Asset Management Plan

Township of King

Final Report

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Chapter 1
Introduction

1. Introduction

1.1 Overview

The main objective of an asset management plan is to use a municipality's best available information to develop a long-term plan for capital assets. In addition, the plan should provide a sufficiently documented framework that will enable continual improvement and updates of the plan, to ensure its relevancy over the long term.

The Township of King (Township) retained Watson & Associates Economists Ltd. (Watson) to develop a comprehensive asset management plan. The project has been completed in three phases. The first phase focused on complying with the July 1, 2022 requirements of *Ontario Regulation 588/17: Asset Management Planning For Municipal Infrastructure* (O. Reg. 588/17) for core[1] assets and was completed in January 2022. The second phase focused on complying with the July 1, 2024 requirements of O. Reg. 588/17 for non-core[2] assets and was completed in June 2024. The third and final phase of the project built on the work completed through the previous phases, with a focus on identifying proposed levels of service and developing a financial strategy to support the asset management plan. This report is the outcome of the third phase and brings the Township into full compliance with the 2025 requirements of O. Reg. 588/17.

The total current replacement cost for the Township's infrastructure assets is estimated to be $1.36 billion. Tax-funded facilities represent the largest share of replacement cost at $458 million (34%), followed by transportation assets at $380.7 million (28%), stormwater management system asset at $161.6 million (12%), water distribution system assets at $160.9 million (12%), wastewater collection system assets at $131.7 million (10%), tax-funded fleet and equipment at $34.9 million (<3%), and lastly, parks and forestry assets at $33.5 million (<3%). The distribution of replacement cost by asset category is provided in Table 1-1 and further illustrated in Figure 1-1.

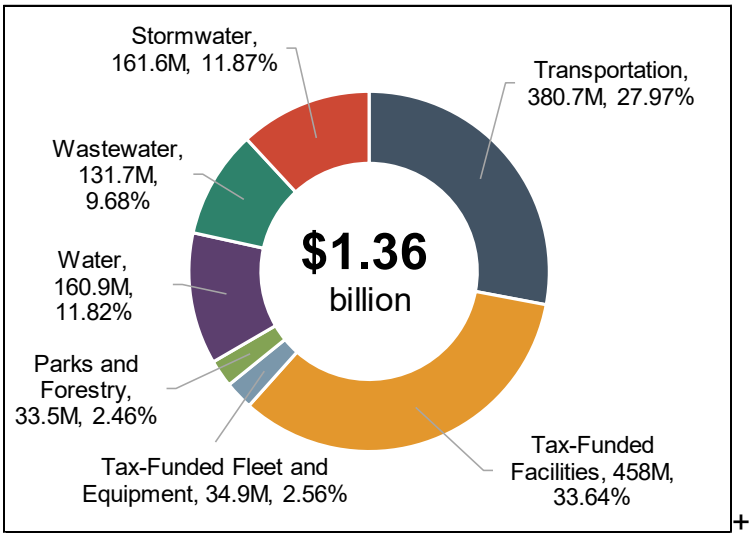
[1]Core infrastructure assets are defined by O. Reg. 588/17 as being roads, bridges, culverts, and any asset that is utilized in the provision of water, wastewater, and stormwater services.

[2]Non-core infrastructure assets are any other assets owned and managed by a municipality that are not included within the definition of core infrastructure assets.

Table 1-1: Distribution of Replacement Cost by Asset Category

Asset Category	Current Replacement Cost	Percentage of Total
Transportation	$380,690,000	27.97%
Tax-Funded Facilities	$457,958,000	33.64%
Tax-Funded Fleet and Equipment	$34,876,000	2.56%
Parks and Forestry	$33,458,000	2.46%
Water	$160,941,000	11.82%
Wastewater	$131,740,000	9.68%
Stormwater	$161,629,000	11.87%
Total	**$1,361,292,000**	**100.00%**

Figure 1-1: Distribution of Replacement Cost by Asset Category



1.2 Legislative Context for the Asset Management Plan

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.

1.3 Asset Management Plan Development

The development of this asset management plan was guided by asset management strategies identified through discussions with the Township's asset managers, information gleaned through reviews of various background documents and studies, service-level objectives and their impacts on the management of assets identified through engagements with Council and staff, and detailed analyses of the Township's

capital asset and financial data. The key steps in the development process of this asset management plan are summarized below:

- Update underlying asset data such as quantities, ages, condition ratings, useful service life expectations, replacement cost valuations, lifecycle activity costing, etc.
- Develop scenarios related to levels of service targets through workshops held with Township staff. As part of these workshops, changes to existing lifecycle management strategies to support each level of service scenario were identified. This step resulted in the development of 10-year forecasts of capital and significant operating expenditures to support each scenario.
- Analyze the Township's financial data and develop a financial strategy model to identify the funding expected to be available to undertake the capital and significant operating expenditures for each scenario identified in the previous step. The financial strategy model was also utilized to determine the financial impact associated with each scenario.
- Present each level of service scenario and its associated 10-year forecasts and financial impacts to Council in a workshop setting. The feedback received from Council during these workshops was key in determining the level of service scenario that is most appropriate for the Township.
- Finalize the 10-year forecasts and financial strategy model based on feedback received from Council on its preferred level of service scenario.
- Document the asset management plan in a formal report to inform future decision-making and to communicate planning to the public.

Chapter 2
State of Local Infrastructure and Levels of Service

2. State of Local Infrastructure and Levels of Service

2.1 Transportation

2.1.1 State of Local Infrastructure

The Township owns and manages a variety of transportation assets that support the safe and efficient passage of vehicular and pedestrian traffic as well as contribute to the overall level of service provided by the Township. The Township's inventory of transportation assets comprises paved roads, gravel roads, bridges and structural culverts, streetlights, sidewalks, paved pathways, and road signs. The estimated current replacement cost of the Township's transportation assets is approximately $380.7 million.

The Township's road network comprises roads with high-class bituminous (HCB), low-class bituminous (LCB), and gravel surfaces (G/S). The estimated current replacement cost of the Township's roads is $262.2 million. HCB roads represent the largest share of replacement cost at $221.4 million (84%) followed by gravel roads at $25.8 million (10%), and LCB roads at $15.0 million (6%). The average age of the Township's roads, based on the age of road surfaces for paved roads and the initial date of construction for gravel roads, is 15.6 years.

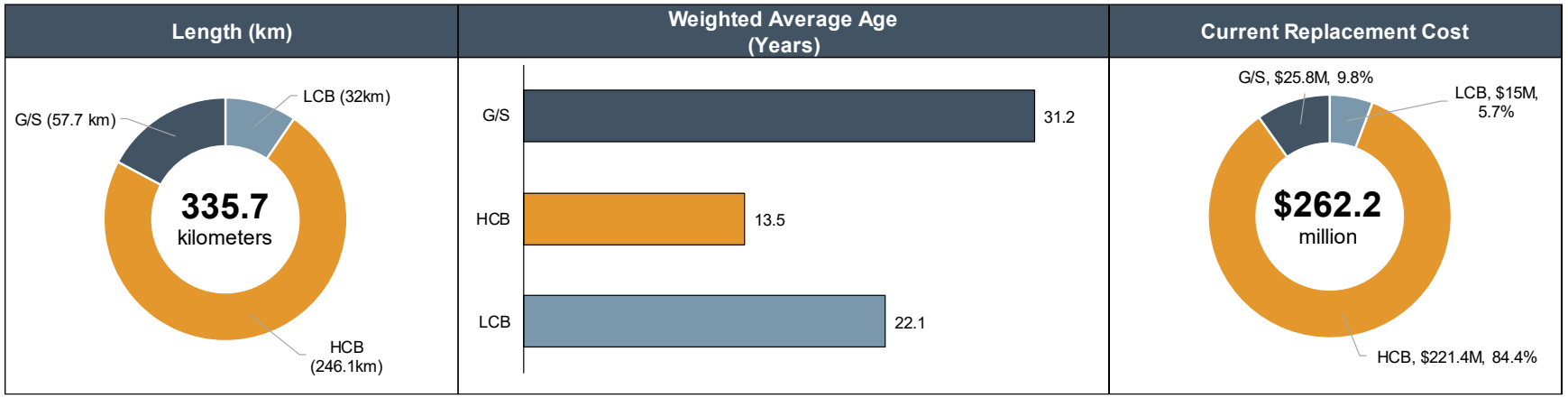
Table 2-1 summarizes the length, average age, and estimated current replacement cost of the Township's roads by surface type and this information is illustrated graphically in Figure 2-1. A spatial illustration of the Township's road network is provided in Map 2-1.

Table 2-1: Roads – Length, Average Age, and Current Replacement Cost by Surface Type

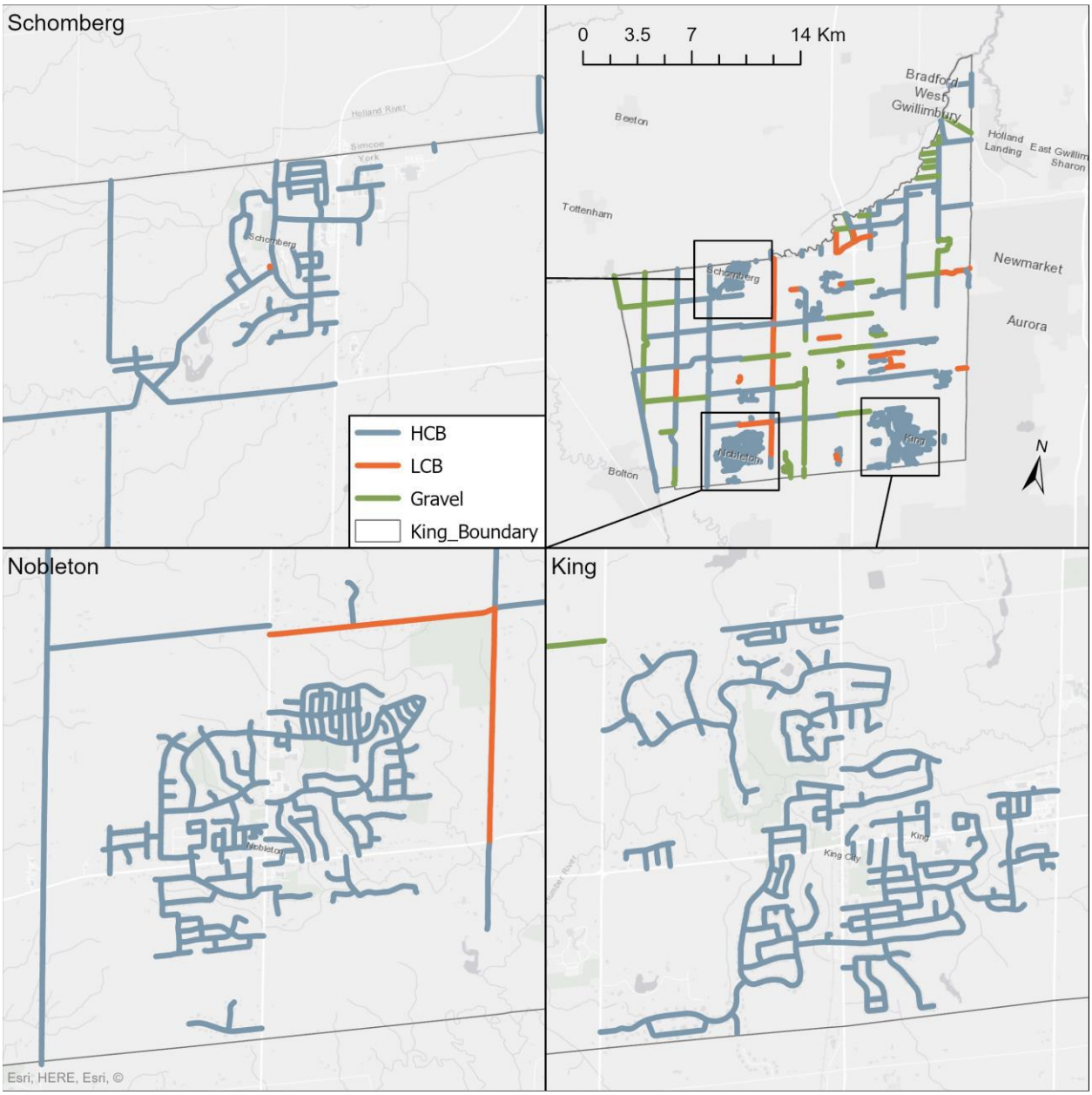
Surface Type	Length (km)	Average Age[1]	Current Replacement Cost
LCB	32.0 km	22.1 years	$15,028,000
HCB	246.1 km	13.5 years	$221,390,000
G/S	57.7 km	31.2 years	$25,829,000
Total	**335.7 km**	**15.6 years**	**$262,247,000**

[1]Weighted average utilizing the area of road segments as weights.

Figure 2-1: Roads – Length, Average Age, and Current Replacement Cost by Surface Type



Map 2-1: Township Road Network by Surface Type and Population Centre



The Township owns and manages 17 vehicular bridges, 2 pedestrian bridges, and 59 structural culverts as part of its transportation network. The estimated current replacement cost of the Township's bridges and structural culverts is $90.8 million. Structural culverts represent the largest share of replacement cost at $52.7 million (58%), followed by vehicular bridges at $37.5 million (41%) and pedestrian bridges at $643,000 (1%). The average age of the Township's bridges and structural culverts is 34.2 years.

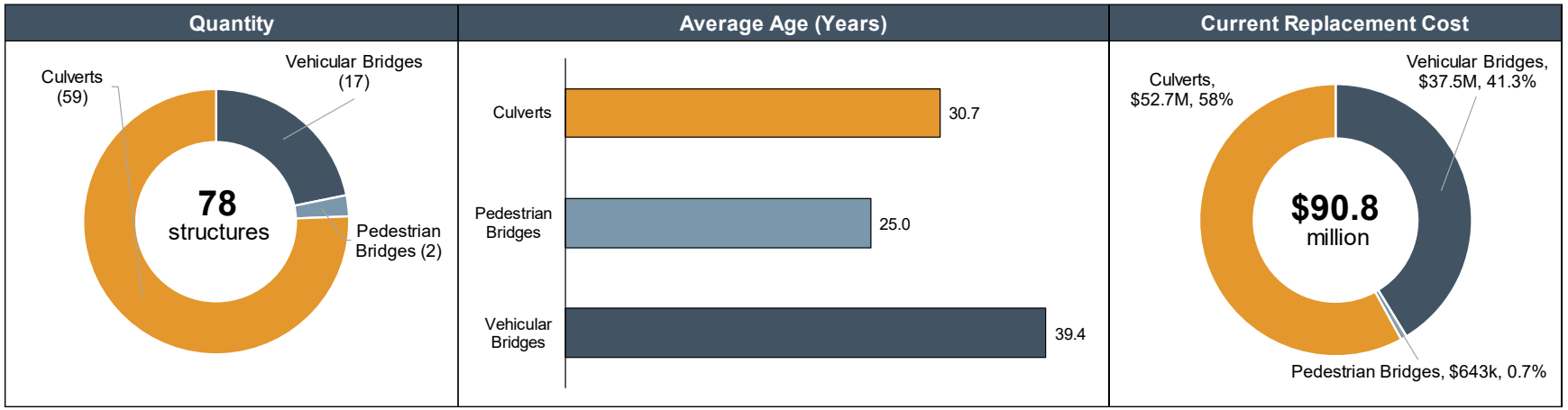
Table 2-2 summarizes the quantity, average age, and estimated current replacement cost of the Township's bridges and structural culverts and this information is illustrated graphically in Figure 2-2. A spatial illustration of the Township's bridges and structural culverts is provided in Map 2-2.

Table 2-2: Bridges & Structural Culverts – Quantity, Average Age, and Current Replacement Cost

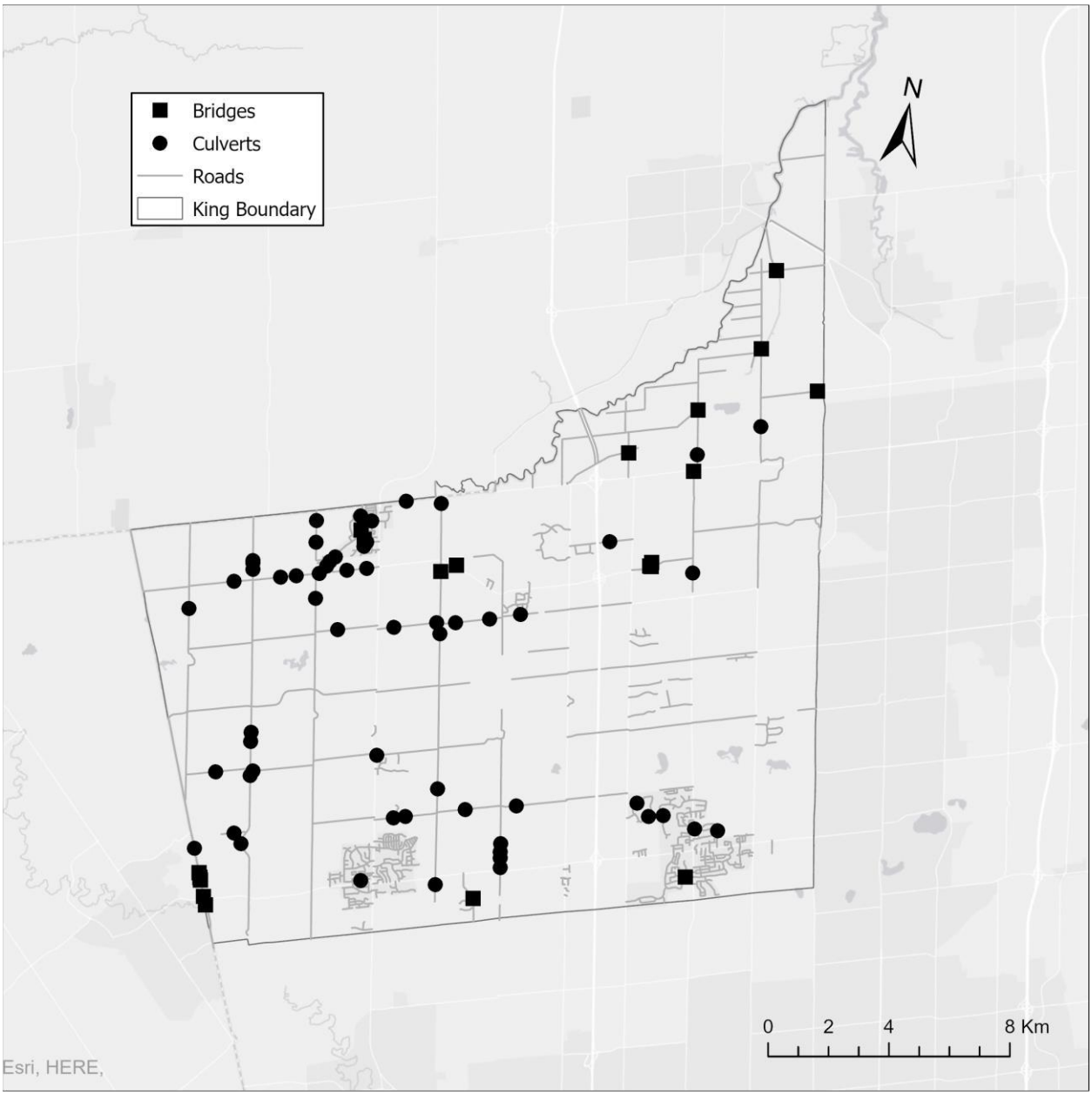
Surface Type	Quantity	Average Age[1]	Current Replacement Cost
Vehicular Bridges	17 structures	39.4 years	$37,512,000
Pedestrian Bridges	2 structures	25.0 years	$643,000
Culverts	59 structures	30.7 years	$52,654,000
Total	**78 structures**	**34.2 years**	**$90,809,000**

[1]Weighted average utilizing the area of road segments as weights.

Figure 2-2: Bridges and Structural Culverts - Quantity, Average Age, and Current Replacement Cost



Map 2-2: Bridges and Structural Culverts



Lastly, the Township also owns and manages a number of road-related assets comprising approximately 4,670 road signs, 89.0 km of sidewalks, 2.0 km of paved pathways, and 2,272 streetlights. The estimated current replacement cost of the Township's road-related assets is $27.6 million. Sidewalks represent the largest share of replacement cost at $23.1 million (84%) followed by streetlights at $3.5 million (13%), paved pathways at $520,000 (<2%), and lastly, road signs at $462,000 (<2%).

It is worth noting that the replacement cost of the Township's sidewalks and paved pathways 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. As well, 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.

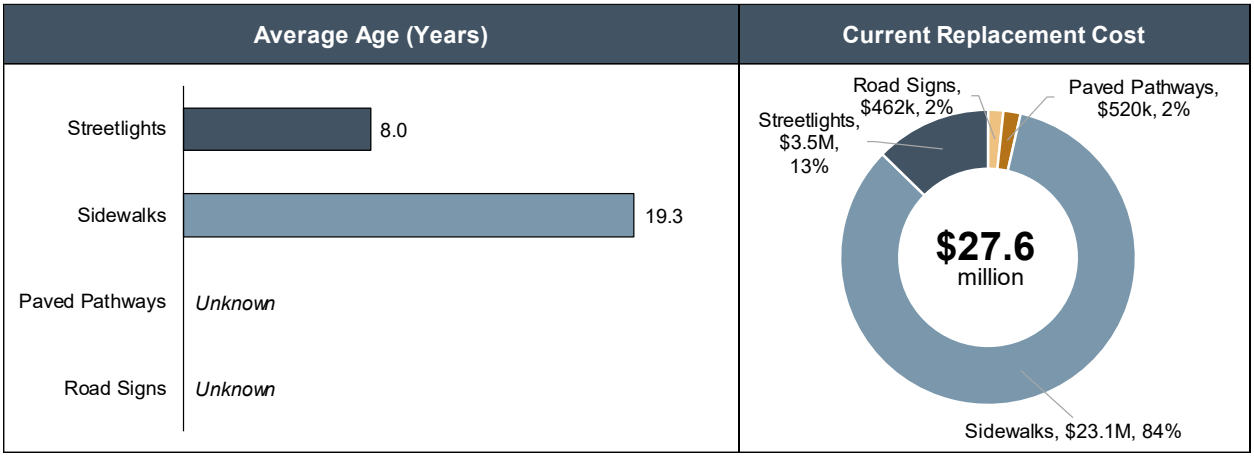
Table 2-3 summarizes the quantity, average age, and estimated current replacement cost of the Township's road-related assets and this information is further illustrated in Figure 2-3.

Table 2-3: Road-related Assets – Quantity, Average Age, and Replacement Cost

Asset Category	Quantity	Average Age[1]	Current Replacement Cost
Road Signs	4,670 signs	Unknown	$462,000
Paved Pathways	2.0 km	Unknown	$520,000
Sidewalks	89.0 km	19.3 years[2]	$23,126,000
Streetlights	2,272 streetlights	8.0 years[3]	$3,499,000
Total			**$27,607,000**

[1]Weighted average utilizing the length of sidewalk segments and replacement cost of streetlights as weights.
[2]The age of 37.3% of the Township's sidewalks (by length) is currently unknown. Those sidewalk segments have been excluded from the calculation of weighted average age.
[3]The age of 161 of the Township's streetlights is currently unknown. Those assets have been excluded from the calculation of weighted average age.

Figure 2-3: Road-related Assets – Average Age, and Replacement Cost



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. However, considering the current high-level estimates of their quantity, the Township expects the replacement cost of its non-structural culverts to be substantial.

2.1.2 Condition

The Township assesses the condition of its paved roads by assigning a Pavement Condition Index (PCI) rating to each road segment. PCI ratings are calculated by assigning weighted values to observed base-related distresses (e.g., rutting, fatigue cracking, etc.), surface-related distresses (e.g., raveling, shoving, etc.), and the overall ride condition of the segment. Thus, PCI ratings also provide an indication of the structural integrity of the road segment and an objective rationale for forecasting upcoming lifecycle requirements.

To better communicate the condition of the Township's paved roads, PCI ratings have been segmented into qualitative condition states as summarized in Table 2-4. Example photos of road segments in each condition state are also provided in Table 2-4.

Table 2-4: Roads – Definition of Condition States with Respect to PCI Rating

Condition State	PCI Rating Range	Example Photo
Very Good	90 ≤ PCI ≤ 100	
Good	70 ≤ PCI < 90	
Fair	50 ≤ PCI < 70	

Condition State	PCI Rating Range	Example Photo
Poor	20 ≤ PCI < 50	
Very Poor	PCI < 20	

As indicated by the example photos above, road segments assessed to be in a 'Very Good' condition state would typically have little to no observable distresses and provide a comfortable ride quality to all users. As road segments degrade over time, their condition would gradually decrease to be in a 'Good' or 'Fair' condition state. These road segments typically have moderate levels of observable distresses that require rehabilitation in the medium-term to prevent the development of more severe distresses. Road segments assessed to be in a 'Poor' condition state would typically have significant observable distresses indicating degradation of structural integrity. These road segments typically also require major rehabilitation or reconstruction in the short-term. Lastly, road segments that exhibit signs of significant structural damage would be assessed to be in a 'Very Poor' condition state. These road segments may pose hazards to road users and should be given priority for reconstruction.

The Township most recently assessed the PCI ratings of its road segments through a Road Needs Study, which is due to be finalized later in 2025. Based on the most recent analyses from that study, the average PCI rating of all paved road segments in the Township is estimated to be 83.5, indicating that the Township's road network is currently in an overall 'Good' condition state. The Township's HCB roads have an average PCI rating of 84.6, indicating that they are currently in a 'Good' condition state. The Township's LCB roads have an average PCI rating of 66.7, indicating that they are currently in a 'Fair' condition state. Lastly, the Township's Road Needs Study also assessed its gravel roads and assigned a condition rating, ranging from 'Very Good' to 'Very Poor', to each gravel road segment based on its observed physical state. Gravel roads in the Township were assessed to be in an overall 'Good' condition state.

Table 2-5 summarizes the average PCI rating and associated condition states of the Township's paved roads by surface type as well as the overall condition rating for the Township's gravel roads.

Table 2-5: Roads – Average PCI Ratings and Condition States/Ratings by Surface Type

Surface Type	Average PCI Rating[1]	Condition State/Rating
LCB	66.7	Fair
HCB	84.6	Good
G/S	N/A	Good
Overall Average	**83.5**	**Good**

The distribution of the Township's roads by condition state and surface type is illustrated in Figure 2-4. The distribution of the Township's paved roads by PCI rating range is illustrated in Figure 2-5.

[1]Weighted average utilizing the area of road segments as weights.

