Asset Management Plan

Town of Hanover

Final Report

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Report

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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 Town of Hanover (Town) retained Watson & Associates Economists Ltd. (Watson) to develop a comprehensive asset management plan and bring the Town into full compliance with the 2025 requirements of *Ontario Regulation 588/17: Asset Management Planning For Municipal Infrastructure* (O. Reg. 588/17). To date, the Town has identified the various core[1] and non-core[2] infrastructure assets under its care and control, codified asset-specific information within asset registers housed in its *Citywide Asset Management Platform,* established processes to ensure continual updates to underlying asset data, and conducted some preliminary analyses to identify the current state of its infrastructure assets. This project builds upon the work that the Town has already completed and focuses on identifying proposed levels of service as well as developing a financial strategy to support the asset management plan. The Town's 2025 asset management plan, which is summarized in this report, goes beyond the requirements of O. Reg. 588/17 to identify the level of sustainable funding that should be provided to assets on an annual basis and the financial impacts of achieving that funding level.

The total current replacement cost for the Town's infrastructure assets is estimated to be $416 million. Facilities represent the largest share of replacement cost at $146.9 million (35%), followed by water system assets at $87.8 million (21%), wastewater system assets at $81.5 million (20%), transportation assets at $57.7 million (14%), stormwater management assets at $29.0 million (7%), and lastly, fleet and equipment

[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.

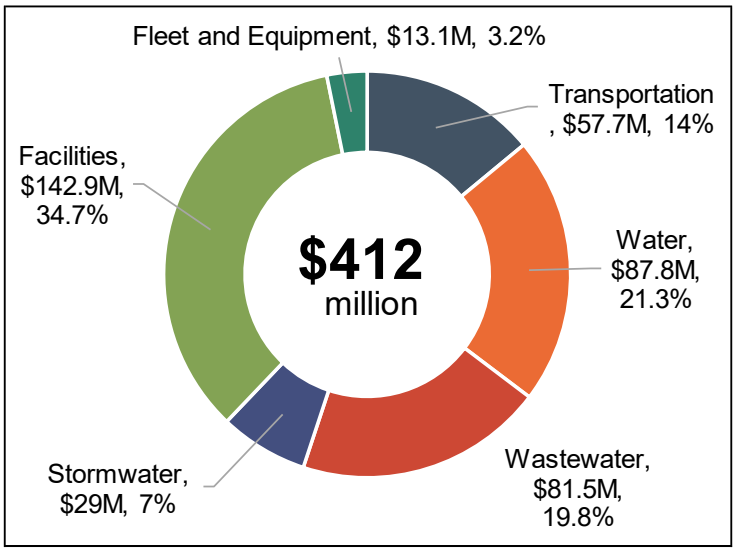
[2]Non-core infrastructure assets are any other assets owned and managed by a municipality that are not included within the definition of core infrastructure assets.

assets at $13.1 million (3%). The distribution of replacement cost by asset category is provided in Table 1-1 and further illustrated in Figure 1-1.

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

Asset Category	Current Replacement Cost	Percentage of Total
Transportation	$57,654,000	14%
Water	$87,799,000	21%
Wastewater	$81,476,000	20%
Stormwater	$28,992,000	7%
Facilities	$142,900,000	35%
Fleet, Equipment, and Land Improvements	$13,145,000	3%
Total	**$411,966,000**	**100%**

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 Town's asset managers, information gleaned through reviews of long-term planning 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 Town's capital asset and financial data. The key steps in the development process of this asset management plan are summarized below:

1. Update underlying asset data such as quantities, ages, condition ratings, useful service life expectations, replacement cost valuations, lifecycle activity costing, etc.
2. Develop scenarios related to levels of service targets through workshops held with Town 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.
3. Analyze the Town'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 (i.e., target level of sustainable capital funding, annual tax levy and tax rate increases to achieve target level of sustainable capital funding, debt requirements, impact on balance of funds held in capital reserves and reserve funds, etc.).
4. 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 Town.
5. Finalize the 10-year forecasts and financial strategy model based on feedback received from Council on its preferred level of service scenario.
6. 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 Town owns and manages a variety of assets that support the safe and efficient passage of vehicular and pedestrian traffic and thereby contribute to the overall level of service provided by the Town. The Town's transportation assets comprise paved roads, streetlights, and sidewalks. The estimated current replacement cost of the Town's transportation assets is approximately $57.7 million.

The Town's road network comprises paved roads with two surface types: HCB (i.e., asphalt) and LCB (i.e., surface treated). The estimated current replacement cost of the Town's roads is $47.5 million. HCB roads represent the largest share of replacement cost at $30.9 million (65%) while LCB roads represent $16.6 million (35%). The average age of the Town's roads, based on the initial date of construction for each road segment, is 23.6 years.

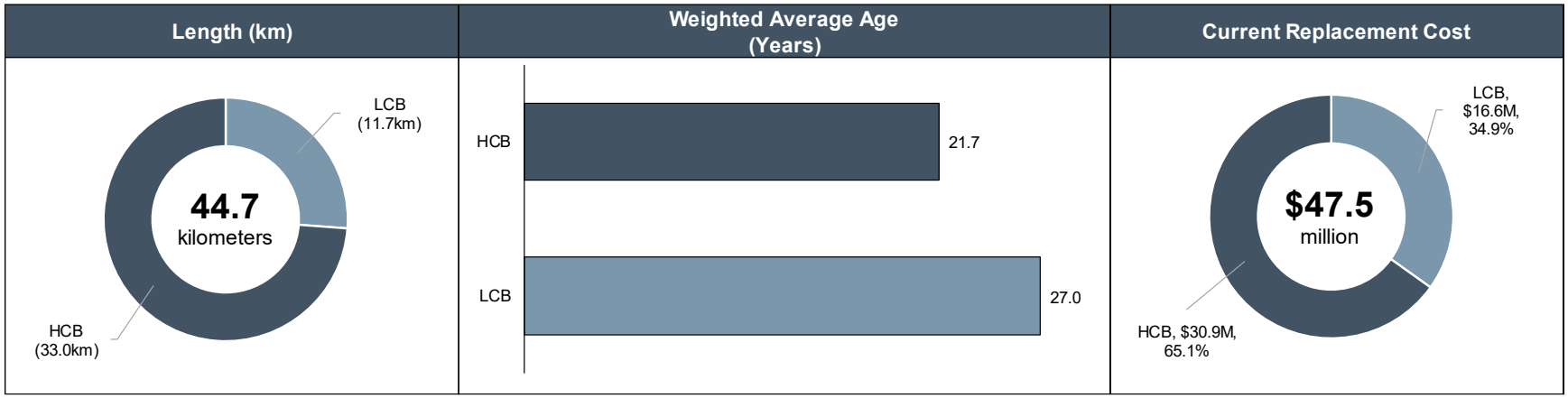
Table 2-1 summarizes the length, average age, and estimated current replacement cost of the Town's roads by surface type and this information is illustrated graphically in Figure 2-1.

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

Surface Type	Length (km)	Average Age[1]	Current Replacement Cost
HCB	33.0 km	21.7 years	$30,929,000
LCB	11.7 km	27.0 years	$16,572,000
Total	**44.7 km**	**23.6 years**	**$47,501,000**

[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



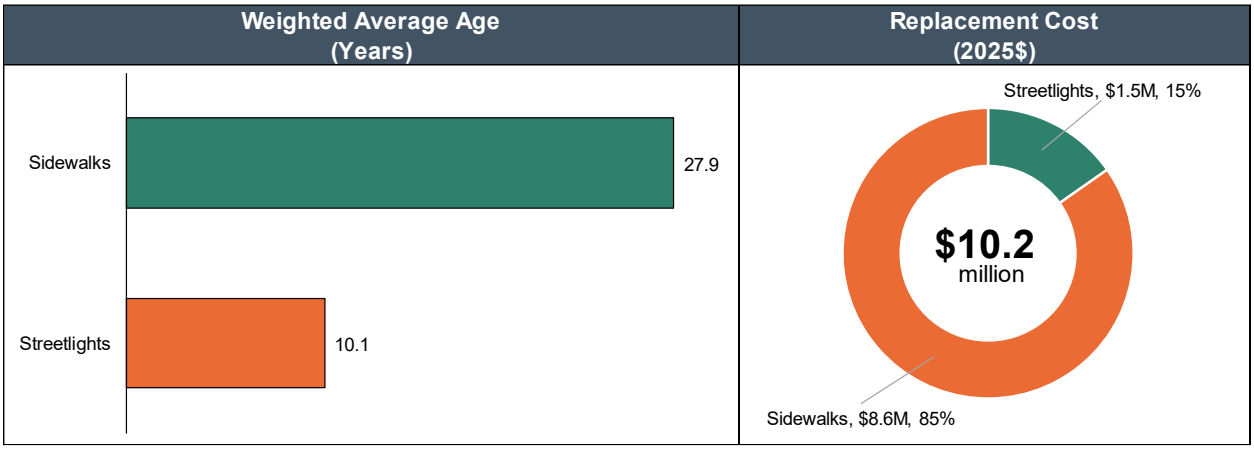
The Town also owns and manages road-related assets comprising streetlights and sidewalks. The estimated current replacement cost of the Town's road-related assets is $10.2 million. Sidewalks represent the largest share of replacement cost at $8.6 million (85%) while streetlights represent $1.5 million (15%).

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

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

Asset Type	Quantity	Average Age[1]	Replacement Cost (2025$)
Sidewalks	32.8 km	27.9 years	$8,604,000
Streetlights	761 streetlights	10.1 years	$1,549,000
Total			**$10,153,000**

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



2.1.2 Condition

The Town 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

[1]Weighted average utilizing the length of sidewalk segments and replacement cost of streetlights as weights.

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 Town's paved roads, PCI ratings have been segmented into qualitative condition states as summarized in Table 2-3.

Table 2-3: Roads – Definition of Condition States with Respect to PCI Rating

Condition State	PCI Rating Range
Very Good	85 < PCI ≤ 100
Good	70 < PCI ≤ 85
Fair	55 < PCI ≤ 70
Poor	40 < PCI ≤ 55
Very Poor	20 < PCI ≤ 40
Failed	0 ≤ PCI ≤ 20

Road segments assessed to be in an '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' or 'Very 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 'Failed' condition state. These road segments may pose hazards to road users and should be given priority for reconstruction.

The Town formally assessed the PCI ratings of its paved road segments through a *StreetScan* condition assessment completed in 2018. The Town's *Citywide Asset Management Platform* was utilized to update PCI ratings for each road segment to their estimated 2025 values. The average PCI rating of all paved road segments in the Town is estimated to be 56.5, indicating that the Town's roads are, on average, in a 'Fair' condition state. The Town's HCB roads are estimated to have an average PCI rating of 70.1, indicating that they are currently in a 'Good' condition state. The Town's LCB roads, however, are estimated to have an average PCI rating of 31.1, indicating that

they are currently in a 'Very Poor' condition state. The Town's asset management strategy for its LCB roads has been to upgrade each road segment to HCB surface at the time of reconstruction. As such, the LCB roads with poor condition ratings will be eliminated over time and upgraded to HCB surfaces through the Town's planned capital program.

Table 2-4 summarizes the average PCI rating and associated condition states of the Town's roads by surface type.

Table 2-4: Roads – Average PCI Ratings and Condition States by Surface Type

Surface Type	Average PCI Rating[1]	Condition State
HCB	70.1	Good
LCB	31.1	Very Poor
Overall Average	**56.5**	**Fair**

The distribution of the Town's roads by condition state and surface type is illustrated in Figure 2-3, and by PCI rating range is illustrated in Figure 2-4.

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

Figure 2-3: Roadways – Distribution (by length) of Roads by Condition State and Surface Type

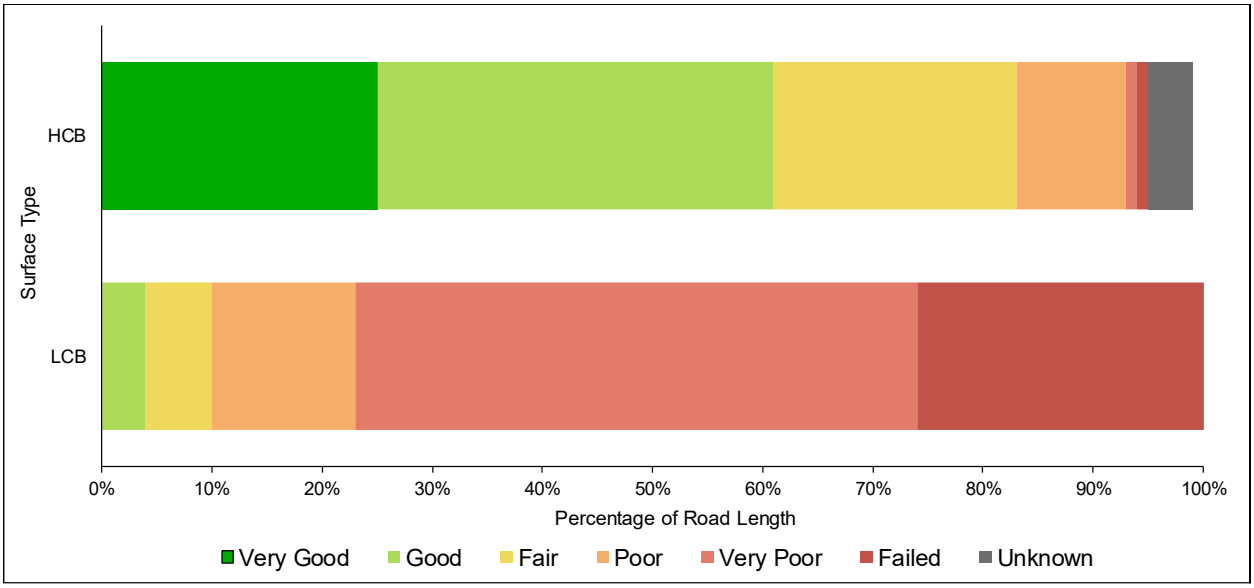
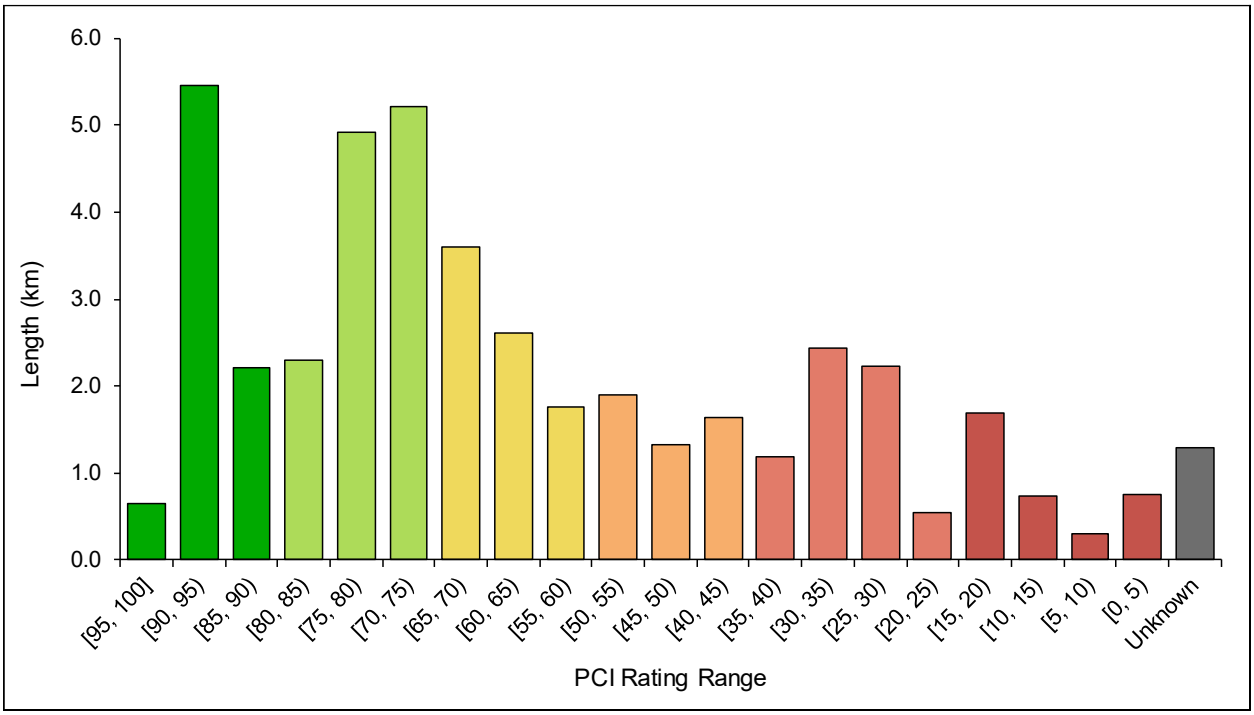


Figure 2-4: Roadways – Distribution (by length) of Roads by PCI Rating



The Town undertakes formal assessments of the condition of its sidewalks on a periodic basis and conducts staff-led inspections annually to ensure compliance with *Ontario*

Regulation 239/02: Minimum Maintenance Standards for Municipal Highways (O. Reg. 239/02). As part of the periodic formal assessments, individual sidewalk segments are evaluated based on the frequency and severity of observed deficiencies (e.g., surface discontinuities or trip hazards, water pooling issues, etc.) and assigned a condition score ranging from 0 to 100, where a score of 0 would indicate a sidewalk segment requiring immediate reconstruction and a score of 100 would indicate a newly constructed segment. To better communicate the condition of the Town's sidewalks, condition scores have been segmented into qualitative condition states as summarized in Table 2-5.

