to be considered in the development of the municipality's budget or of any long-term financial plans of the municipality that take into account municipal infrastructure assets.
3. The municipality's approach to continuous improvement and adoption of appropriate practices regarding asset management planning.
4. The principles to be followed by the municipality in its asset management planning, which must include the principles set out in section 3 of the Act.
5. The municipality's commitment to consider, as part of its asset management planning,
    i. the actions that may be required to address the vulnerabilities that may be caused by climate change to the municipality's infrastructure assets, in respect of such matters as,
        A. operations, such as increased maintenance schedules,
        B. levels of service, and
        C. lifecycle management,
    ii. the anticipated costs that could arise from the vulnerabilities described in subparagraph i,
    iii. adaptation opportunities that may be undertaken to manage the vulnerabilities described in subparagraph i,
    iv. mitigation approaches to climate change, such as greenhouse gas emission reduction goals and targets, and
    v. disaster planning and contingency funding.
6. A process to ensure that the municipality's asset management planning is aligned with any of the following financial plans:
    i. Financial plans related to the municipality's water assets including any financial plans prepared under the *Safe Drinking Water Act, 2002*.
    ii. Financial plans related to the municipality's wastewater assets.
7. A process to ensure that the municipality's asset management planning is aligned with Ontario's land-use planning framework, including any relevant policy statements issued under subsection 3 (1) of the *Planning Act*, any provincial plans as defined in the *Planning Act* and the municipality's official plan.

8. An explanation of the capitalization thresholds used to determine which assets are to be included in the municipality's asset management plan and how the thresholds compare to those in the municipality's tangible capital asset policy, if it has one.

9. The municipality's commitment to coordinate planning for asset management, where municipal infrastructure assets connect or are interrelated with those of its upper-tier municipality, neighbouring municipalities or jointly-owned municipal bodies.

10. The persons responsible for the municipality's asset management planning, including the executive lead.

11. An explanation of the municipal council's involvement in the municipality's asset management planning.

12. The municipality's commitment to provide opportunities for municipal residents and other interested parties to provide input into the municipality's asset management planning.

(2) For the purposes of this section,

"capitalization threshold" is the value of a municipal infrastructure asset at or above which a municipality will capitalize the value of it and below which it will expense the value of it. ("seuil de capitalisation")

Update of asset management policy

4. Every municipality shall prepare its first strategic asset management policy by July 1, 2019 and shall review and, if necessary, update it at least every five years.

ASSET MANAGEMENT PLANS

Asset management plans, current levels of service

5. (1) Every municipality shall prepare an asset management plan in respect of its core municipal infrastructure assets by July 1, 2021, and in respect of all of its other municipal infrastructure assets by July 1, 2023.

(2) A municipality's asset management plan must include the following:

1. For each asset category, the current levels of service being provided, determined in accordance with the following qualitative descriptions and technical metrics and based on data from at most the two calendar years prior to the year in which all information required under this section is included in the asset management plan:

   i. With respect to core municipal infrastructure assets, the qualitative descriptions set out in Column 2 and the technical metrics set out in Column 3 of Table 1, 2, 3, 4 or 5, as the case may be.

   ii. With respect to all other municipal infrastructure assets, the qualitative descriptions and technical metrics established by the municipality.

2. The current performance of each asset category, determined in accordance with the performance measures established by the municipality, such as those that would measure energy usage and operating efficiency, and based on data from at most two calendar years prior to the year in which all information required under this section is included in the asset management plan.

3. For each asset category,

   i. a summary of the assets in the category,

   ii. the replacement cost of the assets in the category,

   iii. the average age of the assets in the category, determined by assessing the average age of the components of the assets,

   iv. the information available on the condition of the assets in the category, and

   v. a description of the municipality's approach to assessing the condition of the assets in the category, based on recognized and generally accepted good engineering practices where appropriate.

~~4. For each asset category, the lifecycle activities that would need to be undertaken to maintain the current levels of service as described in paragraph 1 for each of the 10 years following the year for which the current levels of service under paragraph 1 are determined and the costs of providing those activities based on an assessment of the following:~~

~~i. The full lifecycle of the assets.~~

~~ii. The options for which lifecycle activities could potentially be undertaken to maintain the current levels of service.~~

~~iii. The risks associated with the options referred to in subparagraph ii.~~

~~iv. The lifecycle activities referred to in subparagraph ii that can be undertaken for the lowest cost to maintain the current levels of service.~~

~~5. For municipalities with a population of less than 25,000, as reported by Statistics Canada in the most recent official census, the following:~~

~~i. A description of assumptions regarding future changes in population or economic activity.~~

~~ii. How the assumptions referred to in subparagraph i relate to the information required by paragraph 4.~~

~~6. For municipalities with a population of 25,000 or more, as reported by Statistics Canada in the most recent official census, the following:~~

~~i. With respect to municipalities in the Greater Golden Horseshoe growth plan area, if the population and employment forecasts for the municipality are set out in Schedule 3 or 7 to the 2017 Growth Plan, those forecasts.~~

~~ii. With respect to lower-tier municipalities in the Greater Golden Horseshoe growth plan area, if the population and employment forecasts for the municipality are not set out in Schedule 7 to the 2017 Growth Plan, the portion of the forecasts allocated to the lower-tier municipality in the official plan of the upper-tier municipality of which it is a part.~~

~~iii. With respect to upper-tier municipalities or single-tier municipalities outside of the Greater Golden Horseshoe growth plan area, the population and employment forecasts for the municipality that are set out in its official plan.~~

~~iv. With respect to lower-tier municipalities outside of the Greater Golden Horseshoe growth plan area, the population and employment forecasts for the lower-tier municipality that are set out in the official plan of the upper-tier municipality of which it is a part.~~

~~v. If, with respect to any municipality referred to in subparagraph iii or iv, the population and employment forecasts for the municipality cannot be determined as set out in those subparagraphs, a description of assumptions regarding future changes in population or economic activity.~~

~~vi. For each of the 10 years following the year for which the current levels of service under paragraph 1 are determined, the estimated capital expenditures and significant operating costs related to the lifecycle activities required to maintain the current levels of service in order to accommodate projected increases in demand caused by growth, including estimated capital expenditures and significant operating costs related to new construction or to upgrading of existing municipal infrastructure assets.~~

~~(3) Every asset management plan must indicate how all background information and reports upon which the information required by paragraph 3 of subsection (2) is based will be made available to the public.~~

~~(4) In this section,~~

~~"2017 Growth Plan" means the Growth Plan for the Greater Golden Horseshoe, 2017 that was approved under subsection 7 (6) of the *Places to Grow Act, 2005* on May 16, 2017 and came into effect on July 1, 2017; ("Plan de croissance de 2017")~~

"Greater Golden Horseshoe growth plan area" means the area designated by section 2 of Ontario Regulation 416/05 (Growth Plan Areas) made under the *Places to Grow Act, 2005*. ("zone de croissance planifiée de la région élargie du Golden Horseshoe")

Asset management plans, proposed levels of service

6. (1) Subject to subsection (2), by July 1, 2024, every asset management plan prepared under section 5 must include the following additional information:

1. For each asset category, the levels of service that the municipality proposes to provide for each of the 10 years following the year in which all information required under section 5 and this section is included in the asset management plan, determined in accordance with the following qualitative descriptions and technical metrics:
   i. With respect to core municipal infrastructure assets, the qualitative descriptions set out in Column 2 and the technical metrics set out in Column 3 of Table 1, 2, 3, 4 or 5, as the case may be.
   ii. With respect to all other municipal infrastructure assets, the qualitative descriptions and technical metrics established by the municipality.
2. An explanation of why the proposed levels of service under paragraph 1 are appropriate for the municipality, based on an assessment of the following:
   i. The options for the proposed levels of service and the risks associated with those options to the long-term sustainability of the municipality.
   ii. How the proposed levels of service differ from the current levels of service set out under paragraph 1 of subsection 5 (2).
   iii. Whether the proposed levels of service are achievable.
   iv. The municipality's ability to afford the proposed levels of service.
3. The proposed performance of each asset category for each year of the 10-year period referred to in paragraph 1, determined in accordance with the performance measures established by the municipality, such as those that would measure energy usage and operating efficiency.
4. A lifecycle management and financial strategy that sets out the following information with respect to the assets in each asset category for the 10-year period referred to in paragraph 1:
   i. An identification of the lifecycle activities that would need to be undertaken to provide the proposed levels of service described in paragraph 1, based on an assessment of the following:
      A. The full lifecycle of the assets.
      B. The options for which lifecycle activities could potentially be undertaken to achieve the proposed levels of service.
      C. The risks associated with the options referred to in sub-subparagraph B.
      D. The lifecycle activities referred to in sub-subparagraph B that can be undertaken for the lowest cost to achieve the proposed levels of service.
   ii. An estimate of the annual costs for each of the 10 years of undertaking the lifecycle activities identified in subparagraph i, separated into capital expenditures and significant operating costs.
   iii. An identification of the annual funding projected to be available to undertake lifecycle activities and an explanation of the options examined by the municipality to maximize the funding projected to be available.
   iv. If, based on the funding projected to be available, the municipality identifies a funding shortfall for the lifecycle activities identified in subparagraph i,

A. an identification of the lifecycle activities, whether set out in subparagraph i or otherwise, that the municipality will undertake, and

B. if applicable, an explanation of how the municipality will manage the risks associated with not undertaking any of the lifecycle activities identified in subparagraph i.

5. For municipalities with a population of less than 25,000, as reported by Statistics Canada in the most recent official census, a discussion of how the assumptions regarding future changes in population and economic activity, set out in subparagraph 5 i of subsection 5 (2), informed the preparation of the lifecycle management and financial strategy referred to in paragraph 4 of this subsection.

6. For municipalities with a population of 25,000 or more, as reported by Statistics Canada in the most recent official census,

i. the estimated capital expenditures and significant operating costs to achieve the proposed levels of service as described in paragraph 1 in order to accommodate projected increases in demand caused by population and employment growth, as set out in the forecasts or assumptions referred to in paragraph 6 of subsection 5 (2), including estimated capital expenditures and significant operating costs related to new construction or to upgrading of existing municipal infrastructure assets,

ii. the funding projected to be available, by source, as a result of increased population and economic activity, and

iii. an overview of the risks associated with implementation of the asset management plan and any actions that would be proposed in response to those risks.

7. An explanation of any other key assumptions underlying the plan that have not previously been explained.

(2) With respect to an asset management plan prepared under section 5 on or before July 1, 2021, if the additional information required under this section is not included before July 1, 2023, the municipality shall, before including the additional information, update the current levels of service set out under paragraph 1 of subsection 5 (2) and the current performance measures set out under paragraph 2 of subsection 5 (2) based on data from the two most recent calendar years.

Update of asset management plans

7. (1) Every municipality shall review and update its asset management plan at least five years after the year in which the plan is completed under section 6 and at least every five years thereafter.

(2) The updated asset management plan must comply with the requirements set out under paragraphs 1, 2 and 3 and subparagraphs 5 i and 6 i, ii, iii, iv and v of subsection 5 (2), subsection 5 (3) and paragraphs 1 to 7 of subsection 6 (1).

Endorsement and approval required

8. Every asset management plan prepared under section 5 or 6, or updated under section 7, must be,

(a) endorsed by the executive lead of the municipality; and

(b) approved by a resolution passed by the municipal council.

Annual review of asset management planning progress

9. (1) Every municipal council shall conduct an annual review of its asset management progress on or before July 1 in each year, starting the year after the municipality's asset management plan is completed under section 6.

(2) The annual review must address,

(a) the municipality's progress in implementing its asset management plan;

(b) any factors impeding the municipality's ability to implement its asset management plan; and

(c) a strategy to address the factors described in clause (b).

Public availability

10. Every municipality shall post its current strategic asset management policy and asset management plan on a website that is available to the public, and shall provide a copy of the policy and plan to any person who requests it.

TABLE 1

WATER ASSETS

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system. 2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow.	1. Percentage of properties connected to the municipal water system. 2. Percentage of properties where fire flow is available.
Reliability	Description of boil water advisories and service interruptions.	1. The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system. 2. The number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system.

TABLE 2

WASTEWATER ASSETS

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system.	Percentage of properties connected to the municipal wastewater system.
Reliability	1. Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes. 2. Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches. 3. Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes. 4. Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described in paragraph 3. 5. Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system.	1. The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system. 2. The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system. 3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.

TABLE 3

STORMWATER MANAGEMENT ASSETS

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding.	1. Percentage of properties in municipality resilient to a 100-year storm.

	including the extent of the protection provided by the municipal stormwater management system.	2. Percentage of the municipal stormwater management system resilient to a 5-year storm.

TABLE 4
ROADS

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity.	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality.
Quality	Description or images that illustrate the different levels of road class pavement condition.	1. For paved roads in the municipality, the average pavement condition index value. 2. For unpaved roads in the municipality, the average surface condition (e.g. excellent, good, fair or poor).

TABLE 5
BRIDGES AND CULVERTS

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	Percentage of bridges in the municipality with loading or dimensional restrictions.
Quality	1. Description or images of the condition of bridges and how this would affect use of the bridges. 2. Description or images of the condition of culverts and how this would affect use of the culverts.	1. For bridges in the municipality, the average bridge condition index value. 2. For structural culverts in the municipality, the average bridge condition index value.

COMMENCEMENT

Commencement

11. This Regulation comes into force on the later of January 1, 2018 and the day it is filed.

Asset Management Plan – Non-Core Assets

Township of King

Draft Report

Watson & Associates Economists Ltd.
905-272-3600
info@watsonecon.ca

June 5, 2024

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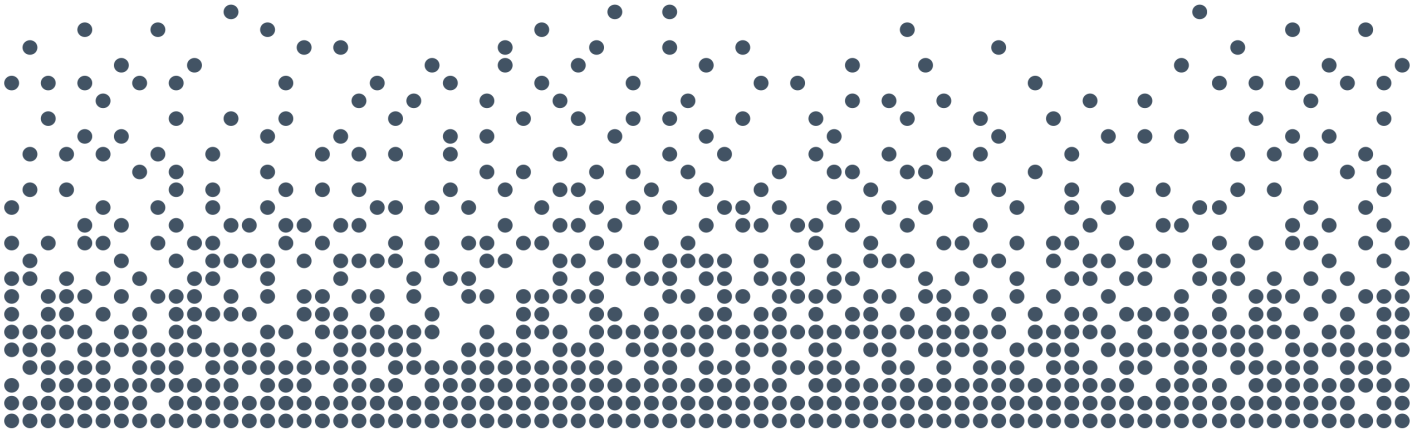


Report

Chapter 1
Introduction

1. Introduction

1.1 Overview

The objective of this asset management plan is to utilize the Township of King's (Township) best available information to develop a long-term plan for systematically and efficiently managing the Township's non-core assets over their entire lifecycle. This plan also provides a documented framework to enable continuous improvement and updating of the plan and the Township's asset management processes, ensuring this plan's relevancy well into the future. The development of this plan was, in part, guided by various existing long-term planning documents and studies to establish appropriate lines-of-sight with the Township's current goals and priorities. Utilizing this approach aims to strengthen the ability of this plan to meaningfully influence infrastructure investment decision-making and aid in achieving the Township's strategic objectives.

The Township retained Watson & Associates Economists Ltd. (Watson) to assist in developing this asset management plan, which serves as a tool for the Township to optimize asset management outcomes for its non-core assets in a cost-effective manner and brings the Township in compliance with the July 1, 2024 requirements of *Ontario Regulation 588/17: Asset Management Planning For Municipal Infrastructure* (O. Reg. 588/17). Watson previously assisted the Township with the development of its 2022 Asset Management Plan for its core assets to bring the Township in compliance with the July 1, 2022 requirements of O. Reg. 588/17. Following the completion of this asset management plan for non-core assets, the Township will shift its focus to developing a comprehensive asset management plan for all of the Township's assets to meet the July 1, 2025 requirements of O. Reg. 588/17, building upon the asset management work that has been completed to date. Core elements of the comprehensive asset management plan will include filling remaining data gaps, identifying proposed levels of service, establishing lifecycle management strategies to achieve those service levels, developing a financial strategy that incorporates Township-specific financial sustainability and affordability factors, and assessing asset criticality through a risk management lens.

The assets included within the scope of this asset management plan are identified in Table 1-1 below.

Table 1-1: List of In-Scope Non-core Assets

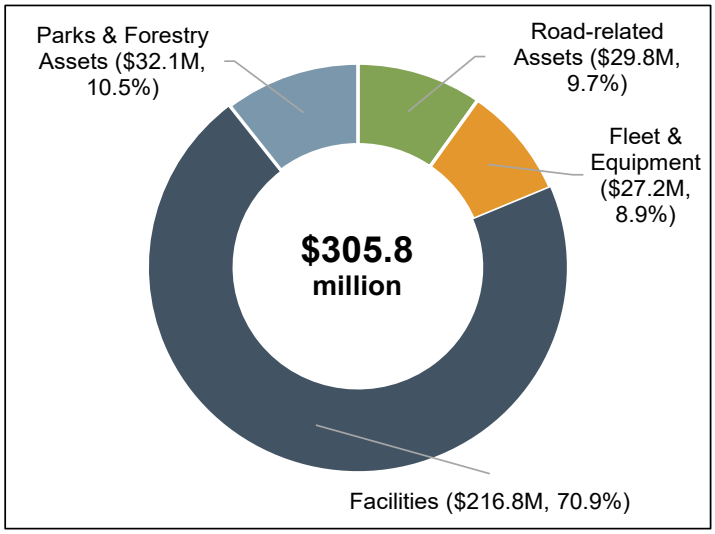
Asset Class	Asset Sub-class
Road-related Assets	Sidewalks and Paved Pathways
	Regulatory and Warning Road Signs
	Non-Structural Culverts
Fleet and Equipment	Plated Vehicles
	Non-Plated Equipment
Facilities	Municipal Facilities
	Recreation Facilities
	Libraries
Parks and Forestry	Park Furnishings and Built Infrastructure
	Sports Fields

The total replacement cost for the Township's non-core assets is estimated to be approximately $305.8 million. A breakdown of the total replacement cost by asset class is provided in Table 1-2 and is illustrated in Figure 1-1. Facilities comprise the largest share of this replacement cost ($216.8 million, 70.9%), followed by parks and forestry assets ($32.1 million, 10.5%), road-related assets ($29.8 million, 9.7%), and lastly, fleet and equipment assets ($27.2 million, 8.9%).

Table 1-2: Replacement Cost of Non-core Asset Classes

Asset Class	Replacement Cost (2024$)	Percentage of Total
Road-related Assets	$29,750,000	9.7%
Fleet & Equipment	$27,167,000	8.9%
Facilities	$216,768,000	70.9%
Parks & Forestry Assets	$32,097,000	10.5%
Total	**$305,782,000**	**100.0%**

Figure 1-1: Distribution of Replacement Cost by Non-core Asset Class



Through its Strategic Asset Management Policy, which was adopted by Council on June 24, 2019 via By-Law #2019-068, the Township has identified and defined its asset management goals. The policy emphasizes the Township's objective of managing its infrastructure assets in a manner that supports sustainable service delivery to its residents. O. Reg. 588/17 requires that municipalities review their Strategic Asset Management Policies every five years to ensure that the policy is reflective of the municipality's evolving asset management environment. The Township is currently undertaking a review of its Strategic Asset Management Policy.