Figure 2-4: Roads – Distribution (by length) of Roads by Condition State and Surface Type

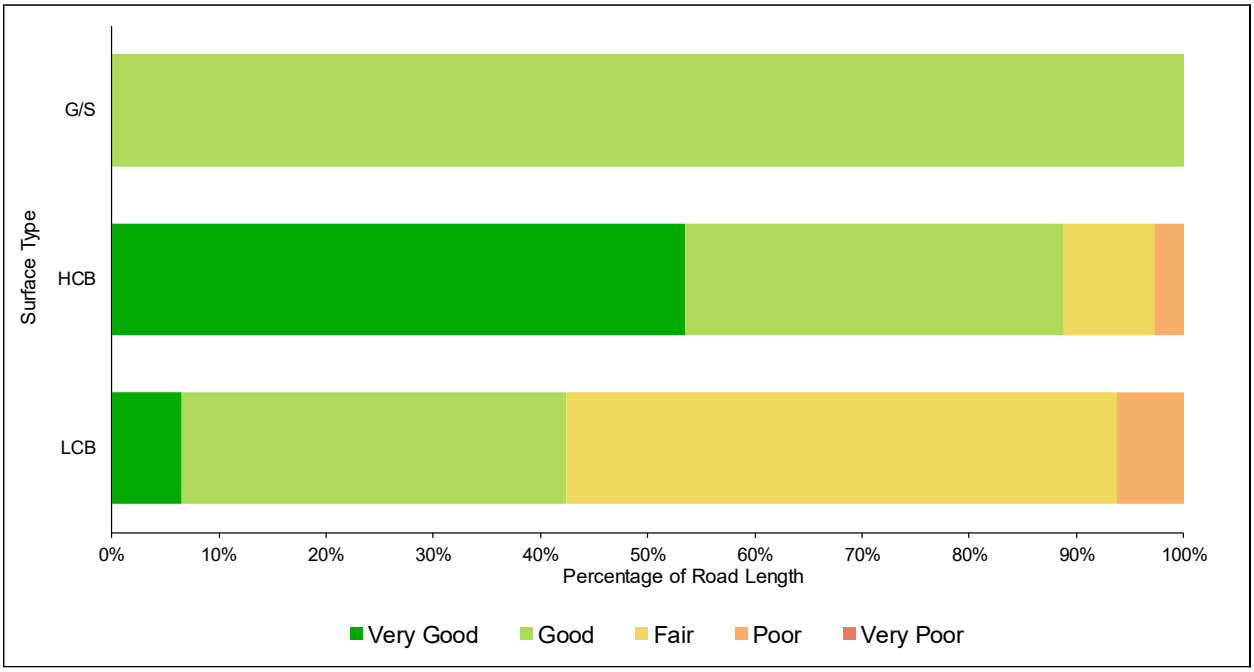
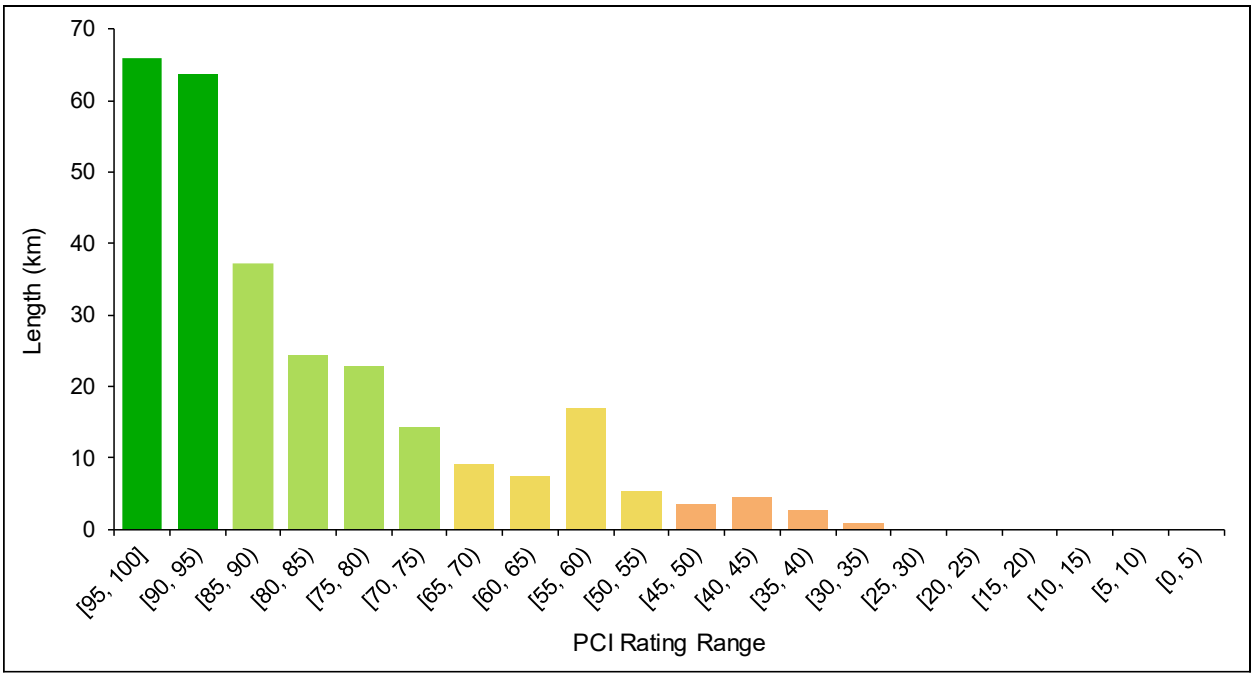


Figure 2-5: Paved Roads – Distribution (by length) of Roads by PCI Rating



In accordance with *Ontario Regulation 104/97: Standards for Bridges* (O. Reg. 104/97), the Township completes biennial inspections of its bridges and structural culverts based

on the *Ontario Structure Inspection Manual* (OSIM). To provide an overall measure of the condition of bridges and structural culverts, Bridge Condition Index (BCI) ratings are calculated for each inspected structure. BCI ratings are calculated by assigning weighted values to the condition of various structural elements (e.g., deck, foundation, superstructure, substructure, girders/beams, bearings, etc.) and non-structural elements (e.g., sidewalks, curbs, handrails, barriers, signage, etc.) of the structure being assessed. BCI ratings are typically represented on a scale of 0 to 100, with 100 being a structure in new or as-new condition. To better communicate the condition of the Township's structures, BCI ratings have been segmented into qualitative condition states as summarized in Table 2-6. Example photos of bridges and structural culverts in each condition state are also provided in Table 2-6.

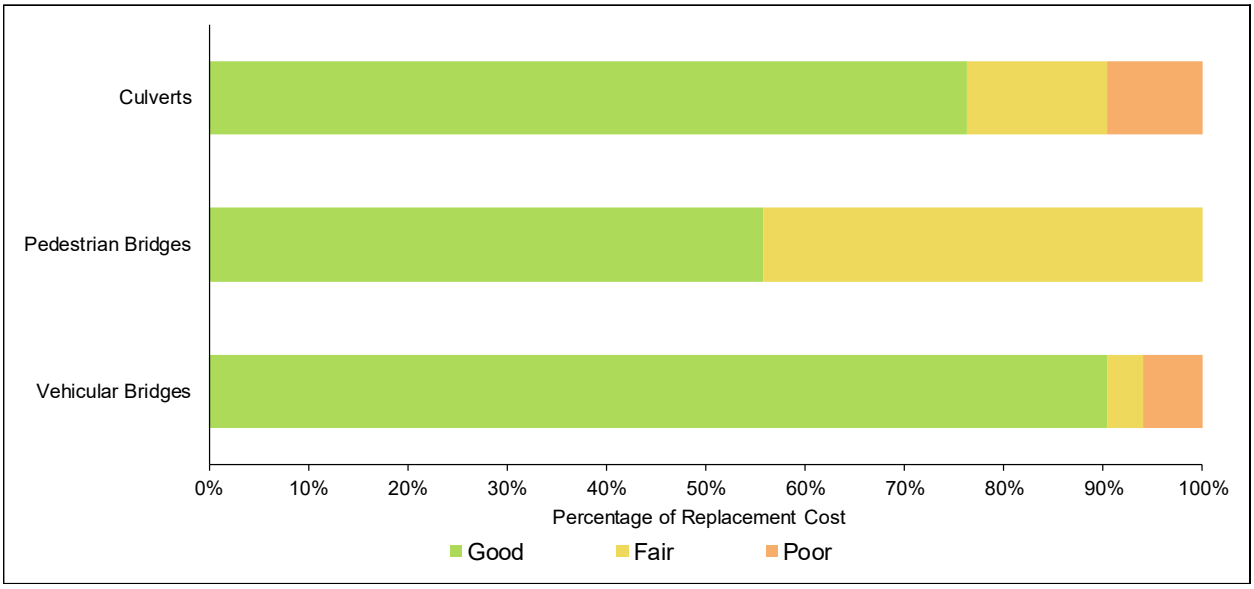
Table 2-6: Bridges and Structural Culverts – Definition of Condition States with Respect to BCI Rating

Condition State	Bridge	Structural Culvert	Description
Good 70 < BCI ≤ 100			A bridge with a BCI greater than 70 is generally considered to be in good to excellent condition, and repair or rehabilitation work is not usually required within the next five years. Routine maintenance, such as sweeping cleaning, and washing are still recommended.
Fair 50 < BCI ≤ 70			A bridge with a BCI between 50 and 70 is generally considered to be in fair condition. Repair or rehabilitation work recommended is ideally scheduled to be completed within the next five years. This is the ideal time to schedule major bridge repairs for larger and/or critical structures from an economic perspective. The most effective improvements in a structure's service life can be achieved by completing repairs while in this range.
Poor 0 < BCI ≤ 50			A bridge with a BCI rating of less than 50 is generally considered poor with lower numbers representing structures nearing the end of their service life. The repair or rehabilitation of these structures is ideally best scheduled to be completed within approximately one year. However, if it is determined that the replacement of the structure would be a more viable, practical, or economical solution than repairing the structure, the structure can be identified for continued monitoring and scheduled for replacement within a one to ten year range. The lower the BCI the more of a priority within the one to ten year range, the replacement becomes.

Based on the most recent (i.e., 2023) OSIM inspections, the average[1] BCI of the Township's vehicular bridges is 80.6, which corresponds to an average condition of 'Good'. The average BCI of Township's structural culverts is 77.6, which also corresponding to an average condition of 'Good'. Lastly, the average BCI of the Township's pedestrian bridges is 74.0, which corresponds to an average condition of 'Good'.

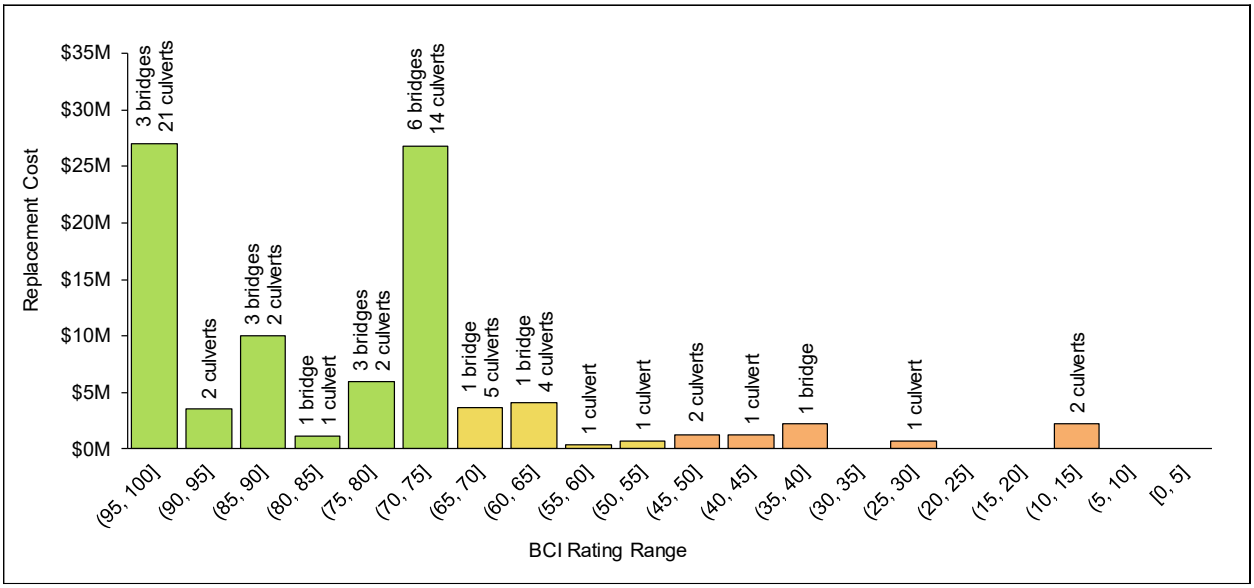
The distribution of the Township's bridges and structural culverts by condition state and structure type is illustrated in Figure 2-6 and by BCI rating range is illustrated in Figure 2-7.

Figure 2-6: Bridges and Structural Culverts – Distribution (by replacement cost) of Assets by Condition State and Structure Type



[1]Weighted average utilizing the replacement cost of structures as weights.

Figure 2-7: Bridges and Structural Culverts – Distribution (by replacement cost) of Assets by BCI Rating Range



The Township undertakes formal assessments of the condition of its sidewalks annually to ensure compliance with *Ontario Regulation 239/02: Minimum Maintenance Standards for Municipal Highways* (O. Reg. 239/02). As part of the periodic assessments, individual sidewalk segments are evaluated based on the frequency of observed deficiencies (e.g., surface discontinuities or trip hazards, water pooling issues, etc.) and assigned a condition score ranging from 1 to 5. To better communicate the condition of the Township's sidewalks, condition scores have been segmented into qualitative condition states as summarized in Table 2-7.

Table 2-7: Sidewalks – Definition of Condition States with Respect to Condition Scores

Condition Score	Condition State	Description
5	Very Good	Deficiencies accounting for up to 1% of the total sidewalk length
4	Good	Deficiencies accounting for up to 1-10% of the total sidewalk length
3	Fair	Deficiencies accounting for up to 10-25% of the total sidewalk length
2	Poor	Deficiencies accounting for up to 25-50% of the total sidewalk length
1	Very Poor	Deficiencies accounting for up to >50% of the total sidewalk length

Sidewalk segments assessed to be in a 'Poor' or 'Very Poor' condition state are prioritized for rehabilitation (e.g., grinding of trip edges, crack sealing, etc.) in accordance with O. Reg. 239/02 standards. Reconstruction of sidewalk segments typically occur in coordination with the reconstruction of the adjacent road segment. The current average[1] condition score of the Township's sidewalks is 4, indicating that the Township's sidewalk network is in an overall 'Good' condition state.

The Township assesses the condition of its road signs annually by conducting retro-reflectivity testing in accordance 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 "Good". Based on the Township's 2023 retro-reflectivity testing report, approximately 93.8% of the Township's road signs are currently assessed to be in "Good" condition while 6.2% are currently assessed to be in "Poor" condition.

The condition of the Township's streetlights has not been directly assessed through physical condition assessments. For the purposes of this asset management plan, the condition of these 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 asset

[1]Weighted average utilizing the length of sidewalk segments as weights.

would have a ULC% of 0%, indicating that none 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 streetlights, ULC% have been segmented into qualitative condition states as summarized in Table 2-8. The scale is set to show that as an asset approaches the end of its expected useful life, it 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 2-8: Streetlights – Definition of Condition States with Respect to ULC%

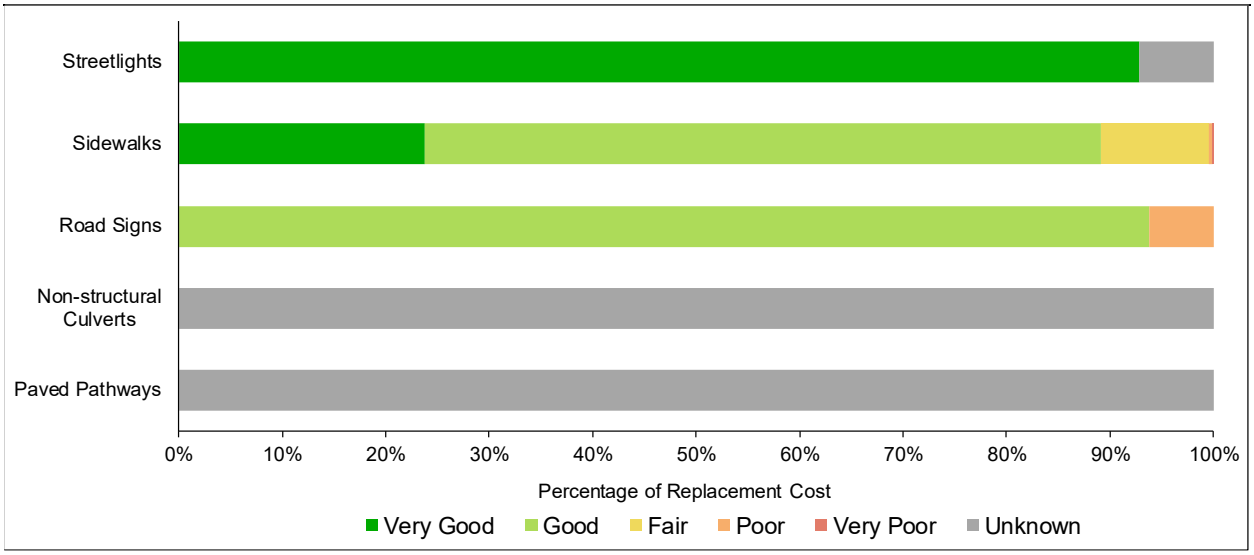
Condition State	ULC%
Very Good	0% ≤ ULC% ≤ 45%
Good	45% < ULC% ≤ 90%
Fair	90% < ULC% ≤ 100%
Poor	100% < ULC% ≤ 125%
Very Poor	125% < ULC%

The current average ULC% for the Township's streetlights is 32%, indicating that the Township's streetlights are in an overall 'Very Good' condition state. The age of 161 of the Township's streetlights is currently unknown. As such, those assets have been excluded from the calculation of average ULC% presented in this subsection.

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 ongoing data collection, with the aim of further integrating non-structural culverts into future iterations of this asset management plan. Furthermore, the Township's paved pathways have also not been assessed through formal condition assessments and therefore their condition is currently unknown.

The distribution of the Township's road-related assets by condition state and asset type is illustrated in Figure 2-8.

Figure 2-8: Road-related Assets – Distribution (by replacement cost) by Condition State and Asset Type



2.1.3 Levels of Service

The levels of service currently provided by the Township's transportation system are, in part, a result of the state of local infrastructure identified above. The levels of service framework presented in this subsection identifies both the levels of service that assets are currently providing as well as the proposed levels of service (target performance) that the Township is striving for.

The tables are structured as follows:

- The Service Attribute column in Table 2-9 indicates the high-level attribute being addressed;
- The Community Levels of Service column in Table 2-9 explains the Township's intent in plain language and provides additional information about the service being provided;
- The Performance Measure column in Table 2-10 describes the performance measure(s) connected to the identified service attribute;

- The Current Performance column in Table 2-10 identifies the current level of service with respect to each performance measure based on the best available data; and
- The Target Performance column in Table 2-10 identifies the proposed level of service with respect to each performance measure.

Table 2-9: Transportation – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Township's transportation assets enable the movement of people and goods within the Township. The assets also support transient traffic passing through the Township. In addition to passenger vehicles, the Township's transportation assets also support public transit, commercial truck traffic, movement of agricultural equipment, products and animals, and reliable emergency vehicle access to all areas of the Township. Transportation assets also support other transportation modes such as walking, cycling, and horseback-riding and special events such as pilgrimages and filming.
	The scope of the Township's transportation assets is illustrated by Map 2-1 and Map 2-2, which show the geographical distribution of transportation assets.
Quality	The Township strives to maintain its transportation assets in adequate condition to support the comfortable passage of vehicular and pedestrian traffic.
	To aid in interpreting the condition of transportation assets, descriptions of different condition states (with example photos for roads and structures) are summarized in Section 2.1.2.
Safety	The Township prioritizes the safety of its road users by ensuring that its road-related assets are maintained up to adequate standards.
Reliability	The Township strives to maintain its road-related assets in adequate condition to continue performing as expected.

Table 2-10: Transportation – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	Target Performance
Scope	Number of lane-kilometres of arterial roads as a proportion of	0.31 km/km^2	0.31 km/km^2

Service Attribute	Performance Measure	2024 Performance	Target Performance
	square kilometres of land area of the municipality.		
	Number of lane-kilometres of collector roads as a proportion of square kilometres of land area of the municipality.	0.54 km/km^2	0.54 km/km^2
	Number of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality.	1.53 km/km^2	1.53 km/km^2
	Percentage of bridges in the municipality with loading or dimensional restrictions.	0%[1]	0%
	Lane-km of gravel roads as a percentage of the total lane-km of the road network.	15.1%	0%
Quality	For paved roads in the Township, the average[2] pavement condition index value.	83.5	PCI > 75
	For unpaved roads in the Township, the average surface condition (e.g., excellent, good, fair, poor).	Good	Good
	For bridges in the municipality, the average bridge condition index value.	80.6	BCI > 70
	For structural culverts in the municipality, the average bridge condition index value.	77.6	BCI > 70
	Percentage (by area) of HCB roads assessed to be in 'Fair' or better condition.	96%	100%
	Percentage (by area) of LCB roads assessed to be in 'Fair' or better condition.	90%	100%

[1]Based on results of 2023 OSIM inspections.
[2]Weighted average utilizing the area of road segments as weights.

Service Attribute	Performance Measure	2024 Performance	Target Performance
	Number (and percentage) of bridges in a Poor condition state.	1 (5.9%)	0 (0%)
	Number (and percentage) of structural culverts in a Poor condition state.	5 (8.5%)	0 (0%)
Safety	Number of outstanding sidewalk discontinuities, as defined by O. Reg. 239/02 (i.e. trip hazards), compared to the total length of sidewalks.	8.1 per km	0 per km
	Number of outstanding sidewalk bay replacements compared to the total length of sidewalks and paved pathways.	4.0 per km	0 per km
	Percentage of sidewalk repairs that met the requirements of O. Reg. 239/02.	100%	100%
	Percentage of regulatory and warning road signs that passed annual retro-reflectivity testing.	93.8%	100%
Reliability	Percentage of sidewalks and paved pathways (by replacement cost) in "Fair" or better condition at time of annual inspection.	99.6%	100%

2.2 Water Distribution

2.2.1 State of Local Infrastructure

The water system provides potable water for residential and business consumption, as well as maintenance operations, recreational facilities, and firefighting. The Township's water service operates under a two-tiered system. The Region of York is responsible for water supply, transmission mains, storage facilities, and booster pumping stations. The Township is responsible for operation and maintenance of local distribution networks. There are large municipal networks in King City, Nobleton, and Schomberg and one small municipal residential network in Ansnorveldt. The water system serves primarily residential customers but also some light commercial and industrial customers. King

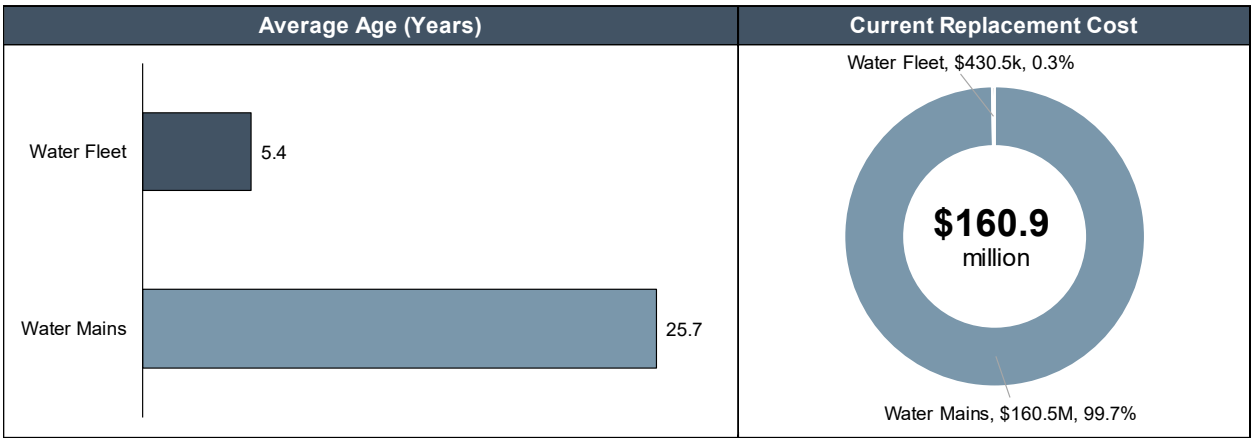
City is supplied by the York-Peel feeder main from Lake Ontario. The other networks are supplied by wells within the respective communities.

The Township's water distribution system is comprised of approximately 114.7 km of mains and 13 fleet and equipment assets that are evenly shared with the wastewater collection system. The estimated current replacement cost of the Township's water distribution system assets is $160.9 million. Watermains represent the largest share of total replacement cost at $160.5 million (99.7%) while shared fleet and equipment assets represent $431,000 (0.3%). The average age of the Township's water distribution system assets is 25.6 years. Table 2-11 summarizes the quantities, average age, and estimated current replacement cost of the Township's water distribution system assets and this information is illustrated graphically in Figure 2-9. A spatial illustration of the Township's water distribution system is provided in Map 2-3.

Table 2-11: Water – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Watermains	114.7 km	25.7 years	$160,510,000
Shared Fleet & Equipment	13 assets	5.4 years	$431,000
Total		**25.6 years[2]**	**$160,941,000**

Figure 2-9: Water – Average Age and Replacement Cost



[1]Weighted average utilizing the length of watermains and the replacement cost of other assets as weights.

[2]Weighted average utilizing the replacement cost of asset types as weights.

Map 2-3: Water Distribution System

2.2.2 Condition

The condition of the Township's water system assets has not been directly assessed through physical condition assessments. For the purposes of this asset management plan, the condition of these assets is assessed based on age relative to useful service life (i.e., based on the percentage of useful service life consumed (ULC%)). To better communicate the condition of these assets, ULC% have been segmented into

qualitative condition states as summarized earlier in Table 2-8. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all water system assets is 30.2%, indicating that the water system as a whole is in a 'Very Good' condition state and that the majority of assets are expected to exhibit little to no signs of performance degradation. Water mains have an average ULC% of 30.1%, indicating that they are currently in a 'Very Good' condition state. Shared fleet and equipment assets have an average ULC% of 57.2%, indicating that they are currently in a 'Good' condition state.

Table 2-12 summarizes the average ULC% and associated condition states of the Township's water system assets.