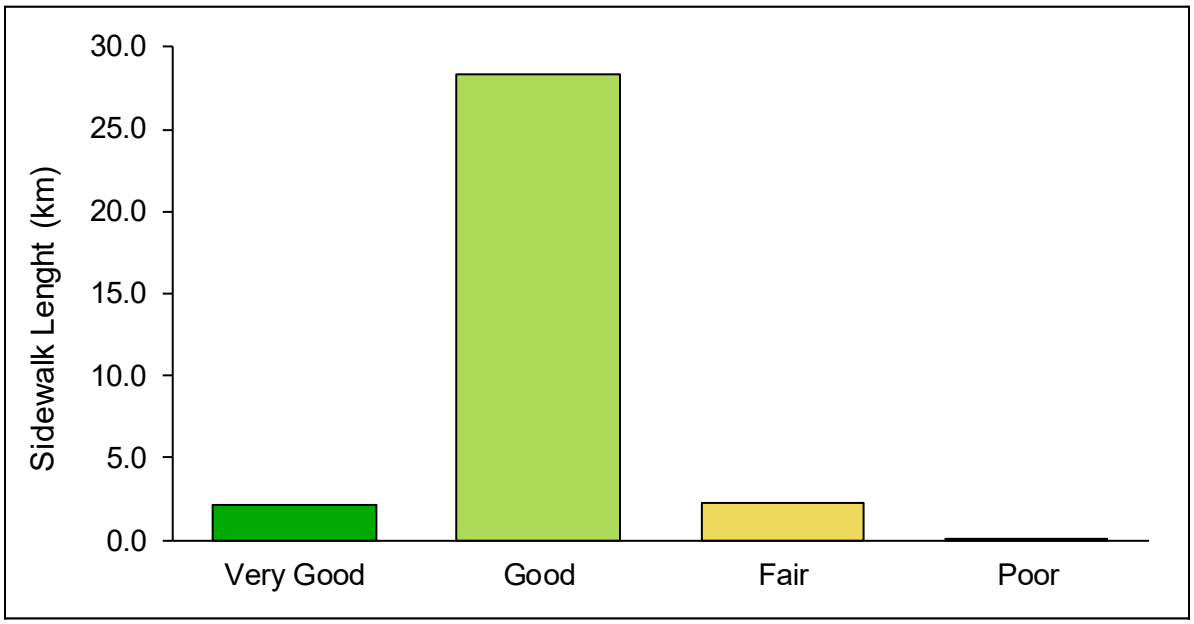
Table 2-5: Sidewalks – Definition of Condition States with Respect to Condition Scores

Condition State	Condition Score Range
Very Good	85 < Score ≤ 100
Good	70 < Score ≤ 85
Fair	45 < Score ≤ 70
Poor	0 < Score ≤ 45

Sidewalk segments assessed to be in a '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 occurs in coordination with the reconstruction of the adjacent road segment. The Town most recently assessed the condition of its sidewalks through a *StreetScan* condition assessment completed in 2018. The Town's *Citywide Asset Management Platform* was utilized to update condition scores for each sidewalk segment to their estimated 2025 values. The current average[1] condition score of all of the Town's sidewalk segments is estimated to be 78.1, indicating that the Town's sidewalks are, on average, in a 'Good' condition state. The distribution of the Town's sidewalks by condition state is illustrated in Figure 2-5.

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

Figure 2-5: Sidewalks – Distribution (by length) of Sidewalks by Condition State



The condition of the Town'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 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.

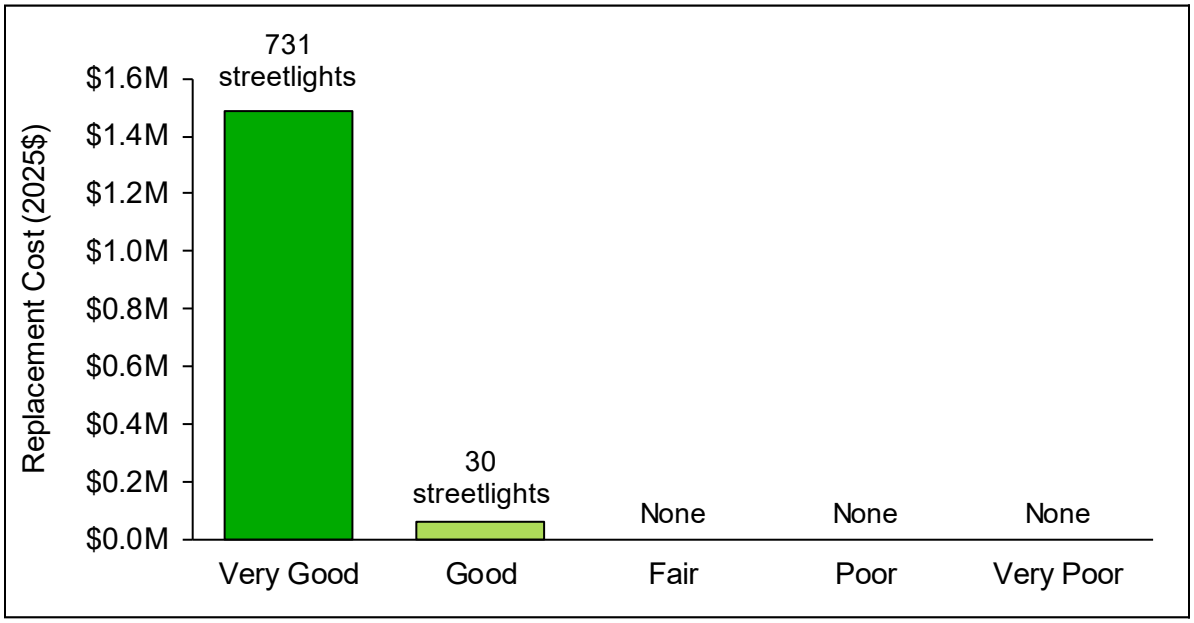
To better communicate the condition of streetlights, ULC% have been segmented into qualitative condition states as summarized in Table 2-6. The scale is set to show that if assets are replaced at the end of their expected useful service life, they would be in a "Fair" condition state. For assets that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

Table 2-6: 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 Town's streetlights is 34%, indicating that, on average, the Town's streetlights are in a 'Very Good' condition state. The distribution of the Town's streetlights by condition state is illustrated in Figure 2-6.

Figure 2-6: Streetlights – Distribution (by replacement cost) of Streetlights by Condition State



2.1.3 Levels of Service

The levels of service currently provided by the Town'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 Town is striving for.

The tables are structured as follows:

- The Service Attribute headings and columns indicate the high-level attribute being addressed;
- The Community Levels of Service column in Table 2-7 explains the Town's intent in plain language and provides additional information about the service being provided;
- The Performance Measure column in Table 2-8 describes the performance measure(s) connected to the identified service attribute;
- The Current Performance column in Table 2-8 identifies the current level of service with respect to each performance measure based on the best available data; and
- The 2026-2035 Performance column in Table 2-8 identifies the proposed level of service with respect to each performance measure for the next 10 years.

Table 2-7: Transportation – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Town's transportation network provides users with access from properties to local amenities/businesses and is structured to enable the efficient flow of traffic onto regional roads. The Town's transportation network also supports the use of recreational vehicles (e.g., ATVs, snowmobiles, etc.) and active transportation methods (e.g., cycling, walking, etc.). Various municipal services also rely on the transportation network, including road maintenance by public works, garbage collection, and emergency services.
Quality	The Town strives to maintain its road network in adequate condition to continue providing a comfortable ride quality to all road users.
	To aid in interpreting the condition of roads, descriptions of different condition states are summarized in Section 2.1.2.
Safety	The Town strives to ensure that the design, construction, and on-going maintenance of its transportation network complies with all applicable regulatory requirements and aligns with the road safety expectations of its community.
Financial Sustainability	The Town strives to ensure financial sustainability and intergenerational equity by budgeting sufficient capital funding annually to fully fund the lifecycle management strategy for its

Service Attribute	Community Levels of Service
	transportation network over the long-term (please refer to Section 3.2 for further details on the specific lifecycle management strategies for transportation asset types).

Table 2-8: Transportation – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Scope	Number of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.	0 lane-km per km^2	0 lane-km per km^2
	Number of lane-kilometres of collector roads as a proportion of square kilometres of land area of the municipality.	0 lane-km per km^2	0 lane-km per km^2
	Number of lane-kilometres of local roads as a proportion of square kilometres of land area of the municipality.	13.5 lane-km per km^2	13.5 lane-km per km^2
	Area (m^2) of LCB roads as a percentage of the total area of the road network.	35%	0%
Quality	For paved roads in the Town, the average[1] pavement condition index value.	56.5	52.0
	For unpaved roads in the Town, the average surface condition (e.g., excellent, good, fair, poor).	N/A[2]	N/A
	Percentage (by area) of HCB roads assessed to be in 'Very Poor' or worse condition.	2.2%	Minimize

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

[2]The Town does not have any gravel road segments within its road network.

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
	Percentage (by area) of LCB roads assessed to be in 'Very Poor' or worse condition.	77.9%	N/A[1]
	Percentage (by area) of paved roads that have undergone a formal assessment of PCI ratings in the last five years.	0%	100%
Safety	Number of instances in the previous calendar year where minimum response time standards for road maintenance, as stipulated by O. Reg. 239/02, were not met.	0	Minimize
Financial Sustainability	Capital funding allocated towards transportation assets in the current year's budget as a percentage of the long-term annual funding target for the transportation network.	94%	100%

2.2 Water

2.2.1 State of Local Infrastructure

The Town's water system provides potable water for residential and business consumption, as well as for the Town's maintenance operations, recreational facilities, and firefighting operations. The system is supported by 55.1 kilometres of watermains, one water treatment plant, two wells, and two water towers.

The estimated current replacement cost of the Town's water system assets is $87.8 million. Watermains represent the largest share of total replacement cost at $41.2 million (47%), followed by the water treatment plant at $31.2 million (34%), the two water towers at $15.4 million (17%), and lastly, the two wells at $1.4 million (2%). The average age of the Town's water system assets is 30.3 years.

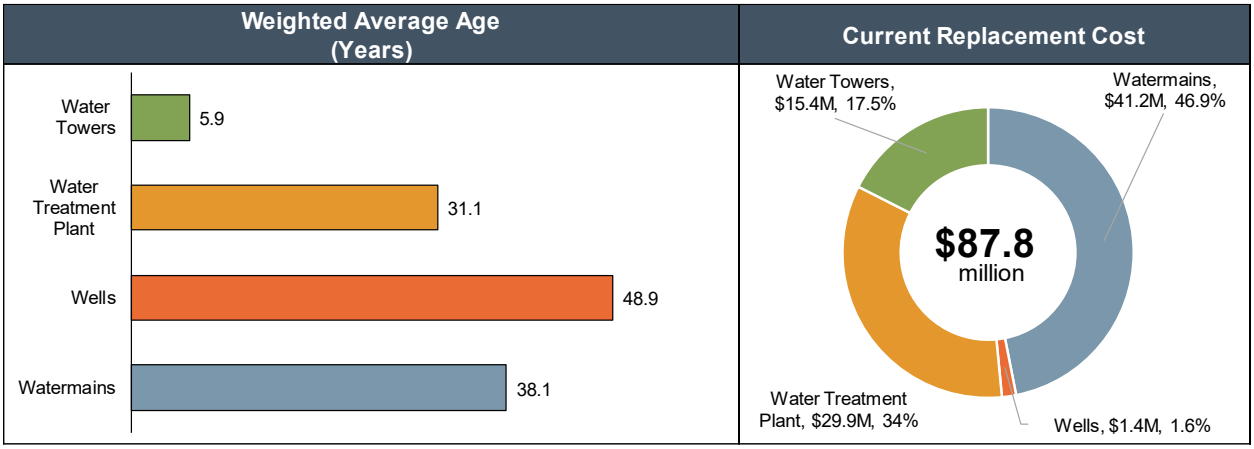
[1]The Town plans to gradually upgrade all LCB roads to HCB surface at the time of reconstruction. As such, a level of service target is not specified for this performance measure.

Table 2-9 summarizes the quantities, average age, and estimated current replacement cost of the Town's water system assets and this information is illustrated graphically in Figure 2-7.

Table 2-9: Water – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Watermains	55.1 km	38.1 years	$41,184,000
Wells	2 wells	48.9 years	$1,379,000
Water Treatment Plant	1 facility	31.9 years	$29,860,000
Water Towers	2 towers	5.9 years	$15,376,000
Total		**30.3 years[2]**	**$87,799,000**

Figure 2-7: Water – Average Age and Replacement Cost



2.2.2 Condition

The condition of the Town'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

[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.

qualitative condition states as summarized earlier in Table 2-6. 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 48.3%, indicating that the water system as a whole is in a 'Good' condition state and that the majority of assets are expected to exhibit little to no signs of performance degradation. Water towers have an average ULC% of 7.4%, indicating that they are currently in a 'Very Good' condition state. Watermains have an average ULC% of 47.6%, indicating that they are currently in a 'Good' condition state. The various components comprising the Town's water treatment plant have average ULC% of 69.2%, indicating that they are also in a 'Good' condition state. Lastly, the two wells have an average ULC% of 117.8%, indicating that they are currently in a 'Poor' condition state.

Table 2-4 summarizes the average ULC% and associated condition states of the Town's water system assets.

Table 2-10: Water – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Watermains	47.6%	Good
Wells	117.8%	Poor
Water Treatment Plant	69.2%	Good
Water Towers	7.4%	Very Good
Overall Average	**48.3%**	**Good**

The distribution of the Town's water system assets by condition state and asset type is illustrated in Figure 2-8 and by ULC% is illustrated in Figure 2-9.