1.2 Legislative Context for Municipal Asset Management

Asset management planning in Ontario has evolved significantly over the past decade.

Prior to 2009, it was common municipal practice to expense capital assets in the year of their acquisition or construction. Consequently, this meant that many municipalities did not have appropriate tracking of their capital assets, especially with respect to any changes that capital assets may have undergone (i.e. betterments, disposals, etc.). Furthermore, this also meant that many municipalities had not yet established inventories of their capital assets, both in their accounting structures and financial statements. As a result of revisions to *Section 3150 – Tangible Capital Assets* of the

Public Sector Accounting Board (PSAB) handbook, which came into effect for the 2009 fiscal year, municipalities were forced to change this long-standing practice and capitalize their tangible capital assets over the term of the asset's expected useful service life. In order to comply with this revision, municipalities needed to establish asset inventories, if none previously existed.

In 2012, the Province launched the Municipal Infrastructure Strategy, which required municipalities and local service boards seeking provincial funding to demonstrate how any proposed project fits within a broader asset management plan. In addition, asset management plans encompassing all municipal assets needed to be prepared by the end of 2016 to meet Federal Gas Tax (now the Canada Community-Building Fund) agreement requirements. To help define the components of municipal asset management plans, the Province produced a document entitled *Building Together: Guide for Municipal Asset Management Plans*. This document outlined the information and analyses that were required to be included in municipal asset management plans under this initiative.

The Province's *Infrastructure for Jobs and Prosperity Act, 2015* (IJPA) was proclaimed on May 1, 2016. This legislation detailed principles for evidence-based and sustainable long-term infrastructure planning. The IJPA also gave the Province the authority to guide municipal asset management planning by way of regulation. In late 2017, the Province introduced O. Reg. 588/17 under the IJPA. The intent of O. Reg. 588/17 is to establish standard content for municipal asset management plans. Specifically, the regulation requires that asset management plans be developed that define levels of service, identify the lifecycle activities that will be undertaken to achieve those levels of service, and provide a financial strategy to support the levels of service and lifecycle activities.

Utilizing the best information available on the Township's assets, this asset management plan has been developed to address the July 1, 2024 requirements of O. Reg. 588/17.

1.3 Asset Management Plan Development

The development of this asset management plan was guided by asset management principles contained with the Township's Strategic Asset Management Policy, asset management strategies and objectives identified through discussions with Township

asset managers, information gleaned through reviews of existing long-term planning documents and studies which was further refined through staff consultations, and the Township's capital asset data. The key steps in the development process of this asset management plan are summarized below:

1. Compile asset information into complete inventories that contain relevant asset attributes such as size, quantity, age, useful service life expectations, and replacement cost. As part of this step, replacement costs were updated, where required, using a combination of the Township's recent procurement data or applicable inflationary indices.
2. Define and assess the current condition of non-core assets using a combination of staff input, existing background reports and studies (e.g. 2024 Building Condition Assessments, 2023 Sidewalk Inspection Report), and age-based condition analysis.
3. Define and document current levels of service based on analyses of available data and review of various background reports.
4. Develop lifecycle management strategies that identify the activities required to maintain current levels of service.
5. Develop a financial summary of forecasted capital and significant operating expenditures arising from the activities identified in the lifecycle management strategies.
6. Document the asset management plan in a formal report to inform future decision-making and to communicate planning to municipal stakeholders.

To comply with the July 1, 2025 requirements of O. Reg. 588/17, the next iteration of this plan will need to set targets for levels of service performance measures and develop a detailed financial strategy that outlines how capital and significant operating expenditures will be funded over the forecast period and how existing funding gaps will be managed. Further integration of this plan into other municipal financial and planning documents would assist in ensuring the ongoing accuracy of the asset management plan, as well as that of those integrated documents.

As further described in Section 7.1, it is recommended that the Township establish processes for reviewing and updating the asset data used to develop this plan on a regular basis to keep it relevant. The Township will also need to establish a process and format for regular updates to Council on its on-going asset management progress.

Chapter 2
Structure of this Asset Management Plan

2. Structure of this Asset Management Plan

The subsequent chapters of this asset management plan are organized by asset class. Each of those chapters is further broken down into sections including state of local infrastructure, levels of service, lifecycle management strategies, and financial summary and forecasts. The contents of each section are further described in the remainder of this chapter.

2.1 State of Local Infrastructure

The State of Local Infrastructure and Condition sections contain summary information on each asset class. As required by O. Reg. 588/17, the asset management plan must include the following information:

- Summary of the assets;
- Replacement cost of the assets;
- Average age of the assets (it is noted regulation O. Reg. 588/17 specifically requires average age to be determined by assessing the age of asset components);
- Information available on the condition of the assets; and
- Approach to condition assessments (based on recognized and generally accepted good engineering practices where appropriate).

The average ages of assets presented in subsequent sections of this asset management plan are weighted by the estimated current replacement cost of each asset. Similarly, for asset classes where age relative to useful service life is being used to estimate condition of assets, the average condition is also weighted by the estimated current replacement cost of each asset.

2.2 Levels of Service

Levels of service measure how effectively an asset meets functional or user requirements and reinforce the fact that assets inherently serve as means rather than ultimate ends. Assets play a pivotal role in delivering services to the residents and stakeholders of a municipality. Municipalities need to ensure that their infrastructure assets perform to meet their level of service goals in a manner that is affordable, achievable, and sustainable.

A fully developed levels of service framework allows a municipality to:

- Communicate its objectives to stakeholders and inform them of any planned changes.
- Track its performance against objectives to identify problem areas.
- Make budget decisions that are linked to outcomes, enabling rational trade-offs to be made.

To comply with the July 1, 2024 requirements of O. Reg. 588/17, asset management plans must identify the current levels of service being provided for each in-scope asset class. Whereas O. Reg. 588/17 prescribes several community and technical levels of service that must be included in asset management plans for core assets, it makes no such prescription for non-core assets. The Township has established its own levels of service frameworks for its non-core assets to describe both qualitatively and quantitatively the objectives it intends its assets to deliver. Included within the levels of service framework are performance measures that the Township will continue to track over time.

The Township's levels of service frameworks are presented for each asset class as follows:

- The Service Attribute identifies the service aspects that are important to the users and/or managers of the asset class;
- The Community Levels of Service tables describe the Township's intent in plain language and provide additional information on the aspects of the service that the Township believes are important to users; and
- The Technical Levels of Service tables describe the performance measures that quantify the Township's current performance with respect to the Service Attribute and Community Levels of Service. Unless noted otherwise, data used to evaluate current performance is as of December 31, 2023.

This asset management plan includes several measures that the Township has identified as being important to include within the levels of service frameworks even though there is insufficient data currently to quantify performance. These measures are presented in Appendix A as "Data-Deferred" measures. These measures will be incorporated directly into the asset management plan once the Township collects the required data.

2.3 Lifecycle Management Strategies

A lifecycle management strategy is a set of planned actions performed on assets to achieve levels of service in a sustainable manner and at the lowest overall lifecycle cost. Developing a lifecycle management strategy framework entails determining which lifecycle activities need to be planned for and performed on assets in order to optimize multiple factors including sustenance of adequate levels of service, extension of asset service life, reduction of overall lifecycle costs, mitigation of risk, and achievement of other objectives such as environmental and community goals. Municipalities need to ensure that their levels of service and lifecycle management strategies work hand-in-hand to balance the municipality's asset rehabilitation, replacement, and growth-related needs with its spending capacity.

Lifecycle management strategies form a vital part of asset management because they represent a plan for how to manage activities related to an asset over its full lifecycle. Lifecycle management strategies allow a municipality to:

- Ensure that the right intervention is made at the right time to deliver the desired levels of service at the lowest average annual cost.
- Set a foundation for medium- and long-term capital budget forecasting.
- Inform front-line decisions about managing assets.

The Township's lifecycle management strategies are presented for each in-scope asset class as follows:

- Inspections and Condition Assessments: Outlines the Township's approach to assessing the performance of its assets and determining asset maintenance, rehabilitation, and replacement needs;
- Major Lifecycle Activities – Operating: Summarizes the significant lifecycle activities that the Township funds through its operating budgets. These lifecycle activities generally pertain to the maintenance required to preserve asset service lives and ensure assets continue performing as intended;
- Major Lifecycle Activities – Capital: Summarizes the significant lifecycle activities that the Township funds through its capital budgets. These lifecycle activities generally pertain to rehabilitation and replacement projects undertaken to extend or renew asset service lives;

- Prioritization of Short-term Lifecycle Needs: Outlines how the Township prioritizes short-term lifecycle requirements of its assets and addresses emerging issues; and
- Growth-related Lifecycle Needs: Describes the Township's methodology for assessing the impact of population and demographic shifts on the long-term sustainability of levels of service and the lifecycle requirements of assets.

2.4 Financial Summary and Forecasts

In accordance with the requirements of O. Reg. 588/17, municipal asset management plans must include a 10-year forecast of capital and significant operating expenditures to support the activities identified in the lifecycle management strategies. This asset management plan also presents an annual lifecycle funding target for each asset class. The annual lifecycle funding target is the amount of funding that would be required annually to fully finance a lifecycle management strategy over the long-term. By planning to achieve this annual funding level, the Township would be able to fully fund capital works as they arise. In practice, however, capital needs are often characterized by peaks and valleys due to the value of works being undertaken changing year-to-year. By planning to achieve this level of funding over the long-term, the periods of relatively low capital needs would allow for the building up of lifecycle reserve funds that could be drawn upon in times of relatively high capital needs.

2.5 Population and Employment Growth

The requirements of O. Reg. 588/17 specify that for lower-tier municipalities in the Greater Golden Horseshoe growth plan area for which population and employment forecasts are not provided in Schedule 7 of the 2017 Greater Golden Horseshoe Growth Plan, as is the case for the Township, the portion of forecasts allocated to the lower-tier municipality in the official plan of the upper-tier municipality of which it is part shall be provided.

Table 2-1 summarizes the population and employment growth forecast for the Township. The Township's population is expected to grow to 50,300 residents by 2051, representing an increase of approximately 84% relative to the population of 27,333 identified in the 2021 census. Similarly, the number of employees in the Township is

expected to grow to 16,400 by 2051, representing an increase of approximately 58% relative to the number provided in the 2021 census of 10,350 employees.

Table 2-1: Township of King Population and Employment Growth Forecast

Township of King	2031	2041	2051
Population	35,400	42,600	50,300
Employment	11,800	14,100	16,400

The Township has identified growth-related expenditures for its capital assets to accommodate incremental service demands through its approved 2024-2033 capital plan. Growth-related expenditures for each asset class are presented in the financial summary and forecasts sections of subsequent chapters of this asset management plan.

The Township currently collects development charges to fund its growth-related expenditures. Utilizing development charges ensures that the effects of population and employment growth do not increase the cost of maintaining levels of service for existing tax and rate payers.

Chapter 3
Road-related Assets

3. Road-related Assets

3.1 State of Local Infrastructure

The Township's non-core road-related assets comprise sidewalks and paved pathways, regulatory and warning road signs, and non-structural culverts.

The Township's sidewalk network comprises mainly concrete and some asphalt sidewalks as well as paved pathways in Township-owned parks. The current replacement cost of the Township's sidewalks and paved pathways is estimated to be approximately $29.4 million. This replacement cost was derived through review of construction quotes obtained by the Township in 2024 for sidewalk panel replacements. The Township's paved pathways have an estimated current replacement cost of approximately $496,000 while the Township's sidewalks have an estimated current replacement cost of approximately $28.9 million. It is important to note that these replacement costs represent the sum of the current construction price for the removal and replacement of each individual sidewalk bay, which may be higher than the construction price for the removal and replacement of the entire sidewalk network if completed as a single capital project.

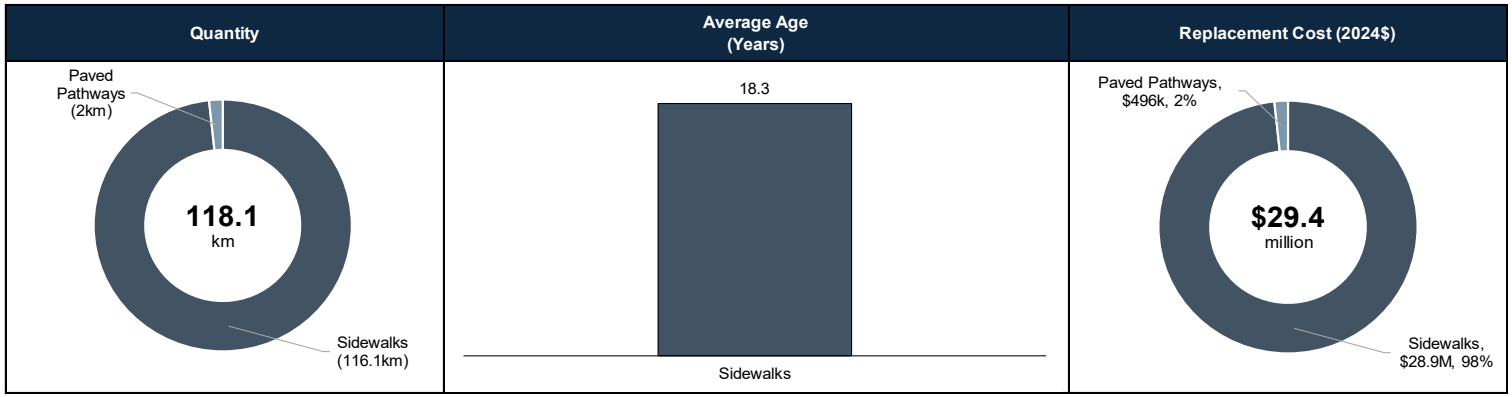
The length of the Township's sidewalks and paved pathways is approximately 118.1 km. The average age of the Township's sidewalks is approximately 18.3 years. It is worth noting, however, that the year of construction for approximately 37.3% of the Township's sidewalks (by length) is currently unknown. Similarly, the year of construction for all of the Township's paved pathways is also currently unknown. As such, those assets have been excluded from the calculation of average age.

Table 3-1 summarizes the length, average age, and estimated current replacement cost of the Township's sidewalks and paved pathways. This information is further illustrated in Figure 3-1.

Table 3-1: Sidewalks and Paved Pathways – Length, Average Age, and Replacement Cost

Asset Sub-class	Length (km)	Average Age (Years)	Replacement Cost (2024$)
Sidewalks	116.1	18.3	$28,931,000
Paved Pathways	2.0	Unknown	$496,000
Total	**118.1**		**$29,427,000**

Figure 3-1: Sidewalks and Paved Pathways – Length, Average Age, and Replacement Cost



The Township owns and manages approximately 3,400 regulatory and warning road signs. This quantity was estimated using information from the Township's 2023 retro-reflectivity testing report. The current replacement cost of the Township's regulatory and warning road signs is estimated at approximately $323,000. Since the Township does not currently track the ages of individual road signs, the average age of the Township's regulatory and warning road signs is not reported in this asset management plan. It is worth noting that the estimated quantity of 3,400 regulatory and warning road signs has increased based on the Township's 2024 retro-reflectivity testing report. However, that data is not currently available at the time of writing of this asset management plan. The increased quantity of regulatory and warning road signs will be reflected in the upcoming iteration of this asset management plan.

The Township is currently inventorying and collecting condition data on its non-structural culverts, with the aim of formalizing this process into a regular inspection protocol. As such, there is insufficient information at this time to report the quantity, average age, and replacement cost of the Township's non-structural culverts. Non-structural culverts are often included in the costing of roadways. Similarly, their lifecycle replacement is typically included in the lifecycle planning for the roadways on which they exist. The Township expects the separated replacement cost of its non-structural culverts to be substantial, considering the current high-level estimates of their quantity. Non-structural culverts will be further integrated into future iterations of this asset management plan upon the completion of the aforementioned inventory and data collection process.

3.2 Condition

The Township completes condition assessments of its sidewalks and paved pathways annually, through an external service provider, to ensure compliance with *O. Reg. 239/02: Minimum Maintenance Standards For Municipal Highways* (O. Reg. 239/02). These assessments identify deficiencies and provide condition ratings for each sidewalk segment. Each sidewalk segment is assessed as being in either "Fair" or "Poor" condition. A sidewalk segment is assessed to be in "Poor" condition if four or more surface discontinuities (i.e., trip hazards) exceeding two centimetres in vertical height are identified to be clustered along the segment. All other segments are assessed to be in "Fair" condition.

Based on its 2023 sidewalk assessment report, approximately 84% of the Township's sidewalks (by replacement cost) were assessed to be in "Fair" condition while 15% were assessed to be in "Poor" condition. The condition of 1.0% of the Township's sidewalks (by replacement cost) was not assessed as part of the 2023 sidewalk assessment. All of the Township's paved pathways were assessed to be in "Fair" condition. The replacement cost of the Township's sidewalks and paved pathways by condition state is illustrated in Figure 3-2 and Figure 3-3.

Figure 3-2: Sidewalks and Paved Pathways – Distribution of Assets (Replacement Cost) by Condition State

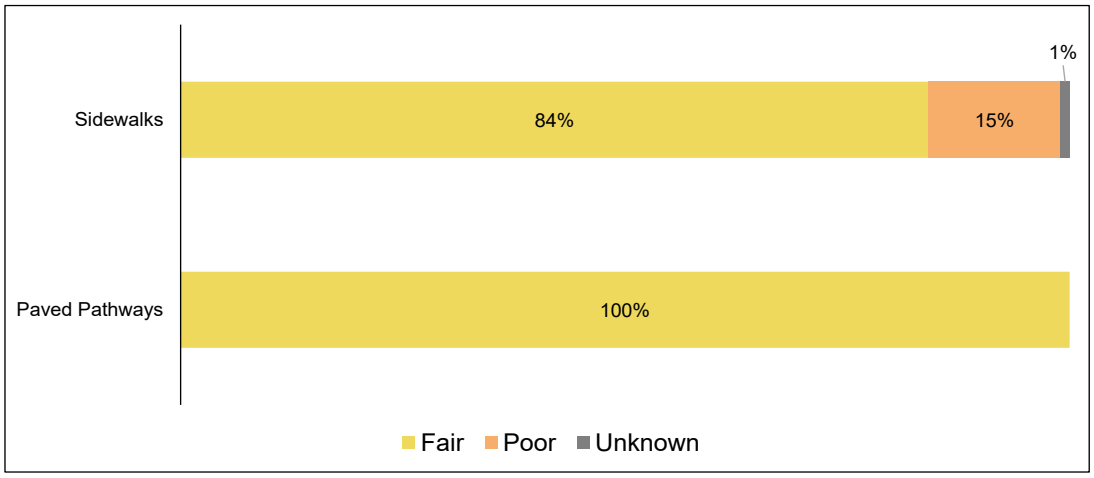
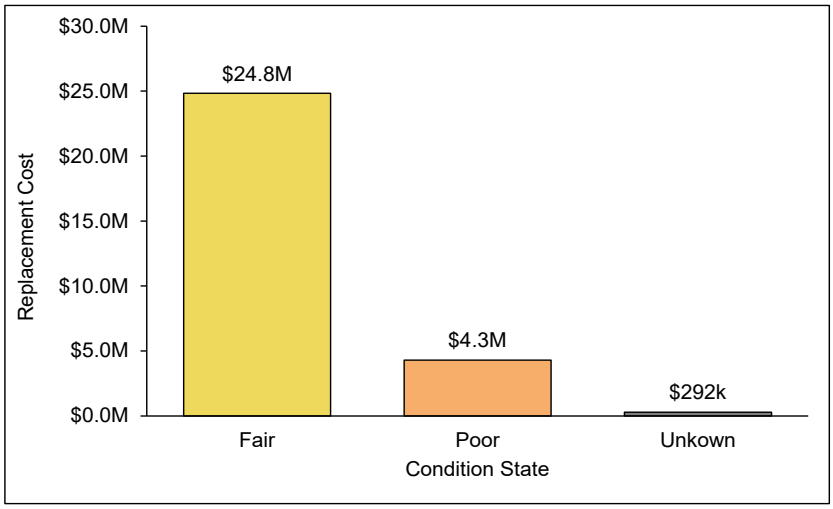


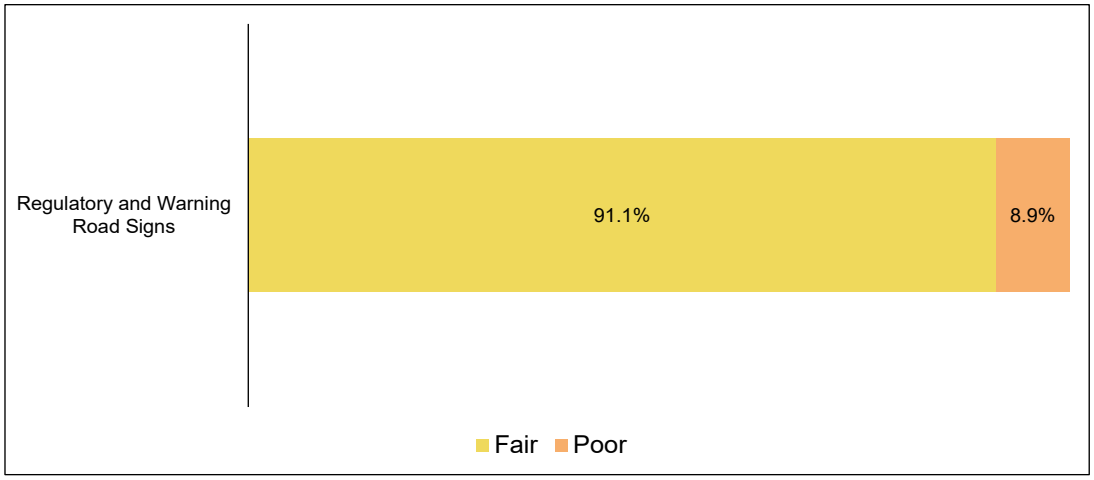
Figure 3-3: Sidewalks and Paved Pathways - Replacement Cost by Condition State



The Township plans to amend the categorization of condition states for its sidewalks and paved pathways in its next sidewalk assessment from the aforementioned two-point scale to a five-point scale. Using this five-point scale, the Township will be able to assess sidewalks and paved pathways as being in “Very Good”, “Good”, “Fair’, “Poor”, or “Very Poor” condition.