Table 2-12: Water – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Watermains	30.1%	Very Good
Shared Fleet & Equipment	57.2%	Good
Overall Average	**30.2%[2]**	**Very Good**

The distribution of the Township's water distribution system assets by condition state and asset type is illustrated in Figure 2-10. The distribution of the Township's watermains by ULC% is illustrated in Figure 2-11.

[1]Weighted average utilizing the length of watermains and the replacement cost of other assets as weights.
[2]Weighted average utilizing the replacement cost of asset types as weights.

Figure 2-10: Water – Distribution (by replacement cost) of Assets by Condition State and Asset Type

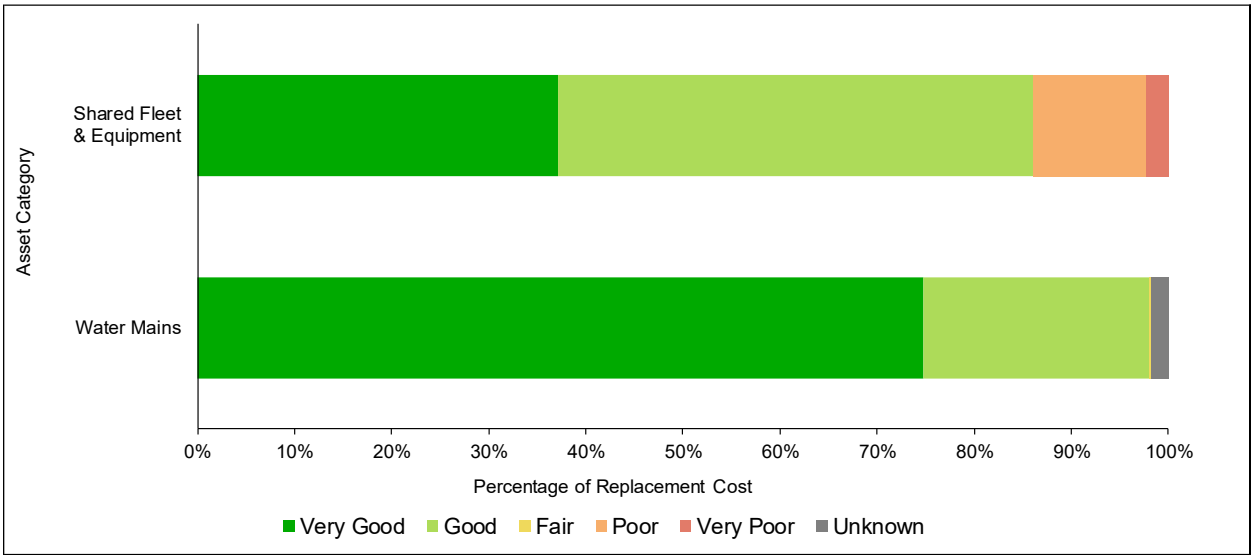
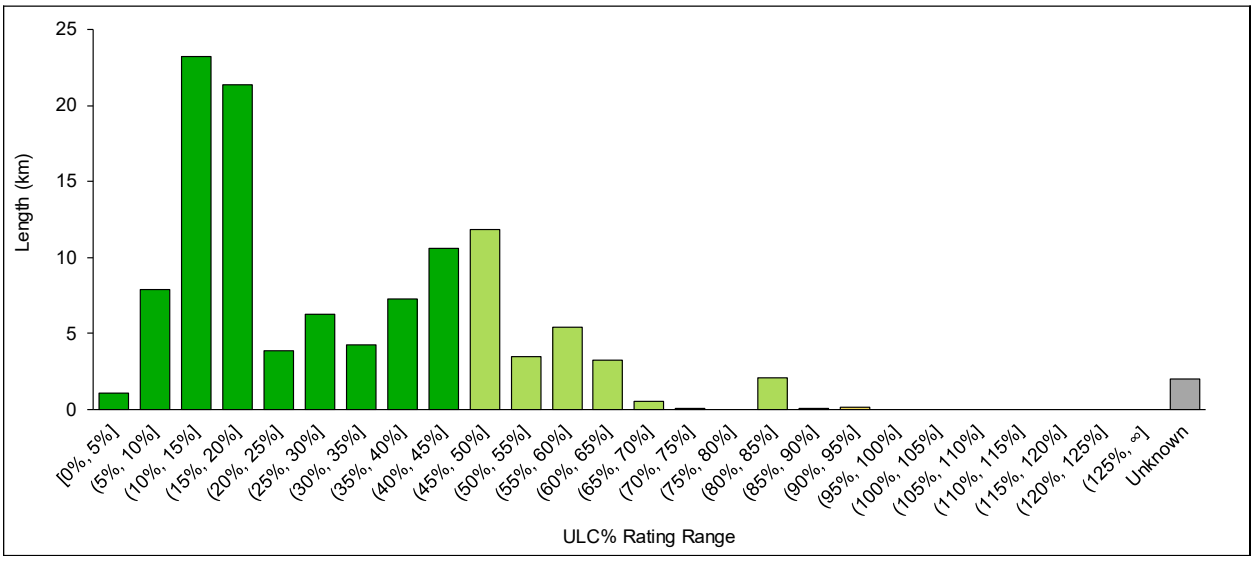


Figure 2-11: Watermains - Distribution (by length) of Assets by ULC% Range



2.2.3 Levels of Service

This subsection presents the Township's levels of service framework for its water distribution system assets. Table 2-13 presents the Township's Service Attributes and Community Levels of Service for its water system assets while Table 2-14 presents the Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

Table 2-13: Water – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The water system provides potable water for residential and business consumption, as well as maintenance operations, recreational facilities, and firefighting. Fire flow is available to all properties in King City, Nobleton, and Schomberg.
	The scope of the Township's water distribution system is illustrated by Map 2-3. The map shows the geographical distribution of municipal water system within the Township.
Reliability	The water distribution system is managed with the goal of providing safe and reliable delivery of water, minimizing service interruptions and occurrences of adverse water quality. Boil water advisories can be triggered by adverse water quality reports from routine water testing or from ad hoc tests done after events, such as watermain breaks, that may have allowed contaminants into the system. Service interruptions can be caused by routine municipal work, including watermain replacements, water distribution system repairs, and service connection repairs.
	The Township endeavors to maintain acceptable water pressure for all customers.
Quality	The water system supplies potable water with acceptable odor, taste, and appearance.
Efficiency	The Township strives to deliver water services efficiently and sustainably.

Table 2-14: Water – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	Target Performance
Scope	Percentage of properties connected to the municipal water system.	47%[1]	47%
	Percentage of properties where fire flow is available.	47%[1]	47%

[1]Based on number of customers in 2023.

Service Attribute	Performance Measure	2024 Performance	Target Performance
Reliability	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.	0 connection-days/connection	0 connection-days/connection
	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.	0.0008[1] connection-days/connection	0 connection-days/connection
	Percentage of fire hydrants with adequate fire flow.	100%	100%
Quality	Number of adverse water quality incidents (AWQIs).	3 AWQIs	Minimize
Efficiency	Percentage of water loss (of total water purchased from York Region).	18.2%	Minimize
	Average daily residential water consumption per capita.	338 litres/day[2]	Minimize

2.3 Wastewater Collection

2.3.1 State of Local Infrastructure

The Township's wastewater service operates under a two-tiered system. The Region of York is responsible for wastewater treatment and trunk collection systems. The Township is responsible for operation and maintenance of local collection networks. King City, Nobleton and Schomberg have municipal sewer connections within the current serviced areas. All water customers have wastewater service except for water customers in Ansnorveldt. Nobleton and Schomberg have individual treatment plants for

[1]Estimated based on number of watermain breaks (3).
[2]Based on 2023 data.

each system operated by York Region. King City is connected to the York-Durham system.

The Township's wastewater collection system comprises approximately 107.2 km of mains, 7 wastewater pumping stations, 14 grinder pumps, and 13 fleet and equipment assets that are evenly shared with the water distribution system.

The estimated current replacement cost of the Township's wastewater collection system assets is $131.7 million. Wastewater mains represent the largest share of total replacement cost at $127.3 million (97%), followed by pumping stations at $4.0 million (<3%), shared fleet and equipment assets at $431,000 (<1%), and lastly, grinder pumps at $40,000 (<1%). The average age of the Township's wastewater collection system assets is 11.9 years. The ages of the Township's grinder pumps are currently unknown. As such, those assets have been excluded from the calculation of average age presented in this subsection.

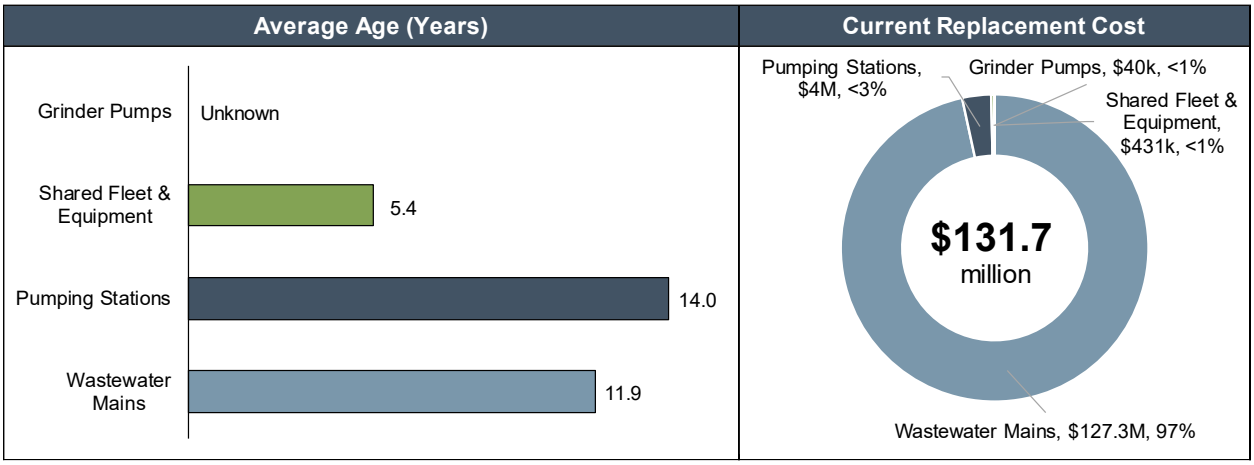
Table 2-15 summarizes the quantities, average age, and estimated current replacement cost of the Township's wastewater system assets and this information is illustrated graphically in Figure 2-12. A spatial illustration of the Township's wastewater collection system is provided in Map 2-4.

Table 2-15: Wastewater – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Wastewater Mains	107.2 km	11.9 years	$127,263,000
Pumping Stations	7 stations	14.0 years	$4,006,000
Shared Fleet and Equipment	13 assets	5.4 years	$431,000
Grinder Pumps	14 pumps	Unknown	$40,000
Total		**11.9 years**	**$131,740,000**

[1]Weighted average utilizing the replacement cost of assets as weights.

Figure 2-12: Wastewater – Average Age and Replacement Cost



Map 2-4: Wastewater Collection System

2.3.2 Condition

Similar to water system assets, the condition of wastewater mains, shared fleet and equipment assets, and grinder pumps assets is also assessed based on age relative to useful service life (i.e., based on the percentage of useful service life consumed (ULC%)). To better communicate the condition of these assets, ULC% have been

segmented into qualitative condition states as summarized earlier in Table 2-8. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for the above mentioned assets is 13.2%, indicating that these assets are in a 'Very Good' condition state and that the majority of assets are expected to exhibit little to no signs of performance degradation. Wastewater mains have an average ULC% of 13.0%, indicating that they are currently in a 'Very Good' condition state. As mentioned previously in Section 2.2.2, shared fleet and equipment assets have an average ULC% of 57.2%, indicating that they are currently in a 'Good' condition state. An average ULC% for grinder pumps cannot be calculated as their ages are currently unknown.

Table 2-16 summarizes the average ULC% and associated condition states of the Township's wastewater mains, shared fleet and equipment assets, and grinder pumps.

Table 2-16: Wastewater – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Wastewater Mains	13.0%	Very Good
Shared Fleet & Equipment	57.2%	Good
Grinder Pumps	Unknown	Unknown
Overall Average	**13.2%[2]**	**Very Good**

The distribution of the Township's wastewater mains, shared fleet and equipment, and grinder pumps by condition state and asset type is illustrated in Figure 2-13. The distribution of the Township's wastewater mains by ULC% is illustrated in Figure 2-14.

[1]Weighted average utilizing the length of wastewater mains and the replacement cost of other assets as weights.
[2]Weighted average utilizing the replacement cost of asset types as weights.

Figure 2-13: Wastewater - Distribution (by replacement cost) of Assets by Condition State and Asset Type

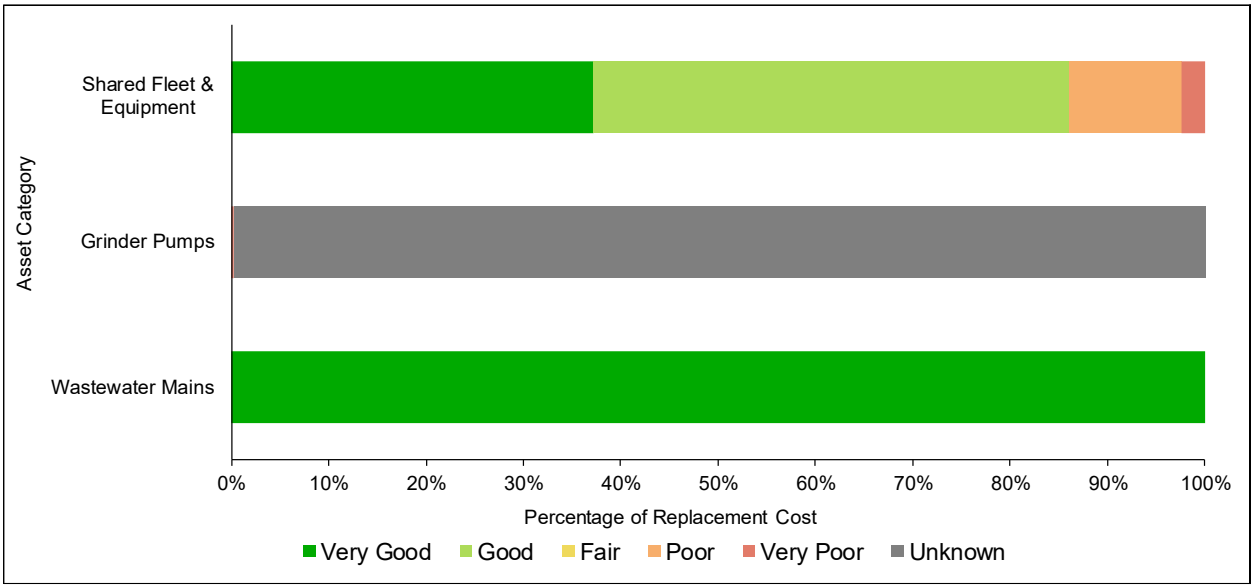
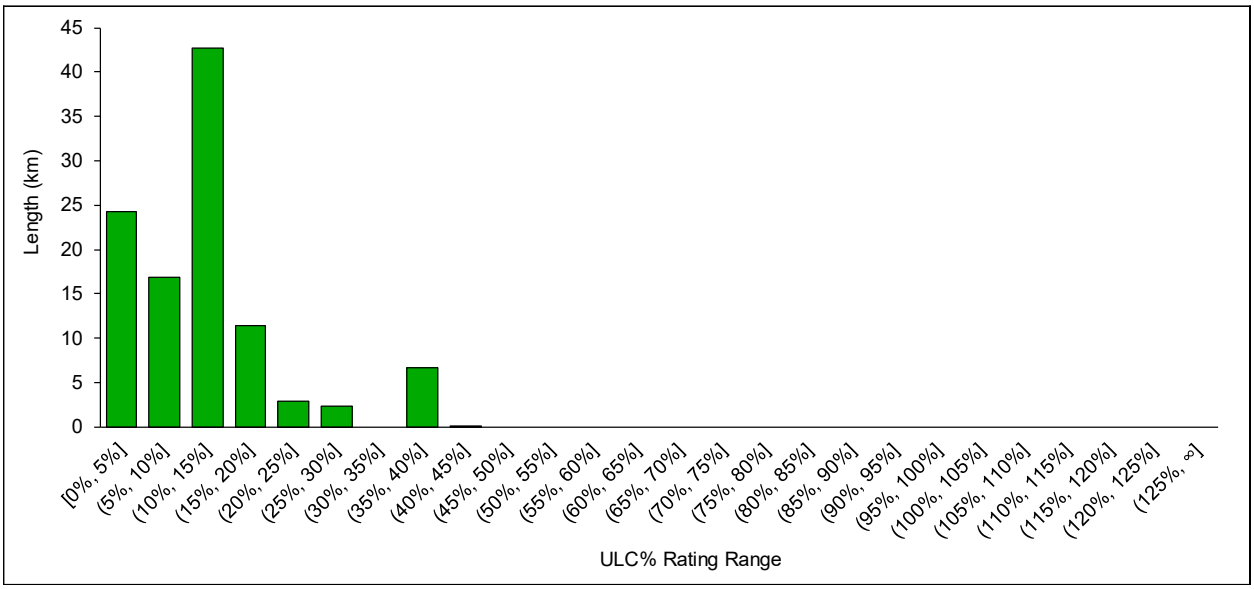


Figure 2-14: Wastewater Mains - Distribution (by length) of Assets by ULC% Range



The Township assesses the condition of its wastewater pumping stations through Building Condition Assessments (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 full

service life potential, the Township also identifies preventative maintenance needs as part of the BCAs.

As part of the BCAs, individual facility components are inspected and qualified 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 (termed 10-year FCI rating). 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.

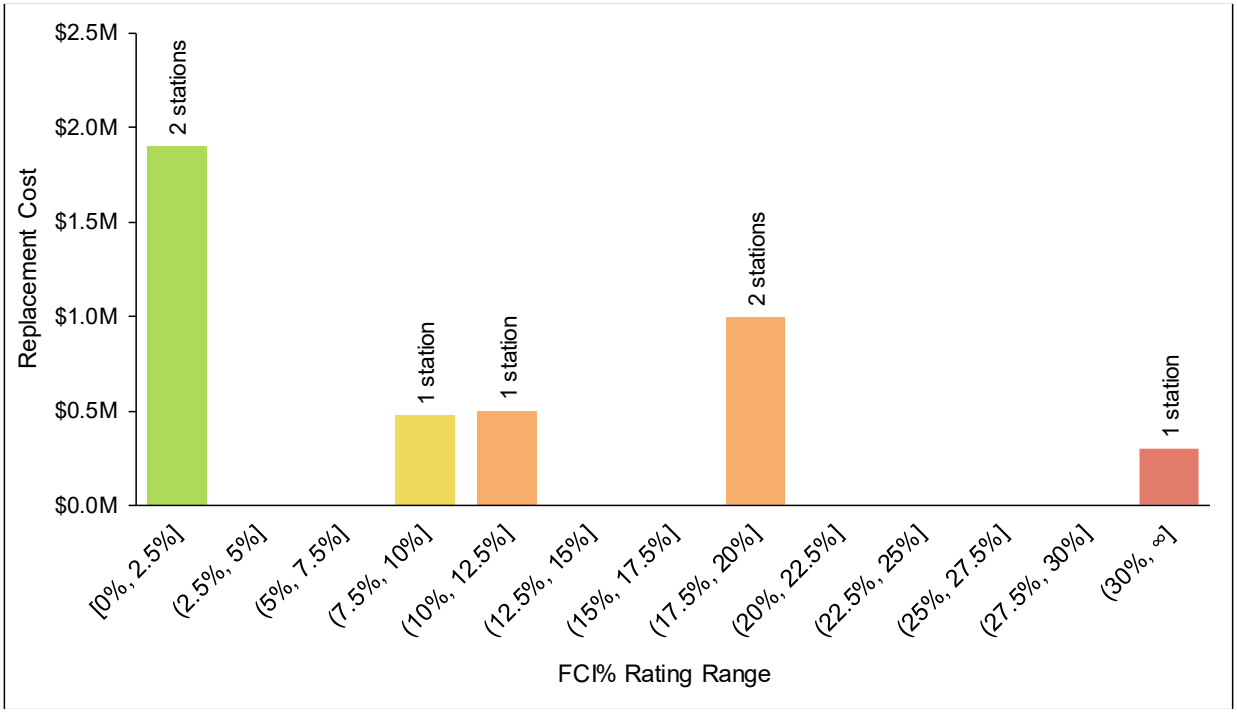
To better communicate the condition of facilities, the BCAs convert FCI ratings into qualitative condition states as summarized in Table 2-17. The scale is set to show that if the sum of forecasted capital requirements over a 10-year forecast horizon for a given facility is lower than 5% of the building's current replacement value, the facility would be deemed to be in a "Good" condition state. On the other hand, 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 2-17: Wastewater Pumping Stations – Definition of Condition States with Respect to FCI Ratings

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

The 10-year cumulative FCI for all pumping stations is 10.4%, indicating that pumping stations are currently in a 'Poor' condition state. Figure 2-15 illustrates the distribution of pumping stations by FCI%.

Figure 2-15: Wastewater Pumping Stations – Distribution (by replacement cost) of Assets by FCI%



2.3.3 Levels of Service

This subsection presents the Township's levels of service framework for its wastewater collection system assets. Table 2-18 presents the Township's Service Attributes and Community Levels of Service for its wastewater system assets while Table 2-19 presents the Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

Table 2-18: Wastewater – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The wastewater collection system serves the communities of King City, Nobleton, and Schomberg. The scope of the wastewater collection system is illustrated by Map 2-4. The map shows the geographical distribution of municipal wastewater mains (including gravity and force mains).

Service Attribute	Community Levels of Service
Reliability	The Township's wastewater collection system is separated, meaning that sanitary and stormwater flows are carried in different mains to different destinations. Despite this, infiltration inflow of both groundwater and stormwater can enter the wastewater collection system through numerous sources such as cracks in pipes, weeping tile connections, cross connections, catch basins, etc. Through York Region, a pick-hole plugging program was conducted and completed to attempt to reduce surface infiltration. Some rehabilitation work was done in Nobleton a few years ago in response to an inflow and infiltration study by Civica. The Township is in the process of developing other programs such as wet CCTV inspection, sump pump diversions and possibly smoke testing. Effluent discharge is typically defined as water pollution and can be caused by outflows from wastewater treatment facilities. Effluent discharges have documented compliance limits for criteria related to flow rates, suspended solids, Biochemical Oxygen Demand (BOD), phosphorous, ammonia, and E. coli. The Township's wastewater treatment facilities are operated in accordance with the Environmental Compliance Approval (ECA) issued by the Ministry of Environment, Conservation and Parks (CLI ECA 121-W601). The ECA also includes a description of the effluent that is discharged from the wastewater treatment facility.

Table 2-19: Wastewater – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	Target Performance
Scope	Percentage of properties connected to the municipal wastewater system.	46%[1]	46%
Reliability	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.	N/A	N/A

[1]Based on 2023 data.

Service Attribute	Performance Measure	2024 Performance	Target Performance
	The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.	0 connection-days/connection	0 connection-days/connection
	The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.	0 occurrences /connection	Minimize
	Number of wastewater main breaks.	0	Minimize
	Percentage of wastewater mains flushed and inspected via CCTV in the past 7 years	12%[1]	100%

2.4 Stormwater

2.4.1 State of Local Infrastructure

The Township's stormwater system supports the management of stormwater runoff, provides flood protection to properties and roads, manages the rate of groundwater discharge while helping to recharge groundwater reserves, and aids in reducing the amount of contaminants entering the water supply. The system is supported by 94.6 km of stormwater mains, 22 stormwater ponds, and 13 oil and grit separators (OGSs).

The estimated current replacement cost of the Township's stormwater system assets is $161.6 million. Stormwater mains represent the largest share of total replacement cost at $129.0 million (80%), followed by stormwater ponds at $31.3 (19%) and OGSs at $1.3 million (1%). The average age of the Township's stormwater system assets is 21.1 years. To note, the ages of the Township's OGSs is not currently known. As such,

[1]Based on 2021 data.

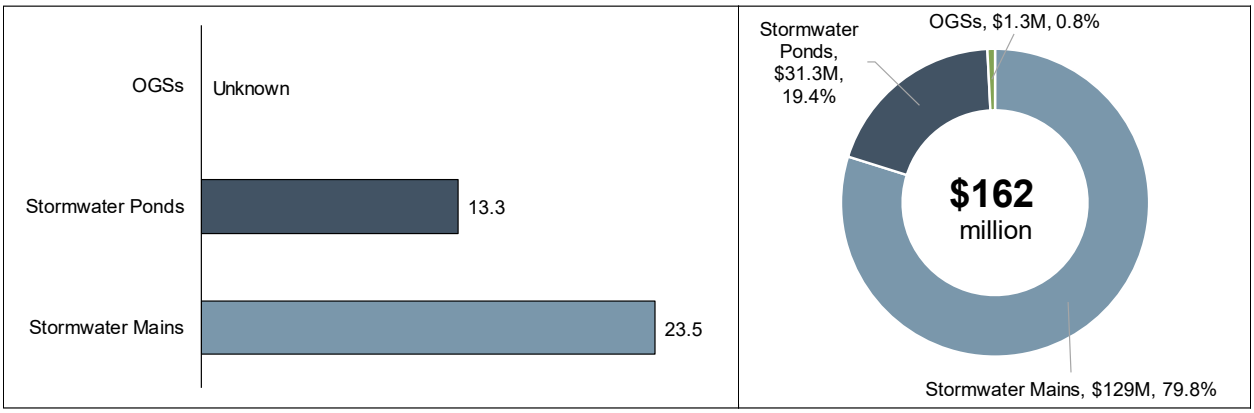
those assets have been excluded from the calculation of average age presented in this subsection.

Table 2-20 summarizes the quantities, average age, and estimated current replacement cost of the Township's stormwater system assets and this information is illustrated graphically in Figure 2-16. A spatial illustration of the stormwater system is provided in Map 2-5.

Table 2-20: Stormwater – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Stormwater Mains	94.6 km	23.5 years	$129,048,000
Stormwater Ponds	22 ponds	13.3 years	$31,287,000
Oil and Grit Separators	13 assets	Unknown	$1,294,000
Total		**21.1 years**	**$161,629,000**

Figure 2-16: Stormwater – Average Age and Replacement Cost



[1]Weighted average utilizing the replacement cost of assets as weights.