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

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

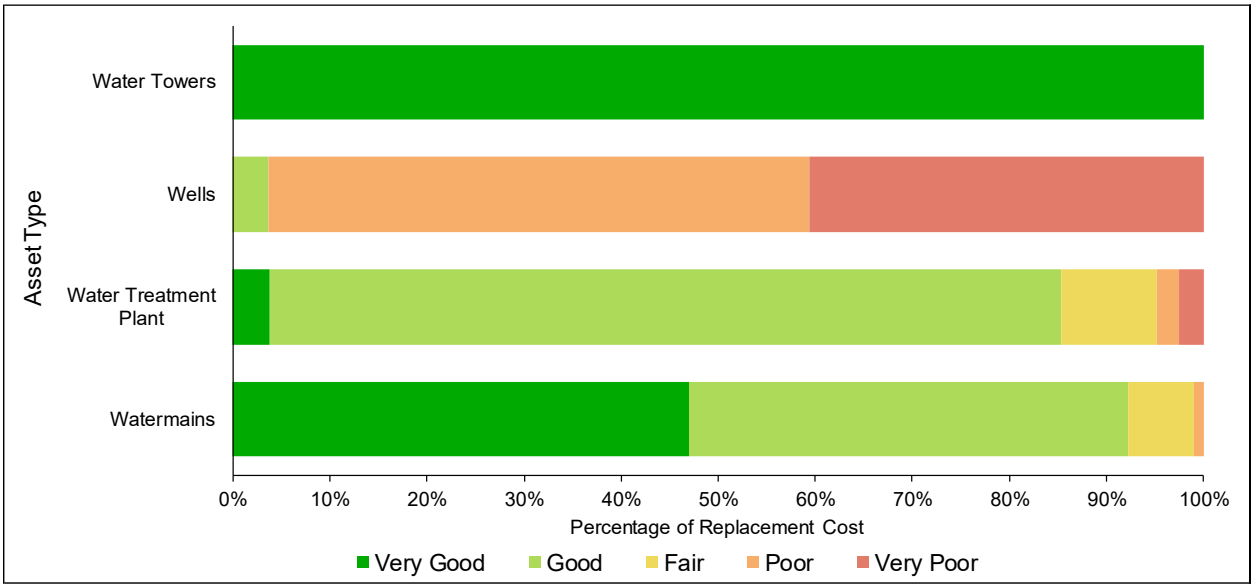
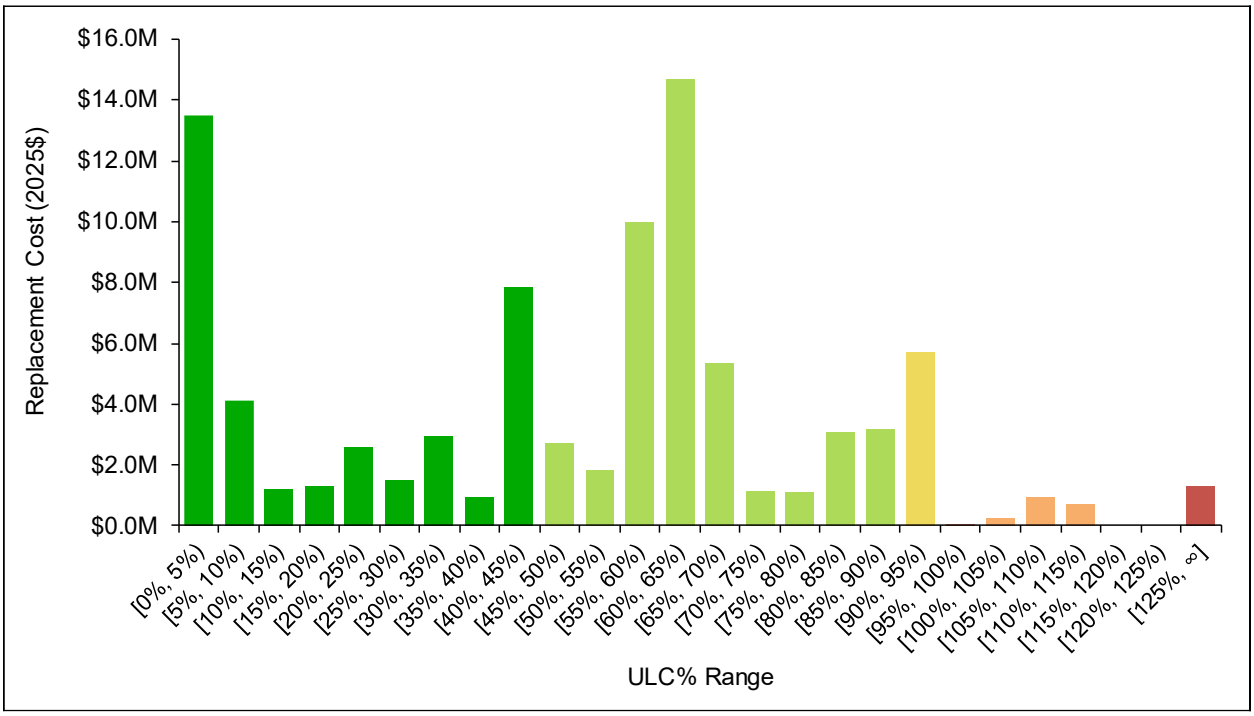


Figure 2-9: Water - Distribution (by replacement cost) of Assets by ULC% Range



2.2.3 Levels of Service

This subsection presents the Town's levels of service framework for its water system assets. Table 2-11 presents the Town's Service Attributes and Community Levels of Service for its water system assets while Table 2-12 presents the Town's Technical Levels of Service (i.e., performance measures), including their current and target performance. Please refer to subsection 2.1.3 for further details on the Town's levels of service framework.

Table 2-11: Water – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Town's water system provides potable water for residential and business consumption, as well as the Town's maintenance operations and recreational facilities. Most properties within the Town are connected to the municipal water system, which serves a population of approximately 8,200 residents. Fire flow is available to all connected properties.
Reliability	The Town manages its water distribution system with the goal of reliably delivering clean drinking water while also minimizing service interruptions and occurrences of adverse water quality events. 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.
Financial Sustainability	The Town strives to ensure financial sustainability and intergenerational equity by budgeting sufficient capital funding annually to fully fund the lifecycle management strategy for its water and wastewater systems over the long-term (please refer to Section 3.3 for further details on the specific lifecycle management strategies for water system assets).

Table 2-12: Water – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Scope	Percentage of properties connected to the municipal water system.	99%	99%
	Percentage of properties where fire flow is available.	99%	99%
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.	3 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 connection-days / connection	0 connection-days / connection
	The number of user complaints related to water quality issues.	13	Minimize
	The percentage of annual treated water lost due to leakage.	8.58%	Minimize
	Replacement cost of water system assets in a 'Poor' or worse condition as a percentage of the total replacement cost of all water system assets.	3.6%	0%
Financial Sustainability	Capital funding allocated towards water and wastewater assets in the current year's budget as a percentage of the long-term annual funding target for water and wastewater assets.	96.5%	100%

2.3 Wastewater

2.3.1 State of Local Infrastructure

The Town's wastewater collection and treatment system services primarily residential customers but also some light commercial and industrial customers. The system is supported by 45.5 kilometres of wastewater mains and one wastewater control plant.

The estimated current replacement cost of the Town's wastewater system assets is $81.5 million. The wastewater control plant represents the largest share of total replacement cost at $51.0 million (63%) while the Town's wastewater mains represent $30.5 million (37%). The average age of the Town's wastewater system assets is 34.6 years.

Table 2-13 summarizes the quantities, average age, and estimated current replacement cost of the Town's wastewater system assets and this information is illustrated graphically in Figure 2-10.

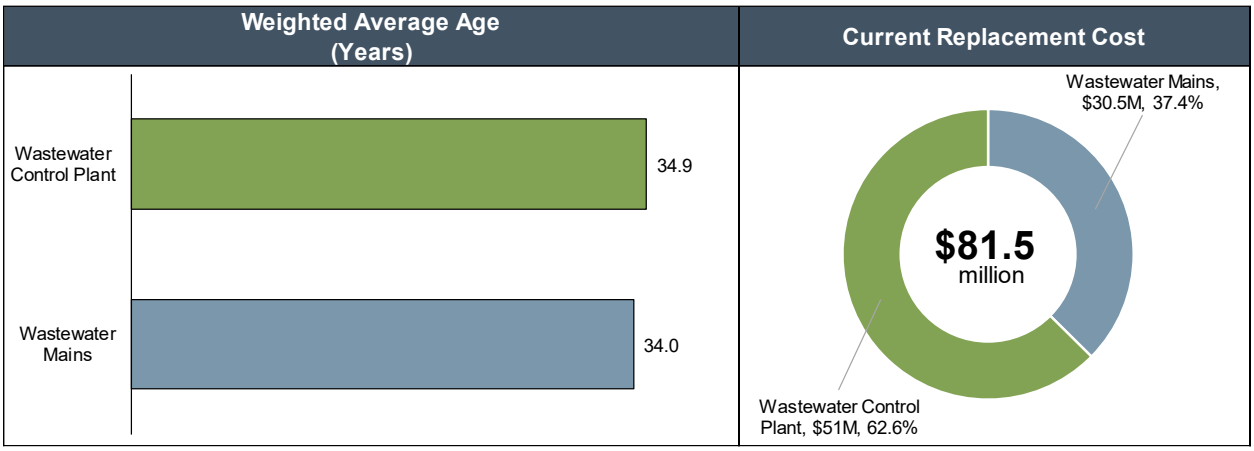
Table 2-13: Wastewater – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Wastewater Mains	45.5 km	34.0 years	$30,494,000
Wastewater Control Plant	1 facility	34.9 years	$50,982,000
Total		**34.6 years[2]**	**$81,476,000**

[1]Weighted average utilizing the length of wastewater mains and the replacement cost of wastewater control plant components assets as weights.

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

Figure 2-10: Wastewater – Average Age and Replacement Cost



2.3.2 Condition

Similar to water system assets, the condition of wastewater system 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 2-5. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all wastewater system assets is 54.3%, indicating that while most assets have expended at least 50% of their estimated useful lives, the wastewater system as a whole is in a '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 42.5%, indicating that they are currently in a 'Very Good' condition state. The various components comprising the Town's wastewater control treatment plant have average ULC% of 61.4%, indicating that they are in a 'Good' condition state.

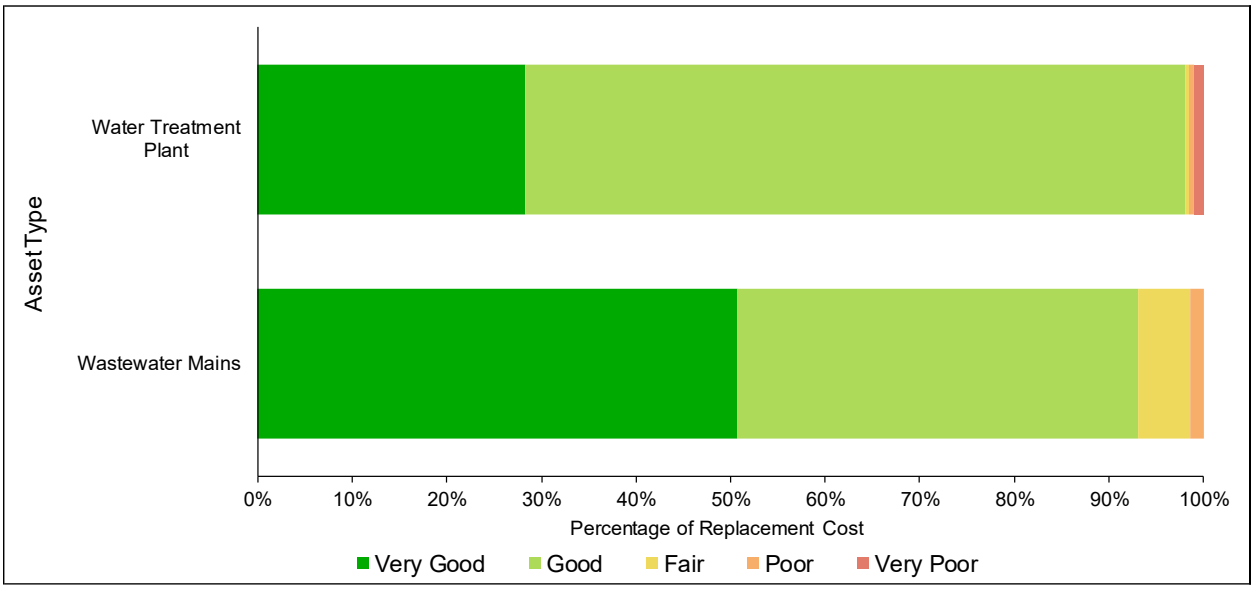
Table 2-4 summarizes the average ULC% and associated condition states of the Town's wastewater system assets.

Table 2-14: Wastewater – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Wastewater Mains	42.5%	Very Good
Wastewater Control Plant	61.4%	Good
Overall Average	54.3%	**Good**

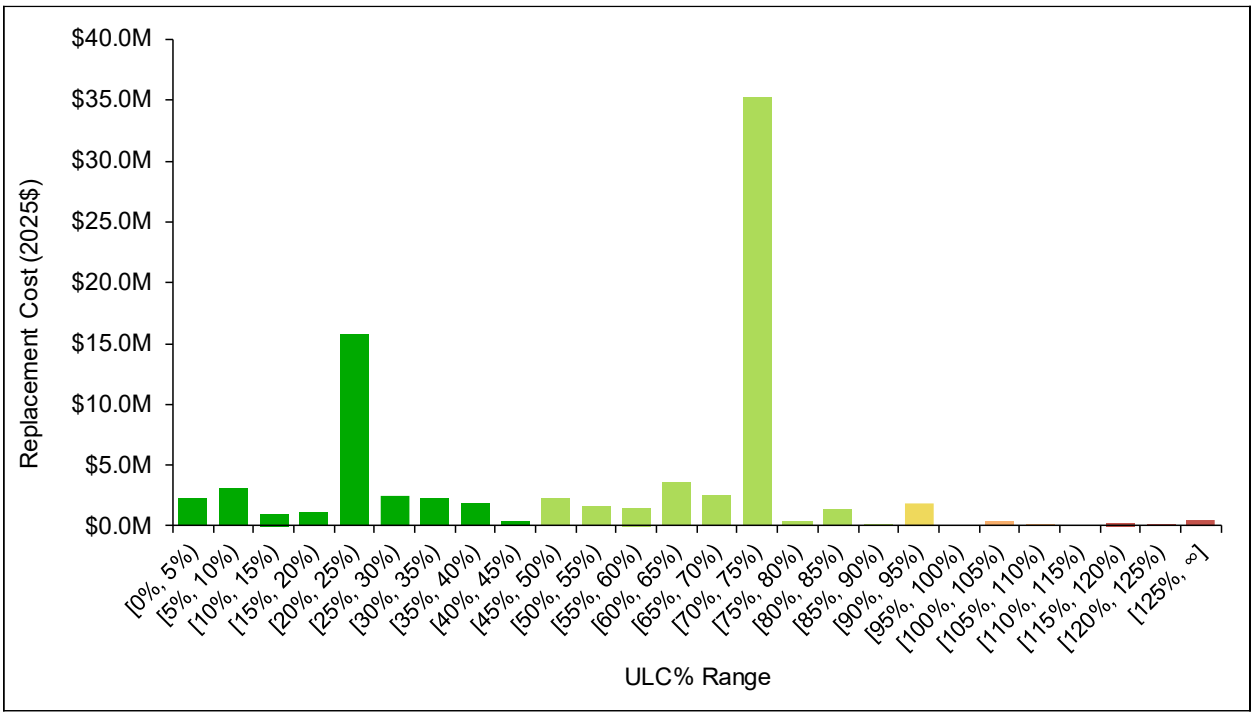
The distribution of the Town's wastewater system assets by condition state and asset type is illustrated in Figure 2-11 and by ULC% is illustrated in Figure 2-12.