The Township assesses the condition of its regulatory and warning road signs annually by conducting retro-reflectivity testing to ensure compliance with O. Reg. 239/02. Any signs that fail retro-reflectivity testing are replaced as soon as possible and generally prior to the completion of the next annual inspection. Signs that are currently in use but have failed the most recent retro-reflectivity testing are assigned a condition state of “Poor”. All other signs are assigned a condition state of “Fair”. Based on the last condition assessment (completed in 2023), approximately 91% of the Township’s regulatory and warning road signs are currently assessed to be in “Fair” condition while 9% are currently assessed to be in “Poor” condition. The replacement cost of the Township’s regulatory and warning road signs by condition state is illustrated in Figure 3-4.

Figure 3-4: Regulatory and Warning Road Signs – Distribution of Assets (Replacement Cost) by Condition State



The Township does not currently have formal condition ratings for its non-structural culverts. The Township will be assessing the condition of its non-structural culverts through the ongoing data collection process (see Section 3.1), with the aim of further integrating non-structural culverts into future iterations of this asset management plan.

3.3 Levels of Service

Table 3-2 provides an index of subsequent tables in this section that present the Community Levels of Service and Technical Levels of Service for the Township's road-related assets.

Table 3-2: Sidewalks and Paved Pathways – Community Levels of Service and Technical Levels of Service Table References

Asset Sub-class	Community Levels of Service Table Reference	Technical Levels of Service Table Reference
Sidewalks and Paved Pathways	Table 3-3	Table 3-4
Regulatory and Warning Road Signs	Table 3-5	Table 3-6
Non-structural Culverts	Table 3-7	Table 3-8

Table 3-3: Sidewalks and Paved Pathways – Community Levels of Service

Service Attribute	Community Levels of Service
Safety	The Township prioritizes the safety of its sidewalks and paved pathways.
Accessibility	The Township strives to ensure that its sidewalks and paved pathways are accessible to all users.
Reliability	The Township strives to maintains its sidewalks and paved pathways in adequate condition to continue performing as intended.

Table 3-4: Sidewalks and Paved Pathways – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Safety	Number of outstanding sidewalk discontinuities, as defined by O. Reg. 239/02 (i.e. trip hazards), compared to the total length of sidewalks and paved pathways.	1.47 per km
	Number of outstanding sidewalk bay replacements compared to the total length of sidewalks and paved pathways.	2.67 per km
	Percentage of sidewalk repairs that met the requirements of O. Reg. 239/02.	100%
Reliability	Percentage of sidewalks and paved pathways (by replacement cost) in “Fair” condition at time of annual inspection.	84.4%

Service Attribute	Technical Levels of Service	Current Performance
	Number of user complaints that resulted in work orders compared to the total length of sidewalks and paved pathways.	17.8 per 100 km

Table 3-5: Regulatory and Warning Road Signs – Community Levels of Service

Service Attribute	Community Levels of Service
Safety	The Township prioritizes the safety of its road users by ensuring that its regulatory and warning road signs are maintained up to adequate standards.

Table 3-6: Regulatory and Warning Road Signs – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Safety	Percentage of regulatory and warning road signs that passed annual retro-reflectivity testing.	85.1%
	Number of regulatory and warning road sign replacements completed compared to the total number of regulatory and warning road signs.	6.1 replacements per 100 signs

Table 3-7: Non-Structural Culverts – Community Levels of Service

Service Attribute	Community Levels of Service
Reliability	The Township strives to maintain its non-structural culverts in adequate condition to continue performing as intended.

Table 3-8: Non-Structural Culverts – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Reliability	Number of work orders related to flushing activities performed on non-structural culverts compared to the total lane kilometers of roadways.	1.67 work orders per 100 lane km
	Number of work orders related to repairs for structural damage performed on non-structural culverts compared to the total lane kilometers of roadways.	2.6 work orders per 100 lane km
	Number of one-off replacements of non-structural culverts compared to the total lane kilometers of roadways.	0.8 replacements per 100 lane km
	Number of user complaints that resulted in work orders compared to the total lane kilometers of roadways.	4.2 complaints per 100 lane km

3.4 Lifecycle Management Strategy

Table 3-9 summarizes the Township's lifecycle management strategy for its sidewalks and paved pathways.

Table 3-9: Sidewalks and Paved Pathways – Lifecycle Management Strategy

Sidewalks and Paved Pathways	
Inspections and Condition Assessments	In addition to the previously mentioned annual condition assessment program (see section 3.2), the Township identifies sidewalk deficiencies by evaluating comments received from the public and through staff observations.
Major Operating Lifecycle Activities	The Township engages in the following maintenance activities to ensure its sidewalks and paved pathways continue to perform as intended: • Marking of deficiencies: identified deficiencies are immediately marked with paint to alert users' attention to the deficiency. • Treatment of minor deficiencies: minor deficiencies include trip hazards, cracks and asphalt repairs, over-vegetation, and pathway obstructions. The Township prioritizes treatment based on assessments of risk. Trip hazards are treated by either grinding down the trip edges or by applying asphalt to bridge the gap.
Major Capital Lifecycle Activities	The Township replaces sidewalks to treat sidewalk bays beyond repair, defects causing ponding of water, and hole defects. The Township replaces individual sidewalk bays on an as-needed basis. Replacements of large sidewalk segments are coordinated with major road construction projects and/or major construction projects for underground infrastructure. In rare instances, the Township may replace large sidewalk segments as a stand-alone project if an upgrade is required to meet Township design standards (e.g. upgrading surface type to concrete).
Prioritization of Short-Term Lifecycle Needs	The Township prioritizes short-term lifecycle needs for its sidewalks and paved pathways based on the type of deficiency as follows:

Sidewalks and Paved Pathways	
	1. Treatment of identified trip hazards (sidewalk discontinuities); 2. Treatment of identified defects causing ponding of water; 3. Treatment of identified cracks and completion of asphalt repairs; and 4. Treatment of other identified deficiencies.
Identification of Growth-Related Lifecycle Needs	Through its Transportation Master Plan, Trails Master Plan, and Active Transportation Strategy, the Township analyzes growth forecasts to determine the need to construct new sidewalks or extend existing sidewalk segments. Direct engagement with residents through public consultations is also conducted as part of the master planning process to understand community requirements.

Table 3-10 summarizes the Township's lifecycle management strategy for its regulatory and warning road signs.

Table 3-10: Regulatory and Warning Road Signs – Lifecycle Management Strategy

Regulatory and Warning Road Signs	
Inspection and Condition Assessments	In addition to the previously mentioned annual retro-reflectivity testing program, the Township identifies damaged or stolen regulatory and warning road signs by evaluating comments received from the public and through staff observations.
Major Operating Lifecycle Activities	Regulatory and warning road signs typically do not require any maintenance as they are replaced on an as-needed basis, as described in the "Major Lifecycle Activities – Capital" section below.
Major Capital Lifecycle Activities	The Township replaces regulatory and warning road signs that are damaged, stolen, or have failed retro-reflectivity testing on an as-needed basis.

Regulatory and Warning Road Signs	
Prioritization of Short-Term Lifecycle Needs	While all signs are replaced within the timeframes prescribed by O. Reg. 239/02, higher priority is given to replacements of stop and change of direction signs.
Identification of Growth-Related Lifecycle Needs	The Township analyzes growth and traffic volume forecasts through its Transportation Master Plan, approved subdivision plans, and future development expectations to identify the need to amend or emplace new regulatory and warning road sings. This approach ensures safe and efficient flow of traffic and ability to implement traffic calming measures.

Table 3-11 summarizes the Township's lifecycle management strategy for its non-structural culverts.

Table 3-11: Non-Structural Culverts – Lifecycle Management Strategy

Non-Structural Culverts	
Inspections and Condition Assessments	In addition to the previously mentioned proposed inspection protocol, the Township regularly evaluates comments received from property owners and staff observations to identify deficiencies in its non-structural culverts.
Major Operating Lifecycle Activities	The Township engages in the following maintenance activities to preserve the service lives of its non-structural culverts: • Flushing to clear blockages. • Repairs to structural damage. • One-off replacements.
Major Capital Lifecycle Activities	The Township replaces multiple non-structural culverts within a road segment in coordination with major road construction projects. By using this approach, the Township aims to align the service lives of its non-structural culverts with that of the road segments on which they exist. This approach also ensures efficient project planning (i.e. well-performing road segments do

Non-Structural Culverts	
	not have to be reconstructed to accommodate non-structural culvert replacements) and reduces the need for repeated labor and equipment mobilization.
Prioritization of Short-Term Lifecycle Needs	The Township prioritizes short-term lifecycle needs for its non-structural culverts by assessing the severity of deficiencies and their impact on property owners. This approach minimizes the impact on service delivery and sustains adequate levels of service.
Identification of Growth-Related Lifecycle Needs	New non-structural culverts may be added as the Township's road network expands through the development process. The Township analyzes development forecasts to identify future lifecycle responsibilities for potential new non-structural culverts. Expansion needs are holistically planned through the Township's Transportation Master Plan.

3.5 Financial Summary and Forecast

Based on the lifecycle activities outlined in the previous section, an estimate of the annual funding requirement and forecast of lifecycle expenditures was developed for the Township's road-related assets.

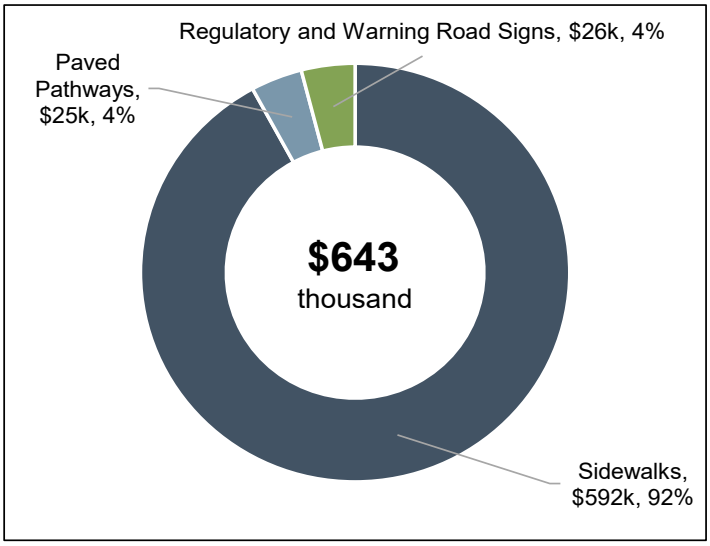
The total average annual lifecycle cost for the Township's road-related assets is estimated to be approximately $643,000. The Township's sidewalks represent the largest share of this average annual lifecycle cost at approximately $592,000, followed by the Township's regulatory and warning road signs at approximately $26,000, and lastly, the Township's paved pathways at approximately $25,000. Although the average annual lifecycle cost for the Township's non-structural culverts is currently unknown, the Township expects it to be substantial based on its current high-level estimates. These average annual lifecycle costs represent the long-term annual funding target for the Township to achieve full lifecycle funding levels for this asset class.

Table 3-12 lists the average annual lifecycle cost for the Township's road-related assets. This information is further illustrated in Figure 3-5.

Table 3-12: Road-related Assets – Average Annual Lifecycle Cost

Asset Sub-Class	Replacement Cost (2024$)	Avg. Annual Lifecycle Cost (2024$)
Sidewalks	$28,931,000	$592,000
Paved Pathways	$496,000	$25,000
Regulatory and Warning Road Signs	$323,000	$26,000
Total	**$29,750,000**	**$643,000**

Figure 3-5: Road-related Assets – Average Annual Lifecycle Cost (2024$)



Based on a review of the Township's approved 2024 budget, the Township allocated $200,000 to fund asset renewal needs for its road-related assets in 2024. This figure includes funding budgeted in 2024 for direct capital costs (through own-source revenues such as taxation and contributions from reserves and through grant funding), budgeted contributions to capital lifecycle reserves for road-related assets, and amounts budgeted to fund debt servicing costs for debentures related to the Township's road-related assets. Based on this information, the annual funding gap for the Township's road-related assets is approximately $443,000. Figure 3-6 compares the 2024 asset renewal budget to the annual funding target for the Township's road-related assets.

Figure 3-6: Road-related Assets: Annual Funding Gap (2024$)

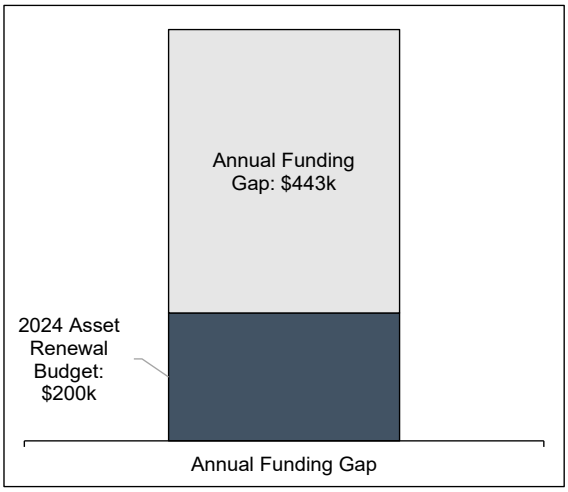
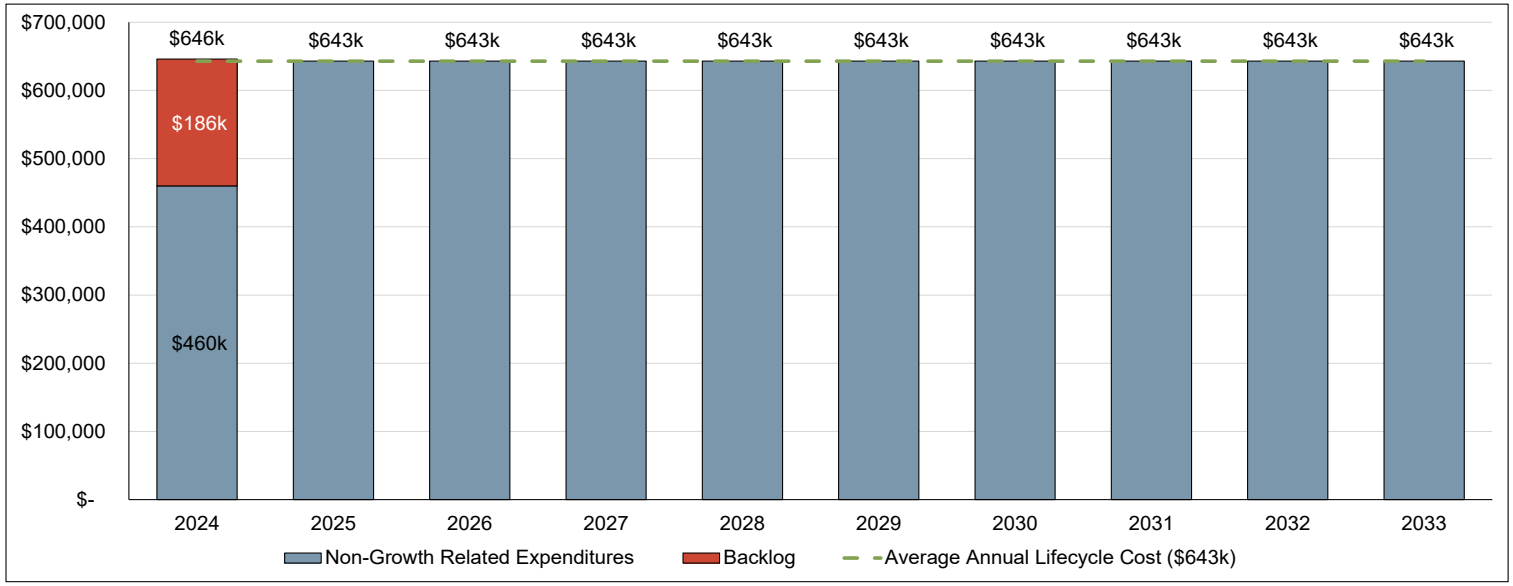


Table 3-13 provides a summary of the 10-year lifecycle expenditure forecast for the Township's road-related assets by asset sub-class and this information is further illustrated in Figure 3-7. This forecast was derived by utilizing an average annual allowance to achieve full lifecycle funding levels for all road-related assets. The lifecycle expenditure requirement for the Township's road-related assets over the next 10 years is forecasted to total approximately $6.4 million. Based on the best information available on the Township's assets, the current backlog for the Township's sidewalks is estimated at approximately $157,000 while the current backlog for the Township's regulatory and warning road signs is estimated at approximately $29,000. This represents the current replacement value of sidewalk panels that have been identified as being due for replacement and regulatory and warning road signs that have failed retro-reflectivity testing but are currently in use. There is currently insufficient information available to develop a financial forecast for the Township's non-structural culverts. Lastly, based on a review of the Township's approved 2024-2033 capital plan, there are no growth-related expenditures forecasted for the Township's road-related assets over the 10-year forecast horizon.

Table 3-13: Road-related Assets – Financial Forecast (2024$)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Sidewalks	$435,000	$592,000	$592,000	$592,000	$592,000	$592,000	$592,000	$592,000	$592,000	$592,000
Paved Pathways	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000
Regulatory and Warning Road Signs	-	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000	$26,000
Backlog	$186,000									
Total Expenditures	**$646,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**	**$643,000**

Figure 3-7: Road-related Assets – Financial Summary (2024$)



Chapter 4
Fleet and Equipment

4. Fleet and Equipment

4.1 State of Local Infrastructure

The Township's inventory of fleet assets comprises plated vehicles ranging from small SUVs and pickup trucks to large dump trucks and fire apparatus such as tankers, pumpers, and rescue vehicles. The Township currently owns a total of 113 fleet assets.