Map 2-5: Stormwater Management System

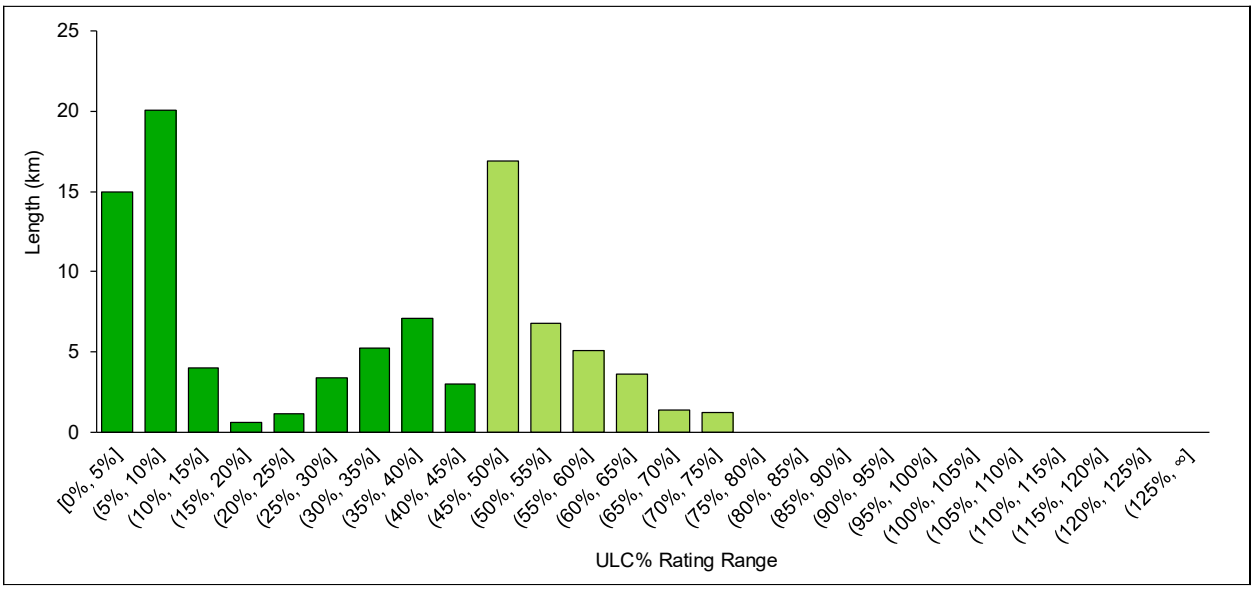
2.4.2 Condition

Similar to water and wastewater system assets, the condition of stormwater mains assets is also assessed based on age relative to useful service life (i.e., based on the percentage of useful service life consumed (ULC%)). To better communicate the condition of these assets, ULC% have been segmented into qualitative condition states

as summarized earlier in Table 2-8. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The Township's stormwater mains have an average ULC% of 29.3%, indicating that they are currently in a 'Very Good' condition state and are not expected to exhibit any signs of performance degradation. The distribution of stormwater mains by ULC% is illustrated in Figure 2-17.

Figure 2-17: Stormwater Mains - Distribution (by length) of Assets by ULC% Range



Since the age of the Township's OGSs is not currently known, an average ULC% cannot be established for these assets. As such, the condition of OGSs is not reported in this asset management plan.

The Township is currently undertaking a study to re-assess the condition of its stormwater ponds in the near future. Similar to OGSs, the condition of the Township's stormwater ponds is not reported in this asset management plan. The upcoming study on stormwater ponds and its underlying analyses will be key in informing the condition of stormwater ponds in future iterations of this asset management plan.

2.4.3 Levels of Service

This subsection presents the Township's levels of service framework for its stormwater system assets. Table 2-18 presents the Township's Service Attributes and Community Levels of Service for its wastewater system assets while Table 2-19 presents the

Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

Table 2-21: Stormwater – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The stormwater management system provides for the collection of stormwater in order to protect properties and roads from flooding, to manage the discharge rate into the environment, and to remove contaminants.
	The stormwater collection system primarily serves the communities of King City, Nobleton, and Schomberg. There are some smaller works in rural areas. The scope of the Township's stormwater system is illustrated in Map 2-5.
Reliability	The Township inspects and maintains the stormwater system to ensure that it functions as intended.

Table 2-22: Stormwater – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	Target Performance
Scope	Percentage of properties in municipality resilient to a 100-year storm.	55%[1]	55%
	Percentage of the municipal stormwater management system resilient to a 5-year storm.	94%[1]	94%
Reliability	Percentage of catch basins cleaned out at least once within previous three years.	68%[2]	100%
	Number (and percentage) of stormwater ponds with sedimentation level within 50% of rated capacity.	13 (59%)	Minimize

[1]Based on 2021 data from the Lakehead Region Conversation Authority and the Toronto and Region Conversation Authority. The performance of this measure is not expected to have changed since 2021.
[2]Based on 2021 data.

Service Attribute	Performance Measure	2024 Performance	Target Performance
	Percentage of the stormwater system flushed and inspected via CCTV in the past 7 years.	0%	100%

2.5 Tax-funded Facilities

2.5.1 State of Local Infrastructure

The Township owns 32 facilities[1] (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 tax-funded facilities as Recreation Facilities, Municipal Facilities, and Libraries. Recreation Facilities comprise community centres, arenas, community halls, etc. Municipal facilities comprise all administrative, operational, and heritage buildings. Libraries comprise the Ansnorveldt Library, the King Library, the Nobleton Library, and the Schomberg Library.

The estimated current replacement cost of Township's tax-funded facilities is $458.0 million. Recreation facilities represent the largest share of replacement cost at $236.4 million (52%), followed by Municipal facilities at $162.5 million (35%) and Libraries at $59 million (13%). The average age of the Township's facilities is 28.8 years.

Table 2-23 summarizes the quantity, average age, and estimated current replacement cost of the Township's facilities by facility classification and this information is illustrated graphically in Figure 2-18.

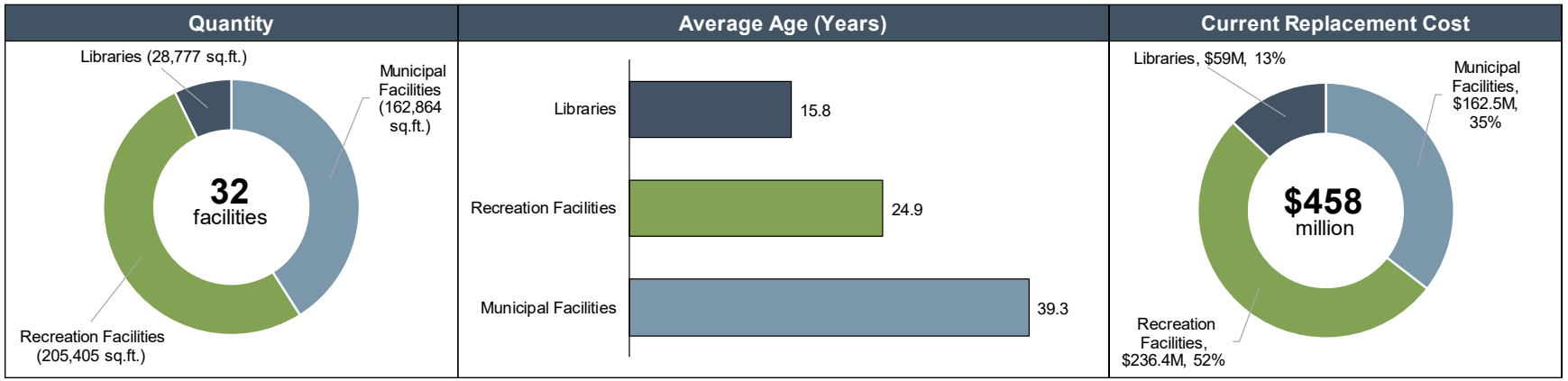
[1]The Township's inventory of facilities includes the Zancor Centre, Nobleton Community Hall, and Old King Senior Centre. The inventory excludes the King City Lions Arena.

Table 2-23: Facilities – Quantity, Average Age, and Replacement Cost

Classification	Quantity	Gross Floor Area (sq.ft.)	Average Age[1]	Current Replacement Cost
Municipal Facilities	12 facilities	162,864 ft^2	39.3 years	$162,511,000
Recreation Facilities	16 facilities	205,405 ft^2	24.9 years	$236,405,000
Libraries	4 facilities	28,777 ft^2	15.8 years	$59,042,000
Total	**32 facilities**	**397,046 ft^2**	**28.8 years**	**$457,958,000**

[1]Weighted average utilizing replacement cost of facilities weights.

Figure 2-18: Facilities – Quantity, Average Age, and Replacement Cost



2.5.2 Condition

The Township assesses the condition of its facilities through BCAs completed by an external service provider. Please refer to Section 2.3.2 for further information on this condition assessment methodology.

The 10-year cumulative FCI% for all of the Township's tax-funded facilities is 4.33%, indicating that facilities are in an overall 'Good' condition state. Table 2-24 summarizes the average FCI% and associated condition states of the Township's facilities by facility classification.

Table 2-24: Facilities – Average FCI% and Associated Condition States

Classification	FCI%	Condition State
Municipal Facilities	4.88%	Good
Recreation Facilities	4.25%	Good
Libraries	3.11%	Good
Overall Average	**4.33%**	**Good**

The distribution of the Township's facilities by condition state and facility classification is illustrated in Figure 2-19 and by FCI% is illustrated in Figure 2-20.

Figure 2-19: Facilities – Distribution (by gross floor area) of Facilities by Condition State

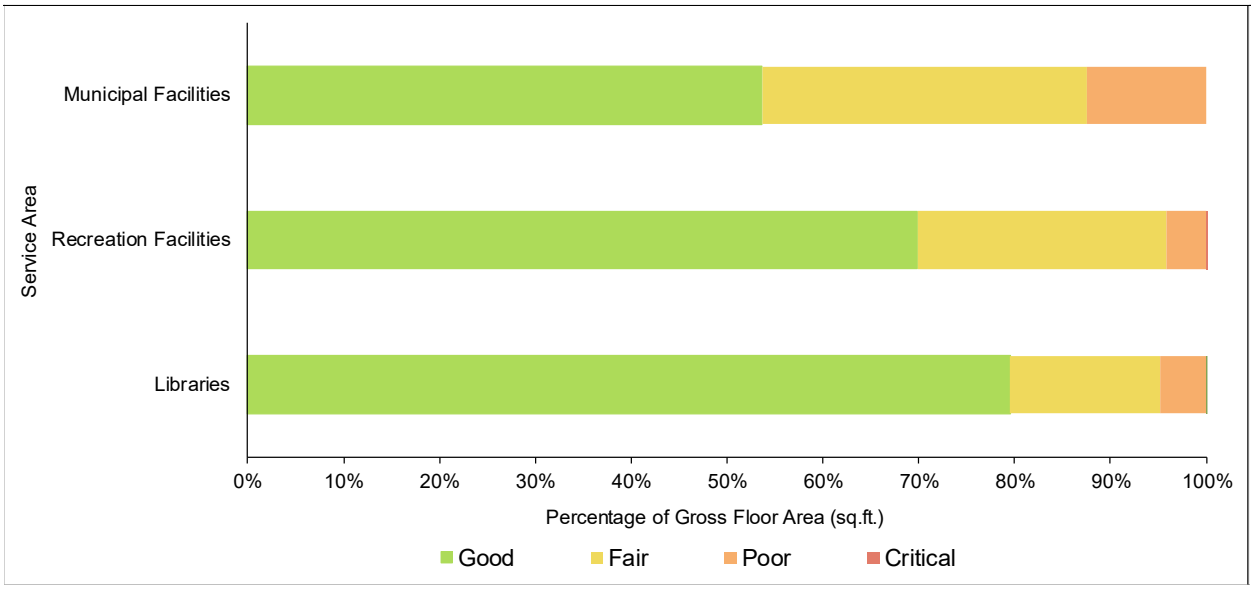
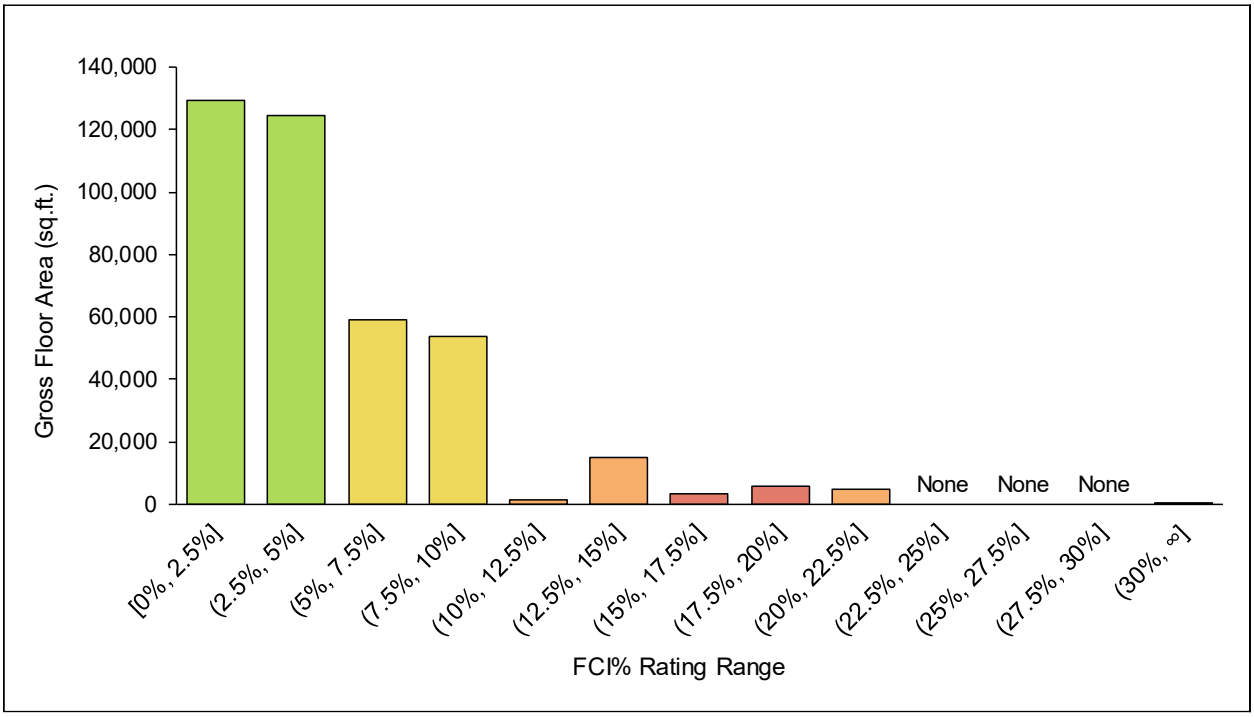


Figure 2-20: Facilities - Distribution (by gross floor area) of Facilities by FCI% Rating Range



2.5.3 Levels of Service

This subsection presents the Township's levels of service framework for its facilities. Table 2-25 presents the Township's Service Attributes and Community Levels of Service for its facilities while Table 2-26 presents the Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

It should be noted that the current performance reported in this asset management plan for the Township's facilities does not include the newly constructed Zancor Centre in its calculations.

Table 2-25: 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.

Service Attribute	Community Levels of Service
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.
Operational Efficiency	The Township strives to maintain adequate staffing levels to sustain the efficient operation of its facilities.
Capacity	The Township strives to align the capacity of its facilities with the service demands of its community.

Table 2-26: Facilities – Technical Levels of Service

Service Attribute	Performance Measure	2023 Performance	Target Performance
Accessibility	Percentage of public access facilities that meet the requirements of the Accessibility for Ontarians with Disabilities Act, 2005.	68%	Maximize
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	Minimize
	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	Minimize

Service Attribute	Performance Measure	2023 Performance	Target Performance
Safety	Percentage of staffed facilities that undergo monthly health and safety inspections.	100%[1]	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.	4.3%[1]	Minimize
	Facilities with Facility Condition Index ratings above 30% as a ratio of the total number facilities.	1:32[1]	0:32
Environmental Sustainability	Kilowatt-hours (kWh) of electricity consumed per square feet for facilities with access to electricity.	15 kWh per sq. ft.	Minimize
	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.	Minimize
	Cubic metres (m^3) of water consumed per square feet for facilities with access to municipal water.	0.12 m^3 per sq. ft.	Minimize
	Ratio of electric vehicle charging ports available for public use to the total number of facilities.	10:33	Maximize
Operational Efficiency	Number of full-time equivalents of operational staff for recreation facilities compared to the total number of recreation facilities.	0.6 FTEs per recreation facility	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	0.21 FTEs per municipal facility

[1]Based on 2024 data.

Service Attribute	Performance Measure	2023 Performance	Target Performance
Capacity	Gross floor area (sq.ft.) of libraries per capita.	0.96 ft^2 per capita[1]	0.96 ft^2 per capita
	Gross floor area (sq.ft.) of recreation facilities per capita.	6.83 ft^2 per capita[1]	6.83 ft^2 per capita
	Gross floor area (sq.ft.) of public works facilities per km of roads.	180.64 ft^2 per km[2]	270.96 ft^2 per km

2.6 Fleet and Equipment

2.6.1 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'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 estimated current replacement cost of the Township's fleet and equipment assets is $34.9 million. Assets supporting Fire and Emergency services represent the largest share of total replacement cost at $19.3 million (55.4%), followed by tax-supported operations assets at $15.1 million (43.4%) and tax-supported passenger vehicles at $415,000 (1.2%). The average age of the Township's fleet and equipment assets is 9.2 years.

Table 2-27 summarizes the average age and estimated current replacement cost of the Township's fleet and equipment assets by service area and this information illustrated graphically in Figure 2-21.

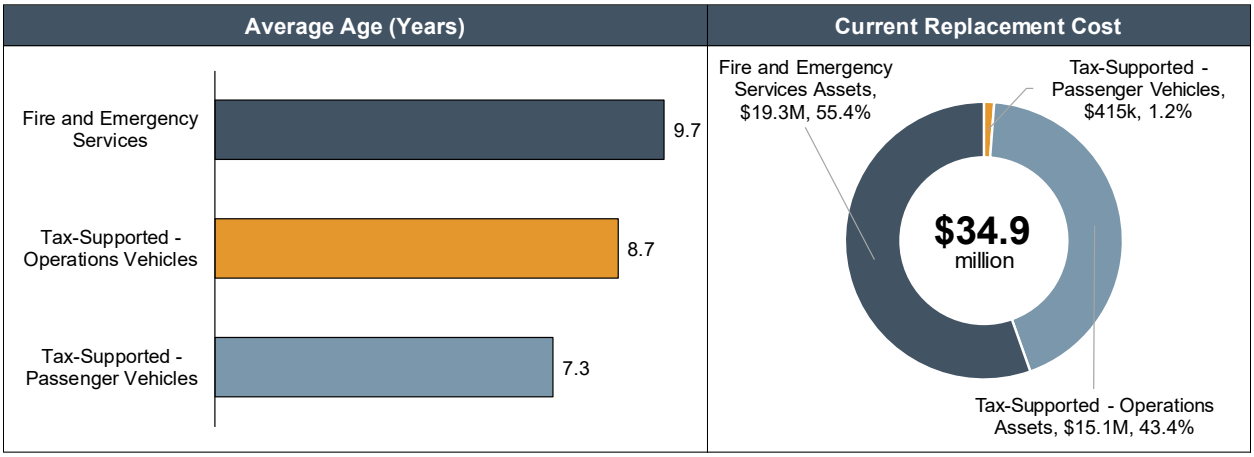
[1]Performance is calculated based on the Township's 2025 population estimates.

[2]Based on 2024 data.

Table 2-27: Fleet and Equipment – Average Age and Replacement Cost

Asset Type	Average Age[1]	Current Replacement Cost
Tax-supported Passenger Vehicles	7.3 years	$415,000
Tax-supported Operations Assets	8.7 years	$15,132,000
Fire and Emergency Services Assets	9.7 years	$19,329,000
Total	**9.2 years**	**$34,876,000**

Figure 2-21: Fleet and Equipment – Average Age and Replacement Cost



2.6.2 Condition

The condition of the Township's fleet and equipment assets has not been directly assessed through physical condition assessments. For the purposes of this asset management plan, the condition of these assets is assessed based on age relative to useful service life (i.e., based on the percentage of useful service life consumed (ULC%)). To better communicate the condition of these assets, ULC% have been segmented into qualitative condition states as summarized earlier in Table 2-8. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all fleet and equipment assets is 86%, indicating that while most assets have expended at least 50% of their estimated useful lives, they are expected to be in a 'Good' condition state and continue functioning as originally

[1] Weighted average utilizing replacement cost of assets as weights.

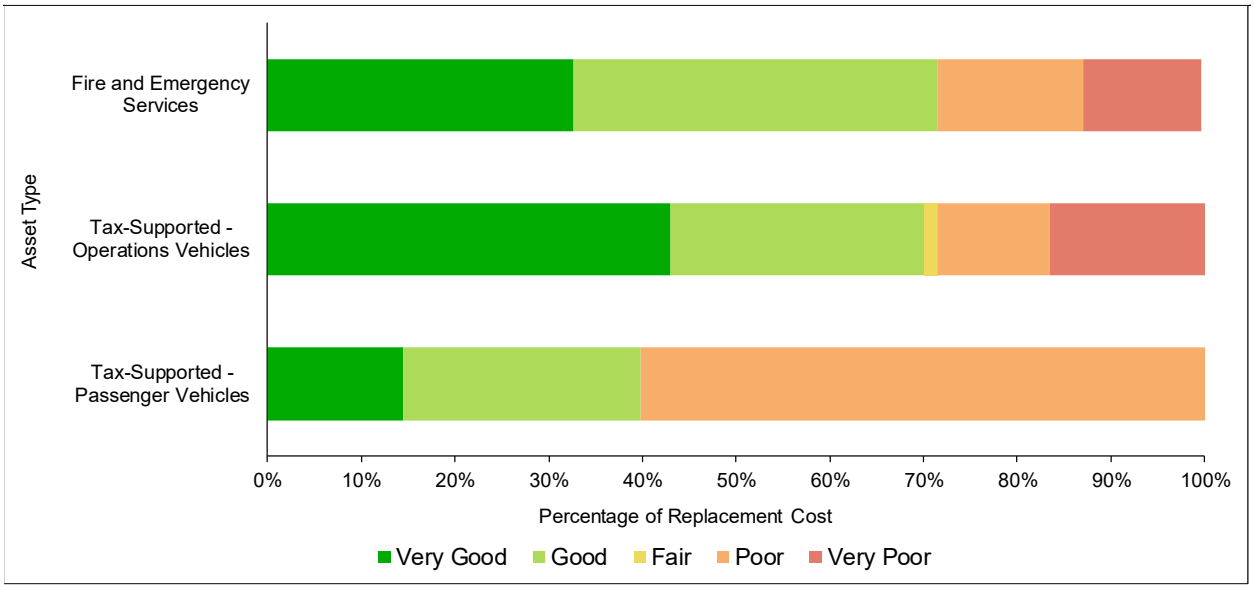
intended. Table 2-28 summarizes the average ULC% and associated condition states of the Township's fleet and equipment assets.

Table 2-28: Fleet and Equipment – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Tax-supported Passenger Vehicles	85.9%	Good
Tax-supported Operations Assets	99.1%	Fair
Fire and Emergency Services Assets	75.5%	Good
Overall Average	**85.9%**	**Good**

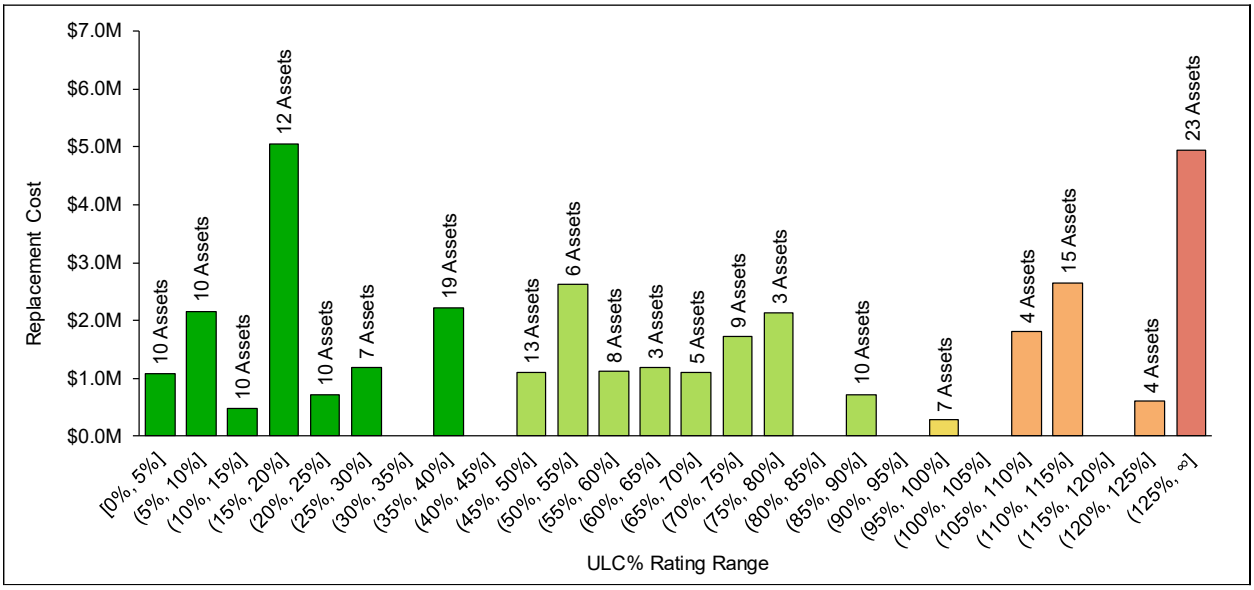
The distribution of the Township's fleet and equipment assets by condition state and asset type is illustrated in Figure 2-22 and by ULC% is illustrated in Figure 2-23.

Figure 2-22: Fleet and Equipment – Distribution (by replacement cost) of Assets by Condition State and Asset Type



[1]Weighted average utilizing the replacement cost of assets as weights.

Figure 2-23: Fleet and Equipment – Distribution (by replacement cost) of Assets by ULC% Range



2.6.3 Levels of Service

This subsection presents the Township's levels of service framework for its fleet and equipment assets. Table 2-29 presents the Township's Service Attributes and Community Levels of Service for its fleet and equipment assets while Table 2-30 presents the Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

Table 2-29: 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.).

Table 2-30: Fleet and Equipment – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	Target Performance
Safety	Percentage of automotive fire apparatus that underwent at least one inspection in the calendar year.	100%	100%
	Percentage of commercial fleet assets that underwent at least one inspection in the calendar year.	100%	100%
	Percentage of non-automotive fire apparatus that underwent at least one inspection in the calendar year.	100%	100%
	Percentage of non-plated heavy equipment assets that underwent at least one inspection in the calendar year.	100%	100%
Reliability	Replacement cost of fleet and equipment assets in use beyond their optimal service life standards compared to the replacement cost of all fleet assets.	28.7%	Minimize
Capacity	Ratio of spare dump trucks with plow attachments to the total number of dump trucks with plow attachments.	0:12	Maximize
	Ratio of spare fire apparatus to the total number of fire apparatus.	1:14	Maximize

2.7 Parks and Forestry

2.7.1 State of Local Infrastructure

The Township's inventory of parks and forestry assets comprises 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 $33.5 million. Sports fields and courts represent the largest share of replacement cost at $16.1 million (48%), followed by play equipment at $10.4 million (31%), park shelters and structures at $4.9 million (15%), park furnishings at $1.7 million (5%), and lastly,

light fixtures at $277,000 (1%). The average age of all of the Township's parks and forestry assets is 9.2 years.