Figure 2-11: Wastewater – Distribution (by replacement cost) of Assets by Condition State and Asset Type



[1]Weighted average utilizing the length of wastewater mains and the replacement cost of wastewater control plant components assets as weights.

Figure 2-12: Wastewater - Distribution (by replacement cost) of Assets by ULC% Range



2.3.3 Levels of Service

This subsection presents the Town's levels of service framework for its wastewater system assets. Table 2-15 presents the Town's Service Attributes and Community Levels of Service for its wastewater system assets while Table 2-16 presents the Town's Technical Levels of Service (i.e., performance measures)), including their current and target performance. Please refer to subsection 2.1.3 for further details on the Town's levels of service framework.

Table 2-15: Wastewater – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Town's wastewater system services primarily residential customers and some light commercial and industrial customers. Most properties within the Town are connected to the municipal wastewater system. The Town anticipates some wastewater treatment capacity constraints relative to the level of population and employment growth is expects over the short- to medium-term. The Town plans to address these capacity constraints by undertaking upgrades to its wastewater control plant within the next five years.

Service Attribute	Community Levels of Service
Reliability	The Town'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. The Town currently has sufficient wastewater treatment capacity to address the potential minor inflow and infiltration of groundwater and stormwater into its wastewater collection network. 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 Town's wastewater treatment facilities are operated in accordance with the Environmental Compliance Approval (ECA) issued by the Ministry of Environment, Conservation and Parks. The ECA also includes a description of the effluent that is discharged from the wastewater treatment facility.
Capacity	The Town strives to align the capacity of its wastewater treatment facilities with the service demands of its community.
Financial Sustainability	The Town strives to ensure financial sustainability and intergenerational equity by budgeting sufficient capital funding annually to fully fund the lifecycle management strategy for its water and wastewater systems over the long-term (please refer to Section 3.3 for further details on the specific lifecycle management strategies for water system assets).

Table 2-16: Wastewater – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Scope	Percentage of properties connected to the municipal wastewater system.	99%	99%
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	N/A	N/A

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
	connected to the municipal wastewater system.		
	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.	0.0005 violations / connection	0 violations / connection
	The number of wastewater backups caused by municipal infrastructure failure as a percentage of the total number of wastewater backups.	0%	0%
	The percentage of wastewater mains that have undergone CCTV inspections in the last five years.	0%	100%
	Replacement cost of wastewater system assets in a 'Poor' or worse condition as a percentage of the total replacement cost of all wastewater system assets.	1.5%	0%
Capacity	The historical average daily flow (ADF) over the past 5 years as a percentage of the ECA rated ADF capacity of the Town's wastewater treatment facilities.	83.2%[1]	≤85%
Financial Sustainability	Capital funding allocated towards water and wastewater assets in the current year's budget as a percentage of the long-term annual funding target for water and wastewater assets.	96.5%	100%

[1]Based on best available average daily flow data from 2018-2022.

2.4 Stormwater

2.4.1 State of Local Infrastructure

The Town'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 30.4 km of stormwater mains, 401 catch basins, and 222 catch basin manholes.

The estimated current replacement cost of the Town's stormwater system assets is $30.0 million. Stormwater mains represent the largest share of total replacement cost at $28.1 million (97%), followed by catch basin manholes at $511,000 (2%) and catch basins at $419,000 million (1%). The average age of the Town's stormwater system assets is 28.1 years.

Table 2-17 summarizes the quantities, average age, and estimated current replacement cost of the Town's stormwater system assets and this information is illustrated graphically in Figure 2-13.

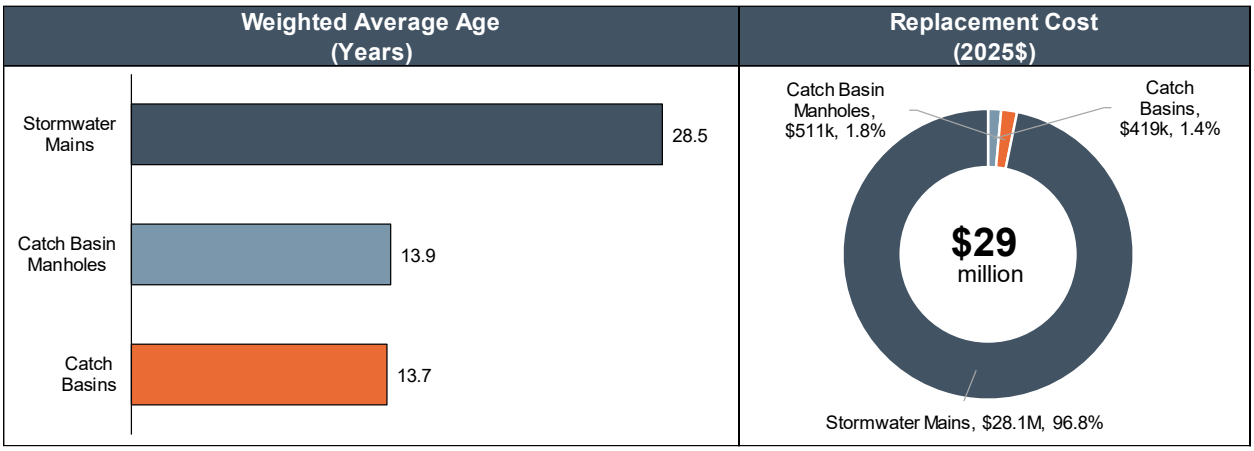
Table 2-17: Stormwater – Quantities, Average Age, and Replacement Cost

Asset Type	Quantity	Average Age[1]	Current Replacement Cost
Stormwater Mains	30.4 km	28.5 years	$419,000
Catch Basins	401	13.7 years	$511,000
Catch Basin Manholes	222	13.9 years	$28,062,000
Total		**28.1 years[2]**	**$28,992,000**

[1]Weighted average utilizing the length of stormwater 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: Stormwater – Average Age and Replacement Cost



2.4.2 Condition

Similar to water and wastewater system assets, the condition of stormwater system 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 2-6. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all stormwater system assets is 35.1%, indicating that the stormwater system as a whole is in a 'Very Good' condition state and that the majority of assets are not expected to exhibit any signs of performance degradation. Stormwater mains have an average ULC% of 37.5%, indicating that they are currently in a 'Very Good' condition state. Similarly, the Town's catch basins and catch basin manholes have an average ULC% of 17.2% and 17.3%, respectively, indicating that they are also in a 'Very Good' condition state.

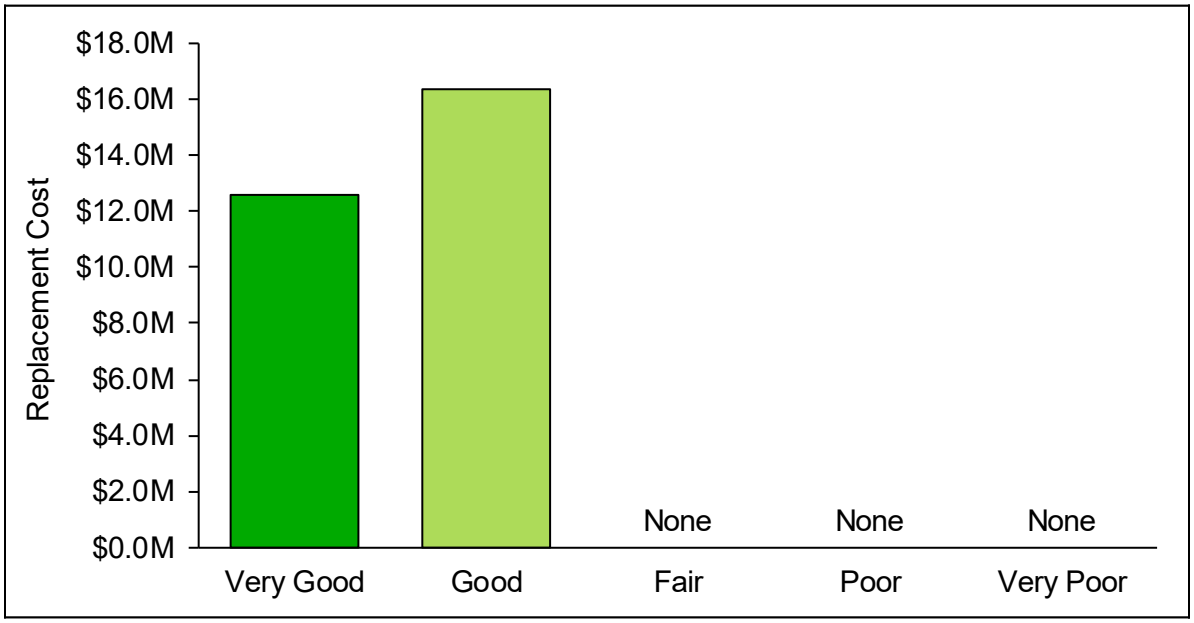
Table 2-18 summarizes the average ULC% and associated condition states of the Town's stormwater system assets.

Table 2-18: Stormwater – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Stormwater Mains	35.7%	Very Good
Catch Basins	17.2%	Very Good
Catch Basin Manholes	17.3%	Very Good
Overall Average	**35.1%[2]**	**Very Good**

The distribution of the Town's stormwater system assets by condition state is illustrated in Figure 2-14 and by ULC% is illustrated in Figure 2-15.

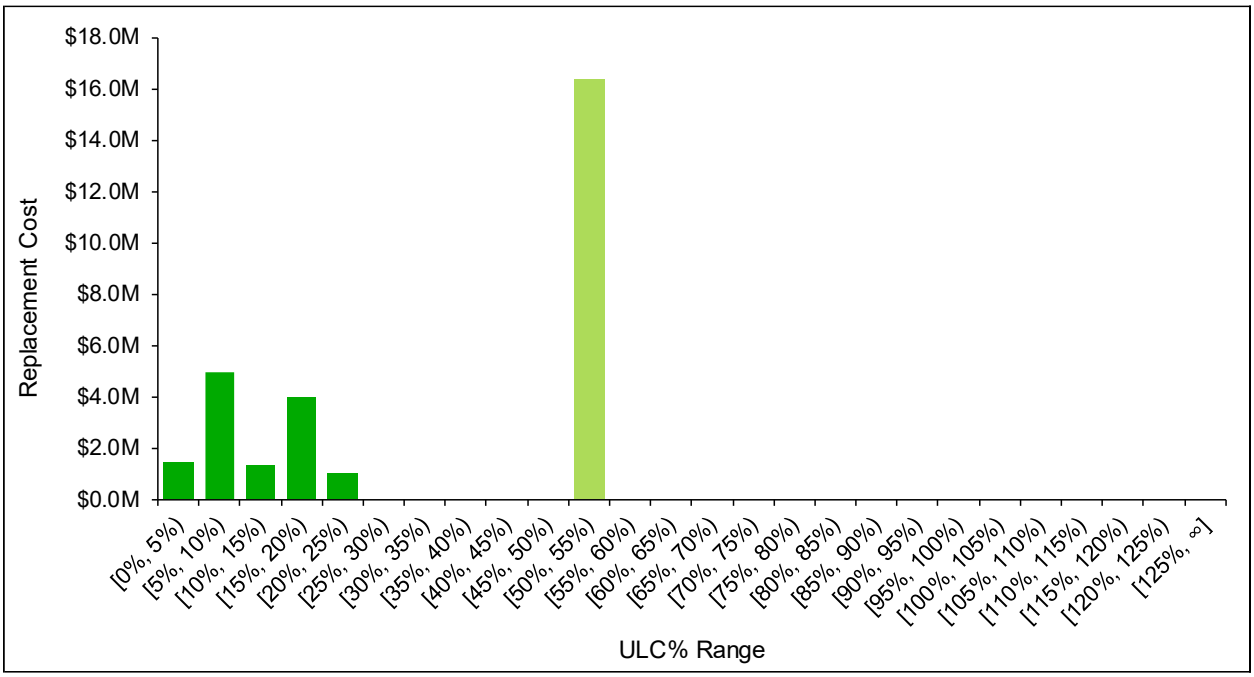
Figure 2-14: Stormwater – Distribution (by replacement cost) of Assets by Condition State



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

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

Figure 2-15: Stormwater - Distribution (by replacement cost) of Assets by ULC% Range



2.4.3 Levels of Service

This subsection presents the Town's levels of service framework for its wastewater system assets. Table 2-15 presents the Town's Service Attributes and Community Levels of Service for its wastewater system assets while Table 2-16 presents the Town's Technical Levels of Service (i.e. performance measures)), including their current and target performance. Please refer to subsection 2.1.3 for further details on the Town's levels of service framework.

Table 2-19: Wastewater – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Town's stormwater system supports the collection of stormwater to protect properties and roads from flooding, to manage the rate of groundwater discharge, and to reduce the amount of contaminants entering the water supply.
Reliability	The Town strives to maintain its stormwater system infrastructure in adequate condition to continue functioning as expected and meet the service demands of the community.

Table 2-20: Wastewater – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Scope	Percentage of properties in municipality resilient to a 100-year storm.	>90%[1]	>90%[2]
	Percentage of the municipal stormwater management system resilient to a 5-year storm.	100%	100%
Reliability	Replacement cost of stormwater system assets in a 'Poor' or worse condition as a percentage of the total replacement cost of all stormwater system assets.	0%	0%
	The percentage of stormwater mains that have undergone CCTV inspections in the last five years.	0%	100%

2.5 Tax-funded Facilities

2.5.1 State of Local Infrastructure

The Town owns and manages 17 facilities (excluding water and wastewater facilities) that support the provision of the various municipal services it provides to the public. These facilities include the municipal office, recreation facilities, public works facilities, an ambulance base, a medical clinic, a fire hall, and a police services building.

The estimated current replacement cost of Town's facilities is $142.9 million. Recreation facilities represent the largest share of replacement cost at $87.7 million (61%), followed by General Government facilities (including the municipal office and the ambulance base) at $29.9 million (21%), facilities utilized by Protection Services (i.e., the fire hall and police services building) at $12.5 million (9%), the medical clinic at $6.8

[1]Based on the most current floodplain mapping from the Saugeen Valley Conservation Authority (SVCA), there is a limited number of existing properties that fall within hazard lands which would be impacted in the event of a 100-year storm.
[2]Based on the most current floodplain mapping from the Saugeen Valley Conservation Authority (SVCA), there is a limited number of existing properties that fall within hazard lands which would be impacted in the event of a 100-year storm.

million (5%), and lastly, public works facilities at $6 million (4%). The average age of the Town's facilities is 27.0 years.

It should be noted that the Town plans to construct a new police services facility in 2027 to replace the existing facility. The estimated current replacement cost of facilities presented in this subsection reflects the replacement cost of the existing police services building.