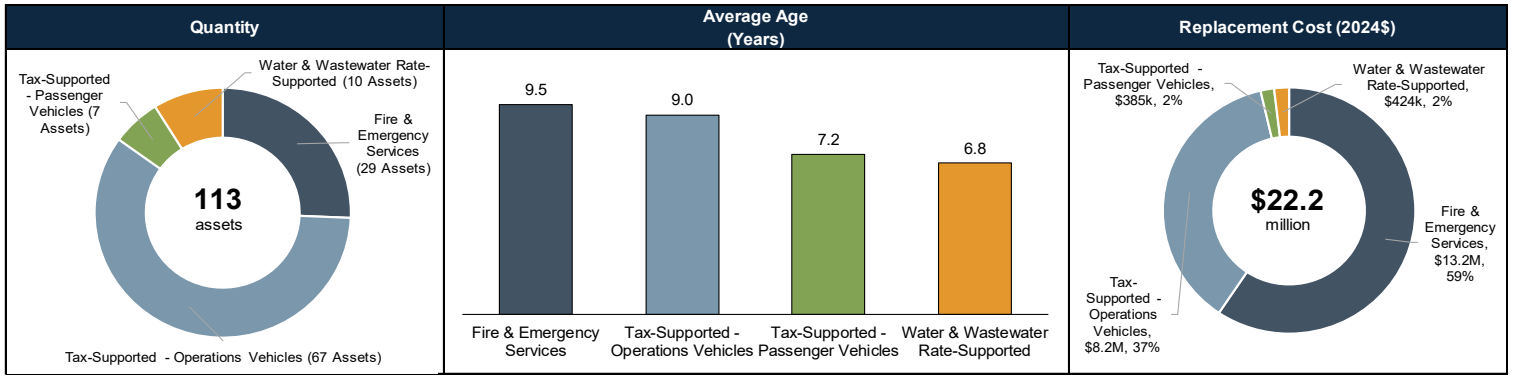
The current replacement cost of the Township's fleet assets is estimated at approximately $22.2 million. Fleet assets utilized by Fire and Emergency Services represent the largest share of total replacement cost at approximately $13.2 million, followed by tax-supported operations vehicles at approximately $8.2 million, water and wastewater rate-supported vehicles at approximately $424,000, and lastly, tax-supported passenger vehicles at approximately $385,000. The average age of all of the Township's fleet assets is approximately 9.2 years.

Table 4-1 summarizes the quantity, average age, and estimated current replacement cost of the Township's fleet assets by department. This information is further illustrated in Figure 4-1.

Table 4-1: Fleet – Quantity, Average Age, and Replacement Cost

Asset Sub-Class	Quantity	Average Age (Years)	Replacement Cost (2024$)
Fire & Emergency Services	29	9.5	$13,202,000
Tax-Supported - Operations Vehicles	67	9.0	$8,221,000
Tax-Supported - Passenger Vehicles	7	7.2	$385,000
Water and Wastewater Rate-Supported Assets	10	6.8	$424,000
Total	**113**	**9.2**	**$22,232,000**

Figure 4-1: Fleet – Quantity, Average Age, and Replacement Cost



The Township's inventory of equipment assets comprises mainly heavy equipment such as graders, tractors, commercial mowers, etc. The inventory also includes several trailers, including a mobile generator trailer, ice re-surfacers, and other non-plated pieces of equipment. The Township currently owns a total of 50 equipment assets.

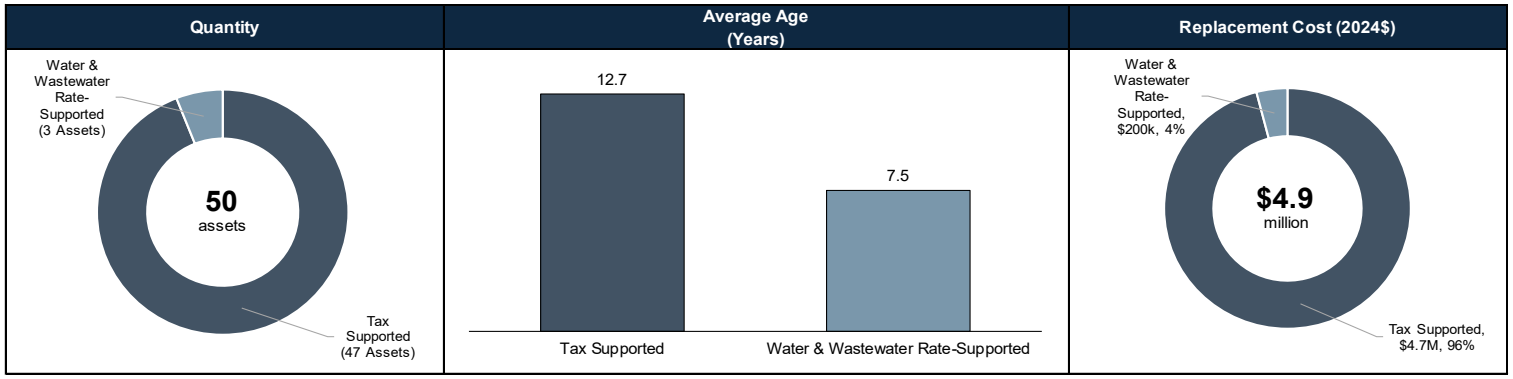
The current replacement cost of the Township equipment assets is estimated at approximately $4.9 million. Tax-supported assets account for approximately $4.7 million of this replacement cost while water and wastewater rate-supported assets account for approximately $200,000. The average age of all of the Township's equipment assets is approximately 12.5 years.

Table 4-2 summarizes the quantity, average age, and estimated current replacement cost of the Township's equipment assets by department. This information is further illustrated in Figure 4-2.

Table 4-2: Equipment – Quantity, Average Age, and Replacement Cost

Asset Sub-Class	Quantity	Average Age (Years)	Replacement Cost (2024$)
Tax-Supported Assets	47	12.7	$4,735,000
Water and Wastewater Rate-Supported Assets	3	7.5	$200,000
Total	**50**	**12.5**	**$4,935,000**

Figure 4-2: Equipment – Quantity, Average Age, and Replacement Cost



4.2 Condition

The condition of the Township's fleet and equipment assets is assessed based on age relative to useful service life (i.e. based on the percentage of useful service life consumed (ULC%)). A brand-new vehicle or piece of equipment would have a ULC% of 0%, indicating that none of the asset's life expectancy has been utilized. On the other hand, a vehicle or piece of equipment that has reached the end of its life expectancy would have a ULC% of 100%. It is possible for vehicles and pieces of equipment to have a ULC% greater than 100%, which occurs if the asset has exceeded its typical life expectancy but continues to be in service. This is not necessarily a cause for concern; however, it must be recognized that assets near or beyond their typical useful service life expectancy are likely to require replacement or rehabilitation in the near term and may have increasing repair and maintenance costs.

To better communicate the condition of vehicles and equipment, ULC% ratings have been segmented into qualitative condition states as summarized in the Table 4-3. The scale is set to show that if assets are replaced at the end of their expected useful service life, they would be in a "Fair" condition state. For assets that remain in service beyond their useful service life (i.e., ULC% > 100), the probability of failure is assumed to have increased to a point where performance would be characterized as "Poor" or "Very Poor".

Table 4-3: Definition of Condition States with Respect to ULC%

Condition State	ULC%
Very Good	0% ≤ ULC% ≤ 45%
Good	45% < ULC% ≤ 90%
Fair	90% < ULC% ≤ 100%
Poor	100% < ULC% ≤ 125%
Very Poor	125% < ULC%

The replacement cost of the Township's fleet assets by condition state is illustrated in Figure 4-3 and Figure 4-4.

Figure 4-3: Fleet – Distribution of Assets (Replacement Cost) by Condition State

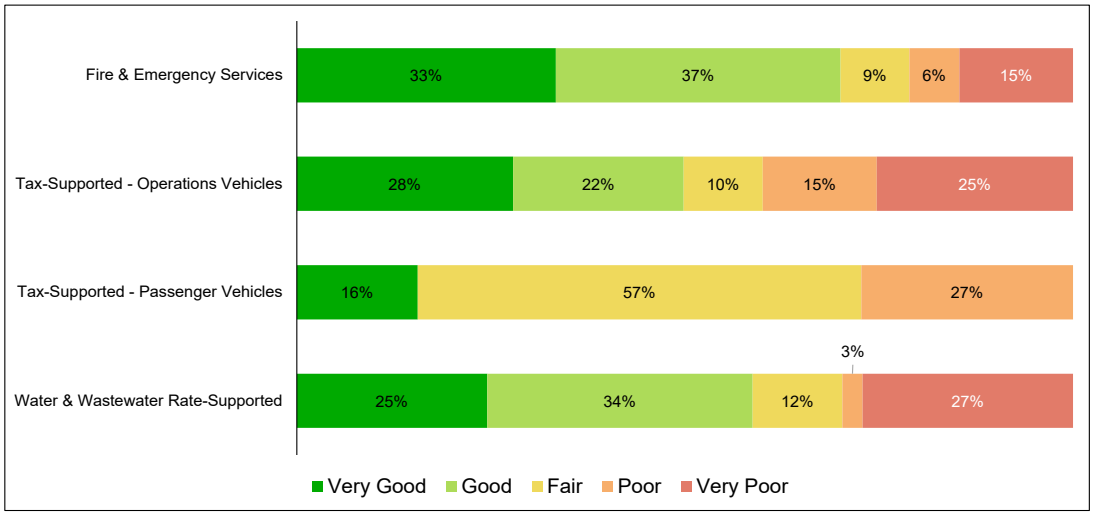


Figure 4-4: Fleet – Replacement Cost by Condition State

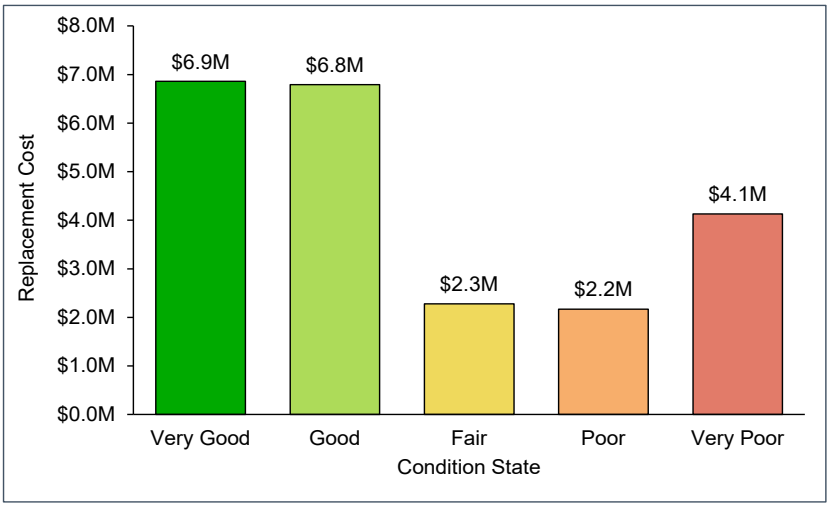
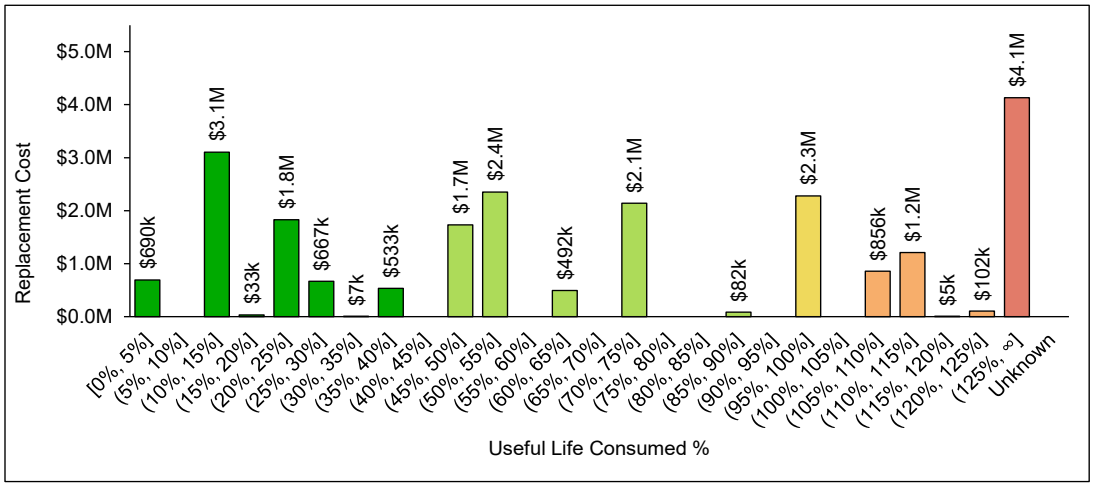


Figure 4-5 illustrates the distribution of fleet assets (by replacement cost) based on ULC%.

Figure 4-5: Fleet – Distribution of Fleet Assets (Replacement Cost) by ULC%



The replacement cost of the Township's equipment assets by condition state is illustrated in Figure 4-6 and Figure 4-7.

Figure 4-6: Equipment – Distribution of Assets (Replacement Cost) by Condition State

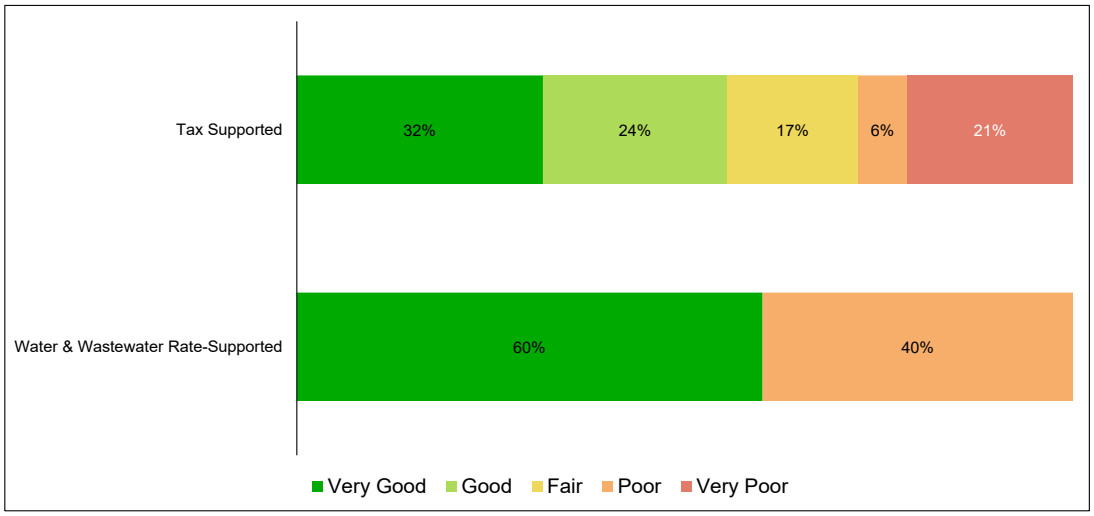


Figure 4-7: Equipment – Replacement Cost by Condition State

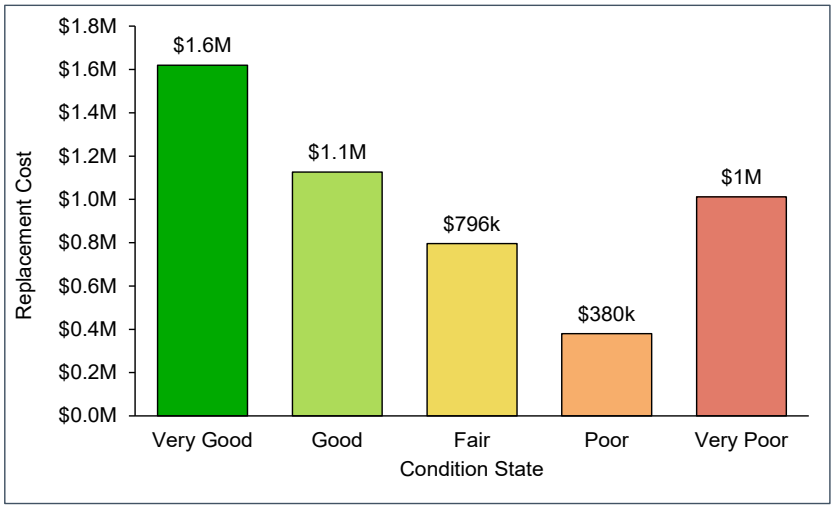
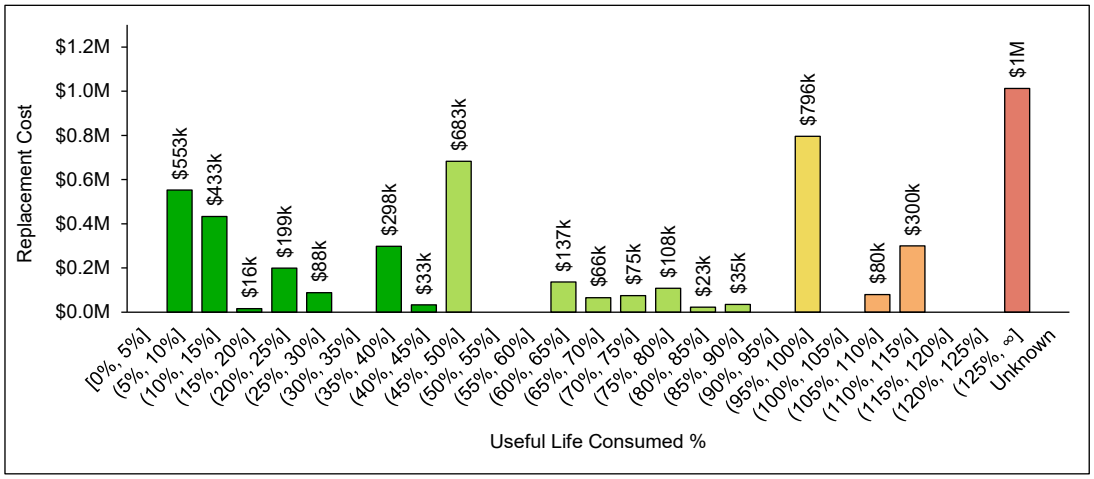


Figure 4-8 illustrates the distribution of equipment assets (by replacement cost) based on ULC%.

Figure 4-8: Equipment – Distribution of Assets (Replacement Cost) by ULC%



4.3 Levels of Service

This section provides an overview of the Township's level of service framework for fleet and equipment. Table 4-4 summarizes the community levels of service and Table 4-5 summarizes the technical levels of service.

Table 4-4: Fleet and Equipment – Community Levels of Service

Service Attribute	Community Levels of Service
Safety	The Township regularly inspects its fleet and equipment assets to ensure they are safe for use.
Reliability	The Township strives to minimize the number and impact of unplanned repair/maintenance activities performed on its fleet and equipment assets.
Capacity	The Township strives to ensure that it has adequate spares (back-ups) for fleet and equipment assets that support critical municipal services in order to mitigate the effects of unplanned events (e.g. extreme weather events, large-scale emergencies, mechanical breakdowns, etc.).
Cost Efficiency	The Township strives to minimize the average annual lifecycle cost of its fleet and equipment assets by ensuring their timely replacement.