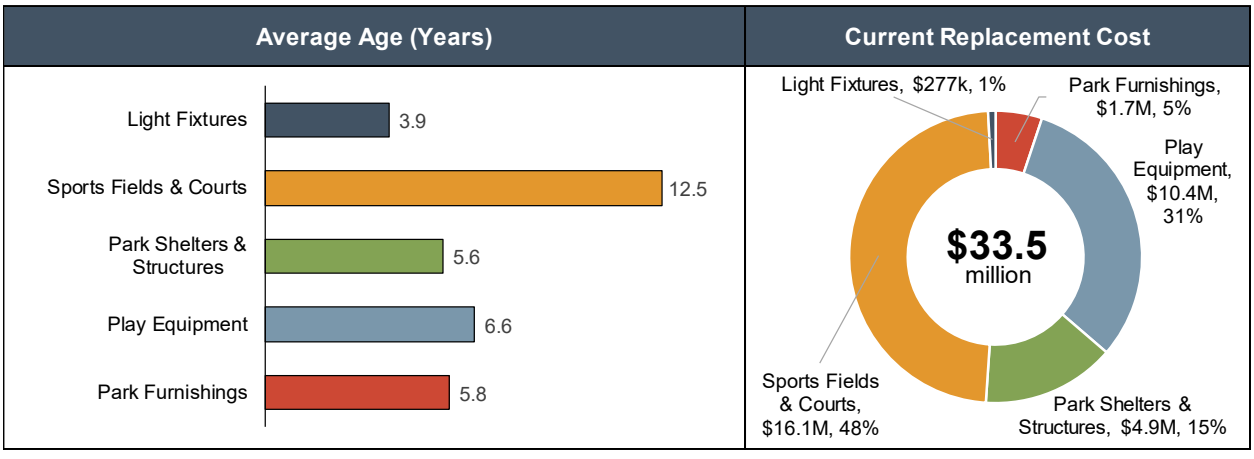
The Township also owns an unknown quantity of trees which comprise its canopy cover. Based on the Township's Tree Conservation Plan, the replacement cost of the Township's canopy cover is estimated to be in the range of $100-$200 million. Similar to non-structural culverts, the Township's canopy cover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

Table 2-31 summarizes the average age and estimated current replacement cost of the Township's parks and forestry assets by service area and this information is illustrated graphically in Figure 2-22.

Table 2-31: Parks and Forestry – Average Age and Replacement Cost

Asset Type	Average Age[1]	Current Replacement Cost
Park Furnishings	5.8 years	$1,719,000
Play Equipment	6.6 years	$10,434,000
Park Shelters & Structures	5.6 years	$4,933,000
Sports Fields & Courts	12.5 years	$16,095,000
Light Fixtures	3.9 years	$277,000
Total	**9.2 years**	**$33,458,000**

Figure 2-24: Parks and Forestry – Average Age and Replacement Cost



[1]Weighted average utilizing the replacement cost of assets as weights.

2.7.2 Condition

The condition of the Township's parks and forestry assets has not been directly assessed through physical condition assessments. For the purposes of this asset management plan, the condition of these assets is assessed based on age relative to useful service life (i.e., based on the percentage of useful service life consumed (ULC%)). To better communicate the condition of these assets, ULC% have been segmented into qualitative condition states as summarized earlier in Table 2-8. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all parks and forestry assets is 35%, indicating that they are expected to be in a 'Very Good' condition state and exhibit little to no signs of performance degradation. Table 2-32 summarizes the average ULC% and associated condition states of the Township's parks and forestry assets.

Table 2-32: Parks and Forestry – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Park Furnishings	35.7%	Very Good
Play Equipment	33.1%	Very Good
Park Shelters & Structures	21.5%	Very Good
Sports Fields & Courts	40.5%	Very Good
Light Fixtures	19.5%	Very Good
Overall Average	**35.0%**	**Very Good**

The distribution of the Township's parks and forestry assets by condition state and asset type is illustrated in Figure 2-25 and by ULC% is illustrated in Figure 2-26.

[1]Weighted average utilizing the replacement cost of assets as weights.

Figure 2-25: Parks and Forestry – Distribution (by replacement cost) of Assets by Condition State and Asset Type

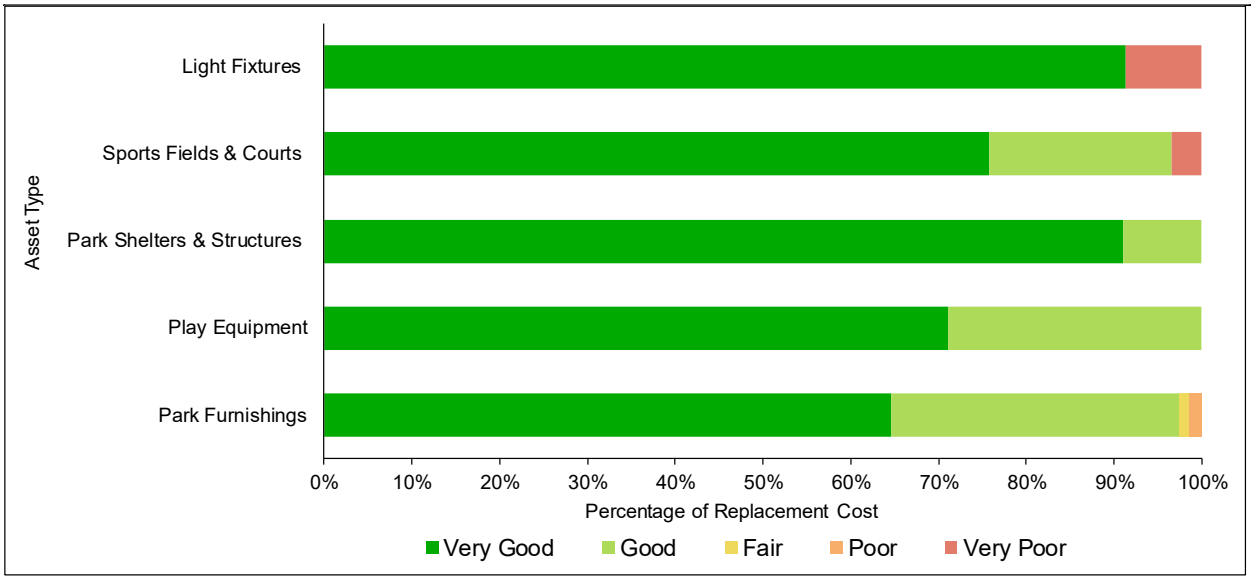
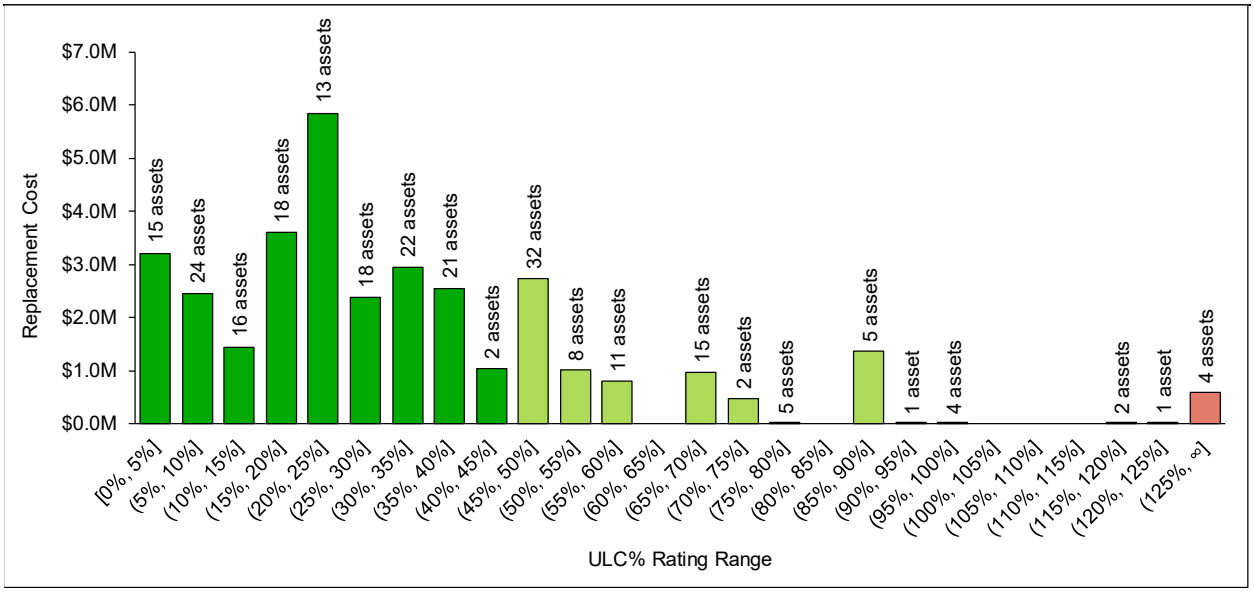


Figure 2-26: Parks and Forestry – Distribution (by replacement cost) of Assets by ULC% Range



2.7.3 Levels of Service

This subsection presents the Township's levels of service framework for parks and forestry assets. Table 2-33 presents the Township's Service Attributes and Community Levels of Service for its fleet and equipment assets while Table 2-34 presents the Township's Technical Levels of Service (i.e. performance measures). Please refer to 2.1.3 for further details on the Township's levels of service framework.

Table 2-33: 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 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.
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.

Table 2-34: Parks and Forestry – Technical Levels of Service

Service Attribute	Performance Measure	2023 Performance	Target Performance
Proximity	Average distance (in meters) from residential areas to the nearest neighborhood park within population centres.	800 metres	800 metres
Quality	Number of outstanding playground deficiencies compared to the total number of playgrounds.	2.3 deficiencies per 10 playgrounds	Minimize

Service Attribute	Performance Measure	2023 Performance	Target Performance
	Number of outstanding splash pad deficiencies compared to the total number of splash pads.	0 deficiencies	0 deficiencies
	Replacement cost of parks and forestry assets in use beyond their optimal service life standards compared to the replacement cost of all parks and forestry assets.	1.8%[1]	Minimize
Availability	Acres of parkland per residential household.	3.15 acres per 100 households	3.15 acres per 100 households
	Metres of Township operated trails per residential household.	726 metres per 100 households	726 metres per 100 households
Accessibility	Percentage of playgrounds that meet the requirements of the Accessibility for Ontarians with Disabilities Act, 2005.	100%	100%
Operational Efficiency	Acres of parkland compared to the number of full-time equivalents (FTE) of operational staff.	43 acres per FTE	43 acres per FTE

2.8 Population and Employment Growth

Based on the Region of York's 2022 Official Plan, the Township's population is projected to increase at a pace of approximately 2% annually, totalling approximately 51,000 residents by 2051. Furthermore, the Region of York's 2022 Official Plan also projects the number of employees in the Township to increase at a pace of approximately 1.9% annually, totalling approximately 17,700 employees by 2051.

The Township has identified some growth-related capital expenditures for its infrastructure assets as part of its Council approved 2025-2034 capital plan. The Township collects development charges to fund its growth-related capital expenditures and is currently undertaking an update of its 2020 Development Charges Background Study. This update is due to be completed in the near future and it is expected that the

[1]Based on 2024 data.

Township's current forecast of growth-related capital expenditures will be further refined through the on-going study process. Utilizing development charges ensures that the capital expenditures required to support population and employment growth do not introduce additional financial burdens on existing tax and rate payers.

Further details on the Township's estimated capital and significant operating expenditures to achieve the proposed levels of service (identified earlier in Chapter 2) in light of expected population and employment growth will be provided in its upcoming Development Charges Background Study Update.

Chapter 3
Lifecycle Management Strategies

3. Lifecycle Management Strategies

3.1 Introduction

The lifecycle management strategies in this asset management plan identify the lifecycle activities that would need to be undertaken to provide the proposed levels of service presented earlier in Chapter 2. Within the context of this asset management plan, lifecycle activities are the specific actions that need to be performed on an asset in order to ensure it is performing as expected and/or to prolong its remaining service life. These actions can be carried out on a planned schedule in a prescriptive manner or through a dynamic approach where the lifecycle activities are only carried out when specified conditions are met. In accordance with O. Reg. 588/17, the lifecycle activities and associated costs presented in this chapter consider the full lifecycle of assets. In general terms, an asset's lifecycle starts with its initial planning and acquisition (or construction), includes both the capital and significant operating/maintenance activities the asset is expected to undergo throughout its life, and ends with its eventual disposal. Additionally, O. Reg. 588/17 requires that all potential lifecycle activity options be assessed, with the aim of identifying the set of lifecycle activities that can be undertaken at the lowest cost to provide the proposed levels of service.

The following subsections summarize the lifecycle activity models developed for the Township's assets and present the annual capital cost of undertaking the lifecycle activities required to provide the proposed levels of service over the next 10 years. The Township should plan to regularly update the underlying data informing the forecasts presented in this chapter to ensure continual alignment with the Township's evolving asset management environment.

3.2 Transportation

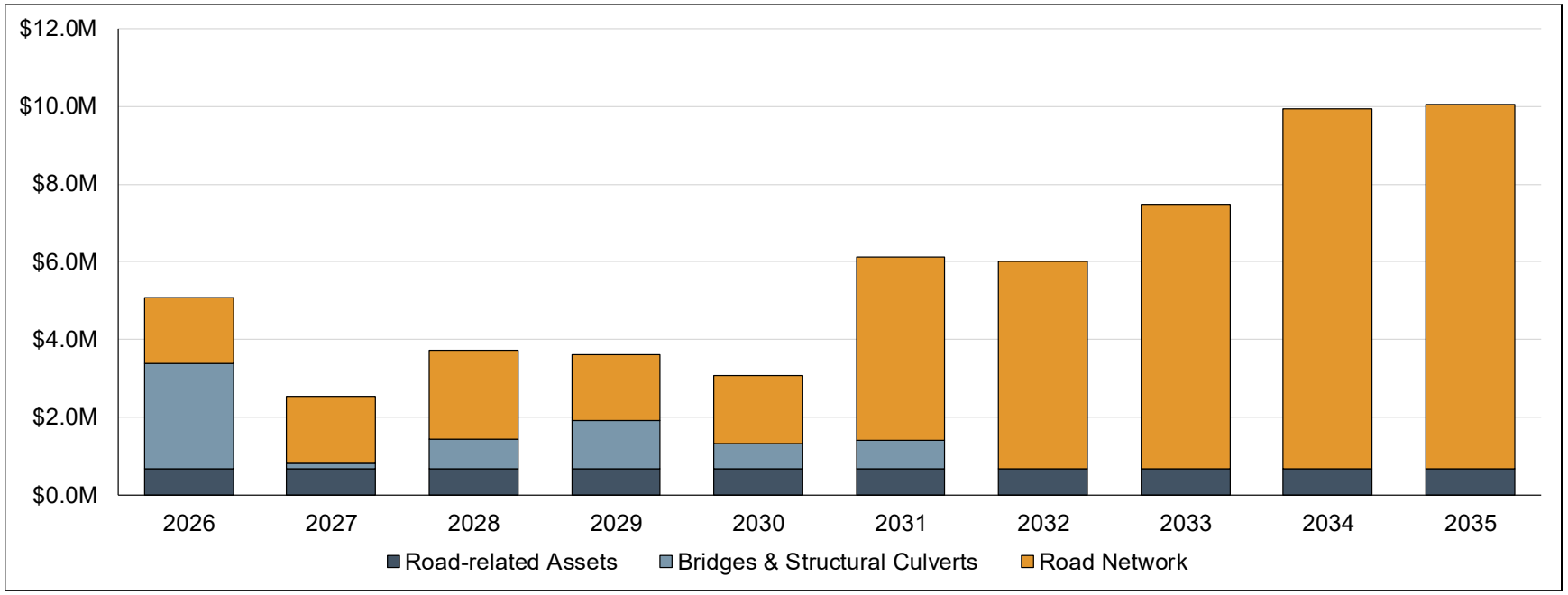
This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's transportation assets presented earlier in Section 2.1.3.

The capital expenditure forecast for the Township's roads is based on its 2024 Road Needs Study and enables the Township to achieve a road network average PCI rating of 75 by 2035. The capital expenditure forecast for the Township's bridges and

structural culverts is derived based on its most recent (2023) OSIM inspection report and ensures the timely rehabilitation of its structures. Lastly, the Township undertakes the replacements of its road-related assets in conjunction with road reconstruction projects. The capital expenditure forecast presented herein includes an annual allowance to undertake the replacements of road-related assets in coordination with planned road reconstructions.

The 10-year capital expenditure forecast for the Township's transportation network is illustrated in Figure 3-1. Average annual expenditures over the forecast period have been estimated at approximately $5.8 million.

Figure 3-1: Transportation – Capital Expenditure Forecast (Uninflated)



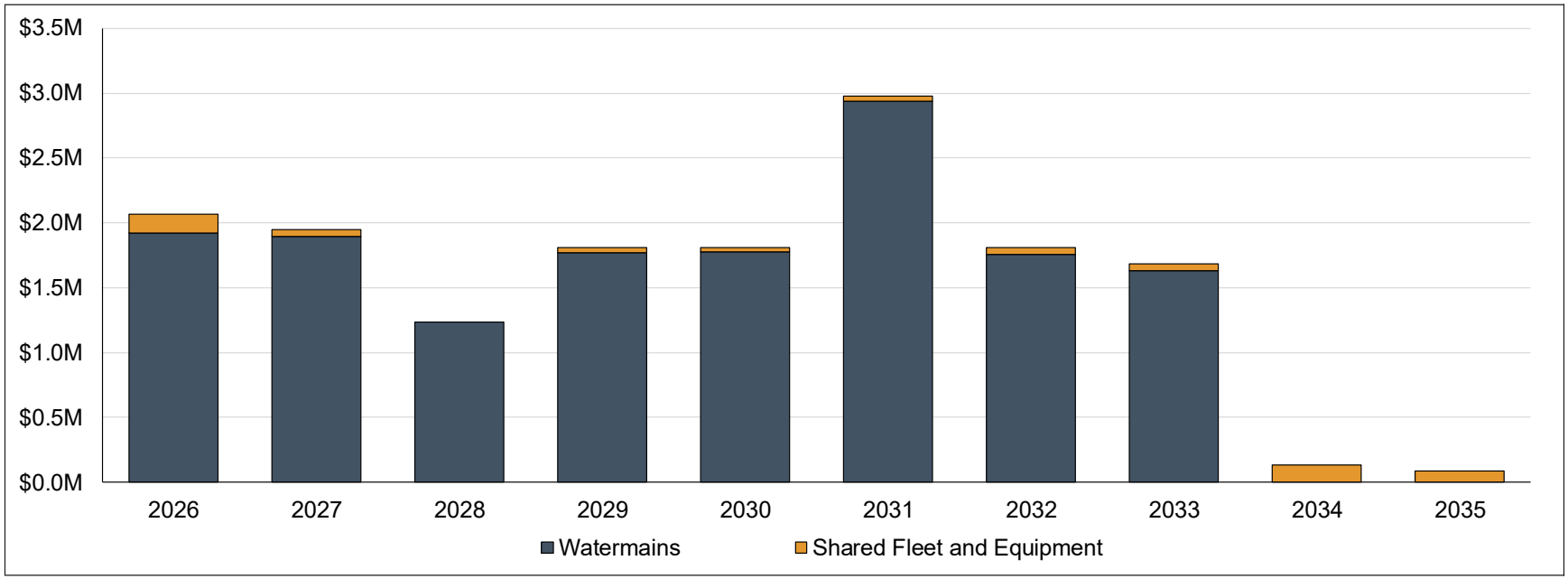
3.3 Water

This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's water system assets presented earlier in Section 2.2.3.

In general terms, the proposed levels of service for the Township's water system assets are to maintain assets in adequate condition to reliably support the provision of safe drinking water while minimizing service interruptions and instances of adverse water quality events. The Township will accomplish this by ensuring the timely replacements of ageing and poor performing assets and through the completion of regular maintenance activities. The capital expenditure forecast presented in this section includes the costs associated with the timely replacements of assets based on current best estimates of their remaining service lives as well as priority replacements of watermains identified through staff consultations.

The 10-year capital expenditure forecast for the Township's water system assets is illustrated in Figure 3-2. Average annual expenditures over the forecast period have been estimated at approximately $1.5 million.

Figure 3-2: Water – Capital Expenditure Forecast (Uninflated)



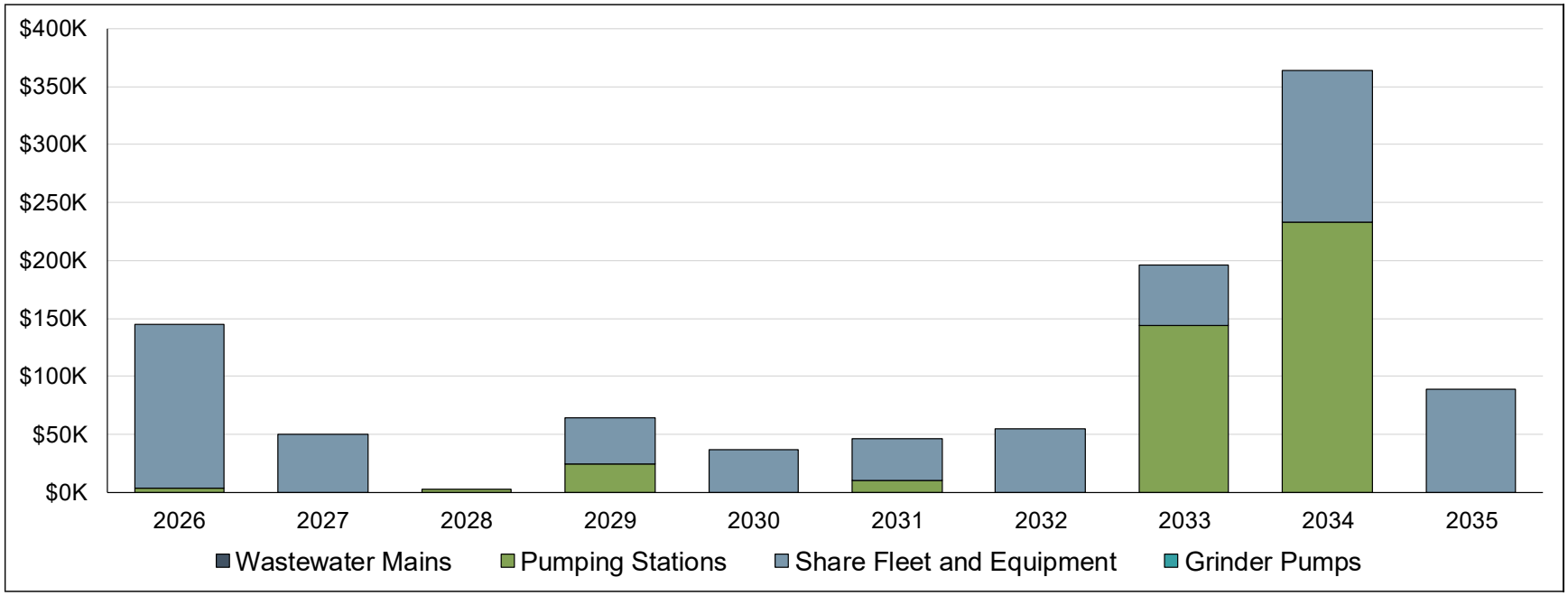
3.4 Wastewater

This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's wastewater system assets presented earlier in Section 2.3.3.

Similar to water system assets, the proposed levels of service for the Township's wastewater system assets are to maintain assets in adequate condition to reliably support the efficient collection and treatment of sanitary flows while minimizing occurrences of wastewater backups due to failure of municipal infrastructure and minimizing instances of effluent violations. The Township will accomplish this by ensuring the timely replacements of ageing and poor performing assets, through the completion of regular maintenance activities, and by periodically undertaking CCTV inspections of wastewater mains to proactively identify underground infrastructure that may require repair, rehabilitation, or replacement. The capital expenditure forecast presented in this section includes the costs associated with the timely replacements of assets based on current best estimates of their remaining service lives.

The 10-year capital expenditure forecast for the Township's wastewater system assets is illustrated in Figure 3-3. Average annual expenditures over the forecast period have been estimated at approximately $105,000.

Figure 3-3: Wastewater – Capital Expenditure Forecast (Uninflated)



3.5 Stormwater

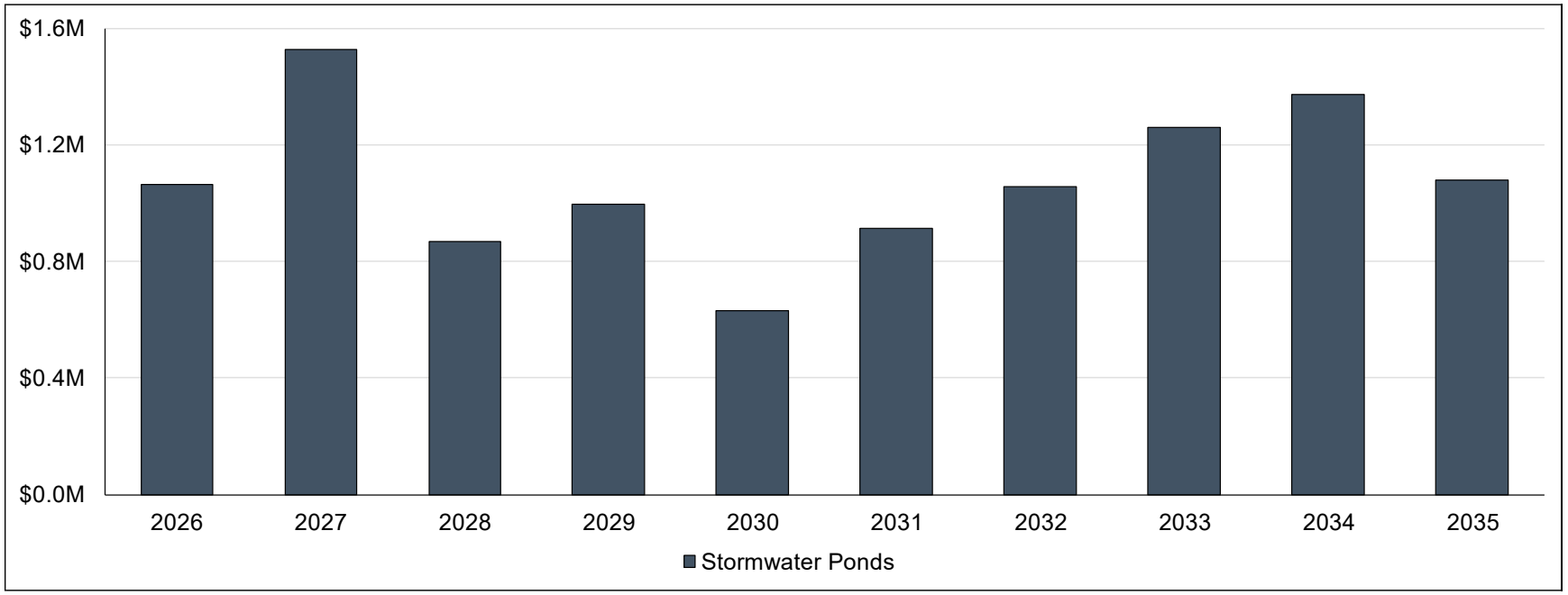
This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's stormwater system assets presented earlier in Section 2.4.3.