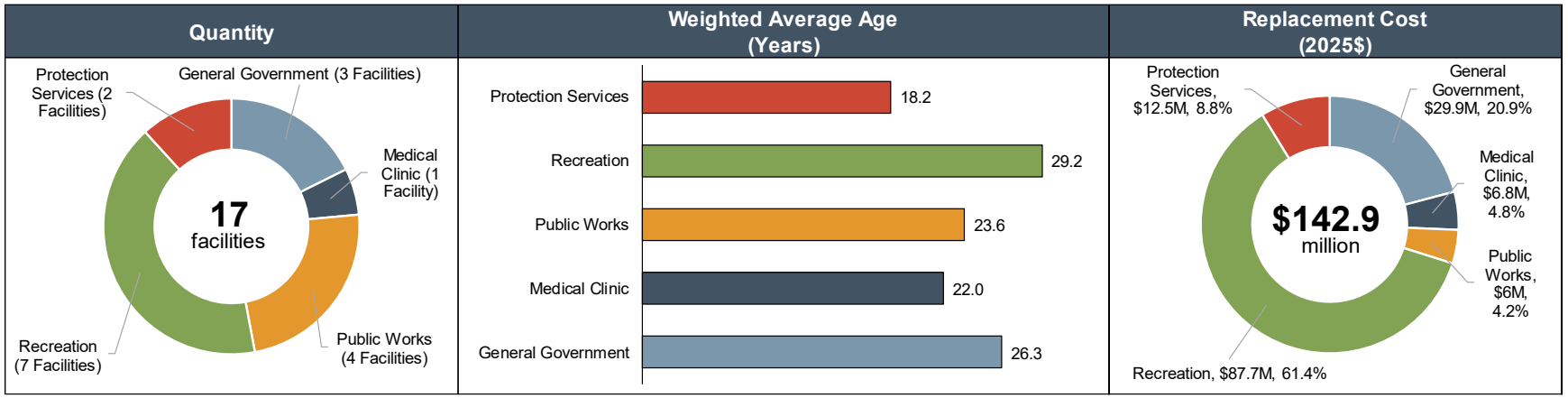
Table 2-21 summarizes the quantity, average age, and estimated current replacement cost of the Town's facilities by service area and this information is illustrated graphically in Figure 2-16.

Table 2-21: Tax-funded Facilities – Quantity, Average Age, and Replacement Cost

Service Area	Quantity	Average Age[1]	Current Replacement Cost
General Government	3 facilities	26.3 years	$29,859,000
Medical Clinic	1 facility	22.0 years	$6,812,000
Public Works	4 facilities	23.6 years	$6,034,000
Recreation	7 facilities	29.2 years	$87,690,000
Protection Services	2 facilities	18.2 year	$12,505,000
Total	**17 facilities**	**27.0 years**	**$142,900,000**

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

Figure 2-16: Tax-funded Facilities – Quantity, Average Age, and Replacement Cost



2.5.2 Condition

The condition of the Town's facilities is assessed based on the age relative to useful service life of individual facility components (i.e., based on the percentage of useful service life consumed (ULC%) of each component). To provide an overall measure of the condition of each facility, the ULC% of each facility's individual components were averaged[1] to calculate an overall ULC% for the facility. To better communicate the condition of facilities, ULC% have been segmented into qualitative condition states as summarized earlier in Table 2-6. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all of the Town's facilities (excluding water and wastewater facilities) is 46.0%, indicating that, on average, facilities are in a 'Good' condition state and that most facility components are well within their useful life expectancy and therefore should be functioning as originally intended. The Town's Recreation and General Government facilities have average ULC% of 46.3% and 50.0%, respectively, indicating that they are currently in a 'Good' condition state. The Town's Public Works facilities and the medical clinic have average ULC% of 27.9% and 40.1%, respectively, indicating that they are currently in a 'Very Good' condition state. The Town's Protection Services facilities, comprising the fire hall and the police services building, are excluded from the calculation of average ULC% due to insufficiency of data. However, due to its age, the fire hall is expected to be in an overall 'Very Good' condition state. Furthermore, the Town plans on replacing the existing police services building with a new facility that is due to be constructed in 2027. Once constructed, the new police services building is also expected to be in a 'Very Good' condition state.

Table 2-22 summarizes the average ULC% and associated condition states of the Town's facilities by service area.

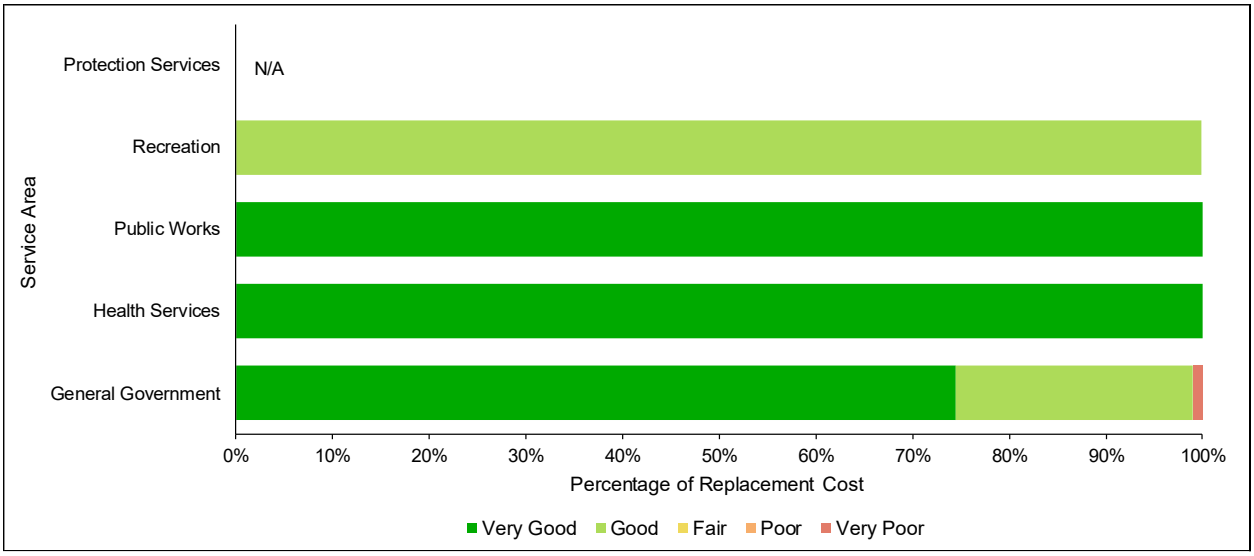
[1] Weighted average utilizing replacement cost of individual facility components as weights.

Table 2-22: Tax-funded Facilities – Average ULC% and Condition State by Service Area

Service Area	Average ULC%[1]	Condition State
General Government	50.0%	Good
Medical Clinic	40.1%	Very Good
Public Works	27.9%	Very Good
Recreation	46.3%	Good
Protection Services	N/A	N/A
Overall Average	**46.0%**	Good

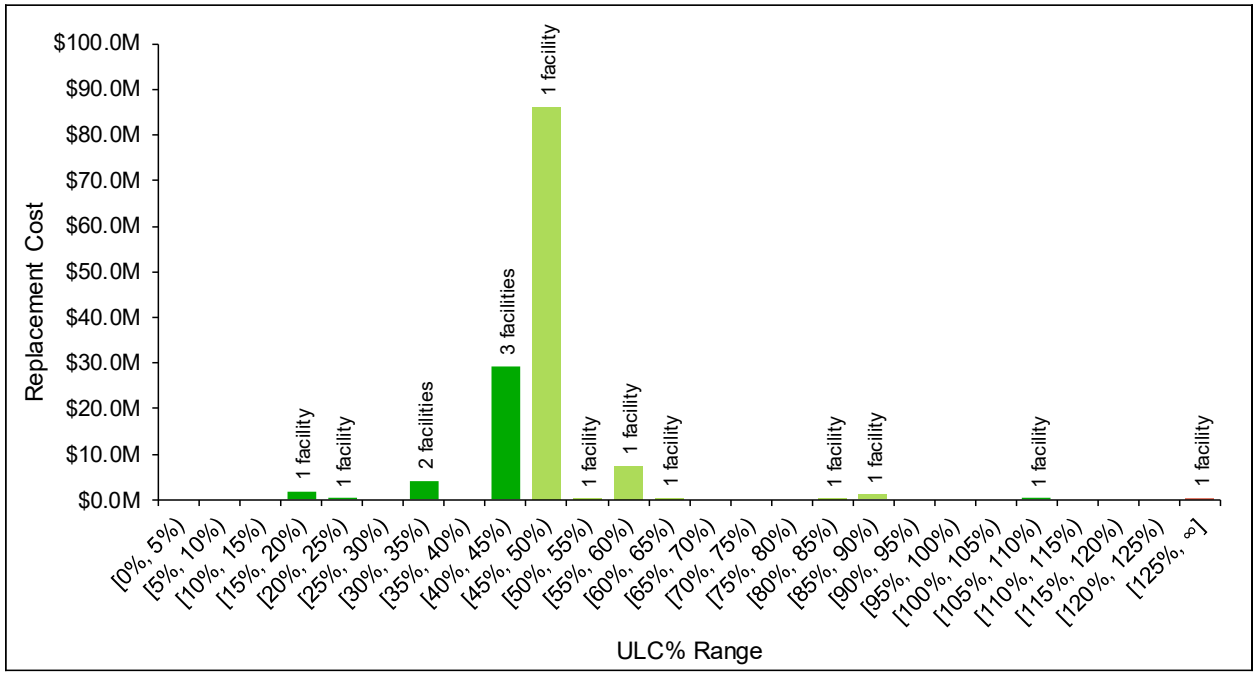
The distribution of the Town's facilities by condition state and service area is illustrated in Figure 2-17 and by average ULC% is illustrated in Figure 2-18.

Figure 2-17: Tax-funded Facilities – Distribution (by replacement cost) of Facilities by Condition State and Service Area



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

Figure 2-18: Tax-funded Facilities - Distribution (by replacement cost) of Facilities by Average ULC%



2.5.3 Levels of Service

This subsection presents the Town's levels of service framework for its facilities. Table 2-15 presents the Town's Service Attributes and Community Levels of Service for its facilities while Table 2-24 presents the Town's Technical Levels of Service (i.e. performance measures), including their current and target performance. Please refer to subsection 2.1.3 for further details on the Town's levels of service framework.

Table 2-23: Tax-funded Facilities – Community Levels of Service

Service Attribute	Community Levels of Service
Capacity	The Town strives to align the capacity of its facilities with the service demands of its community. The Town is currently experiencing storage capacity limitations for the storage of equipment assets at its multi-use recreation centre and its Public Works garage/workshop. The Town plans to address these storage capacity limitations by adding approximately 5,600 square feet of additional storage space to its multi-use recreation centre and its Public Works garage/workshop within the next five years.

Service Attribute	Community Levels of Service
Quality	The Town strives to maintain its facilities in adequate condition to continue meeting the expectations of its facility users.

Table 2-24: Tax-funded Facilities – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Capacity	Gross floor area (square footage) of the multi-use recreation centre (including associated equipment storage space) per 100 residents.	1,147 ft^2	1,211 ft^2
	Gross floor area (square footage) of the municipal office per 100 residents.	530 ft^2	530 ft^2
	Gross floor area (square footage) of the Public Works garage/workshop per 100 residents.	74 ft^2	78 ft^2
	Gross floor area (square footage) of fire services facilities per 100 residents.	189 ft^2	189 ft^2
Reliability	Replacement cost of facilities assessed to be in a 'Poor' or worse condition state (based on the condition of the individual components comprising each facility) as a percentage of the total replacement cost of all facilities	0.3%	0%

2.6 Fleet, Equipment/Machinery, and Land Improvements

2.6.1 State of Local Infrastructure

The Town owns and manages a number of fleet, equipment/machinery, and land improvement assets that assist in the provision of the various services the Town provides to the public.

The Town's inventory of fleet assets comprises fire apparatus such as fire trucks and rescue vehicles as well as vehicles utilized by Public Works such as graders and plow

trucks. It should be noted that leased vehicles are excluded from the Town's fleet inventory and the analyses presented herein. These vehicles are not owned by the Town and the average annual lifecycle cost of leased vehicles is expected to be fully funded by the on-going lease payments, which are reflected in the Town's operating budget.

The Town's inventory of equipment/machinery comprises heavy equipment (e.g., landfill compactor, backhoe, tractors, etc.) as well as a number of smaller pieces of equipment (e.g., generators, trackless sidewalk plows, trailers, etc.) utilized by Public Works. The inventory also includes various pieces of furniture and fixtures as well as the Town's IT infrastructure assets.

Lastly, the Town's inventory of land improvement assets comprises four pedestrian bridges, a pedestrian boardwalk, sports fields, parking lots, and a variety of other ancillary assets.

The estimated current replacement cost of the Town's fleet, equipment, and land improvement assets is $13.1 million. Equipment/machinery represents the largest share of total replacement cost at $5.2 million (39%), followed by land improvement assets at $4.8 million (37%) and fleet assets at $3.2 million (24%). The average age of the Town's fleet, equipment/machinery, and land improvement assets is 13 years.

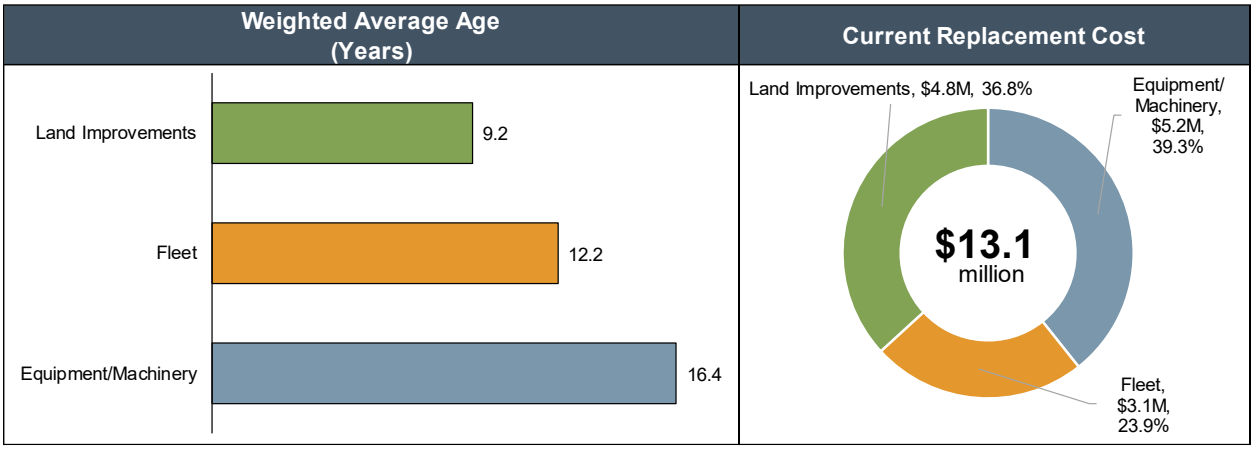
Table 2-25 summarizes the average age and estimated current replacement cost of the Town's fleet and equipment assets by asset type and this information illustrated graphically in Figure 2-19.

Table 2-25: Fleet, Equipment/Machinery, and Land Improvements – Average Age and Replacement Cost

Asset Type	Average Age[1]	Current Replacement Cost
Equipment/Machinery	16.4 years	$5,167,000
Fleet	12.2 years	$3,140,000
Land Improvements	9.2 years	$4,838,000
Total	**13.0 years**	**$13,145,000**

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

Figure 2-19: Fleet, Equipment/Machinery, and Land Improvements – Average Age and Replacement Cost



2.6.2 Condition

The condition of the Town's fleet, equipment/machinery, and land improvement 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 2-6. Please refer to Section 2.1.2 for more information on this condition assessment methodology.

The overall average ULC% for all fleet, equipment/machinery, and land improvement assets is 59%, indicating that while most assets have expended at least 50% of their estimated useful lives, they are well within their useful life expectancy and therefore should be functioning as originally intended. Land Improvement assets have an average ULC% of 20%, indicating that they are currently in a 'Very Good' condition state. Fleet assets have an average ULC% of 58%, indicating that they are currently in a 'Good' condition state. Lastly, the Town's equipment/machinery has an average ULC% of 91%, indicating that those assets are currently in a 'Fair' condition state.