Table 4-5: Fleet and Equipment – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Safety	Percentage of automotive fire apparatus that underwent at least one inspection in the calendar year.	100%

Service Attribute	Technical Levels of Service	Current Performance
	Percentage of commercial fleet assets that underwent at least one inspection in the calendar year.	100%
	Percentage of non-automotive fire apparatus that underwent at least one inspection in the calendar year.	100%
	Percentage of non-plated heavy equipment assets that underwent at least one inspection in the calendar year.	100%
Reliability	Replacement cost of fleet assets in use beyond their optimal service life standards compared to the replacement cost of all fleet assets.	28.3%
	Replacement cost of equipment assets in use beyond their optimal service life standards compared to the replacement cost of all equipment assets.	28.2%
Capacity	Ratio of spare dump trucks with plow attachments to the total number of dump trucks with plow attachments.	0:12
	Ratio of spare fire apparatus to the total number of fire apparatus.	1:14
Cost Efficiency	Annual funding allocated[1] for the replacement of fleet and equipment assets compared to the total replacement cost of fleet and equipment assets.	3.7%

[1] Annual funding allocation includes budgeted amounts for funding rehabilitation and replacement of fleet or equipment assets, and comprises own-source revenues, transfer payment revenues (e.g. CCBF, OMPF, OCIF), and debt servicing costs. Own-source revenues include direct capital funding and contribution to fleet or equipment capital reserves.

4.4 Lifecycle Management Strategy

Table 4-6 summarizes the Township's lifecycle management strategy for its fleet and equipment assets.

Table 4-6: Fleet and Equipment – Lifecycle Management Strategy

Fleet and Equipment	

Inspections and Condition Assessments	The Township has a number of inspection programs for its fleet and equipment assets as follows:
	• Fire Services
	  ○ Fire apparatus: inspected annually as part of certification requirements. Inspections are completed by an Emergency Vehicle Technician and include testing of components such as vehicle transmissions, engines, differentials, suspensions, frames, etc.
	  ○ Pumps: inspected annually in accordance with guidance provided by the National Fire Protection Association (N.F.P.A.).
	  ○ Aerial devices: non-destructive x-ray testing is conducted every 5 years.
	  ○ Non-commercial vehicles: inspected at least three times a year by a Class A mechanic as part of their regular servicing.
	• Public Works
	  ○ Heavy-duty vehicles: inspected annually.
	  ○ Light-duty vehicles: inspected regularly by Township mechanics.
	  ○ Non-plated heavy equipment: circle-checks conducted by Township operators prior to use, which include inspecting cutting edges, sweeper brushes, and checking tire health

Fleet and Equipment	
Major Operating Lifecycle Activities	The Township conducts regular servicing, on-going maintenance, and as-needed repairs on its fleet and equipment assets to preserve their service life. Preventative maintenance, such as periodic power-washing and undercoating, is performed on critical fleet assets to reduce the frequency of unplanned repairs and their impacts on service delivery. The following are examples of major maintenance activities the Township engages in to ensure its fleet and equipment assets continue to perform as intended: • Timely replacement of cutting edges on graders, snowplows, mowers, etc. Continued use of damaged cutting edges can cause significant damage to the equipment to which the cutting edge is attached. • Timely replacement of gradall buckets due to worn or damaged cutting edge(s). • Timely replacement of worn sweeper brushes. • Timely replacement of worn tires. The Township has recently developed a Fleet Service Request form to be integrated into the work order module of its enterprise asset management software to allow for more efficient management and tracking of maintenance activities
Major Capital Lifecycle Activities	The Township replaces fleet and equipment assets that have reached the end of their service lives, are unable to meet annual certification requirements, or have uneconomical repair costs. The Township may also refurbish older fleet assets to extend their service lives, although this is becoming increasingly uncommon due to enhanced maintenance programs and higher quality materials being used in manufacturing processes. As part of on-going efforts to minimize overall lifecycle costs, the Township ensures that warranty coverage is also purchased when replacing fire apparatus. Warranty typically covers annual certifications, Class A service, fire pump and ground ladder

Fleet and Equipment	
	testing, power washing, undercoating, and repairs not related to regular maintenance and regular wear-and-tear.
Prioritization of Short-Term Lifecycle Needs	Highest priority is given to repairing breakdowns of critical fleet assets, such as fire apparatus and snowplows, to minimize impact on public safety. Other lifecycle activities are prioritized by measuring impacts on service delivery of affected assets.
Identification of Growth-Related Lifecycle Needs	**Fire Services:** through its Fire Master Plan, the Township assesses the need to upgrade existing or purchase additional Fire Service fleet and equipment assets. The Township also relies on the Fire Underwriters Survey and evolving N.F.P.A. standards to provide recommendations on upgrades to fire apparatus based on size of community and changing nature of structure fires. In recent years, growth-related needs have been addressed by upgrading assets at the time of replacement rather than increasing asset quantities. **Public Works:** the Township analyzes key performance metrics, such as number of plows compared to the total lane kilometers of roadways, to determine the need for additional Public Works fleet or equipment assets

4.5 Financial Summary and Forecast

Based on the lifecycle activities outlined in the previous section, an estimate of the annual funding requirement and forecast of lifecycle expenditures was developed for the Township's fleet and equipment assets.

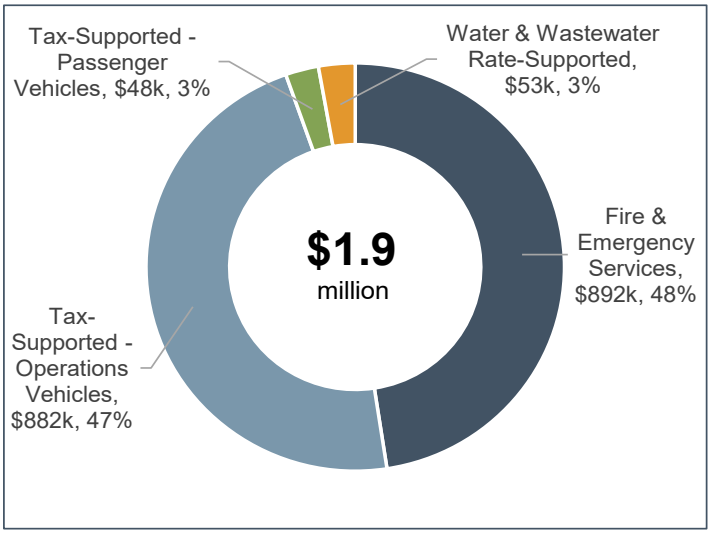
Average annual lifecycle cost for the Township's fleet assets is estimated to be approximately $1.9 million. Assets utilized by Fire and Emergency Services represent the largest share of this average annual lifecycle cost at approximately $892,000, followed by tax-supported operations vehicles at approximately $882,000, water and wastewater rate-supported vehicles at approximately $53,000, and lastly, tax-supported passenger vehicles at approximately $48,000. This average annual lifecycle cost

represents the long-term funding target for the Township to achieve full lifecycle funding levels for its fleet assets. Table 4-7 lists the average annual lifecycle cost for the Township's fleet by classification. This information is further illustrated in Figure 4-9.

Table 4-7: Fleet – Average Annual Lifecycle Cost (2024$)

Asset Sub-Class	Replacement Cost (2024$)	Average Annual Lifecycle Cost (2024$)
Fire & Emergency Services	$13,202,000	$892,000
Tax-Supported - Operations Vehicles	$8,221,000	$882,000
Tax-Supported - Passenger Vehicles	$385,000	$48,000
Water and Wastewater Rate-Supported Assets	$424,000	$53,000
Total	**$22,232,000**	**$1,875,000**

Figure 4-9: Fleet – Average Annual Lifecycle Cost (2024$)



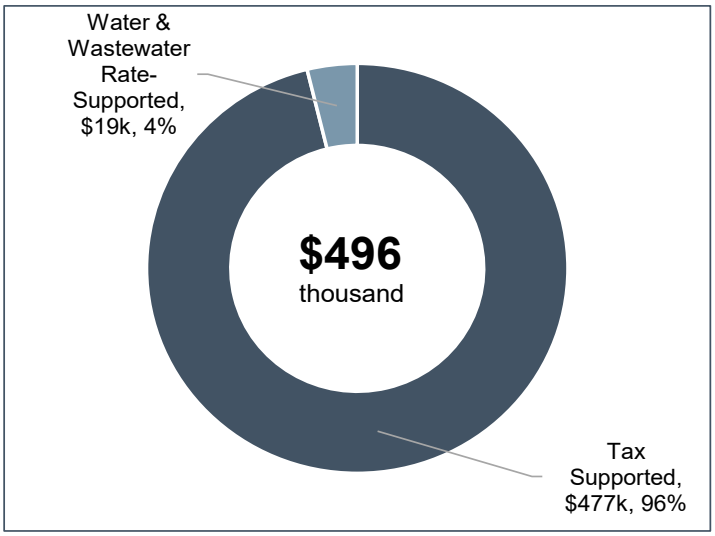
Average annual lifecycle cost for the Township's equipment assets is estimated to be approximately $496,000. Tax-supported assets represent the largest share of this average annual lifecycle cost at approximately $477,000 while water and wastewater

rate-supported assets represent approximately $19,000. This average annual lifecycle cost represents the long-term funding target for the Township to achieve full lifecycle funding levels for its equipment assets. Table 4-8 lists the average annual lifecycle cost for the Township's fleet by classification. This information is further illustrated in Figure 4-10.

Table 4-8: Equipment – Average Annual Lifecycle Cost (2024$)

Asset Sub-Class	Replacement Cost (2024$)	Average Annual Lifecycle Cost (2024$)
Tax Supported Assets	$4,735,000	$477,000
Water and Wastewater Rate Supported Assets	$200,000	$19,000
Total	**$4,935,000**	**$496,000**

Figure 4-10: Equipment – Average Annual Lifecycle Cost (2024$)



Based on a review of the Township's approved 2024 budget, the Township allocated approximately $1 million to fund asset renewal needs for its fleet and equipment assets in 2024. This figure includes funding budgeted in 2024 for direct capital costs (through own-source revenues such as taxation and contributions from reserves and through grant funding), budgeted contributions to capital lifecycle reserves for fleet and

equipment assets, and amounts budgeted to fund debt servicing costs for debentures related to the Township's fleet and equipment assets. Based on information, the annual funding gap for the Township's fleet and equipment assets is approximately $1.4 million. Figure 4-11 compares the 2024 asset renewal budget to the annual funding target for the Township's fleet and equipment assets.

Figure 4-11: Fleet and Equipment – Annual Funding Gap (2024$)

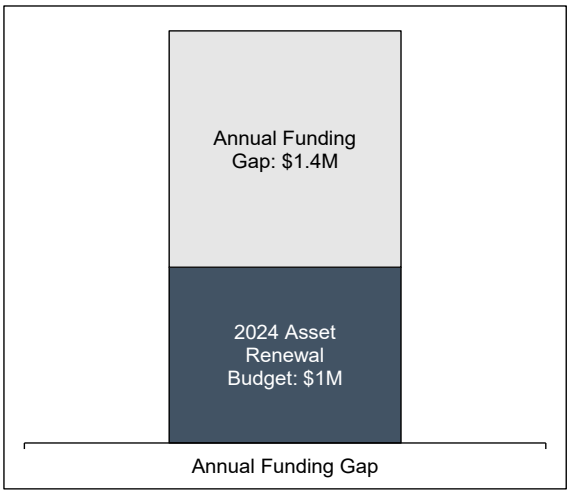


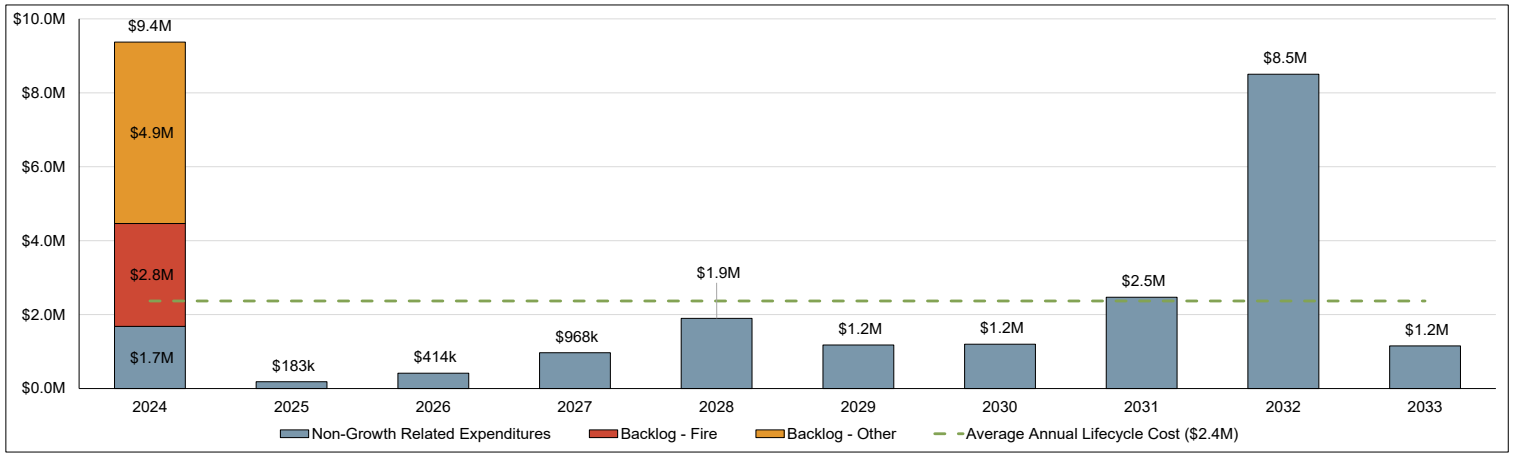
Table 4-9 provides a summary of the 10-year lifecycle expenditure forecast for the Township's fleet and equipment assets this information is further illustrated in Figure 6-7. This forecast was derived by conducting age-based lifecycle modelling for all fleet and equipment assets. Based on this forecast, the non-growth related lifecycle expenditure requirement for the Township's fleet and equipment assets over the next 10 years is expected to total approximately $27.3 million. Based on the best information available on the Township's assets, the current backlog for the Township's fleet and equipment assets is estimated at approximately $7.7 million. This represents the current replacement value of all fleet and equipment assets that are in use beyond their expected useful service lives. It is worth noting that approximately $1.8 million of this backlog has already been addressed by the Township through purchases made through 2022 to 2024. These assets are currently being included in the calculation of the backlog as the Township is awaiting delivery of the newly purchased assets and the soon-to-be-replaced assets are currently still in service. Lastly, based on a review of the Township's approved 2024-2033 capital plan, the growth-related lifecycle

expenditure requirement for the Township's fleet and equipment assets over the next 10 years is expected to total approximately $3.7 million.

Table 4-9: Fleet and Equipment – Financial Forecast (2024$)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Non-Growth Related Expenditures										
Fleet	$885,000	$82,000	$339,000	$492,000	$1,800,000	$1,040,000	$978,000	$2,074,000	$7,147,000	$241,000
Equipment	$796,000	$101,000	$75,000	$476,000	$100,000	$138,000	$221,000	$396,000	$1,355,000	$911,000
Backlog – Fire	$2,785,000									
Backlog – Other	$4,908,000									
Growth-Related Expenditures										
Growth-Related Expenditures	-	-	$440,000	$1,620,000	$260,000	$1,391,000	-	-	-	-
Total Expenditures	**$9,374,000**	**$183,000**	**$854,000**	**$2,588,000**	**$2,160,000**	**$2,568,000**	**$1,199,000**	**$2,470,000**	**$8,502,000**	**$1,152,000**

Figure 4-12: Fleet and Equipment – Financial Summary (2024$)



Chapter 5
Facilities

5. Facilities

5.1 State of Local Infrastructure

The Township owns 33 facilities (excluding water and wastewater facilities) that support the delivery of various municipal services. These facilities range from smaller buildings such as picnic shelters and washrooms to larger buildings such as community halls, recreation centres, arenas, and the King Township Municipal Centre.

The Township classifies its facilities as Recreation Facilities, Municipal Facilities, and Libraries. Recreation Facilities are defined as comprising community centres, arenas, community halls, the King City Senior Centre, and the Cold Creek Conservation Area buildings. Municipal facilities are defined as comprising all administrative, operational, and heritage buildings. Libraries comprise the Ansnorveldt Library, the King Library and Senior Centre, the Nobleton Library, and the Schomberg Library.

The Township plans to demolish the existing King City Lions Arena within the term of the 10-year forecast horizon. As such, the King City Lions Arena has not been included in any of the analyses and forecasts presented in this chapter. It has also been excluded from the calculation of the annual lifecycle funding target presented in Section 5.5 to ensure that the Township does not over-fund this asset class.

The current replacement cost of Township's facilities is estimated at approximately $216.8 million. Municipal Facilities represent the largest share of replacement cost at approximately $99.1 million, followed Recreation Facilities at approximately $73 million, and lastly, Libraries at approximately $44.6 million. The average age of all of the Township's facilities is approximately 36.4 years.

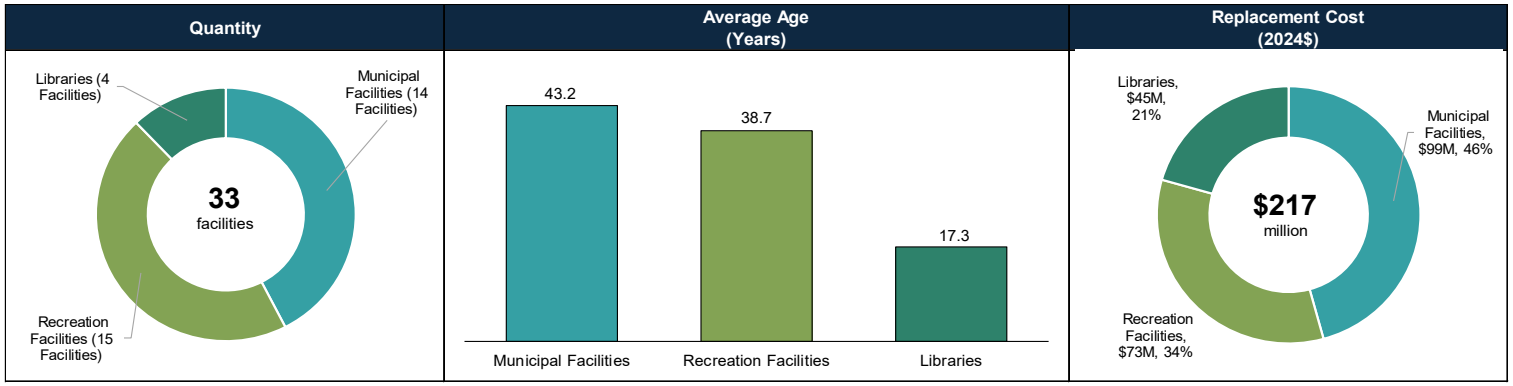
Table 5-1 provides the classification, type, age, and replacement cost of each facility. This information is further illustrated in Figure 5-1.