Similar to water and wastewater system assets, the proposed levels of service for the Township's stormwater system assets are to maintain assets in adequate condition to reliably provide flood protection to properties and roads, manage the rate of groundwater discharge, and assist in reducing the amount of contaminants entering the environment. The Township will accomplish this by ensuring the timely replacements of ageing and poor performing assets, through completing regular cleanouts of its stormwater ponds, and by periodically undertaking CCTV inspections of stormwater mains to proactively identify underground infrastructure that may require repair, rehabilitation, or replacement.

Based on the current ages of assets relative to their respective useful service life expectations, there are no capital expenditures forecasted for the Township's stormwater mains over the 10-year forecast horizon. The capital expenditure forecast for the Township's stormwater ponds includes cleanouts as ponds reach 50% of their sediment carrying capacity. As mentioned in Section 2.4.2, the Township is currently undertaking a study to re-assess the condition and sediment levels of its stormwater ponds. As such, the capital forecast presented in this subsection is subject to change as the Township's data for its stormwater ponds is further refined. Furthermore, it is recommended that the Township continue to proactively monitor the condition of its stormwater assets and update both its capital plan for stormwater assets as well as this asset management plan if asset performance is observed to be degrading more rapidly than currently expected.

The 10-year capital expenditure forecast for the Township's wastewater system assets is illustrated in Figure 3-4. Average annual expenditures over the forecast period have been estimated at approximately $1.1 million.

Figure 3-4: Stormwater – Capital Expenditure Forecast (Uninflated)



3.6 Facilities

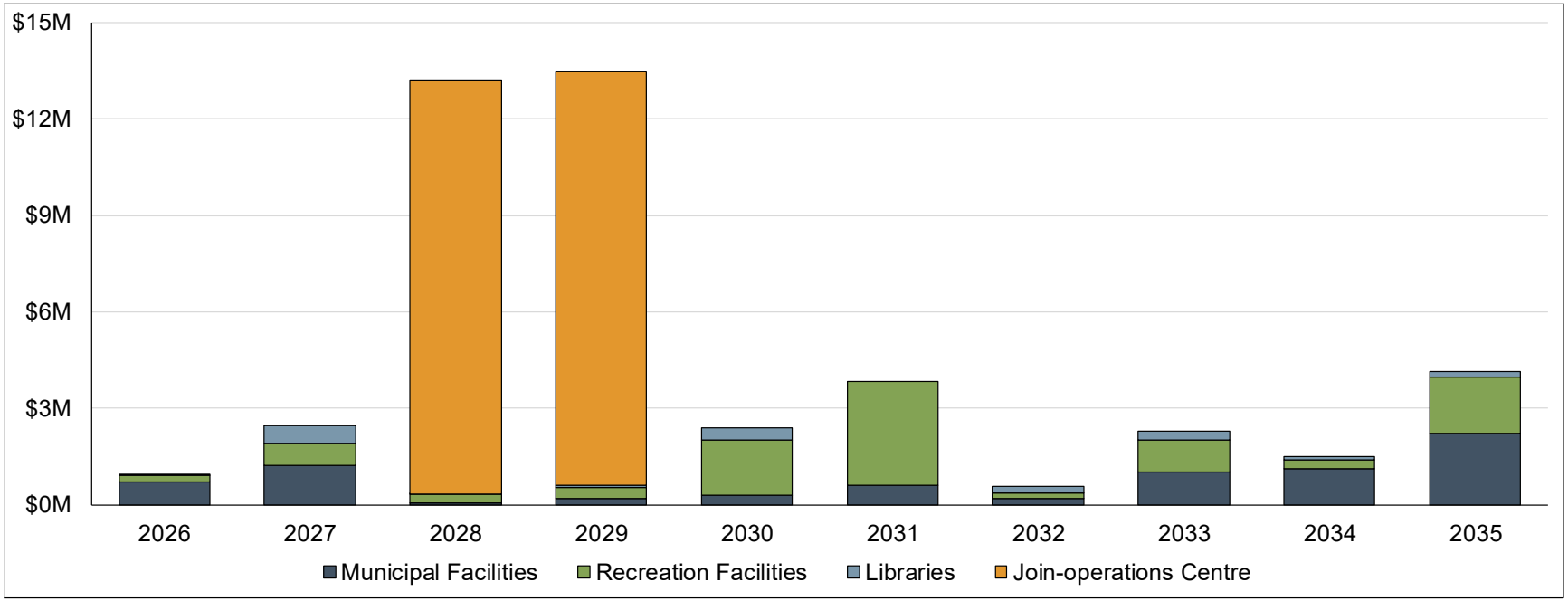
This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's facilities presented earlier in Section 2.5.3.

The capital expenditure forecast for the Township's facilities was derived based on the results of its 2024 BCAs and includes the timely replacement of ageing and poor performing assets, required rehabilitation work, and preventative maintenance activities.

The Township is currently experiencing operational capacity constraints related to its Public Works facilities and plans to address these constraints by constructing a joint-operations centre. This project is expected to increase Public Works facility space by approximately 30,000 square feet, corresponding to a 50% increase relative to current Public Works facility space. This increase in facility space is expected to both address the existing capacity constraints and provide additional capacity for expanding operations as the Township grows. The cost associated with the construction of the joint-operations centre is expected to be incurred over the two-year period from 2028-2029 and is included within the capital expenditure forecast presented in this section.

The 10-year capital expenditure forecast for the Township's facilities is illustrated in Figure 3-5. Average annual expenditures over the forecast period have been estimated at approximately $4.5 million, with the bulk of expenditures relating to the expansion of Public Works facility space.

Figure 3-5: Facilities – Capital Expenditure Forecast (Uninflated)



3.7 Fleet and Equipment

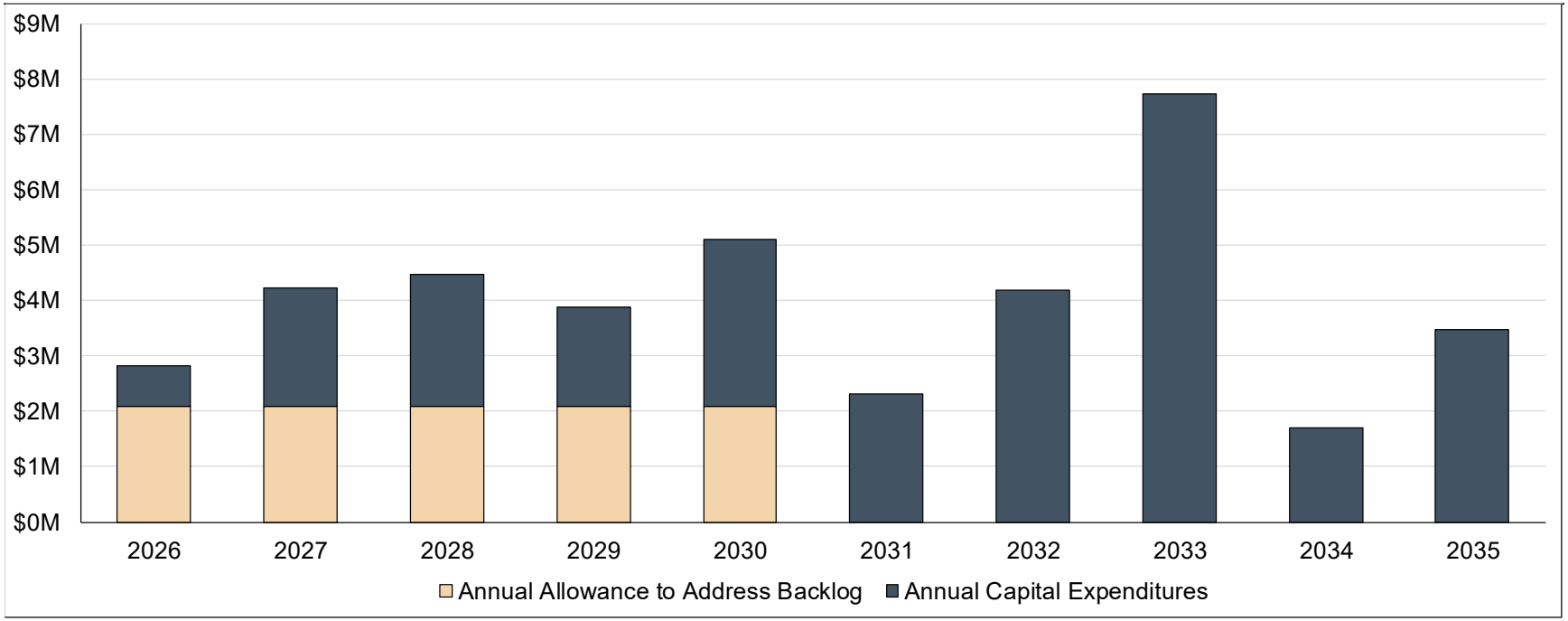
This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's fleet and equipment assets presented earlier in Section 2.6.3.

In general terms, the proposed levels of service for the Township's fleet and equipment assets are to maintain assets in adequate condition to reliably assist in the provision of the various services the Township provides to the public. Alongside this objective, the Township also strives to minimize the frequency and impact of unplanned repair/maintenance activities performed on assets by ensuring the timely replacements of ageing and poor performing assets and through the completion of regular maintenance activities.

The capital expenditure forecast for the Township's fleet and equipment assets was derived based on the ages of assets relative to their respective useful service life expectancies. This approach identifies the specific assets that require replacement over the 10-year forecast horizon and ensures that no assets remain in service beyond their useful service life expectancies.

The 10-year capital expenditure forecast for the Township's fleet and equipment assets is illustrated in Figure 3-6. Average annual expenditures over the forecast period have been estimated at approximately $4.0 million. The current backlog for fleet and equipment assets comprises assets that have exceeded their useful service life expectancy but remain in-service. The capital expenditure forecast includes an annual allowance over the period from 2026 to 2030 to address these replacements.

Figure 3-6: Fleet and Equipment – Capital Expenditure Forecast (Uninflated)



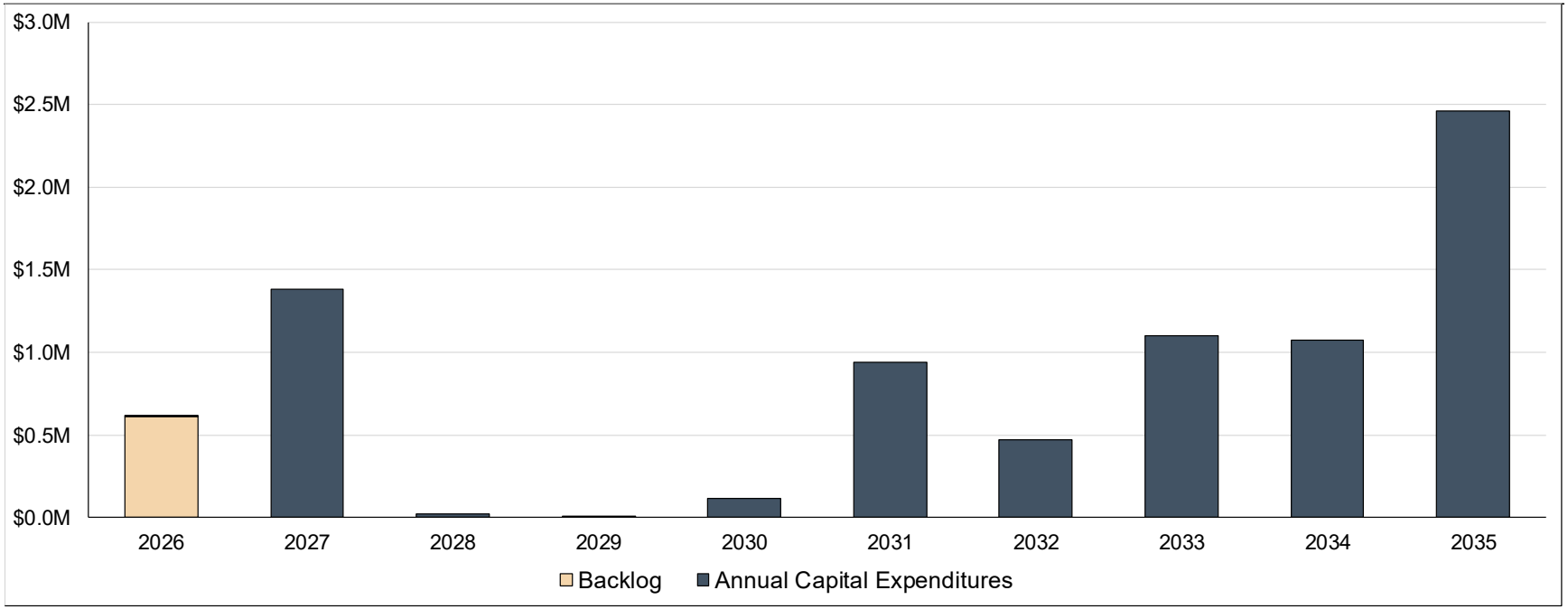
3.8 Parks and Forestry

This section presents an estimate of costs associated with achieving the proposed levels of service for the Township's parks and forestry assets presented earlier in Section 1.1.1.

Similar to fleet and equipment assets, the proposed levels of service for the Township's parks and forestry assets are to maintain assets in adequate condition to reliably assist in the provision of the various recreational services the Township provides to the public. The capital expenditure forecast for these assets was derived based on the ages of assets relative to their respective useful service life expectancies. This approach identifies the specific assets that require replacement over the 10-year forecast horizon and ensures that no assets remain in service beyond their useful service life expectancies.

The 10-year capital expenditure forecast for the Township's parks and forestry assets is illustrated in Figure 3-7. Average annual expenditures over the forecast period have been estimated at approximately $819,000. The current backlog for parks and forestry assets comprises assets that have exceeded their useful service life expectancy but remain in service. The replacement of these assets is included within the capital forecast presented in Figure 3-7.

Figure 3-7: Parks and Forestry – Capital Expenditure Forecast (Uninflated)



Chapter 4
Financial Strategy

4. Financial Strategy

4.1 Introduction

The financial strategy that supports this asset management plan is designed to fulfill the following key objectives:

- Identify the level of capital financing available annually to undertake the lifecycle activities presented previously in Chapter 3, which respond to the Township's proposed levels of service outlined in Chapter 2;
- Identify the various sources of capital financing on an annual basis and outline a plan to address/mitigate the impacts of any identified financing shortfalls; and
- Develop a strategy to achieve financial sustainability and intergenerational equity as it relates to the Township's infrastructure assets over the long-term.

In support of these objectives, a comprehensive financial strategy model was developed for the Township utilizing key financial data including, but not limited to:

- The Township's 2025 operating budget;
- The Township's five-year capital plan;
- The Township's reserve and reserve fund continuity schedules;
- The Township's debt continuity schedules; and
- MPAC property assessment details.

The subsequent sections of this chapter present the outputs of the financial strategy modelling work that was conducted to support this asset management plan. The financial strategy presented in this chapter not only identifies the financing plan to undertake the lifecycle activities outlined in Chapter 3 but also identifies the level of capital funding required to be provided to assets on a consistent annual basis to ensure long-term financial sustainability. Alongside this, the strategy also outlines the financial impacts of achieving that funding level on both the Township's financial position as well as on property taxpayers.

It should be noted here that the financial strategy presented herein is a suggested approach which should be examined and re-evaluated as part of the Township's annual budgeting process to ensure continual alignment with the Township's changing financial position and evolving asset management environment.

4.2 Tax-funded Assets

4.2.1 Annual Capital Expenditure Forecast

This section summarizes the cost associated with undertaking the lifecycle activities identified earlier in Chapter 3 for the Township's tax-supported infrastructure assets (i.e., transportation assets, facilities, fleet and equipment assets, and park and forestry assets).

Capital expenditures over the 10-year forecast horizon are expected to total $150.5 million, an average of $15.0 million annually, in current (2025) dollars. Incorporating inflationary adjustments over the forecast period, capital expenditures in nominal terms are expected to total $192.5 million, an average of $19.3 million annually.

Figure 4-1 presents the overall capital expenditure forecast for the Township's tax-funded infrastructure assets on an inflated basis and this information is provided in tabular form in Table 4-1.

Figure 4-1: Tax-funded Assets – Overall Capital Expenditure Forecast (Inflated)

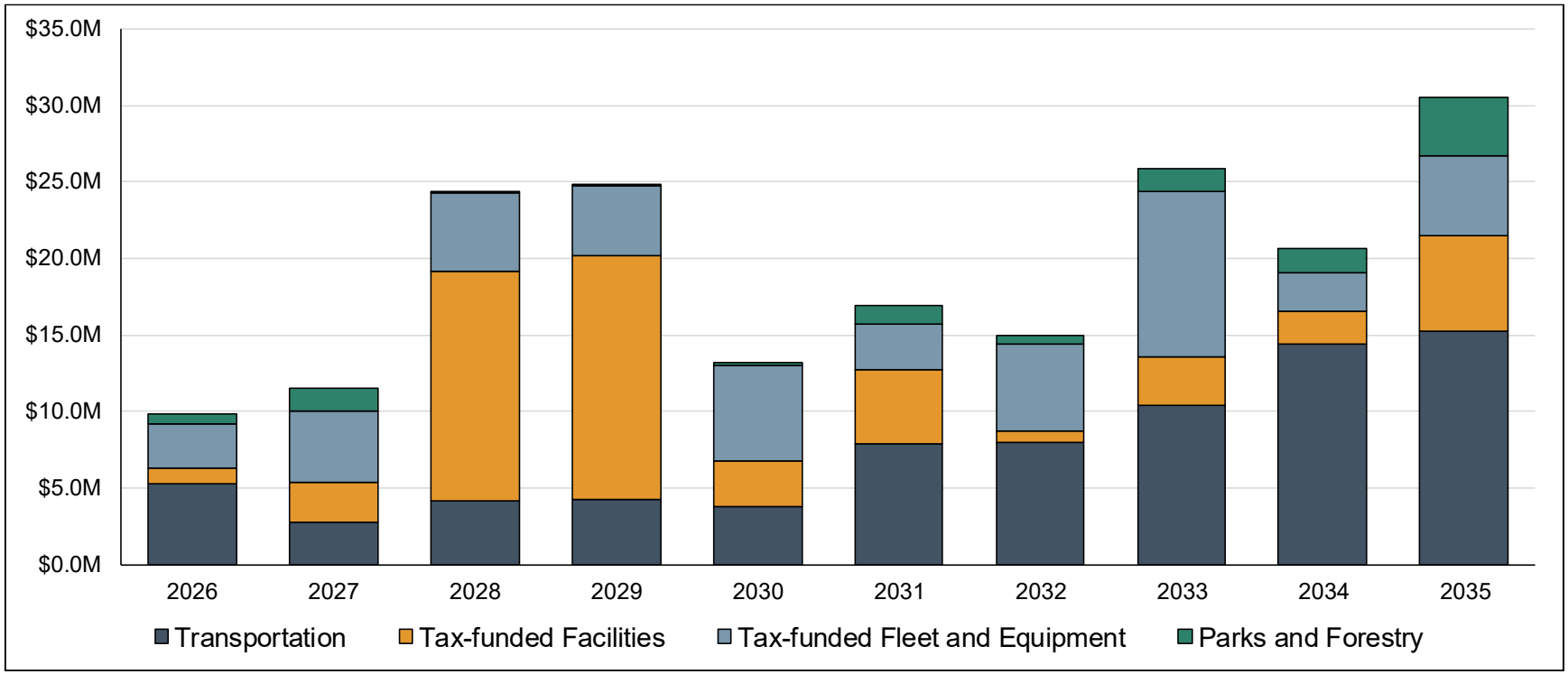


Table 4-1: Tax-funded Assets – Overall Capital Expenditure Forecast (Inflated)

Asset Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Transportation	$5,292,000	$2,755,000	$4,201,000	$4,246,000	$3,788,000	$7,844,000	$8,022,000	$10,420,000	$14,425,000	$15,233,000
Tax-funded Facilities	$979,000	$2,659,000	$14,976,000	$15,927,000	$2,950,000	$4,920,000	$752,000	$3,166,000	$2,162,000	$6,260,000
Tax-funded Fleet & Equipment	$2,949,000	$4,602,000	$5,076,000	$4,592,000	$6,289,000	$2,966,000	$5,598,000	$10,773,000	$2,475,000	$5,265,000
Parks and Forestry	$642,000	$1,500,000	$27,000	$9,000	$143,000	$1,206,000	$625,000	$1,532,000	$1,562,000	$3,732,000
Total Capital Expenditures	**$9,862,000**	**$11,516,000**	**$24,280,000**	**$24,774,000**	**$13,170,000**	**$16,936,000**	**$14,997,000**	**$25,891,000**	**$20,624,000**	**$30,490,000**

4.2.2 Annual Capital Financing Forecast

This section summarizes the sources of financing expected to be available to undertake the capital expenditures identified in Section 4.2.1.

Capital expenditures for tax-funded assets are expected to be financed through a combination of the Township's annual *Ontario Community Infrastructure Fund* (OCIF) transfer payment allocations, annual *Canada Community-Building Fund* (CCBF) transfer payment allocations, funds expected to be available in the Township's tax-funded capital reserves and reserve funds, and external debt.

Figure 4-2 presents the capital financing forecast for the Township's tax-funded infrastructure assets and this information is provided in tabular form in Table 4-2.

Figure 4-2: Tax-funded Assets – Capital Financing Forecast (Inflated)

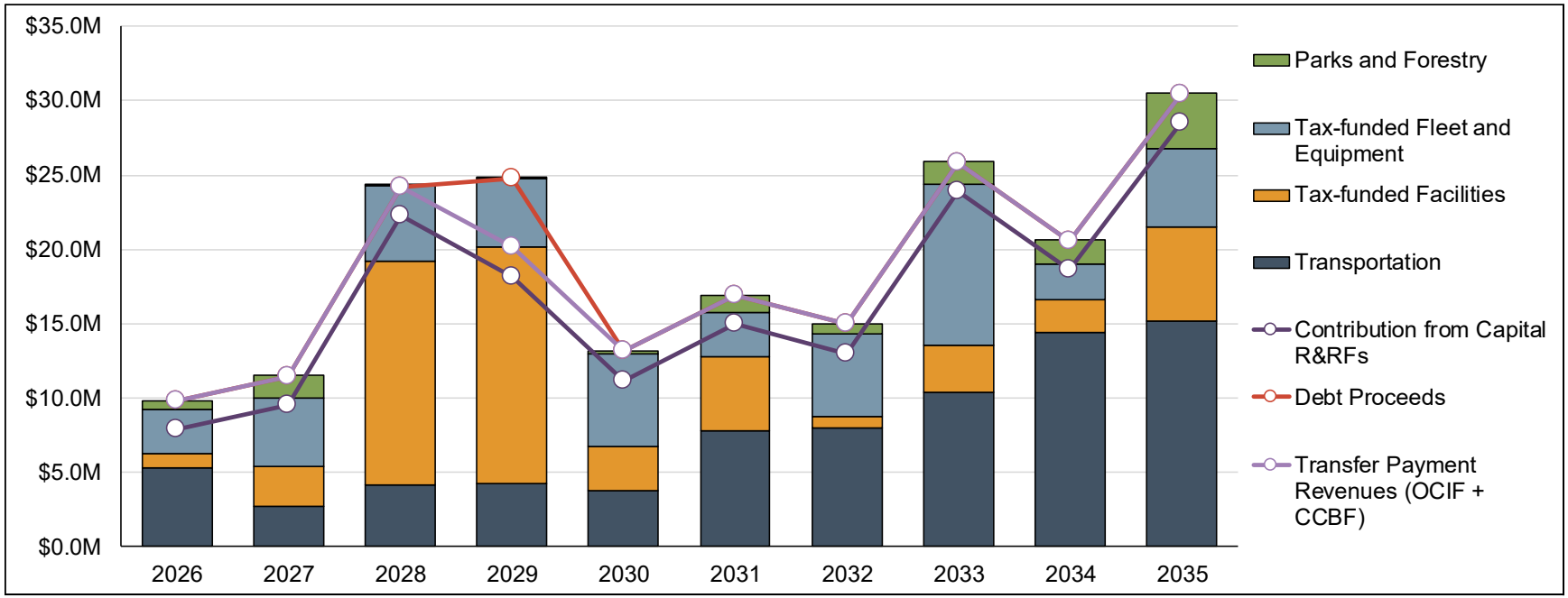


Table 4-2: Tax-funded Assets – Capital Financing Forecast (Inflated)

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Transportation	$5,292,000	$2,755,000	$4,201,000	$4,246,000	$3,788,000	$7,844,000	$8,022,000	$10,420,000	$14,425,000	$15,233,000
Tax-funded Facilities	$979,000	$2,659,000	$14,976,000	$15,927,000	$2,950,000	$4,920,000	$752,000	$3,166,000	$2,162,000	$6,260,000
Tax-funded Fleet & Equipment	$2,949,000	$4,602,000	$5,076,000	$4,592,000	$6,289,000	$2,966,000	$5,598,000	$10,773,000	$2,475,000	$5,265,000
Parks and Forestry	$642,000	$1,500,000	$27,000	$9,000	$143,000	$1,206,000	$625,000	$1,532,000	$1,562,000	$3,732,000
Total Capital Expenditures	**$9,862,000**	**$11,516,000**	**$24,280,000**	**$24,774,000**	**$13,170,000**	**$16,936,000**	**$14,997,000**	**$25,891,000**	**$20,624,000**	**$30,490,000**
Capital Financing										
Contribution from Capital R&RFs	$7,913,000	$9,531,000	$22,295,000	$18,205,186	$11,185,000	$14,951,000	$13,012,000	$23,906,000	$18,639,000	$28,505,000
Transfer Payments (OCIF + CCBF)	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000	$1,949,000
Debt Proceeds	-	-	-	$4,583,814	-	-	-	-	-	-
Total Capital Financing	**$9,862,000**	**$11,480,000**	**$24,244,000**	**$24,738,000**	**$13,134,000**	**$16,900,000**	**$14,961,000**	**$25,855,000**	**$20,588,000**	**$30,454,000**

4.2.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

An annual lifecycle funding target represents the level 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 theoretically be able to fully fund capital works as they arise. In practice, however, capital expenditures are characterized by peaks and valleys and often fluctuate year-to-year based on the lifecycle activities being undertaken. By planning to achieve the lifecycle funding target 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.