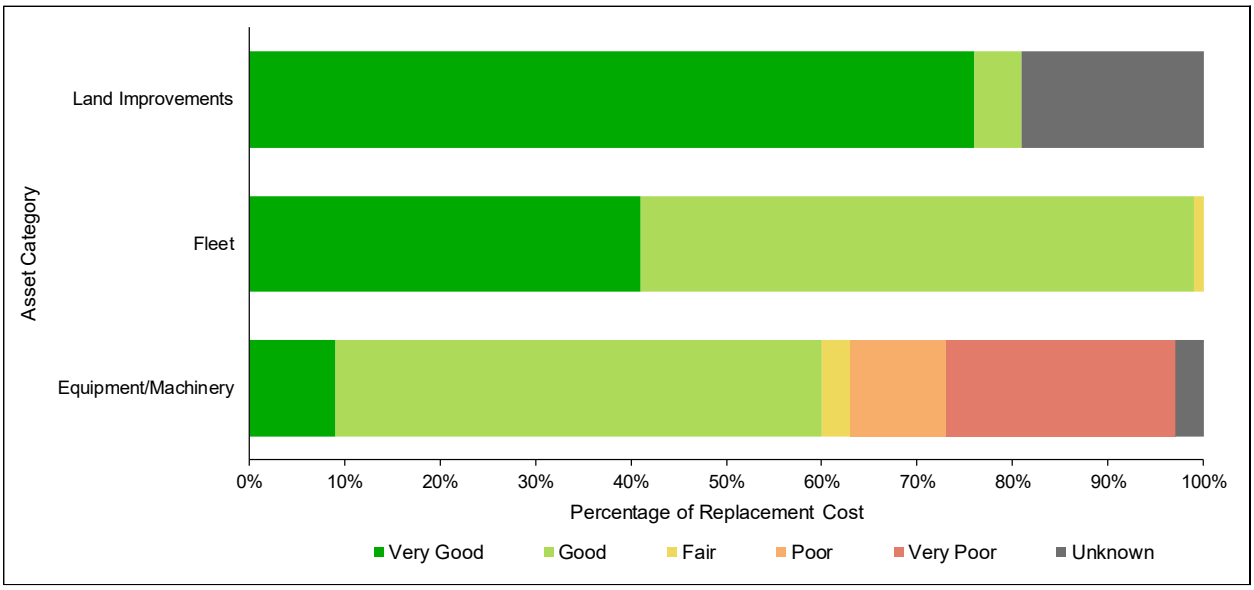
Table 2-26 summarizes the average ULC% and associated condition states of the Town's fleet, equipment/machinery, and land improvement assets.

Table 2-26: Fleet, Equipment/Machinery, and Land Improvements – Average ULC% and Condition States by Asset Type

Asset Type	Average ULC%[1]	Condition State
Equipment/Machinery	91.0%	Fair
Fleet	58.0%	Good
Land Improvements	20.0%	Very Good
Overall Average	**59.0%**	**Good**

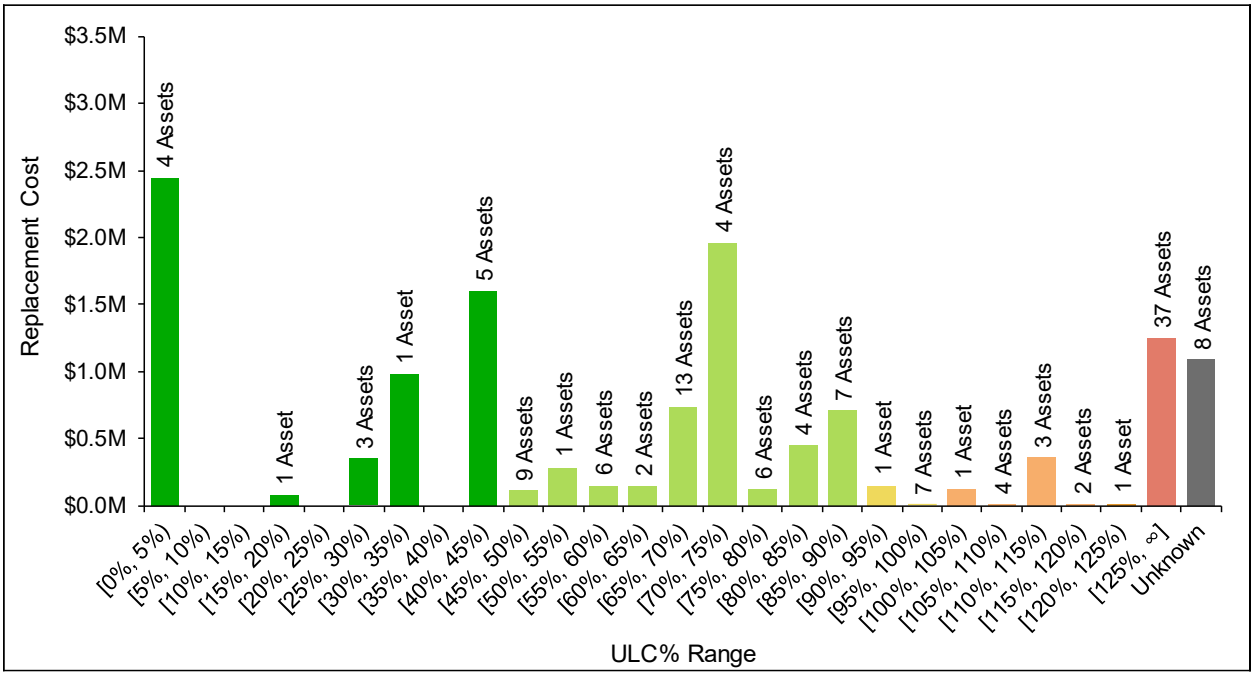
The distribution of the Town's fleet, equipment/machinery, and land improvement assets by condition state and asset type is illustrated in Figure 2-20 and by ULC% is illustrated in Figure 2-21.

Figure 2-20: Fleet, Equipment/Machinery, and Land Improvements – Distribution (by replacement cost) of Assets by Condition State and Asset Type



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

Figure 2-21: Fleet, Equipment/Machinery, and Land Improvements – Distribution (by replacement cost) of Assets by ULC%



2.6.3 Levels of Service

This subsection presents the Town's levels of service framework for its fleet, equipment/machinery, and land improvement assets. Table 2-27 presents the Town's Service Attributes and Community Levels of Service for its fleet, equipment/machinery, and land improvement assets while Table 2-28 presents the Town's Technical Levels of Service (i.e. performance measures) , including their current and target performance. Please refer to 2.1.3 for further details on the Town's levels of service framework.

Table 2-27: Facilities – Community Levels of Service

Service Attribute	Community Levels of Service
Reliability	The Town strives to minimize the number and impact of unplanned repair/maintenance activities performed on its fleet, equipment/machinery, and land improvement assets.

Table 2-28: Facilities – Technical Levels of Service

Service Attribute	Performance Measure	2024 Performance	2026-2035 Performance
Reliability	Replacement cost of fleet assets in a 'Poor' or worse condition as a percentage of the total replacement cost of all fleet assets.	0%	0%
	Replacement cost of equipment/machinery in a 'Poor' or worse condition as a percentage of the total replacement cost of all equipment/machinery.	35%	0%
	Replacement cost of land improvement assets in a 'Poor' or worse condition as a percentage of the total replacement cost of all land improvement assets.	0%	0%

2.7 Population and Employment Growth

O. Reg. 588/17 requires municipalities with a population less than 25,000, as reported in the most recent census, to assess impacts of future changes in population or economic activity on the lifecycle management of assets and the supporting financial strategy. Based on the County of Grey's Official Plan, the Town's population is projected to grow to 11,870 residents by 2046, representing a 49.0% increase from its 2021 census population of 7,967 residents (1.61% annually).

Continued population growth would result in incremental service demands that are expected to have material impacts on the levels of service the Town proposes to provide to the public. Service impacts have been assessed through discussions with both Town staff and Council and have been incorporated into the proposed levels of service targets presented earlier in this chapter. The key levels of service impacts are summarized below:

- Increased demand for water and wastewater services;
- Increased traffic volumes on Town roadways; and
- Need for additional equipment storage space.

The Town plans to address the anticipated increased service demands by:

- Completing upgrades to its wastewater control plant to increase treatment capacity[1];
- Upgrading its entire road network to HCB surface; and
- Adding approximately 5,600 square feet of additional equipment storage space.

The costs associated with the above-mentioned activities have been fully incorporated into the capital expenditure forecasts presented in Chapter 3 as well as the financial strategy presented later in Chapter 4.

It should be noted here that the Town is currently completing a Development Charges Background Study, which is due to be finalized later this year. It is expected that the Town's current forecast of growth-related expenditures will be further refined through the on-going study process. Further details on the Town's estimated capital and significant operating expenditures to achieve the proposed levels of service in light of expected population and employment growth will be provided in its upcoming Development Charges Background Study.

[1]The Town does not currently anticipate needing to upgrade its water treatment capacity to support the level of population and employment growth expected over the next 10 years.

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 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 forecasts of lifecycle activities, and associated costs, that would be required for the Town to provide the proposed levels of service over the next ten years.

3.2 Transportation

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

The capital expenditure forecast for the Town's roads for the period covering 2026 to 2029 is based on its most recent (2025) five-year capital plan and includes reconstructions of priority road segments as well as one planned extension of an existing road segment. The capital expenditure forecast for the period covering 2030 to 2035 is derived based on the estimated current PCI ratings of each road segment (see Section 2.1.2 for further details on the PCI ratings of the Town's roads), prioritizing the reconstructions of road segments with the lowest estimated current PCI ratings. The

capital expenditure forecast was refined in consultation with Town staff to ensure annual capital expenditures over the 10-year forecast horizon align with both the operational and spending capacity of the Town.

It should be noted that the bulk of capital expenditures forecasted over the 10-year forecast horizon are related to the reconstruction of poorly performing LCB road segments. As noted earlier in Section 2.1.2, the Town's asset management strategy with respect to LCB roads is to upgrade each road segment to HCB surface at the time of reconstruction, with the intent of gradually converting the entire road network to HCB surface. As such, the capital expenditure forecast presented in this section includes the costs associated with upgrading LCB road segments to HCB surface at the time of their reconstruction.

Lastly, the Town undertakes the replacements of its road-related assets in conjunction with the reconstruction of roads. The capital expenditure forecast presented herein includes an annual allowance for the replacement of road-related assets.

The 10-year capital expenditure forecast for the Town's transportation assets is illustrated in Figure 3-1 and provided in tabular form in Table 3-1. Average annual expenditures over the forecast period have been estimated at approximately $2.6 million.

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

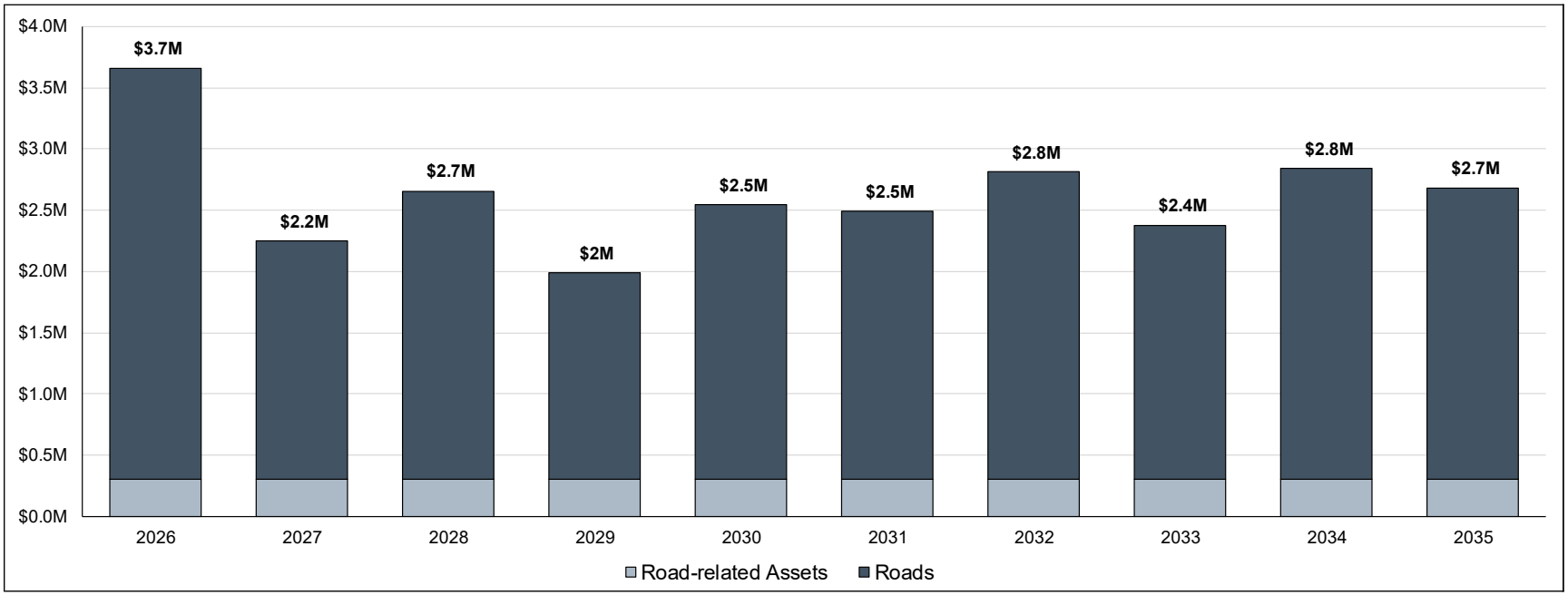


Table 3-1: Transportation – Capital Expenditure Forecast (Uninflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Roads	$3,359,000	$1,952,000	$2,360,000	$1,690,000	$2,244,000	$2,197,000	$2,515,000	$2,081,000	$2,541,000	$2,386,000
Road-related Assets	$298,000	$298,000	$298,000	$298,000	$298,000	$298,000	$298,000	$298,000	$298,000	$298,000
Total Capital Exp.	**$3,657,000**	**$2,250,000**	**$2,658,000**	**$1,988,000**	**$2,542,000**	**$2,495,000**	**$2,813,000**	**$2,379,000**	**$2,839,000**	**$2,684,000**

3.3 Water

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

In general terms, the proposed levels of service for the Town'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 Town will accomplish this by ensuring the timely replacement of ageing and poorly performing assets and through the completion of regular maintenance activities. The capital expenditure forecast presented in this section includes the costs associated with replacement of assets based on current estimates of their remaining service lives. The forecast has been supplemented with the Town's most recent (2025) five-year capital plan for water system assets and includes the remaining costs associated with the replacement of the 7th avenue water tower, costs associated with the re-painting of the 14th street water tower, and the cost of planned replacements of the Town's two wells.

The 10-year capital expenditure forecast for the Town's water system assets is illustrated in Figure 3-2 and provided in tabular form in Table 3-2. Average annual expenditures over the forecast period have been estimated at approximately $2.4 million. The current backlog of water system assets comprises assets that have exceeded their useful service life expectancy but remain in-service. The Town plans to gradually replace these assets over the next five years and as such, the capital expenditure forecast includes an annual allowance over the period from 2026 to 2030 to address these replacements.