Table 5-1: Facilities – Classification, Type, Age, and Replacement Cost

Name	Classification	Type	Age	Replacement Cost (2024$)
Firehouse 34 – King City	Municipal Facilities	Fire Hall	24	$6,472,000
Firehouse 36 – Schomberg	Municipal Facilities	Fire Hall	38	$7,910,000
Firehouse 38 – Nobleton	Municipal Facilities	Fire Hall	28	$3,540,000
King City Lions Arena Lions Barn	Municipal Facilities	Other	52	$88,000
King Heritage & Cultural Centre - Laksay Hall	Municipal Facilities	Heritage & Culture	165	$1,549,000
King Heritage & Cultural Centre - Museum	Municipal Facilities	Heritage & Culture	64	$7,458,000
King Heritage Church	Municipal Facilities	Heritage & Culture	173	$696,000
King Heritage Train Station	Municipal Facilities	Heritage & Culture	172	$813,000
King Township Municipal Centre	Municipal Facilities	Operational Facility	6	$35,625,000
Public Works Barn	Municipal Facilities	Operational Facility	40	$1,050,000
Public Works Garage	Municipal Facilities	Operational Facility	62	$6,919,000
Public Works Salt Shed	Municipal Facilities	Operational Facility	32	$4,350,000
Schomberg Community Barn	Municipal Facilities	Other	39	$750,000
Schomberg Parks Depot	Municipal Facilities	Operational Facility	65	$21,920,000
Cold Creek Conservation Area - Visitor Centre	Recreation Facilities	Conservation Site	62	$909,000
Cold Creek Conservation Area Barn	Recreation Facilities	Conservation Site	176	$1,848,000
Cold Creek Conservation Area Well House	Recreation Facilities	Conservation Site	17	$35,000
Cold Creek Education Centre	Recreation Facilities	Conservation Site	62	$1,688,000
Memorial Park Tennis Club	Recreation Facilities	Club House	36	$543,000
Memorial Park Washrooms and Picnic Shelter	Recreation Facilities	Washroom/Picnic Shelter	6	$1,120,000
Nobleton Arena and EMS	Recreation Facilities	Recreation Centre	47	$25,125,000
Nobleton Community Hall	Recreation Facilities	Community Hall	89	$3,500,000
Nobleton Picnic Shelter and Washrooms	Recreation Facilities	Washroom/Picnic Shelter	7	$972,000
Nobleton Pool House	Recreation Facilities	Other	54	$2,538,000

Name	Classification	Type	Age	Replacement Cost (2024$)
Nobleton Tennis Building	Recreation Facilities	Club House	2	$1,046,000
Old King Senior Centre	Recreation Facilities	Other	36	$1,126,000
Pottageville Pavilion	Recreation Facilities	Community Hall	35	$1,624,000
Schomberg Community Hall	Recreation Facilities	Community Hall	117	$2,608,000
Trisan Centre & EMS	Recreation Facilities	Recreation Centre	13	$28,308,000
Ansnorveldt Library	Libraries	Library	34	$2,350,000
King Library & Senior Centre	Libraries	Library	3	$29,610,000
Nobleton Library	Libraries	Library	37	$7,050,000
Schomberg Library	Libraries	Library	46	$5,628,000
Total			**36.4**	**$216,768,000**

Figure 5-1: Facilities – Quantity, Average Age, and Replacement Cost



5.2 Condition

The Township assesses the condition of its facilities through BCAs completed by an external service provider. The BCAs identify repair, maintenance, rehabilitation, and replacement requirements for Township facilities at a component level over a 10-year forecast horizon. To reduce the potential for downtime and to ensure that facility components are reaching their expected service lives, the Township also identifies preventative maintenance needs as part of the BCAs.

As part of the BCAs, individual facility components are inspected and the assessors assign a remaining useful life to each component based on the observed condition. Facility Condition Index (FCI) ratings are also calculated to provide an overall measure of each facility's condition. FCI ratings are calculated by forecasting the repair, maintenance, rehabilitation, and replacement requirements for each building over a 10-year forecast horizon and expressing the sum of forecasted requirements as a percentage of the replacement cost of the facility.

To better communicate the condition of facilities, the BCAs convert FCI% ratings into qualitative condition states as summarized in Table 5-2. The scale is set to show that if the sum of forecasted capital requirements over a 10-year forecast horizon for a given facility is lower than 5% of the building's current replacement value, the facility would be deemed to be in a "Good" condition state. Consequently, if the sum of forecasted capital requirements over a 10-year forecast horizon for a given facility is higher than 30% of the building's current replacement value, the facility would be deemed to be in a "Critical" condition state. The Township should ensure that facility components are repaired, rehabilitated, and/or replaced in a timely manner to ensure that they continue performing as intended and to reduce the potential for component failures.

Table 5-2: Facilities – Definition of Condition States with Respect to FCI

Condition State	FCI
Good	0% ≤ FCI% < 5%
Fair	5% ≤ FCI% < 10%
Poor	10% ≤ FCI% ≤ 30%
Critical	30% ≤ FCI%

At the time of writing of this asset management plan, the Township is in the process of completing BCAs on its facilities. Some of the preliminary assessments conducted as part of the BCAs are used in this section to determine condition ratings for Township facilities. The Township plans to update BCAs for all of its facilities every 5 years to align with the updates to its long-term capital plans for facilities.

The 10-year cumulative FCI for all Township facilities is 5.9% and translates to an overall condition state of "Fair". The 10-year cumulative FCI% for the Township's Municipal Facilities is 5.0%, which translates to an overall condition state of "Fair". Similarly, the 10-year cumulative FCI% for the Township's Recreation Facilities is 9.1%, which also translates to an overall condition state of "Fair". Lastly, the 10-year cumulative FCI% for the Township's Libraries is 2.9%, which translates to an overall condition state of "Good".

Table 5-3 lists the 10-Year Cumulative FCI% and condition state for each of the Township's facilities. Figure 5-2 illustrates the distribution of facility replacement costs by condition state and Figure 5-3 illustrates the distribution of facility replacement costs by FCI%.

Table 5-3: Facilities – 10-Year Cumulative FCI and Condition States

Name	Classification	10-Year Cumulative FCI%	10-Year Cumulative Condition State
Firehouse 34 – King City	Municipal Facilities	10.8%	Poor
Firehouse 36 – Schomberg	Municipal Facilities	6.0%	Fair
Firehouse 38 – Nobleton	Municipal Facilities	14.8%	Poor
King City Lions Arena Lions Barn	Municipal Facilities	17.0%	Poor
King Heritage & Cultural Centre - Laksay Hall	Municipal Facilities	1.4%	Good
King Heritage & Cultural Centre - Museum	Municipal Facilities	2.7%	Good

Name	Classification	10-Year Cumulative FCI%	10-Year Cumulative Condition State
King Heritage Church	Municipal Facilities	N/A	N/A
King Heritage Train Station	Municipal Facilities	N/A	N/A
King Township Municipal Centre	Municipal Facilities	1.2%	Good
Public Works Barn	Municipal Facilities	1.0%	Good
Public Works Garage	Municipal Facilities	9.9%	Fair
Public Works Salt Shed	Municipal Facilities	2.0%	Good
Schomberg Community Barn	Municipal Facilities	8.8%	Fair
Schomberg Parks Depot	Municipal Facilities	8.0%	Fair
Cold Creek Conservation Area - Visitor Centre	Recreation Facilities	8.3%	Fair
Cold Creek Conservation Area Barn	Recreation Facilities	0.8%	Good
Cold Creek Conservation Area Well House	Recreation Facilities	42.9%	Critical
Cold Creek Education Centre	Recreation Facilities	8.7%	Fair
Memorial Park Tennis Club	Recreation Facilities	10.9%	Poor
Memorial Park Washrooms and Picnic Shelter	Recreation Facilities	0.4%	Good
Nobleton Arena and EMS	Recreation Facilities	10.2%	Poor
Nobleton Community Hall	Recreation Facilities	12.1%	Poor
Nobleton Picnic Shelter and Washrooms	Recreation Facilities	0.4%	Good
Nobleton Pool House	Recreation Facilities	4.2%	Good
Nobleton Tennis Building	Recreation Facilities	0.4%	Good
Old King Senior Centre	Recreation Facilities	22.3%	Poor
Pottageville Pavilion	Recreation Facilities	0.5%	Good
Schomberg Community Hall	Recreation Facilities	5.9%	Fair
Trisan Centre & EMS	Recreation Facilities	9.9%	Fair
Ansnorveldt Library	Libraries	12.6%	Poor
King Library & Senior Centre	Libraries	1.3%	Good
Nobleton Library	Libraries	7.8%	Fair
Schomberg Library	Libraries	1.0%	Good
Total		**5.9%**	**Fair**

Figure 5-2: Facilities – Replacement Cost by Condition State

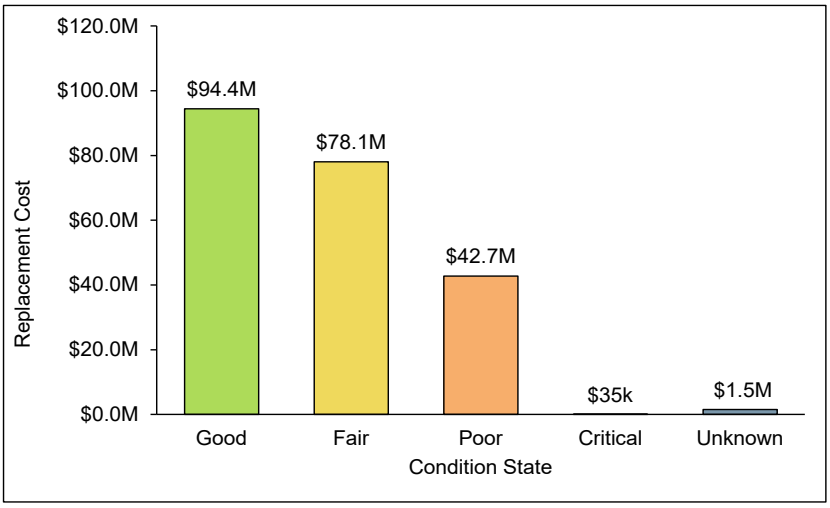
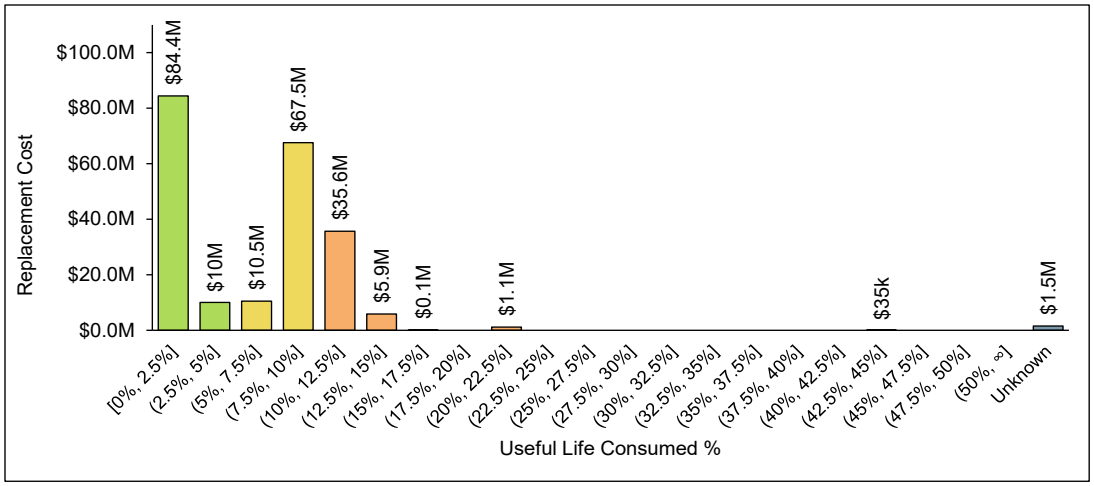


Figure 5-3: Distribution of Facilities (Replacement Cost) by FCI%



5.3 Levels of Service

This section provides an overview of the Township's level of service framework for facilities. Table 5-4 summarizes the community levels of service and Table 5-5 summarizes the technical levels of service.

Table 5-4: Facilities – Community Levels of Service

Service Attribute	Community Levels of Service
Accessibility	The Township strives to ensure that its facilities are accessible to all users.
Availability	The Township strives to ensure that its facilities are dependably available for use.
Capacity	The Township strives to align the capacity of its facilities with the service demands of the community.
Safety	The Township prioritizes the safety of all users of its facilities.
Quality	The Township strives to maintain its facilities in adequate condition to continue performing as intended.
Environmental Sustainability	The Township strives to minimize the environmental impact of its facilities.
Cost Efficiency	The Township strives to minimize the average annual lifecycle cost of its facilities by ensuring timely completion of repair, maintenance, rehabilitation, and replacement activities.
Operational Efficiency	The Township strives to maintain adequate staffing levels to sustain the efficient operation of its facilities.

Table 5-5: Facilities – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Accessibility	Percentage of public access facilities that meet the requirements of the *Accessibility for Ontarians with Disabilities Act, 2005.*	68%

Service Attribute	Technical Levels of Service	Current Performance
Availability	Number of shutdowns of recreation facilities, or portions within, due to unplanned repair, maintenance, rehabilitation, or replacement activities compared to the gross floor area of recreational facilities.	1.3 shutdowns per 100,000 sq. ft. of recreation facility space
	Number of shutdowns of municipal facilities, or portions within, due to unplanned repair, maintenance, rehabilitation, or replacement activities compared to the gross floor area of municipal facilities.	0.678 shutdowns per 100,000 sq. ft. of municipal facility space
Safety	Percentage of staffed facilities that undergo monthly health and safety inspections.	100%
Quality	Total cost of repair, maintenance, rehabilitation, and replacement requirements for all facilities forecasted over the next 10-years as a percentage of the total current replacement cost of all facilities.	5.9%
	Facilities with Facility Condition Index ratings above 30% as a ratio of the total number facilities.	1:33
Environmental Sustainability	Kilowatt-hours (kWh) of electricity consumed per square feet for facilities with access to electricity.	15 kWh per sq. ft.
	Cubic meters (m^3) of natural gas consumed per square feet for facilities with access to natural gas.	0.92 m^3 per sq. ft.
	Cubic metres (m^3) of water consumed per square feet for facilities with access to municipal water.	0.12 m^3 per sq. ft.

Service Attribute	Technical Levels of Service	Current Performance
	Ratio of electric vehicle charging ports available for public use to the total number of facilities.	10:33
Cost Efficiency	Annual funding allocated for the repair and maintenance of facilities compared to the total replacement cost of all facilities.	0.54%
Operational Efficiency	Number of full-time equivalents of operational staff[1] for recreation facilities compared to the total number of recreation facilities.	0.6 FTEs per recreation facility
	Number of full-time equivalents of operational staff for municipal facilities compared to the total number of municipal facilities.	0.21 FTEs per municipal facility

5.4 Lifecycle Management Strategy

Table 5-6 summarizes the Township's lifecycle management strategy for its facilities.

Table 5-6: Facilities – Lifecycle Management Strategy

Facilities	
Inspections and Condition Assessments	As required by the Occupational Health and Safety Act, staffed Township facilities undergo monthly health and safety inspections performed by Township staff. Pools open for public access undergo additional health and safety inspections performed by a York Region Public Health Inspector. Lastly, Township staff perform on-going inspections as part of their daily activities to identify health and safety concerns and immediate maintenance requirements.

[1] Operational staff is defined as the staffing complement directly involved in the day-to-day operations and on-going maintenance of Township facilities. This does not include staff responsible for administrative duties, oversight, and management.

Facilities	
	The Township has a number of on-going preventative maintenance programs in place with external vendors for critical equipment assets within its facilities (e.g. refrigeration plants, electrical systems, elevators, safety systems, filtration systems, etc.). Routine inspections on critical equipment assets are performed as part of these preventative maintenance programs. In addition to its inspection and condition assessment programs, the Township evaluates comments received from its facilities' users to identify maintenance, rehabilitation, and replacement requirements.
Major Operating Lifecycle Activities	The Township conducts on-going maintenance and as-needed repairs to its facilities, and the equipment assets within, to sustain adequate levels of service and reduce the potential for facility closures. Minor equipment assets (e.g. floor scrubbers/cleaning machines) are replaced as required to prevent service interruptions. The Township completes preventative maintenance on minor equipment assets in-house while preventative maintenance on major/specialized equipment assets is performed by external vendors. Township staff have indicated that maintenance of facility components other than equipment is performed on a reactive basis and have identified the need to develop long-term maintenance programs to reduce overall lifecycle costs.
Major Capital Lifecycle Activities	Township staff annually review and revise forecasts of lifecycle activities provided through the BCAs to identify rehabilitation and replacement needs for its facilities and the equipment assets within. Rehabilitation and replacement projects are undertaken to address facility components and equipment assets that have reached the end of their service lives, are not

Facilities	
	performing as originally intended, and/or have uneconomical maintenance and repair costs.
Prioritization of Short-Term Lifecycle Needs	The Township is currently developing a matrix to prioritize lifecycle activities for its facilities and ensure that needs are prioritized based on an assessment of criticality in budget constrained scenarios.
Identification of Growth-Related Lifecycle Needs	Through its Facilities Master Plan, the Township analyzes growth forecasts and shifts in demographics to determine whether current capacity can support the projected service demands of the community. Direct engagement with residents through public surveys is also conducted to ensure that internal priorities align with residents' expectations.

5.5 Financial Summary and Forecast

To develop an estimate of the annual funding requirement and forecast of capital and significant operating expenditures for Township facilities, an annual reinvestment rate of 2.1% was applied to the replacement cost of each facility. This annual reinvestment rate represents the mid-point of the annual reinvestment rate target range (1.7% - 2.5%) presented in the *2016 Canadian Infrastructure Report Card* and aims to ensure that sufficient funds are allocated annually to fund annual capital requirements and allow for the building up of lifecycle reserves. Future iterations of this asset management plan will utilize the component level forecasts developed through the BCAs, which are in development at the time of writing of this AMP, to inform the annual funding requirement and forecast of capital and significant operating expenditures for Township facilities.

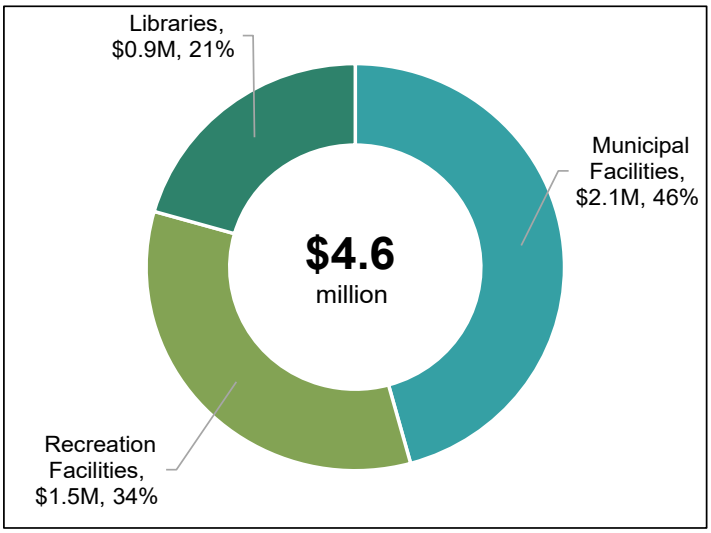
Average annual lifecycle cost for the Township's facilities is estimated to be approximately $4.6 million. The Township's Municipal Facilities represent the largest share of this average annual lifecycle cost at approximately $2.1 million, followed by Recreation Facilities at approximately $1.5 million, and lastly, Libraries at approximately $937,000. This average annual lifecycle cost represents the long-term funding target for the Township to achieve full lifecycle funding levels for its facilities. Table 5-7 lists the

average annual lifecycle cost for the Township's facilities assets by asset sub-class. This information is further illustrated in Figure 5-4.

Table 5-7: Facilities – Average Annual Lifecycle Cost

Asset Sub-class	Replacement Cost (2024$)	Average Annual Lifecycle Cost (2024$)
Municipal Facilities	$99,140,000	$2,082,000
Recreation Facilities	$72,990,000	$1,533,000
Libraries	$44,638,000	$937,000
Total	**$216,768,000**	**$4,552,000**

Figure 5-4: Facilities – Average Annual Lifecycle Cost



Based on a review of the Township's approved 2024 budget, the Township allocated approximately $1.2 million to fund asset renewal needs for its facilities in 2024. This figure includes funding budgeted in 2024 for direct capital costs (through own-source revenues such as taxation and contributions from reserves), budgeted contributions to capital lifecycle reserves for facilities, and amounts budgeted to fund debt servicing costs for debentures related to facilities. Based on this information, the annual funding gap for the Township's facilities is approximately $3.4 million. Figure 5-5 compares the 2024 asset renewal budget to the annual funding target for Township facilities.