The annual lifecycle funding target for the Township's tax-funded assets is $17.3 million (in 2025 dollars). A breakdown of the lifecycle funding target by asset category is illustrated in Figure 4-3 and provided in tabular form in Table 4-3.

Figure 4-3: Tax-funded Assets – Annual Lifecycle Funding Target (2025$) by Asset Category

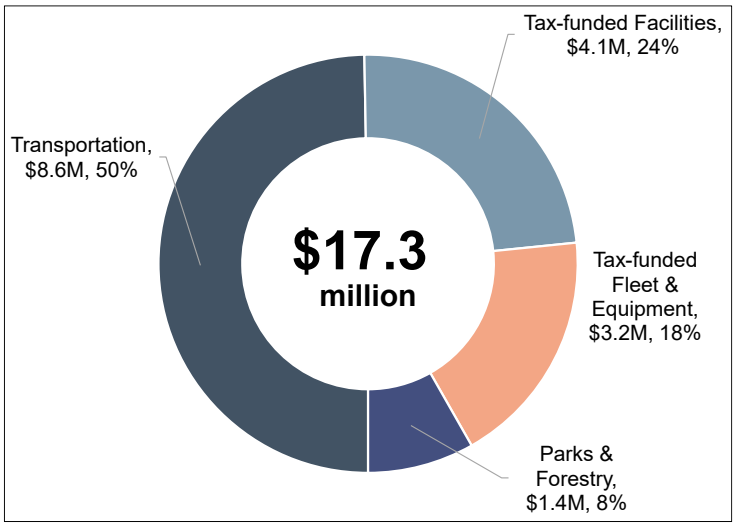


Table 4-3: Tax-funded Assets – Annual Lifecycle Funding Target (2025$) by Asset Category

Asset Category	Annual Lifecycle Funding Target (2025$)
Transportation	$8,594,000
Tax-funded Facilities[1]	$4,091,000
Tax-funded Fleet and Equipment	$3,178,000
Parks and Forestry	$1,422,000
Total	**$17,285,000**

Relative to this annual lifecycle funding target, the Township allocated approximately $13.2 million towards capital-related needs in its 2025 Council approved budget for tax-funded assets. This allocation comprised approximately $1.9 million from on-going transfer payment revenues (i.e., OCIF and CCBF), approximately $2.4 million in debt repayments for debt previously incurred to fund tangible capital asset purchases, and lastly, approximately $8.8 million in contributions to capital reserves and reserve funds.

A breakdown of the capital funding included in the Township's 2025 Council approved budget for tax-funded assets is illustrated in Figure 4-4 and provided in tabular form in Table 4-4.

[1]The annual lifecycle funding target for facilities includes the Zancor Centre but excludes the Nobleton Community Hall, Old King Senior Centre, and King City Lions Arena since the Township plans to lease these facilities. The average annual lifecycle costs of these facilities is expected to be fully funded through on-going lease payments that the Township will receive.

Figure 4-4: Tax-funded Assets – Capital Funding Allocated in 2025 Council Approved Budget

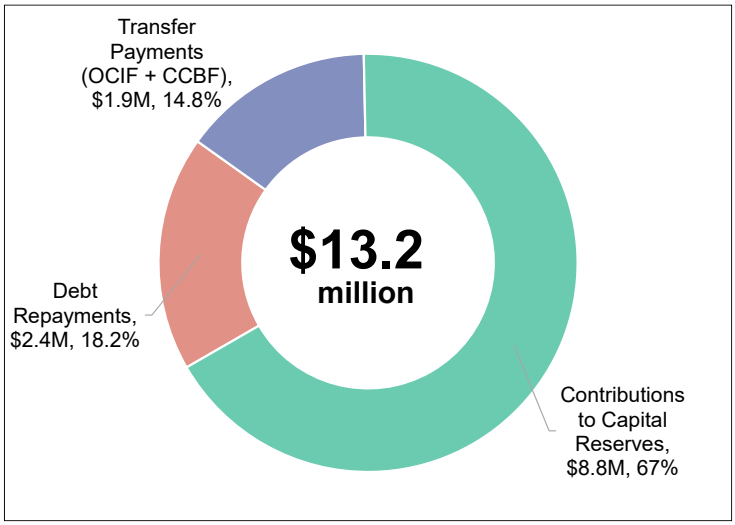


Table 4-4: Tax-funded Assets – Capital Funding Allocated in 2025 Council Approved Budget

Capital Funding Source	Capital Funding Budgeted in 2025
Transfer Payment Revenues (OCIF & CCBF)	$2,396,330
Debt Repayments	$1,949,072
Contributions to Capital Reserves & Reserve Funds	$8,819,000
Total	**$13,164,402**

The difference between the annual lifecycle funding target and the currently budgeted capital funding informs the Township's annual infrastructure funding gap for its tax-funded assets. Based on this analysis, the Township is currently facing an annual infrastructure funding gap of approximately $4.1 million. The financial strategy presented herein seeks to gradually eliminate this funding gap.

4.2.4 Estimated Impact on Tax Levy

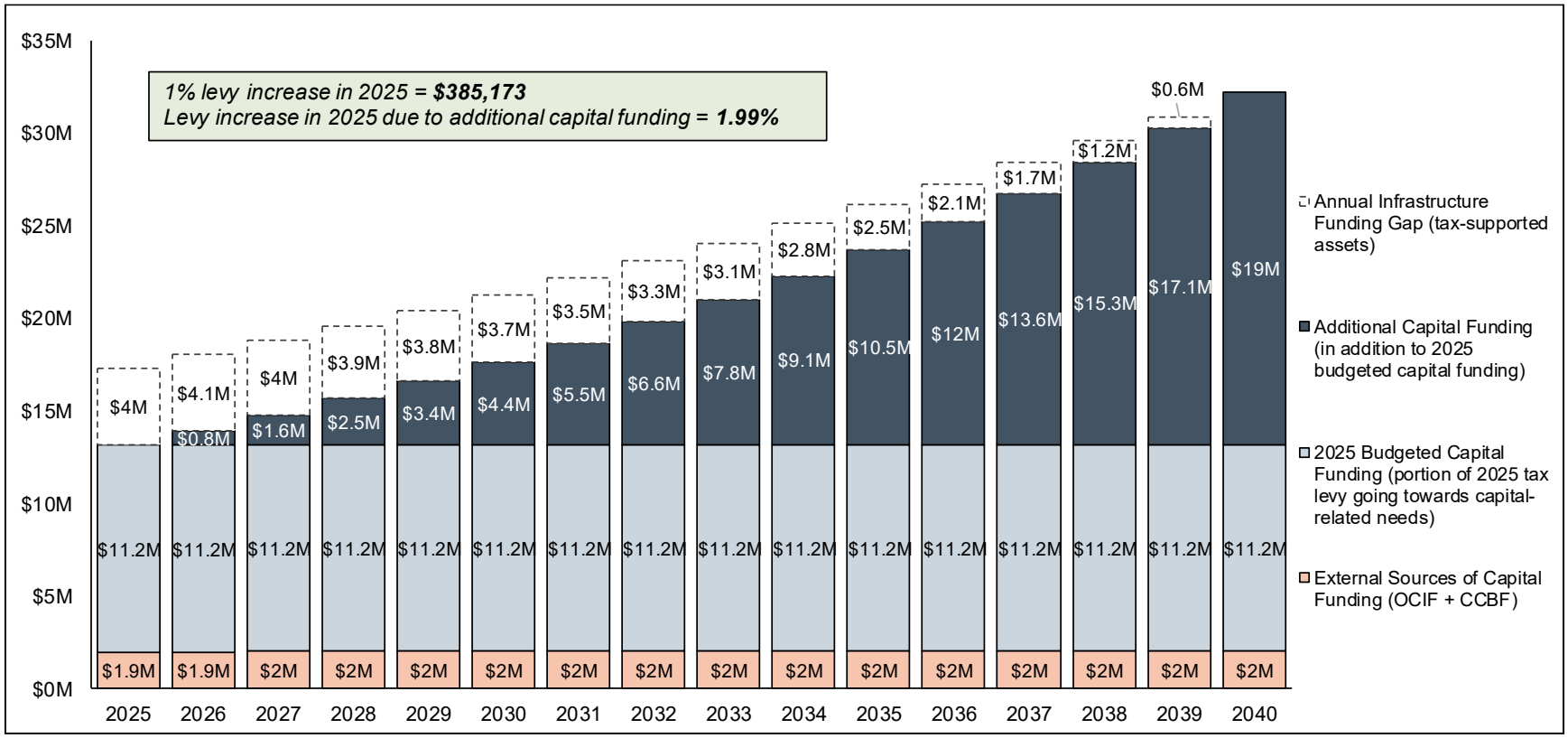
This section presents the overall impacts on the Township's general tax levy of gradually eliminating the infrastructure funding gap with respect to tax-funded assets. As noted in the previous section, the Township is currently facing an annual infrastructure gap of approximately $4.1 million. As also noted in that section, the Township allocated approximately $13.2 million in its 2025 Council approved budget

towards capital-related needs for its tax-funded infrastructure assets. Of that portion, approximately $11.2 million (comprising debt repayments and contributions to capital reserves and reserve funds) was sourced directly from the Township's 2025 general tax levy. The remainder was sourced from on-going transfer payments revenues (i.e., OCIF and CCBF).

Through consultations with both staff and Council, it was determined that the Township would seek to eliminate its tax-based infrastructure funding gap over the next 15 years (i.e., by 2040)[1]. To accomplish this, the Township will need to increase the capital portion of its general tax levy by 6.84% annually. In 2026, this would equate to an increase of approximately $767,000, or 1.99% relative to the Township's 2025 general tax levy. Over a 15-year forecast horizon, the capital portion of the general tax levy would need to increase from approximately $11.2 million in 2025 to approximately $21.7 million by 2035 and further increase to approximately $30.2 million by 2040. Figure 4-5 illustrates the capital funding forecast for the Township's tax funded assets to eliminate the infrastructure funding gap with respect to tax-supported assets by 2040.

[1]Direction provided by Council during Council Meeting held on June 17, 2025.

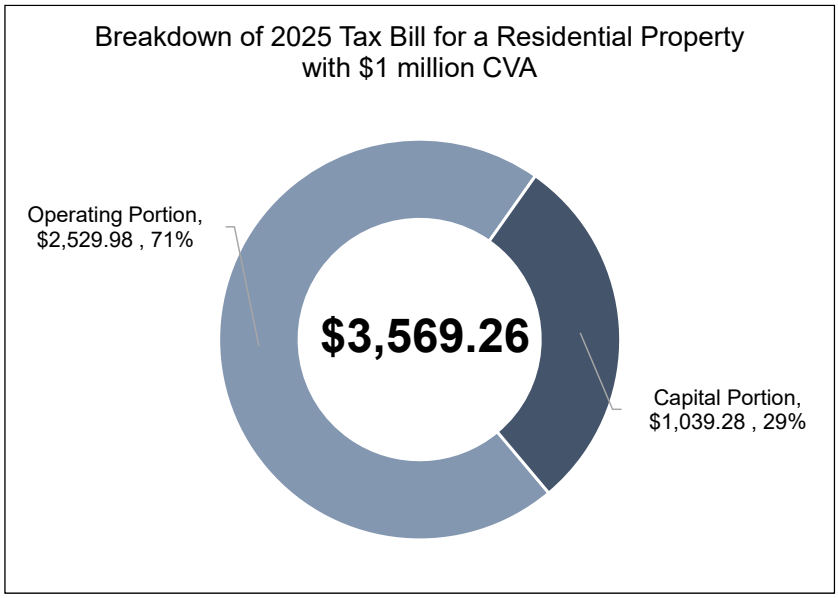
Figure 4-5: Tax-funded Assets – Capital Funding Forecast with 15-year Phase-in Period (Inflated)



4.2.5 Estimated Impact on Current Tax Bills

This section presents the estimated impact of the Township eliminating its annual infrastructure funding gap on the current tax bill of the typical single-family detached house in the Township assessed at $1 million[1]. In 2025, such a property would pay approximately $3,569 towards the Township portion of its property tax bill. Of this amount, approximately $2,530 is utilized to fund the Township's 2025 net operating costs while the remaining $1,039 is allocated towards capital related needs (including debt payments and transfers to capital reserves/reserve funds). Figure 4-6 illustrates the breakdown of the Township portion of the 2025 tax bill for a residential property with an assessed value of $1 million.

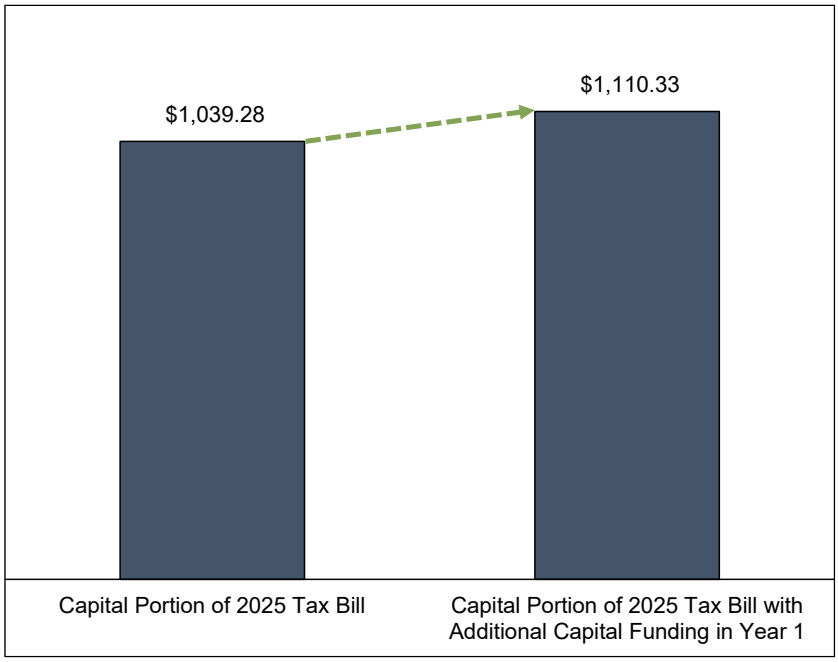
Figure 4-6: Municipal Portion of Property Tax Bill for Residential Property with $1M CVA



As noted in the previous section, in order for the Township to eliminate its annual infrastructure funding gap by 2040, it will need to increase the capital portion of its general tax levy by approximately $767,000 in 2026. The resultant impact of this increase in a rise in the capital portion of the property tax bill of a residential property assessed at $1 million by $71.04 (6.84%), which is illustrated in Figure 4-7.

[1]Assessed values of properties are determined by MPAC and may not be reflective of their current market values.

Figure 4-7: Increase to Capital Portion of Property Tax Bill in 2026 (15-year Phase-in Period)



4.3 Water and Wastewater Assets

4.3.1 Annual Capital Expenditure Forecast

This section summarizes the cost associated with undertaking the lifecycle activities identified earlier in Chapter 3 for the Township's infrastructure assets funded through its annual water and wastewater rate revenues.

Capital expenditures over the 10-year forecast horizon are expected to total $16.5 million, an average of $1.6 million annually, in current (2025) dollars (i.e., uninflated). Incorporating inflationary adjustments over the forecast period, capital expenditures in nominal terms are expected to total $20.1 million, an average of $2.0 million annually.

Figure 4-8 presents the overall capital expenditure forecast for the Township's water and wastewater assets and this information is provided in tabular form in Table 4-5.

Figure 4-8: Water & Wastewater Assets - Overall Capital Expenditure Forecast (Inflated)

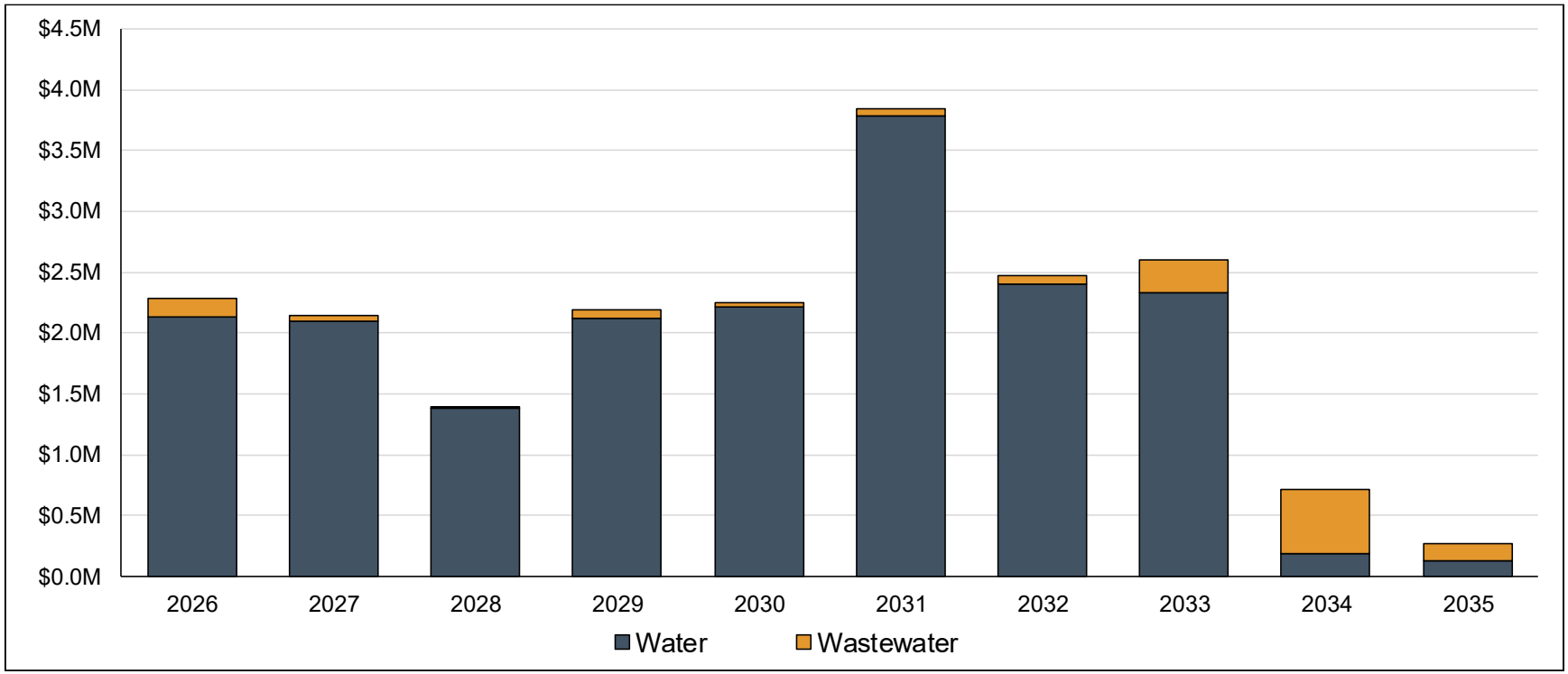


Table 4-5: Water & Wastewater Assets - Overall Capital Expenditure Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Water	$2,134,000	$2,097,000	$1,388,000	$2,118,000	$2,211,000	$3,784,000	$2,400,000	$2,328,000	$190,000	$135,000
Wastewater	$151,000	$54,000	$2,000	$76,000	$45,000	$60,000	$73,000	$274,000	$529,000	$135,000
Total Capital Expenditures	**$2,285,000**	**$2,151,000**	**$1,390,000**	**$2,194,000**	**$2,256,000**	**$3,844,000**	**$2,473,000**	**$2,602,000**	**$719,000**	**$270,000**

4.3.2 Annual Capital Financing Forecast

This section summarizes the sources of financing expected to be available to undertake the capital expenditures identified in Section 4.3.1.

The forecasted capital expenditures for the Township's water and wastewater system assets are expected to be fully funded through funds held in the Township's water and wastewater capital reserves and reserve funds. Figure 4-9 presents the capital financing forecast for the Township's water and wastewater assets and this information is provided in tabular form in Table 4-6.

Figure 4-9: Water & Wastewater Assets - Capital Financing Forecast (Inflated)

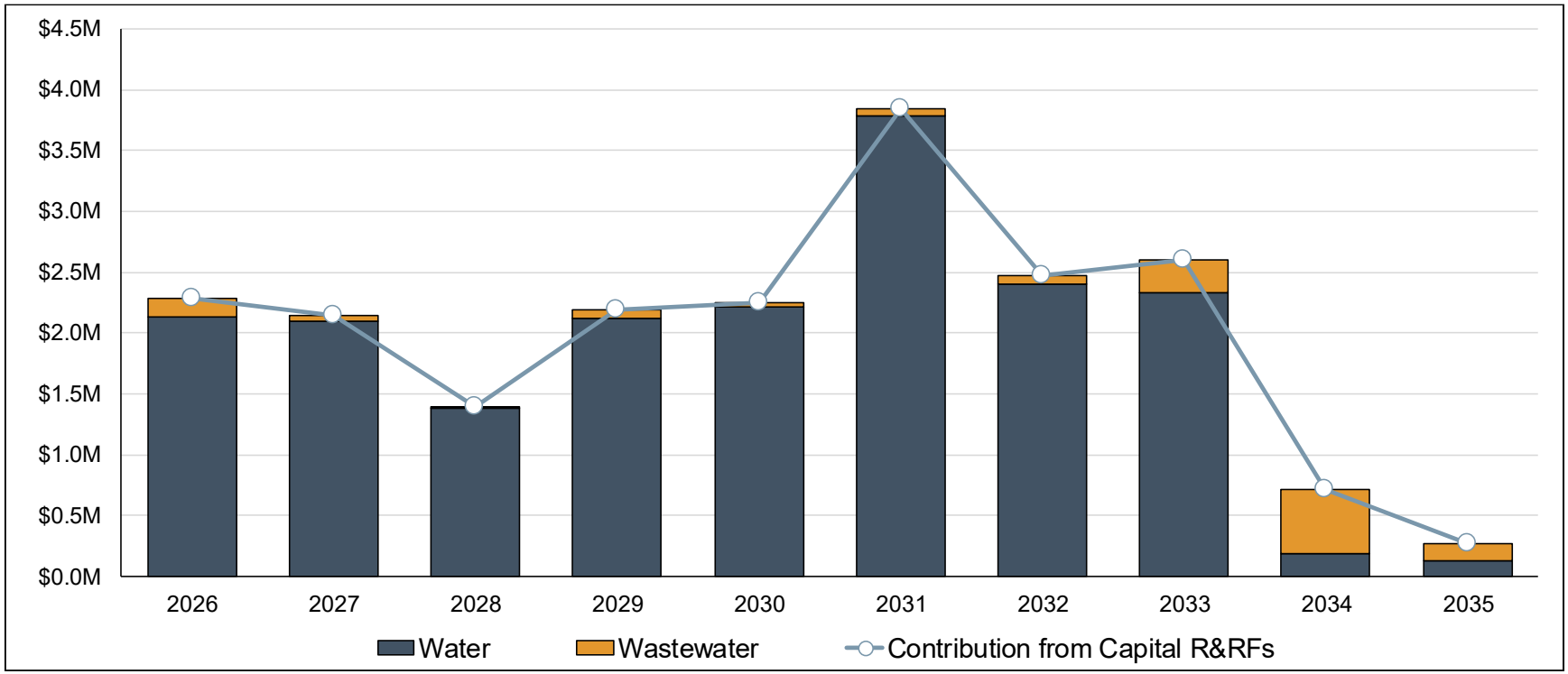


Table 4-6: Water & Wastewater Assets - Capital Financing Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Water	$2,134,000	$2,097,000	$1,388,000	$2,118,000	$2,211,000	$3,784,000	$2,400,000	$2,328,000	$190,000	$135,000
Wastewater	$151,000	$54,000	$2,000	$76,000	$45,000	$60,000	$73,000	$274,000	$529,000	$135,000
Total Capital Expenditures	**$2,285,000**	**$2,151,000**	**$1,390,000**	**$2,194,000**	**$2,256,000**	**$3,844,000**	**$2,473,000**	**$2,602,000**	**$719,000**	**$270,000**
Capital Financing										
Contribution from Capital R&RFs	$2,285,000	$2,151,000	$1,390,000	$2,194,000	$2,256,000	$3,844,000	$2,473,000	$2,602,000	$719,000	$270,000
Total Capital Financing	**$2,285,000**	**$2,151,000**	**$1,390,000**	**$2,194,000**	**$2,256,000**	**$3,844,000**	**$2,473,000**	**$2,602,000**	**$719,000**	**$270,000**

4.3.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

The annual lifecycle funding target for the Township's water and wastewater assets is $3.38 million (in 2025 dollars). Please refer to Section 4.2.3 for further information on annual lifecycle funding targets.

A breakdown of the lifecycle funding target by asset category is illustrated in Figure 4-10 and provided in tabular form in Table 4-7.

Figure 4-10: Water & Wastewater Assets - Annual Lifecycle Funding Target (2025$) by Asset Type

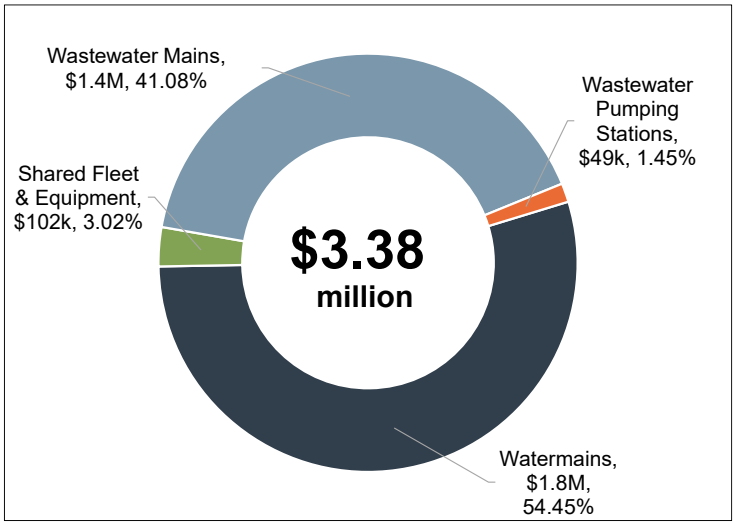


Table 4-7: Water & Wastewater Assets - Annual Lifecycle Funding Target (2025$) by Asset Type

Asset Category	Annual Lifecycle Funding Target (2025$)
Watermains	$1,840,000
Shared Fleet & Equipment	$102,000
Wastewater Mains	$1,388,000
Wastewater Pumping Stations	$49,000
Total	**$3,379,000**

Relative to this annual lifecycle funding target, the Township allocated approximately $3.81 million towards capital-related needs in its 2025 Council approved budget for its

water and wastewater assets. This allocation comprised approximately $3.2 million in contributions to capital reserves and reserve funds and approximately $582,000 in debt repayments (i.e., principal and interest payments).