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

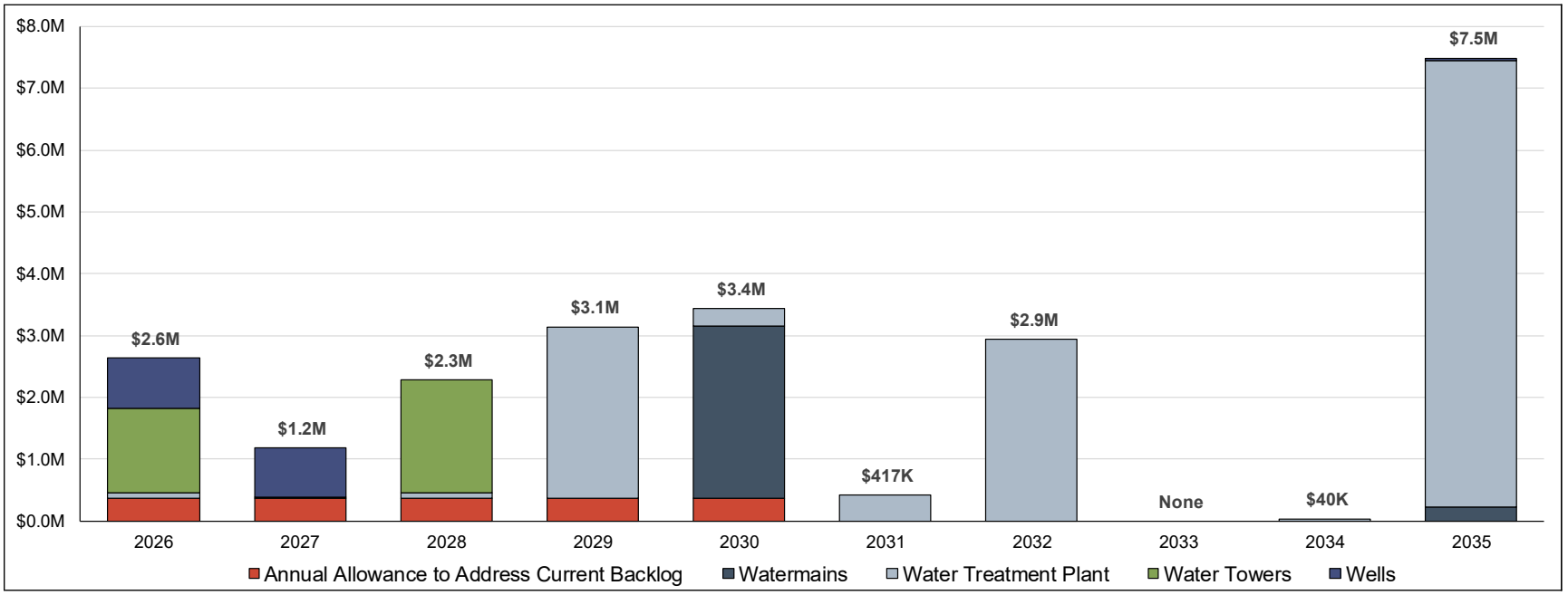


Table 3-2: Water – Capital Expenditure Forecast (Uninflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Watermains	-	-	-	-	$2,787,000	-	-	-	-	$233,000
Water Treatment Plant	$91,000	-	$91,000	$2,772,000	$278,000	$417,000	$2,941,000	-	$40,000	$7,220,000
Wells	$800,000	$800,000	-	-	-	-	-	-	-	$39,000
Water Towers	$1,375,000	$23,000	$1,825,000	-	-	-	-	-	-	-
Allowance for Backlog	$367,000	$367,000	$367,000	$367,000	$367,000	-	-	-	-	-
Total Capital Exp.	**$2,633,000**	**$1,190,000**	**$2,283,000**	**$3,139,000**	**$3,432,000**	**$417,000**	**$2,941,000**	-	**$40,000**	**$7,492,000**

3.4 Wastewater

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

The proposed levels of service for the Town's wastewater system include maintaining assets in adequate condition to reliably support the efficient collection and treatment of sanitary flows, minimizing the occurrences of wastewater backups due to failure of municipal infrastructure, and minimizing instances of effluent violations. The Town will accomplish this by ensuring the timely replacement of ageing and poorly performing assets, through the completion of regular maintenance activities, and by periodically undertaking CCTV inspections of wastewater mains to proactively identify poorly performing underground infrastructure. The capital expenditure forecast presented in this section includes the costs associated with replacement of assets based on current estimates of their remaining service lives.

As noted earlier in Section 2.3.3, based on the expected amount of population and employment growth, the Town is anticipating to experience wastewater treatment capacity constraints in the short- to medium-term. To address these constraints, the Town plans to complete significant upgrades to its wastewater control plant over the two-year period from 2028-2029. The expected cost of these upgrades as well as other items identified within the Town's most recent (2025) five-year capital plan for wastewater system assets is included within the capital expenditure forecast presented in this section.

The 10-year capital expenditure forecast for the Town's wastewater system assets is illustrated in Figure 3-3 and provided in tabular form in Table 3-3. Average annual expenditures over the forecast period have been estimated at approximately $6.8 million, with the bulk of expenditures relating to the wastewater control plant upgrades. The current backlog of wastewater system assets comprises assets that have exceeded their useful service life expectancy but remain in service. The Town plans to gradually replace these assets over the next five years and as such, the capital expenditure forecast includes an annual allowance over the period from 2026 to 2030 to address these replacements.

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

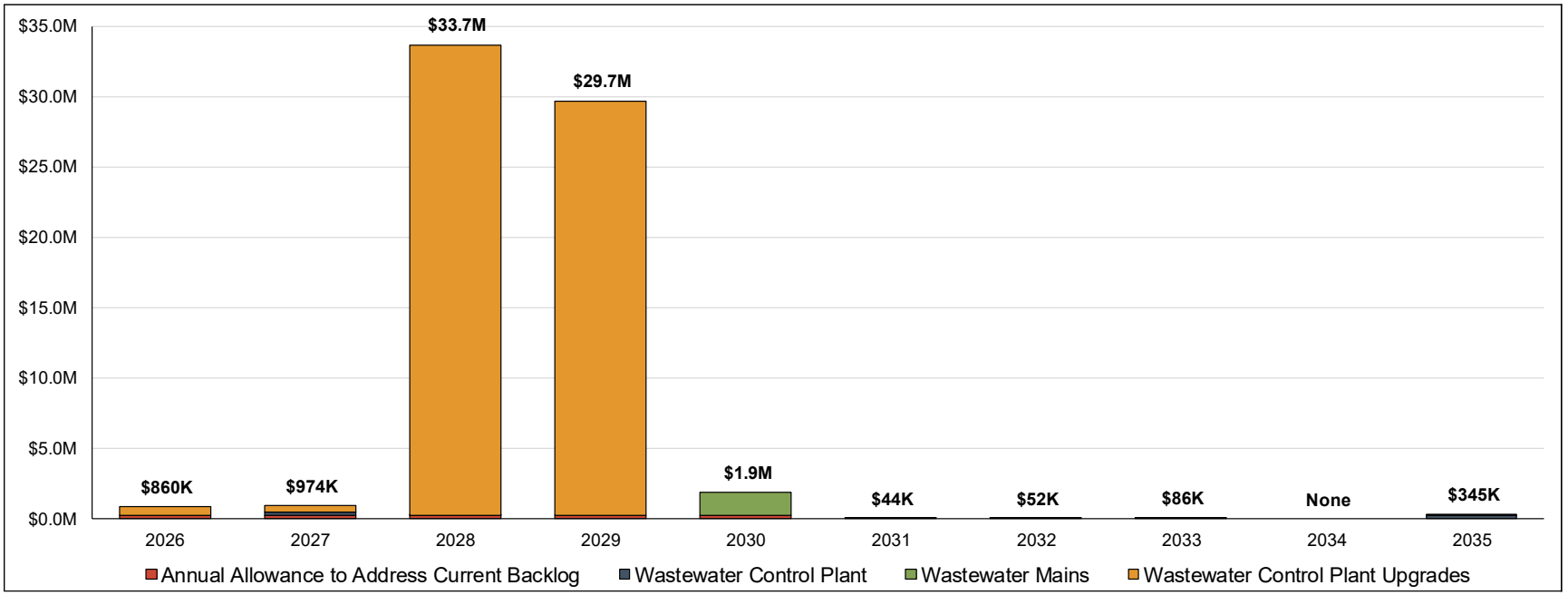


Table 3-3: Wastewater – Capital Expenditure Forecast (Uninflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Wastewater Plant	-	$261,000	$32,000	-	-	$44,000	$52,000	$86,000	-	$218,000
Wastewater Mains	-	-	-	-	$1,669,000	-	-	-	-	$127,000
Wastewater Plant Upg.	$623,000	$476,000	$33,437,500	$29,460,500	-	-	-	-	-	-
Allowance for Backlog	$237,000	$237,000	$237,000	$237,000	$237,000	-	-	-	-	-
Total Capital Exp.	**$860,000**	**$974,000**	**$33,706,500**	**$29,697,500**	**$1,906,000**	**$44,000**	**$52,000**	**$86,000**	**-**	**$345,000**

3.5 Stormwater

This section presents an estimate of costs associated with achieving the proposed levels of service for the Town'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 Town's stormwater system include maintaining 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 natural environment. The Town will accomplish this by ensuring the timely replacements of ageing and poorly performing assets, through the completion of regular maintenance activities, and by periodically undertaking CCTV inspections of stormwater mains to proactively identify poorly performing underground infrastructure.

Based on the current ages of assets relative to their respective useful service life expectations, there are no capital expenditures forecasted for the Town's stormwater system over the 10-year forecast horizon. It is recommended that the Town 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 if asset performance is observed to be degrading more rapidly than currently expected.

3.6 Tax-funded Facilities

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

The capital expenditure forecast for the Town's facilities was derived based on the ages of individual facility components relative to their expected useful service lives. This approach identifies the specific components that will likely require replacement over the 10-year forecast horizon and aligns the timing of their replacements with the end of their useful service life expectancies. This age-based replacement forecast was supplemented by the Town's most recent (2025) five-year capital plan for facilities and includes the costs associated with the construction of the new police services building, planned rehabilitations and upgrades to the multi-use recreation centre, rehabilitations to stand-alone washroom facilities, replacement of the Kinsmen Ball Park Pavillion, etc.

As noted earlier in Section 2.5.3, the Town is currently experiencing storage capacity constraints at its multi-use recreation centre and its Public Works garage/workshop. To address these limitations and provide additional capacity to support future growth, the Town plans on adding a combined 5,600 square feet of storage space to those two facilities. The cost associated with these additions is expected to be incurred over the two-year period from 2027-2028 and is included within the capital expenditure forecast presented in this section.

The 10-year capital expenditure forecast for the Town's facilities is illustrated in Figure 3-4 and provided in tabular form in Table 3-4. Average annual expenditures over the forecast period have been estimated at approximately $2.0 million, with the bulk of expenditures relating to the construction of the new police services building as well as the storage space additions. It should be noted here that there are no capital expenditures forecasted for the fire hall over the next 10 years due to the age of its components (facility was recently constructed in 2024). Similarly, there are no capital expenditures forecasted for the new police services building over the next 10 years apart from the cost of its initial construction.

The current backlog for facilities comprises facility components that have exceeded their useful service life expectancy but remain in service. The Town plans to gradually replace these assets over the next five years and as such, the capital expenditure forecast includes an annual allowance over the period from 2026 to 2030 to address these replacements.

Figure 3-4: Tax-funded Facilities – Capital Expenditure Forecast (Uninflated)

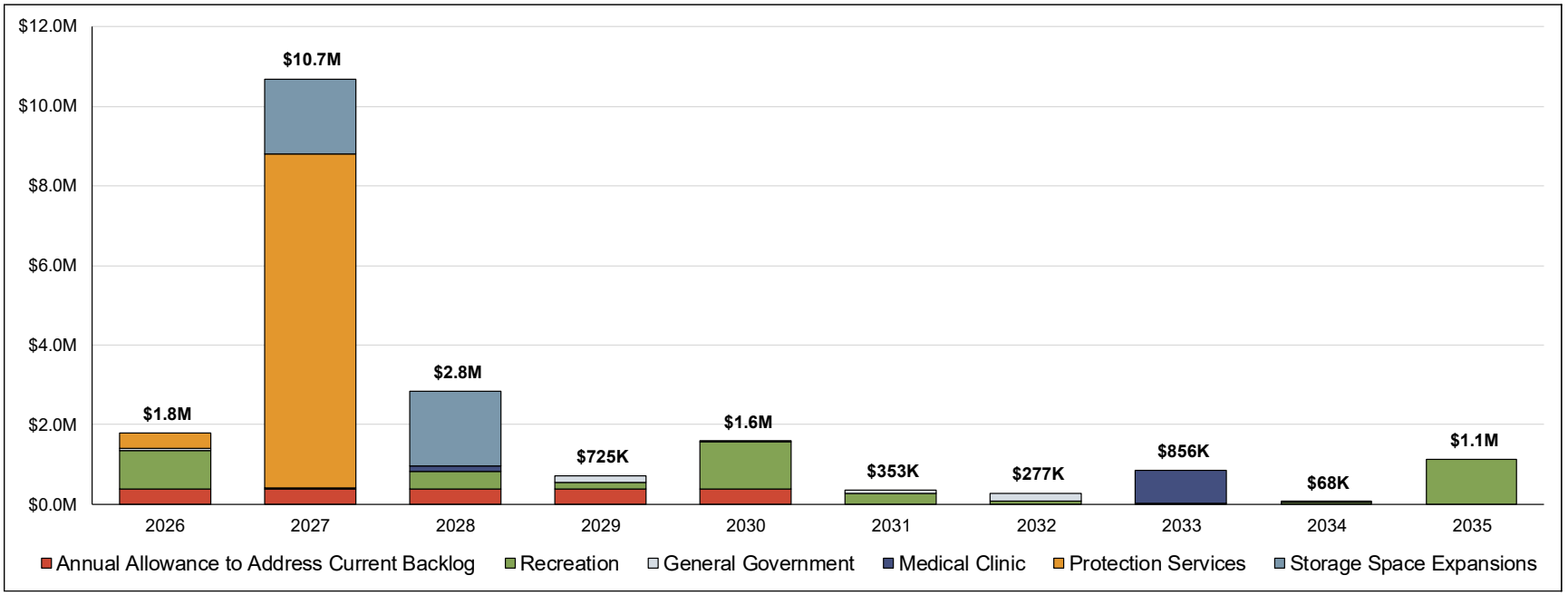


Table 3-4: Tax-funded Facilities – Capital Expenditure Forecast (Uninflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Recreation	$965,000	$46,000	$441,000	$171,000	$1,194,000	$285,000	$89,000	$32,000	$53,000	$1,133,000
General Government	$51,000	-	-	$176,000	$18,000	$68,000	$188,000	-	$15,000	-
Public Works	-	-	-	-	-	-	-	-	-	-
Medical Clinic	-	-	$139,000	-	-	-	-	$824,000	-	-
Protection Services	$388,000	$8,375,000	-	-	-	-	-	-	-	-
Storage Space Exp.	-	$1,885,000	$1,885,000	-	-	-	-	-	-	-
Allowance for Backlog	$378,000	$378,000	$378,000	$378,000	$378,000	-	-	-	-	-
Total Capital Exp.	**$1,782,000**	**$10,684,000**	**$2,843,000**	**$725,000**	**$1,590,000**	**$353,000**	**$277,000**	**$856,000**	**$68,000**	**$1,133,000**

3.7 Fleet, Equipment/Machinery, and Land Improvements

This section presents an estimate of costs associated with achieving the proposed levels of service for the Town's fleet, equipment/machinery, and land improvement assets presented earlier in Section 2.6.3.

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

The capital expenditure forecast for the Town's fleet, equipment/machinery, and land improvement assets was derived based on the ages of assets relative to their respective useful service life expectancies. This approach identifies the specific assets that will likely require replacement over the 10-year forecast horizon and aligns the timing of their replacements with the end of their useful service life expectancies. This age-based replacement forecast was supplemented by the Town's most recent (2025) five-year capital plan and includes the costs associated with the replacement of a fire rescue pumper, replacement of a trackless sidewalk machine, refurbishment of sports fields, development of the Centre of Excellence park, etc.

The 10-year capital expenditure forecast for the Town's fleet, equipment/machinery, and land improvement assets is illustrated in Figure 3-5 and provided in tabular form in Table 3-5. Average annual expenditures over the forecast period have been estimated at approximately $1.0 million. The current backlog for fleet, equipment/machinery, and land improvement assets comprises assets that have exceeded their useful service life expectancy but remain in-service. The Town plans to gradually replace these assets over the next five years and as such, the capital expenditure forecast includes an annual allowance over the period from 2026 to 2030 to address these replacements.