Figure 5-5: Facilities – Annual Funding Gap (2024$)

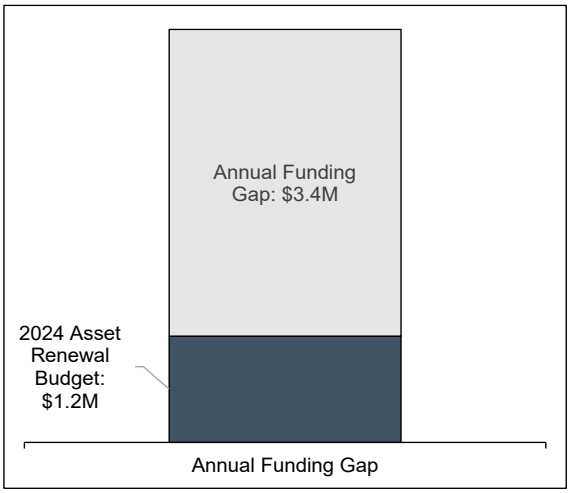
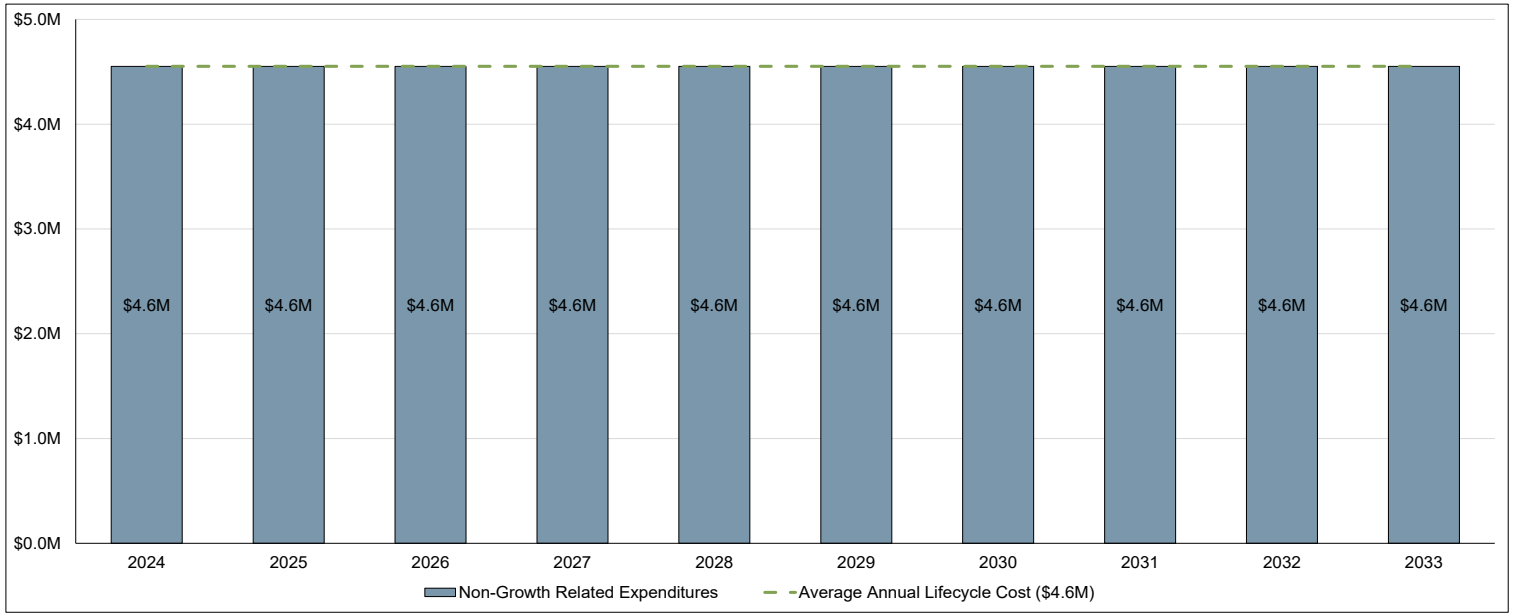


Table 5-8 provides a summary of the 10-year lifecycle expenditure forecast for the Township's facilities by classification and this information is further illustrated in Figure 5-6. This forecast was derived by allocating an annual allowance to each year of the forecast to ensure the Township achieves full lifecycle funding levels for its facilities. Based on this forecast, the non-growth related lifecycle expenditure requirement for the Township's facilities over the next 10 years is expected to total approximately $45.5 million. Future iterations of this asset management plan will utilize the component level forecasts developed through the BCAs to inform the 10-year forecasts of capital and significant operating needs. Based on a review of the Township's approved 2024-2033 capital plan, the growth-related lifecycle expenditure requirement for Township facilities over the next 10 years is expected to total approximately $62.1 million.

Table 5-8: Facilities – Financial Forecast (2024$)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Non-Growth Related Expenditures										
Municipal Facilities	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000	$2,082,000
Recreation Facilities	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000	$1,533,000
Libraries	$937,000	$937,000	$937,000	$937,000	$937,000	$937,000	$937,000	$937,000	$937,000	$937,000
Growth-Related Expenditures										
Growth-Related Expenditures	-	-	$7,690,000	$11,106,000	$16,559,000	$13,505,000	$13,267,000	-	-	-
Total Expenditures	**$4,552,000**	**$4,552,000**	**$12,242,000**	**$15,658,000**	**$21,111,000**	**$18,057,000**	**$17,819,000**	**$4,552,000**	**$4,552,000**	**$4,552,000**

Figure 5-6: Facilities – Financial Summary (2024$)



Chapter 6
Parks and Forestry

6. Parks and Forestry

6.1 State of Local Infrastructure

The Township's inventory of parks and forestry assets comprise park furnishings, play equipment, park shelters and structures, sports fields and courts, and light fixtures.

The current replacement cost of the Township's parks and forestry assets is estimated at approximately $32.1 million. Sports fields and courts represent the largest share of replacement cost at approximately $15.4 million, followed by assets comprising play equipment at approximately $10 million, park shelters and structures at approximately $4.7 million, park furnishing at approximately $1.6 million, and lastly, light fixtures at approximately $266,000. The average age of all of the Township's parks and forestry assets is approximately 8.2 years.

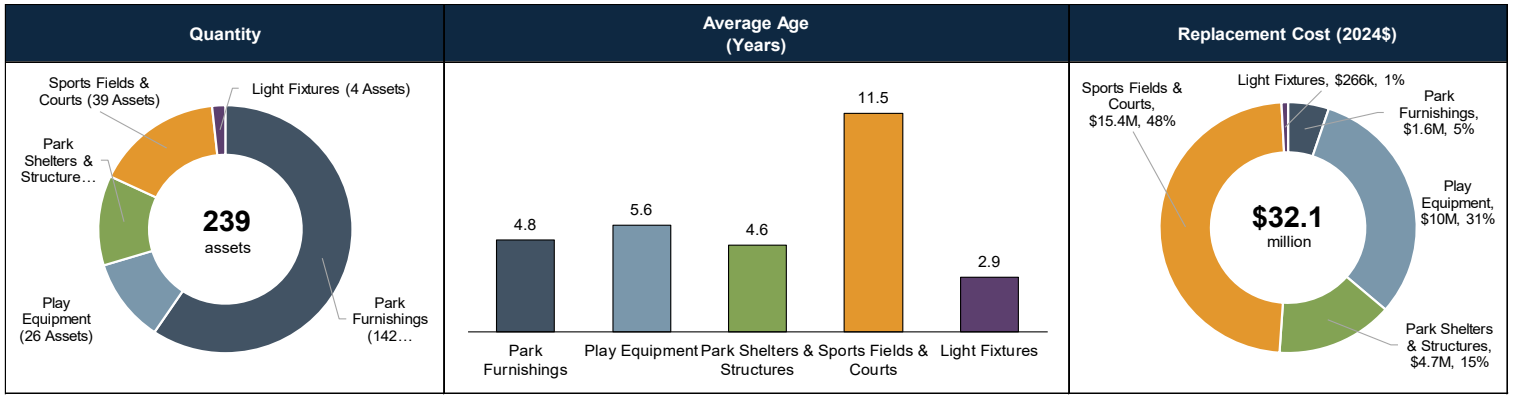
The Township also owns an unknown quantity of trees which comprise its canopy cover. Based on the Township's Tree Conservation Plan, the replacement cost of the Township's canopy cover is estimated to be in the range of $100-$200 million. Similar to non-structural culverts, the Township's canopy cover will be further integrated into future iterations of this asset management plan.

Table 6-1 summarizes the current replacement cost of the Township's parks and forestry assets. This information is further illustrated in Figure 6-1.

Table 6-1: Parks and Forestry – Quantity, Average Age, Replacement Cost

Asset Sub-Class	Quantity	Average Age (Years)	Replacement Cost (2024$)
Sports Fields & Courts	39	11.5	$15,440,000
Play Equipment	26	5.6	$10,010,000
Park Shelters & Structures	28	4.6	$4,732,000
Park Furnishings	142	4.8	$1,649,000
Light Fixtures	4	2.9	$266,000
Total	**239**	**8.2**	**$32,097,000**

Figure 6-1: Parks and Forestry – Quantity, Average Age, and Replacement Cost



6.2 Condition

Similar to the Township's fleet and equipment assets, the condition of the Township's parks and forestry assets is based on age relative to useful service life (i.e. based on the percentage of useful service life consumed (ULC%)). A brand-new parks and forestry asset would have a ULC% of 0%, indicating that zero percent of the asset's life expectancy has been utilized. On the other hand, an asset that has reached the end of its life expectancy would have a ULC% of 100%. It is possible for assets to have a ULC% greater than 100%, which occurs if the asset has exceeded its typical life expectancy but continues to be in service. This is not necessarily a cause for concern, however, it must be recognized that assets near or beyond their typical useful service life expectancy are likely to require replacement or rehabilitation in the near term and may have increasing repair and maintenance costs.

To better communicate the condition of parks and forestry assets, ULC% ratings have been segmented into qualitative condition states as summarized in Table 6-2. The scale is set to show that if assets are replaced at the end of their expected useful service life, they would be in a "Fair" condition state. For assets that remain in service beyond their useful service life (i.e., ULC% > 100), the probability of failure is assumed to have increased to a point where performance would be characterized as "Poor" or "Very Poor".

Table 6-2: Definition of Condition States with Respect to ULC%

Condition State	ULC%
Very Good	0% ≤ ULC% ≤ 45%
Good	45% < ULC% ≤ 90%
Fair	90% < ULC% ≤ 100%
Poor	100% < ULC% ≤ 125%
Very Poor	125% < ULC%

The replacement cost of the Township's parks and forestry assets by condition state is illustrated in Figure 6-2 and Figure 6-3.

Figure 6-2: : Parks and Forestry– Distribution of Assets (Replacement Cost) by Condition State

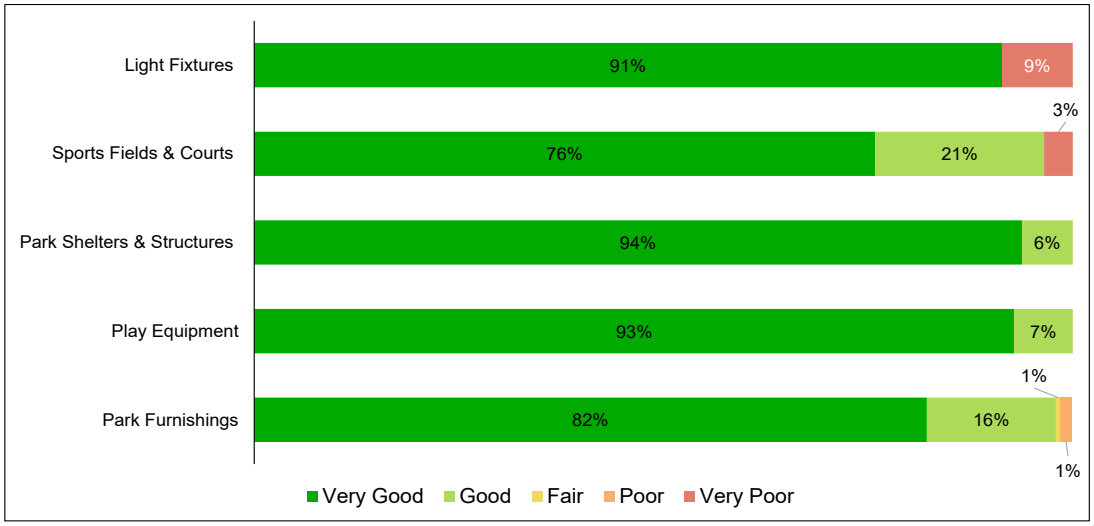


Figure 6-3: Parks and Forestry – Replacement Cost by Condition State

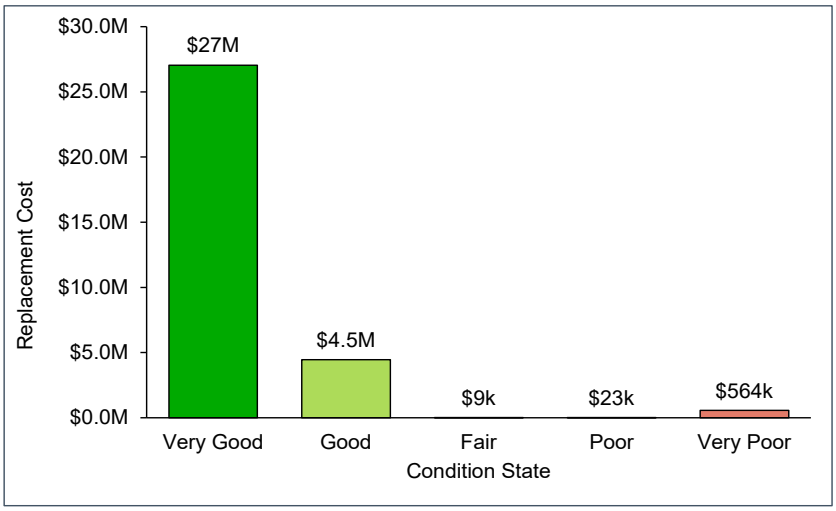
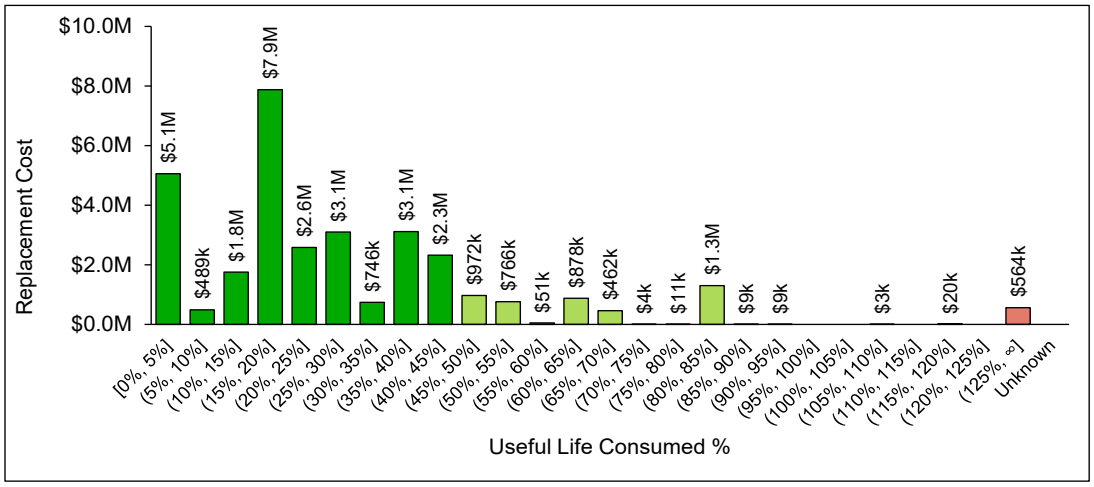


Figure 6-4 illustrates the distribution of parks and forestry assets (by replacement cost) based on ULC%.

Figure 6-4: Distribution of Parks and Forest Assets (Replacement Cost) by ULC%



6.3 Levels of Service

This section provides an overview of the Township's level of service framework for parks and forestry. Table 6-3 summarizes the community levels of service and Table 6-4 summarizes the technical levels of service.

Table 6-3: Parks and Forestry – Community Levels of Service

Service Attribute	Community Levels of Service
Proximity	The Township strives to ensure that all residents have access to neighbourhood parks[1] in close proximity to their homes.
Quality	The Township strives to maintain its parks and park amenities in adequate condition to continue providing a satisfactory user experience.

[1] The Township's 2019 Parks, Recreation and Culture Master Plan defined neighborhood parks as "primarily walk/bike-to parks, catering to the recreational needs of residents living within their general vicinity."

Service Attribute	Community Levels of Service
Availability	The Township strives to ensure that the quantity of its parks and size of its trail network is sufficient to meet the service expectations of its community.
Accessibility	The Township strives to ensure that its playgrounds are accessible to all users.
Operational Efficiency	The Township strives to maintain adequate staffing levels to sustain the efficient operation of its parks and park amenities.
Enhancement	The Township strives to enhance its existing canopy cover.

Table 6-4: Parks and Forestry – Technical Levels of Service

Service Attribute	Technical Levels of Service	Current Performance
Proximity	Average distance (in meters) from residential areas to the nearest neighborhood park[1] within population centres.	800 meters
Quality	Number of outstanding playground deficiencies[2] compared to the total number of playgrounds.	2.3 deficiencies per 10 playgrounds
	Number of outstanding splash pad deficiencies[3] compared to the total number of splash pads.	0 deficiencies
	Replacement cost of parks and forestry assets in use beyond their optimal service life standards	1.8%

[1] The Township's 2019 Parks, Recreation and Culture Master Plan defined neighborhood parks as "primarily walk/bike-to parks, catering to the recreational needs of residents living within their general vicinity."
[2] Playground deficiencies include deficiencies related to playground equipment pieces, playground surfaces, retaining borders, sub-bases, and drainage.
[3] Splash pad deficiencies include deficiencies related to splash pad surfaces.

Service Attribute	Technical Levels of Service	Current Performance
	compared to the replacement cost of all parks and forestry assets.	
Availability	Acres of parkland per residential household.	3.15 acres per 100 residential households
	Metres of Township operated trails per residential household.	726 metres per 100 residential households
Accessibility	Percentage of playgrounds that meet the requirements of the *Accessibility for Ontarians with Disabilities Act, 2005*.	100%
Operational Efficiency	Acres of parkland compared to the number of full-time equivalents of operational staff[1].	43 acres per FTE

6.4 Lifecycle Management Strategy

Table 6-5 summarizes the Township's lifecycle management strategy for its parks and forestry assets.

[1] Operational staff is defined as the staffing complement directly involved in the day-to-day operations and on-going maintenance of parks, trails, and greenspaces. This does not include staff responsible for administrative duties, oversight, and management.

Table 6-5: Parks and Forestry – Lifecycle Management Strategy

Parks and Forestry	

Inspections and Condition Assessments	The Township has a number of inspection and condition assessment programs for its playground equipment and splash pads as follows:
	• Playground Equipment
	  ○ All pieces of playground equipment are verified to conform with Canadian Standards Association (C.S.A.) guidelines prior to their emplacement.
	  ○ Monthly inspections are completed by Township staff and compiled into an annual report in accordance with C.S.A. guidelines. These assessments include inspections for safe designated play spaces to ensure they are free from trip hazards, entanglements, entrapments, and are generally unencumbered for motion. Playground surfaces are also inspected to ensure they are clean, do not have cracks or broken glass, have evenly distributed loose fill, etc.
	  ○ Head impact testing is performed on playground surfaces in 5-year intervals through an external service provider to ensure compliance with C.S.A. guidelines and to evaluate maintenance, rehabilitation, and replacement needs.
	  ○ Condition assessments are completed in 5-year intervals through an external service provider to evaluate maintenance, rehabilitation, and replacement needs. Inspections are also performed on playground surfaces to ensure that they pass head impact testing, are clean, do not have cracks or broken glass, have evenly distributed loose fill, etc.
	• Splash Pads

Parks and Forestry	
	○ Daily inspections are conducted by Township staff during operating season to ensure safety and cleanliness. All high-touch surfaces are sanitized as part of these inspections. ○ Regular inspections are conducted by the York Region Public Health Unit to ensure compliance with R.R.O. 1990, Regulation 565: Public Pools. The Township is currently developing an inspection and patrol program for its parks and trails to identify issues related to signage, tree trunk and limb failures, trip hazards, fencing, public seating (benches, bleachers, etc.), picnic shelters, washroom facilities, pedestrian pathways and bridges, trail maintenance, garbage and recycling, etc. The proposed program would include the following (the frequency of inspections and patrols may vary based on seasonality): • Biweekly inspections of parks. • Regular patrols of Township owned trails. Currently, there is no formal inspection program for the Township's trail system. Trail checks are conducted by Township staff as time allows, with the aim of inspecting all trails once a month. • Regular inspections of pedestrian pathways and bridges. In addition to its inspection and condition assessment programs, the Township evaluates comments received from the public to identify deficiencies. Complaints related to garbage collection and sports field maintenance are most common.
Major Operating Lifecycle Activities	The Township has a number of on-going maintenance programs to ensure its parks and playground equipment are well-maintained and continue to meet the expectations of the community. Some of the Township's major maintenance programs are as follows: • Grass cutting for all maintained open spaces.