A breakdown of the capital funding budgeted in the Township's 2025 Council approved budget for its water and wastewater assets is illustrated in Figure 4-11 and provided in tabular form in Table 4-8.

Figure 4-11: Water & Wastewater Assets - Capital Funding Allocated in 2025 Council Approved Budget

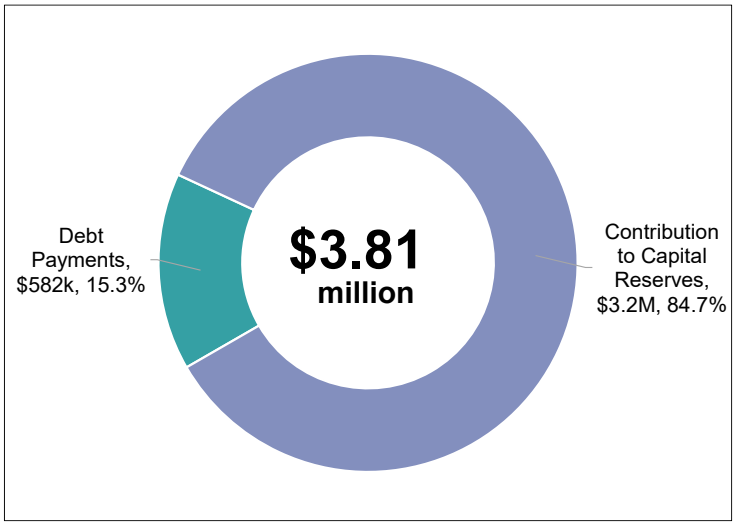


Table 4-8: Water & Wastewater Assets - Capital Funding Allocated in 2025 Council Approved Budget

Capital Funding Source	Capital Funding Budgeted in 2025
Debt Repayments	$582,000
Contributions to Capital Reserves and Reserve Funds	$3,229,000
Total	**$3,811,000**

The difference between the annual lifecycle funding target and the currently budgeted capital funding informs the Township's annual infrastructure funding gap for its water and wastewater assets. Based on this analysis, the Township is currently fully funding the average annual lifecycle cost of its water and wastewater assets. The financial strategy presented herein aims to ensure alignment of budgeted capital funding with the

long-term funding needs of assets over the 10-year forecast horizon, accounting for effects of estimated inflation on capital costs.

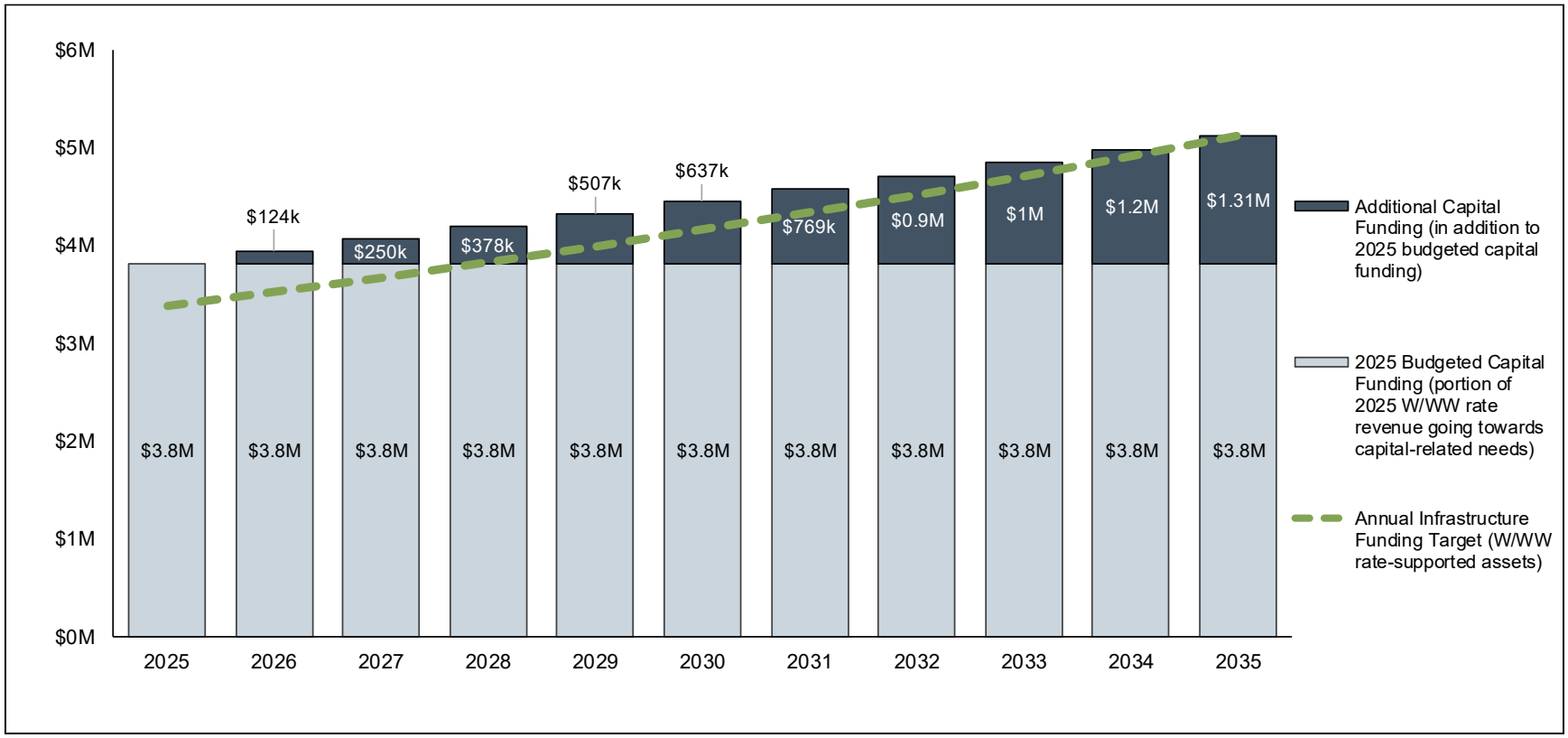
4.3.4 Estimated Impact on Rate Revenues

This section presents the overall impacts on the Township's water and wastewater rate revenues of ensuring that water and wastewater assets remain fully funded over the 10-year forecast horizon.

As noted in the previous section, the Township is currently allocating sufficient funds from its current (2025) Council approved budget to fully fund the lifecycle costs of its water and wastewater assets. However, it must be noted that average annual lifecycle cost estimates (i.e., annual funding target) are subject to inflationary impacts on an annual basis. To account for estimated inflation on the capital costs of water and wastewater assets, the Township will still need to increase the capital portion of its annual water and wastewater rate revenues from approximately $3.81 million in 2025 to approximately $5.12 million in 2035. This represents an average annualized increase of approximately 2.99%.

Figure 4-12 illustrates the estimated annual increases required to the allocation towards capital-related sourced directly from water and wastewater rate revenues over the 10-year forecast horizon.

Figure 4-12: Water and Wastewater Assets – Capital Funding Forecast with 10-year Phase-in Period (Inflated)



4.4 Stormwater Assets

4.4.1 Annual Capital Expenditure Forecast

The Township implemented stormwater rates in 2024 to provide a dedicated funding source for stormwater management services. This section summarizes the cost associated with undertaking the lifecycle activities identified earlier in Chapter 3 for the Township's infrastructure assets funded through its annual stormwater rate revenues.

As noted earlier in Section 2.4.2, the Township is currently completing a re-assessment of the current state of its stormwater ponds. It is expected that this process will result in a material revision to the short- and long-term capital investment requirements for stormwater ponds. As such, the Township plans to re-evaluate the financial strategy for its stormwater assets upon the completion of the re-assessment.

Capital expenditures over the 10-year forecast horizon are currently expected to total $10.8 million, an average of $1.1 million annually, in current (2025) dollars (i.e., uninflated). Incorporating inflationary adjustments over the forecast period, capital expenditures in nominal terms are expected to total $14.3 million, an average of $1.4 million annually.

Figure 4-13 presents the overall capital expenditure forecast for the Township's stormwater assets and this information is provided in tabular form in Table 4-9.

Figure 4-13: Stormwater Assets - Overall Capital Expenditure Forecast (Inflated)

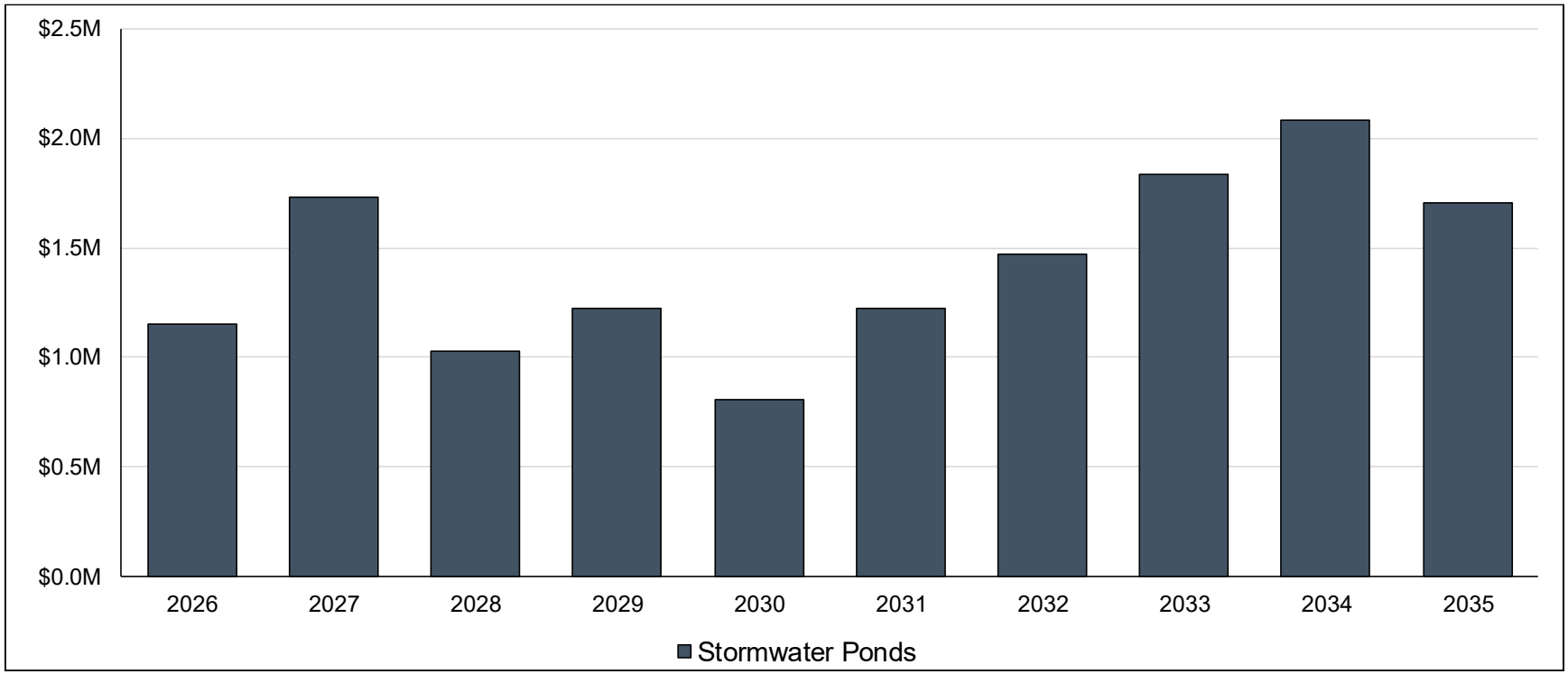


Table 4-9: Stormwater Assets - Overall Capital Expenditure Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Stormwater Ponds	$1,156,000	$1,730,000	$1,026,000	$1,227,000	$811,000	$1,222,000	$1,472,000	$1,834,000	$2,083,000	$1,705,000
Total Capital Expenditures	**$1,156,000**	**$1,730,000**	**$1,026,000**	**$1,227,000**	**$811,000**	**$1,222,000**	**$1,472,000**	**$1,834,000**	**$2,083,000**	**$1,705,000**

4.4.2 Annual Capital Financing Forecast

This section summarizes the sources of financing expected to be available to undertake the capital expenditures identified in Section 4.4.1.

The forecasted capital expenditures for the Township's stormwater system assets are expected to be funded through a combination of funds held in stormwater rate-supported capital reserves and through external debt. Figure 4-14 presents the capital financing forecast for the Township's stormwater system assets and this information is provided in tabular form in Table 4-10.

Figure 4-14: Stormwater Assets - Capital Financing Forecast (Inflated)

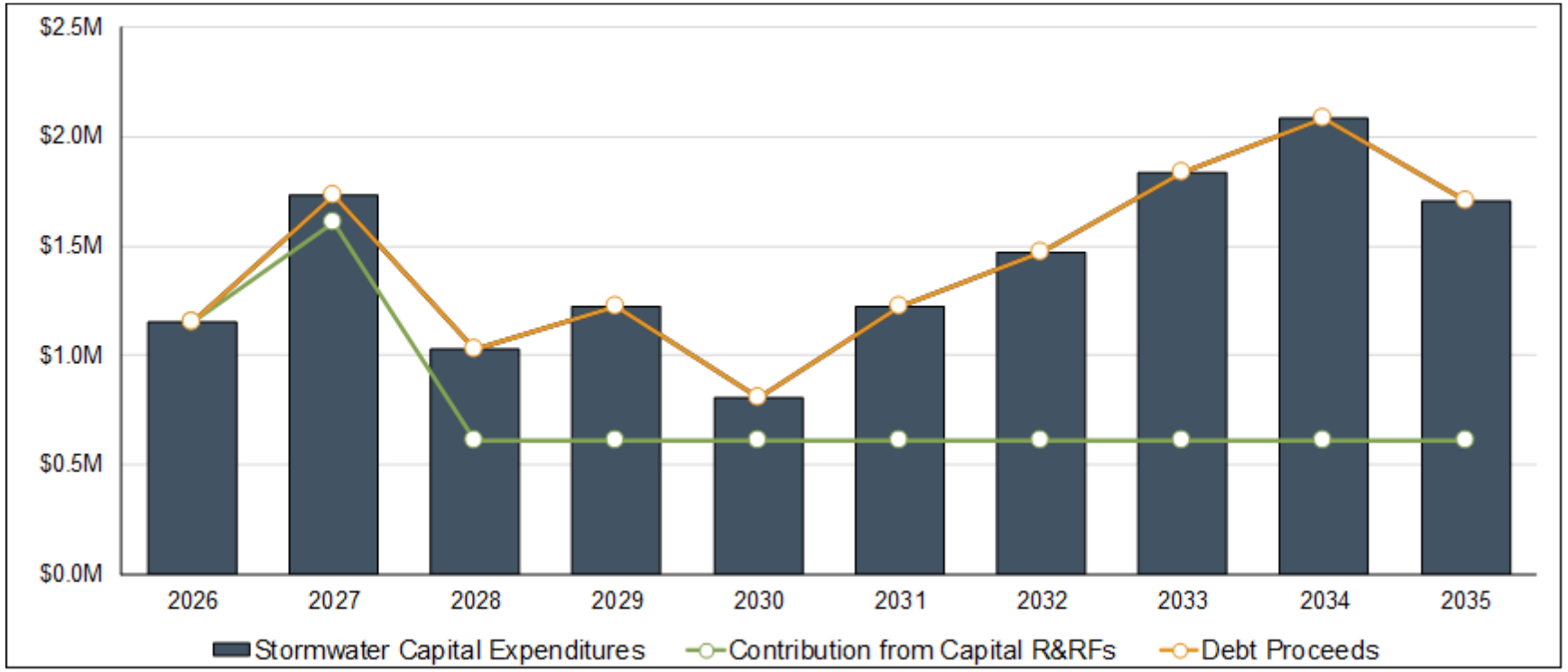


Table 4-10: Stormwater Assets - Capital Financing Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Stormwater Ponds	$1,156,000	$1,730,000	$1,026,000	$1,227,000	$811,000	$1,222,000	$1,472,000	$1,834,000	$2,083,000	$1,705,000
Total Capital Expenditures	**$1,156,000**	**$1,730,000**	**$1,026,000**	**$1,227,000**	**$811,000**	**$1,222,000**	**$1,472,000**	**$1,834,000**	**$2,083,000**	**$1,705,000**
Capital Financing										
Contribution from Capital R&RFs	$1,156,000	$1,610,000	$615,000	$615,000	$615,000	$615,000	$615,000	$615,000	$615,000	$615,000
Debt Proceeds	-	$120,000	$411,000	$612,000	$196,000	$607,000	$857,000	$1,219,000	$1,468,000	$1,090,000
Total Capital Financing	**$1,156,000**	**$1,730,000**	**$1,026,000**	**$1,227,000**	**$811,000**	**$1,222,000**	**$1,472,000**	**$1,834,000**	**$2,083,000**	**$1,705,000**

4.4.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

The annual lifecycle funding target for the Township's stormwater assets is $2.66 million (in 2025 dollars). Please refer to Section 4.2.3 for further information on annual lifecycle funding targets.

A breakdown of the lifecycle funding target by asset category is illustrated in Figure 4-15 and provided in tabular form in Table 4-11.

Figure 4-15: Stormwater Assets - Annual Lifecycle Funding Target (2025$) by Asset Type

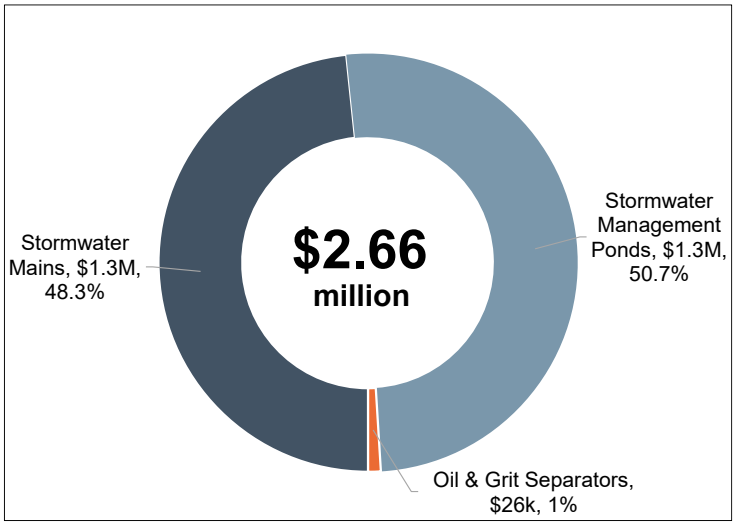


Table 4-11: Stormwater Assets - Annual Lifecycle Funding Target (2025$) by Asset Type

Asset Category	Annual Lifecycle Funding Target (2025$)
Stormwater Mains	$1,284,000
Stormwater Ponds	$1,347,000
Oil & Grit Separators	$26,000
Total	**$2,657,000**

Relative to this annual lifecycle funding target, the Township allocated approximately $599,000 (comprising contributions to capital reserves and reserve funds) towards capital-related needs in its 2025 Council approved budget for its stormwater assets.

The difference between the annual lifecycle funding target and the currently budgeted capital funding informs the Township's annual infrastructure funding gap for its stormwater assets. Based on this analysis, the Township is currently facing an annual infrastructure funding gap of approximately $2.1 million. The financial strategy presented herein seeks to gradually eliminate this funding gap over a 15-year time period.

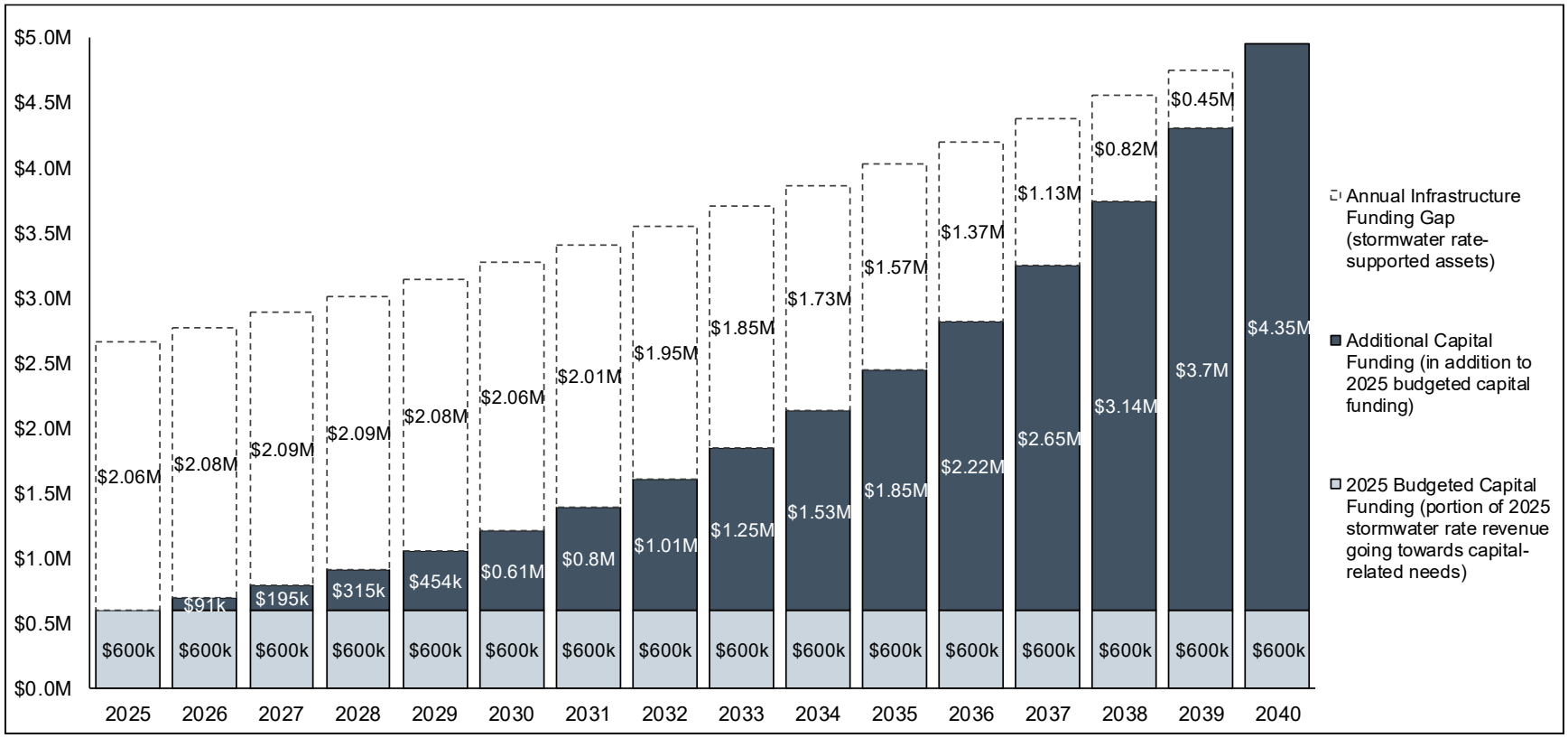
4.4.4 Estimated Impact on Rate Revenues

This section presents the overall impacts on the Township's stormwater rate revenues of gradually eliminating the infrastructure funding gap with respect to stormwater assets. As noted in the previous section, the Township is currently facing an annual infrastructure gap of approximately $2.1 million. As also noted in that section, the Township allocated $600,000 in its 2025 Council approved budget towards capital-related needs for its stormwater assets directly from its 2025 stormwater rate revenues.

In order for the Township to eliminate its annual infrastructure funding gap over a 15-year period (i.e., by 2040), it will need to increase the capital portion of its stormwater rate revenues by 15.11% annually. In 2026, this would equate to an increase of approximately $91,000 and the Township anticipates funding this increase through expected operating cost savings related to its stormwater management system. Therefore, the Township does not anticipate having to increase its stormwater rates in 2026 in order to fund the forecasted increase to the capital portion of its stormwater rate revenues.

Figure 4-16 illustrates the capital funding forecast for the Township's stormwater assets to eliminate the infrastructure funding gap by 2040.

Figure 4-16: Stormwater Assets – Capital Funding Forecast with 15-year Phase-in Period (Inflated)



Chapter 5
Recommendations and Next Steps

5. Recommendations and Next Steps

5.1 Recommendations

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

- That the Township of King Asset Management Plan be received and approved by Council; and
- That consideration be made as part of the annual budgeting process to ensure sufficient capital funding is available to implement the asset management plan.

5.2 Next Steps

Following the approval of this asset management plan by Council, the Township's asset management journey will transition from developing the plan to its operationalization. The Township will need to establish processes and implement systems to keep asset information (e.g., condition, replacement costs, etc.) updated and relevant, so that it can be relied on to identify capital priorities and inform the annual budget process.

To ensure on-going compliance with O. Reg. 588/17, the Township will need to start conducting annual reviews of the progress being made towards implementing the asset management plan, with the first review required to be conducted prior to July 1, 2026. The annual reviews must identify any factors preventing progress towards full implementation and outline a strategy to address those impeding factors. Following the completion of this asset management plan, the Township should shift its focus to developing the format and content of these annual reviews to enable informed decision-making by Council and staff.

O. Reg. 588/17 requires updates to this asset management plan to be conducted at minimum on a every five-year basis, with the first update required to be completed in 2030. To maximize the reliability of the updated analyses, the Township should proactively plan to conduct updates of background studies and underlying asset data in a timely manner prior to undertaking an update of this asset management plan.

The Townships should plan to proactively update the underlying data utilized to inform the current performance of included level of service measures on a regular basis. Tracking the current performance of included measures over time relative to their

targeted performance provides a key measure of success in fully implementing the asset management plan.

The Township should closely monitor the level of funding budgeted annually to be provided to assets relative to the target levels presented in Subsections 4.2.3 and 4.3.3 and ensure that any identified funding gaps are being gradually eliminated in a systematic manner.

The Township should plan to undertake an update to the financial strategy for its stormwater assets and this asset management plan as the underlying asset-specific data is further refined. Please refer to Subsection 2.4.2 and Section 4.4 for further details.