Parks and Forestry	
	• Grass maintenance (aeration, fertilization, applying top dressing, cleaning, etc.). • Grading, painting, crack-sealing, and cleaning of sports fields. • Trail maintenance (grading, brushing, cleaning, etc.). • Snow clearing from all public access spaces (trails, public pathways and bridges, parking lots, etc.). • Maintenance of irrigation systems (flushing, winterization, etc.). • Garbage and recycling collection. • Preventative maintenance to avoid service interruptions.
Major Capital Lifecycle Activities	The Township conducts rehabilitation and replacement projects for parks and playground assets that have reached the end of their service lives, are not performing as originally intended, and/or have uneconomical repair and maintenance costs. When replacing parks and playground assets, the Township evaluates current trends and relevant changes in the community to determine if upgrades are necessary. Upgrades are sometimes also undertaken at the direction of Council, based on community feedback, or to accommodate changes in design specifications to meet accessibility or other requirements. While the Township does complete some rehabilitation activities to its parks and playground assets in-house, major rehabilitation and replacement projects that exceed staff capacity are typically completed through external service providers. The Township plans its capital activities with an emphasis on meeting accessibility requirements and strives to ensure that all parks have accessible features and pathways. When purchasing replacement or additional playground equipment, the Township ensures that the requirements of the Accessibility for Ontarians with Disabilities Act, 2005 are met.

Parks and Forestry	
Prioritization of Short-Term Lifecycle Needs	Highest priority is given to treating issues related to health and safety, followed by issues that may cause closures or significant service interruptions. Other lifecycle activities are prioritized by measuring impacts on service delivery of affected assets.
Identification of Growth-Related Lifecycle Needs	Through its Parks, Recreation, and Culture Master Plan, the Township analyzes growth forecasts and trends in active transportation use to determine whether purchase of additional playground equipment or construction of new parks and trails is required. Direct engagement with residents through public consultations and surveys is also conducted to understand community priorities.

6.5 Financial Summary and Forecast

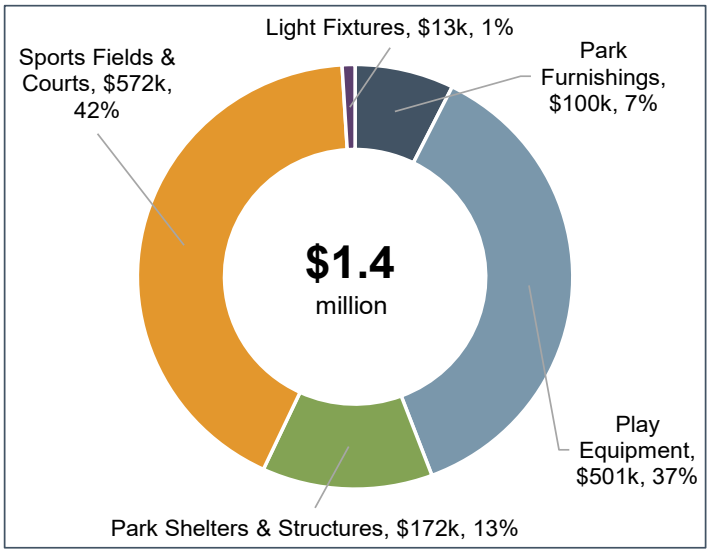
Based on the lifecycle activities outlined in the previous section, an estimate of the annual funding requirement and forecast of capital expenditures was developed for the Township's parks and forestry assets.

Average annual lifecycle cost for the Township's parks and forestry assets is estimated to be approximately $1.4 million. The Township's sports fields and courts represent the largest share of this average annual lifecycle cost at approximately $572,000, followed by assets comprising play equipment at approximately $501,000, park shelters and structures at approximately $172,000, park furnishing at approximately $100,000, and lastly, the light fixtures at approximately $13,000. This average annual lifecycle cost represents the long-term funding target for the Township to achieve full lifecycle funding levels for its parks and forestry assets. Table 6-6 lists the average annual lifecycle cost for the Township's parks and forestry assets by asset sub-class. This information is further illustrated in Figure 6-5.

Table 6-6: Parks and Forestry – Average Annual Lifecycle Cost

Asset Sub-class	Replacement Cost (2024$)	Average Annual Lifecycle Cost (2024$)
Sports Fields & Courts	$15,440,000	$572,000
Play Equipment	$10,010,000	$501,000
Park Shelters & Structures	$4,732,000	$172,000
Park Furnishings	$1,649,000	$100,000
Light Fixtures	$266,000	$13,000
Total	**$32,097,000**	**$1,358,000**

Figure 6-5: Parks and Forestry – Average Annual Lifecycle Cost



Based on a review of the Township's approved 2024 budget, the Township allocated $258,000 to fund asset renewal needs for its parks and forestry assets in 2024. This figure includes funding budgeted in 2024 for direct capital costs (through own-source revenues such as taxation and contributions from reserves), budgeted contributions to capital lifecycle reserves for park and forestry assets, and amounts budgeted to fund debt servicing costs for debentures related to the Township's parks and forestry assets. Based on this information, the annual funding gap for the Township's parks and forestry assets is approximately $1.1 million. Figure 6-6 compares the 2024 asset renewal budget to the annual funding target for the Township's parks and forestry assets.

Figure 6-6: Parks and Forestry – Annual Funding Gap (2024$)

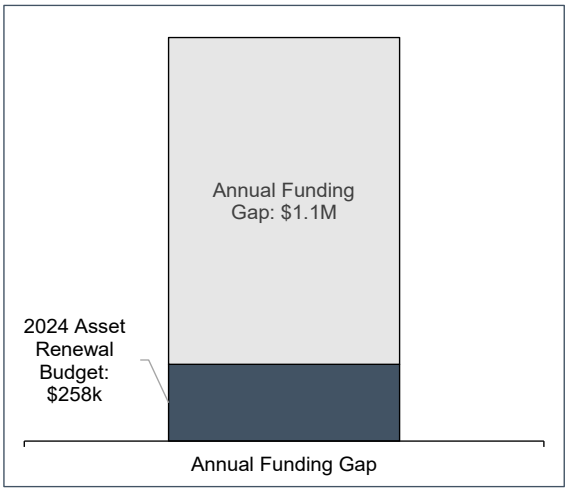
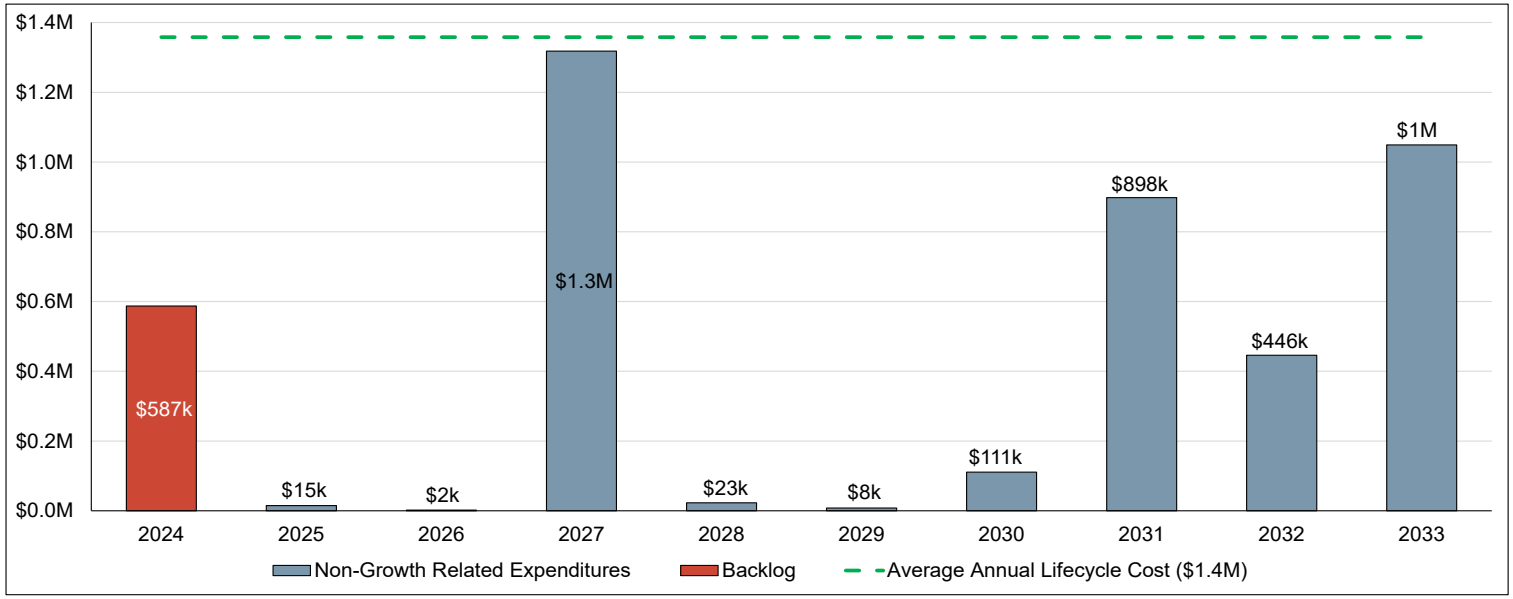


Table 6-7 provides a summary of the 10-year lifecycle expenditure forecast for the Township's parks and forestry assets by asset sub-class and this information is further illustrated in Figure 6-7. This forecast was derived by conducting age-based lifecycle modelling for all parks and forestry assets. Based on this forecast, the non-growth related lifecycle expenditure requirement for the Township's parks and forestry assets over the next 10 years is expected to total approximately $4.5 million. The average annual expenditures over the 10-year forecast horizon are approximately $446,000. Based on the best information available on the Township's assets, the current backlog for the Township's parks and forestry assets is estimated at approximately $587,000. This represents the current replacement value of all parks and forestry assets that are in use beyond their expected useful service lives. Lastly, based on a review of the Township's approved 2024-2033 capital plan, the growth-related lifecycle expenditure requirement for the Township's parks and forestry assets over the next 10 years is expected to total approximately $28.3 million.

Table 6-7: Parks and Forestry – Financial Forecast (2024$)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Non-Growth Related Expenditures										
Park Furnishings	-	$15,000	$2,000	$18,000	$23,000	$8,000	$111,000	$53,000	$56,000	$301,000
Play Equipment	-	-	-	-	-	-	-	-	-	$715,000
Park Shelters & Structures	-	-	-	$260,000	-	-	-	-	-	$33,000
Sports Fields & Courts	-	-	-	$1,040,000	-	-	-	$845,000	$390,000	-
Light Fixtures	-	-	-	-	-	-	-	-	-	-
Backlog	$587,000									
Growth-Related Expenditures										
Growth-Related Expenditures	$30,000	$5,882,000	$1,234,000	$3,092,000	$5,605,000	$4,918,000	$4,589,000	$2,693,000	$270,000	-
Total Expenditures	**$617,000**	**$5,897,000**	**$1,236,000**	**$4,410,000**	**$5,628,000**	**$4,926,000**	**$4,700,000**	**$3,591,000**	**$716,000**	**$1,049,000**

Figure 6-7: Parks and Forestry – Financial Summary (2024$)



Chapter 7
Recommendations and Next Steps

7. Recommendations and Next Steps

7.1 Recommendations

The following recommendations are provided for the Township's consideration:

- Review existing asset inventories and address the data gaps that have been identified through the development of this asset management plan.
- There are several fleet and equipment assets that are currently in use beyond their expected useful lives, representing a backlog of approximately $7.7 million. Although approximately $1.8 million of this backlog has been addressed through assets purchased, but not yet received, between 2022 – 2024 (see Section 4.5), the Township should assess whether the remaining assets are currently performing adequately. If so, the Township should consider revising the service life expectations of those assets.
- Continue to collect the data necessary to quantify performance of Data-Deferred Levels of Service Performance Measures in the near future.
- Develop a register of Levels of Service Performance Measures so that they can be appropriately tracked over time.
- Continue to integrate all Township assets into its enterprise asset management software so that it can act as a central repository.
- Improve complaint tracking procedures and implement a maintenance work order system. The Township should also consider integrating the maintenance work order system into its enterprise asset management software. This is particularly important in instances where public feedback results in activities that preserve, extend, or renew the service lives of Township assets.
- Improve tracking of work orders for asset management activities related to the Township's assets and segment work order tasks by those that were planned vs. unplanned.

- Develop frameworks that allow for the assessment of asset criticality through the determination of consequence of failure and probability of failure factors associated with each asset class.

- Develop a structure and format for regular updates to Council on asset management progress, including updates on the performance of the Township's Technical Levels of Service measures.

7.2 Next Steps

Following the completion of this asset management plan, the Township will need to develop a comprehensive asset management plan for all of its infrastructure assets to meet the July 1, 2025 requirements of O. Reg. 588/17. Watson will be assisting the Township complete its comprehensive asset management plan as the next phase of our engagement with the Township.

Following the approval of the comprehensive asset management plan by Council, the Township will need to shift its focus to operationalizing the plan. The Township will need to establish processes and implement systems to keep asset information (e.g. condition ratings, replacement costs, etc.) current and relevant so that it can be relied upon to identify capital and significant operating expenditure priorities. This will allow the plan to be able to inform the Township's annual budget process well into the future. The Township will also need to establish a format and process for annual updates to Council on asset management progress, as required by O. Reg. 588/17.

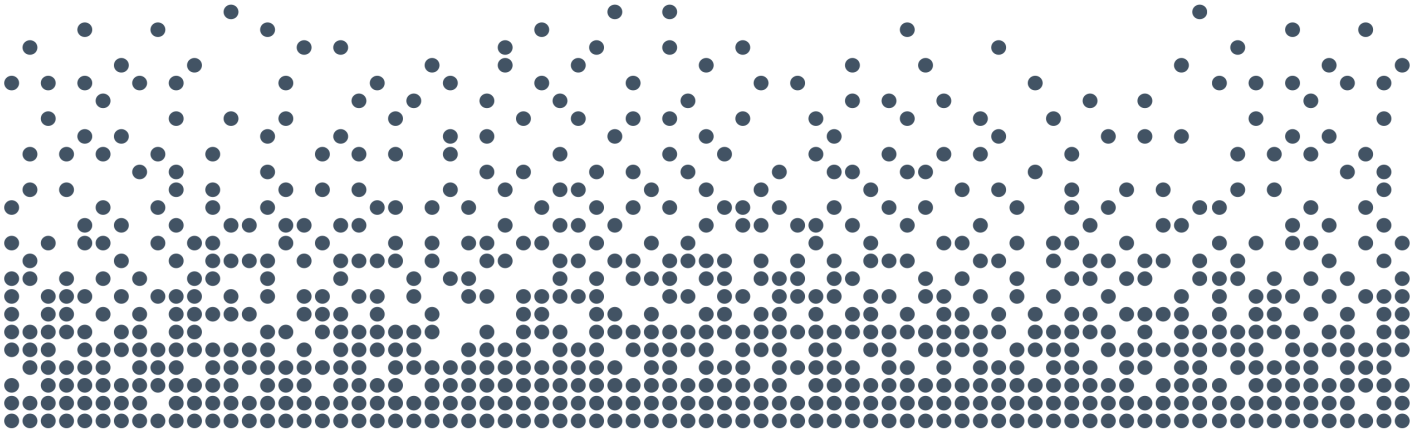
The following are key elements that have been identified for the continual improvement of this asset management plan for the Township's consideration:

- The Township should consider developing an implementation strategy for this asset management plan which includes a roadmap to address data gaps and establish processes for continual updates and monitoring.

- The Township should consider developing an asset management manual that documents the tasks that Township staff are required to undertake to manage the Township's assets. Included in this manual should be clear definition of roles and segregation of duties for all relevant stakeholders (i.e. asset managers, financial staff, senior management team members, Council, etc.). Such a

manual will provide the Township with documented processes to maintain its asset inventories, assess asset condition and performance over time, plan for lifecycle activities, and ensure the viability of financial strategies to achieve full lifecycle funding levels.

- The Township should consider designing a community communication and engagement strategy to support the successful implementation of this asset management plan. Such a strategy would aim to establish community understanding of why asset management planning is important, develop an asset program that reflects the priorities of the community, and solidify community support for asset management planning principles.



Appendices

Appendix A
Data-Deferred Technical Levels of Service

Appendix A: Data-Deferred Technical Levels of Service

Presented in this Appendix are the Township's Data-Deferred Technical Levels of Service. The Township has identified these Technical Levels of Service as being important to include within its Levels of Service framework and is currently developing data-collection protocols to be able to quantify performance in future iterations of this asset management plan.

Table A-1 provides an index of the Data-Deferred Technical Levels of Service tables contained in this appendix.

Table A-1: Non-core Assets – Data-Deferred Technical Levels of Service Table References

Asset Class	Data-Deferred Technical Levels of Service Table Reference
Sidewalks and Paved Pathways	Table A-2
Non-structural Culverts	Table A-3
Fleet and Equipment	Table A-4
Facilities	Table A-5

Table A-2: Sidewalks and Paved Pathways– Data-Deferred Technical Levels of Service

Service Attribute	Data-Deferred Technical Levels of Service
Safety	Percentage of sidewalks and paved pathways (by length) that meet the requirements of the Township's current design standard for surface type and width.

Service Attribute	Data-Deferred Technical Levels of Service
Accessibility	Percentage of sidewalks and paved pathways (by length) that meet the requirements of the *Accessibility for Ontarians with Disabilities Act, 2005*.

Table A-3: Non-Structural Culverts – Data-Deferred Technical Levels of Service

Service Attribute	Data-Deferred Technical Levels of Service
Reliability	Number of work orders related to flushing activities performed on non-structural culverts compared to the total number of non-structural culverts.
	Number of work orders related to repairs for structural damage performed on non-structural culverts compared to the total number of non-structural culverts.
	Number of one-off replacements of non-structural culverts compared to the total number of non-structural culverts
	Number of user complaints that resulted in work orders compared to the total number of non-structural culverts

Table A-4: Fleet and Equipment – Data-Deferred Technical Levels of Service

Service Attribute	Data-Deferred Technical Levels of Service
Reliability	Number of fleet assets that underwent more than 3 unplanned repairs[1] in the calendar year compared to the total number of fleet assets.
	Number of work orders related to unplanned repairs[1] performed on fleet assets compared to the total number of fleet assets.
	Number of hours fleet assets spent out of service due to unplanned repairs[1] compared to the total number of fleet assets.

Table A-5: Facilities – Data-Deferred Technical Levels of Service

Service Attribute	Data-Deferred Technical Levels of Service
Accessibility	Percentage of parking lots located at facilities that meet the requirements of the Accessibility for Ontarians with Disabilities Act, 2005.
Availability	Number of hours lost due to shutdown of recreation facilities, or portions within, due to unplanned repair, maintenance, rehabilitation, or replacement activities compared to the total number of recreation facilities.
	Number of hours lost due to shutdown of municipal facilities, or portions within, due to unplanned repair, maintenance, rehabilitation, or replacement activities compared to the total number of municipal facilities.

[1] Unplanned repairs do not include repairs to address issues caused by operator error.

Capacity	Percentage of facilities with booked hours exceeding 80% of available hours during high usage periods[1].
Safety	Number of identified health and safety issues addressed within required timeframes compared to the total number of facilities.
Quality	Number of user complaints that resulted in work orders compared to the total number of facilities.

[1] The Township defines high usage periods as the hours between 4PM – 11PM on Mondays – Thursdays and the hours between 7AM – 11PM on Saturdays and Sunday.