Figure 3-5: Fleet, Equipment/Machinery, and Land Improvements – Capital Expenditure Forecast (Uninflated)

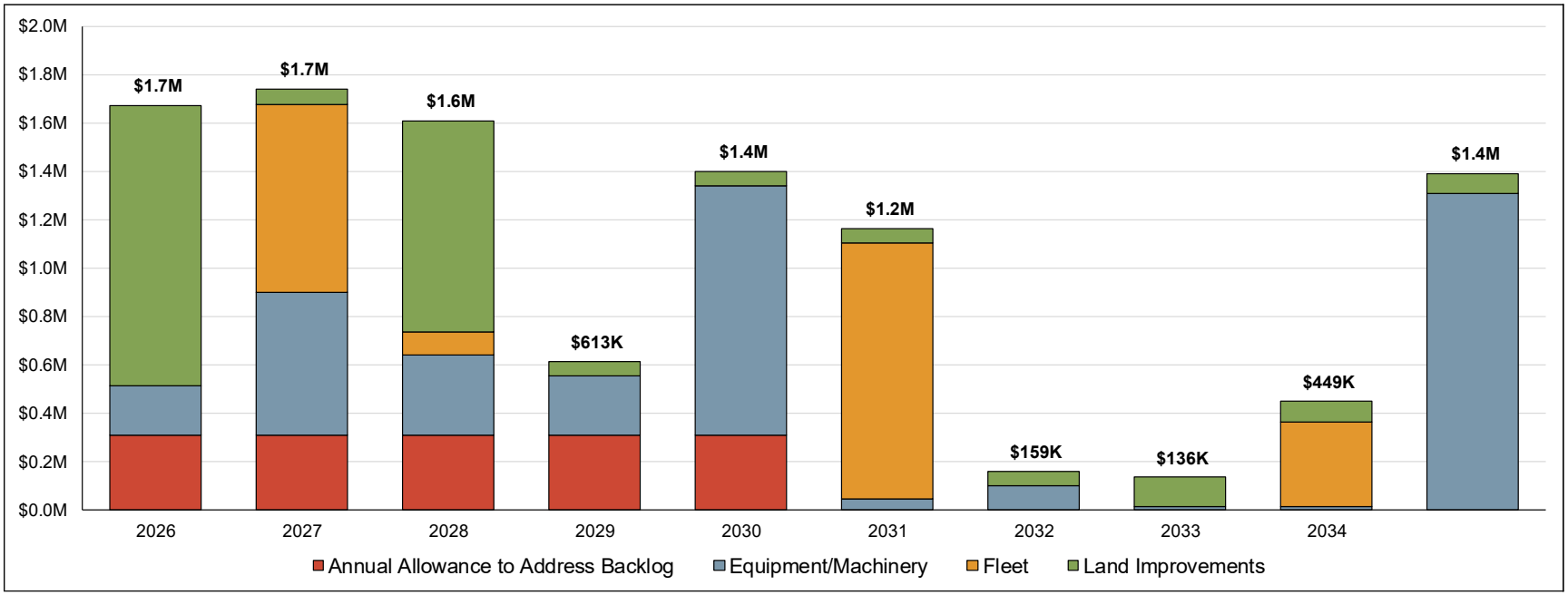


Table 3-5: Fleet, Equipment/Machinery, and Land Improvements – Capital Expenditure Forecast (Uninflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Equipment/Machinery	$204,000	$588,000	$332,000	$242,000	$1,031,000	$45,000	$99,000	$12,000	$12,000	$1,308,000
Fleet	-	$781,000	$96,000	-	-	$1,060,000	-	-	$350,000	-
Land Improvements	$1,160,000	$60,000	$871,800	$60,000	$60,000	$60,000	$60,000	$124,000	$87,000	$84,000
Allowance for Backlog	$311,000	$311,000	$311,000	$311,000	$311,000	-	-	-	-	-
Total Capital Exp.	**$1,675,000**	**$1,740,000**	**$1,610,800**	**$613,000**	**$1,402,000**	**$1,165,000**	**$159,000**	**$136,000**	**$449,000**	**$1,392,000**

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 and sources of capital financing available annually to undertake the lifecycle activities presented previously in Chapter 3, which respond to the Town's proposed levels of service outlined earlier in Chapter 2;
- Develop a strategy to achieve financial sustainability and intergenerational equity as it relates to the Town's infrastructure assets over the long-term.

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

- The Town's most recent (2025) Council approved operating budget;
- The Town's most recent (2025) five-year capital plan;
- The Town's reserve and reserve fund continuity schedules;
- The Town's debt continuity schedules; and
- MPAC property assessment details.

The subsequent sections of this chapter present the financial strategy that has been developed to support this asset management plan. The financial strategy presented in this chapter identifies how the Town will fund the forecasts of lifecycle activities presented in Chapter 3. Furthermore, the financial strategy also identifies the level of sustainable funding that should be provided to assets on an annual basis to maintain the proposed levels of service over the long-term. Lastly, the strategy outlines the financial impacts of gradually working towards that level of sustainable funding on both the Town's financial position as well as on property owners.

It is noted that the financial strategy presented herein is a suggested approach which should be examined and re-evaluated as part of the Town's annual budgeting process to ensure continual alignment with the Town'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 capital expenditures associated with undertaking the lifecycle activities identified earlier in Chapter 3 for the Town's infrastructure assets funded through the general tax levy (i.e., transportation, stormwater, facilities, fleet, machinery/equipment, and land improvements).

Capital expenditures over the 10-year forecast horizon are expected to total $57 million, an average of $5.7 million annually, in current (2025) dollars (i.e., uninflated). Inflation on capital costs has been estimated based on the historical 20-year annual average rate of inflation as witnessed in the Statistics Canada Non-residential Building Construction Price Index and is expected to be approximately 4.50% annually. Once inflationary impacts are incorporated, capital expenditures are expected to total $73.1 million, an average of $7.3 million annually.

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

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

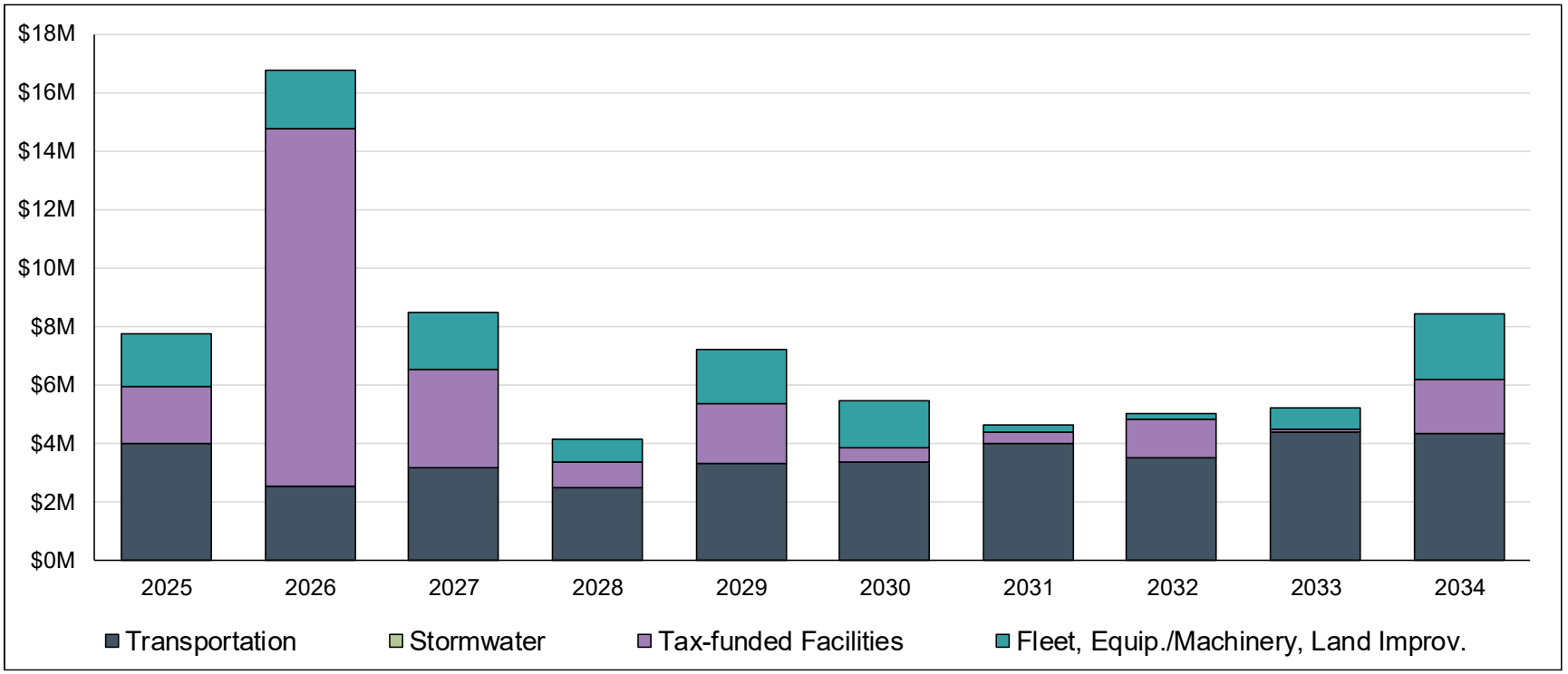


Table 4-1: Tax-funded Assets – Overall Capital Expenditure Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Transportation	$3,994,000	$2,568,000	$3,170,000	$2,478,000	$3,311,000	$3,396,000	$4,002,000	$3,537,000	$4,410,000	$4,357,000
Stormwater	-	-	-	-	-	-	-	-	-	-
Tax-funded Facilities	$1,946,000	$12,194,000	$3,391,000	$904,000	$2,071,000	$481,000	$394,000	$1,273,000	$106,000	$1,839,000
Fleet, Equipment, & Land Improv.	$1,829,000	$1,986,000	$1,921,000	$764,000	$1,826,000	$1,586,000	$226,000	$202,000	$698,000	$2,260,000
Total Capital Expenditures	**$7,769,000**	**$16,748,000**	**$8,482,000**	**$4,146,000**	**$7,208,000**	**$5,463,000**	**$4,622,000**	**$5,012,000**	**$5,214,000**	**$8,456,000**

4.2.2 Annual Capital Financing Forecast

This section summarizes the recommended strategy to finance the asset lifecycle expenditures identified in Section 4.2.1.

Capital expenditures for tax-funded assets are expected to be financed from the following sources:

- Annual *Ontario Community Infrastructure Fund* (OCIF) formula-based funding (approximately $538,000 annually). It is noted that the Ministry of Infrastructure recently shifted from using historical costs to using replacement costs in the formula used for calculating annual OCIF funding allocations. As a result of this formula change, the Town's OCIF allocation may continue to change in the coming years. The amount of OCIF funding will need to be monitored by Town staff and, if a significant variance occurs relative to the estimate provided in this asset management plan, the financial strategy may need to be updated;
- Annual *Canada Community-Building Fund* (CCBF) funding. CCBF funding is expected to be a stable and long-term funding source for eligible capital projects. Annual funding estimates are based on the Town's allocations for 2026 and 2027, and held constant thereafter (approximately $271,000 annually from 2027-2035);
- Funds expected to be available in the Town's tax-funded capital reserves and reserve funds; and
- Proceeds from external debt financing. The capital forecast for tax-supported assets proposes additional debt financing of $49.4 million over the 10-year forecast horizon. Further analysis of proposed debt financing is provided in section 4.4.

Figure 4-2 presents the capital financing forecast for the Town'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)

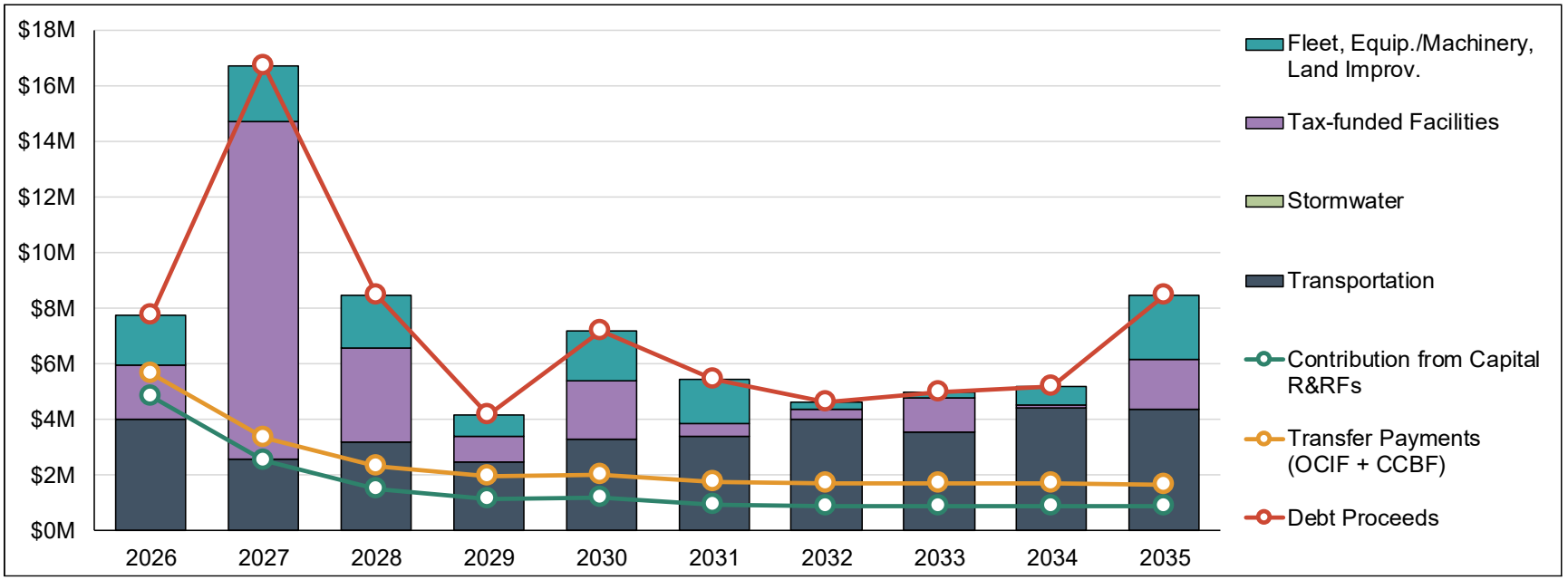


Table 4-2: Tax-funded Assets – Capital Financing Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Transportation	$3,994,000	$2,568,000	$3,170,000	$2,478,000	$3,311,000	$3,396,000	$4,002,000	$3,537,000	$4,410,000	$4,357,000
Stormwater	-	-	-	-	-	-	-	-	-	-
Facilities	$1,946,000	$12,194,000	$3,391,000	$904,000	$2,071,000	$481,000	$394,000	$1,273,000	$106,000	$1,839,000
Fleet, Equipment, & Land Improv.	$1,829,000	$1,986,000	$1,921,000	$764,000	$1,826,000	$1,586,000	$226,000	$202,000	$698,000	$2,260,000
Total Capital Expenditures	**$7,769,000**	**$16,748,000**	**$8,482,000**	**$4,146,000**	**$7,208,000**	**$5,463,000**	**$4,622,000**	**$5,012,000**	**$5,214,000**	**$8,456,000**
Capital Financing										
Transfer Payments	$799,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000
Contribution from Capital R&RFs	$4,842,000	$2,540,000	$1,501,000	$1,148,000	$1,185,000	$951,000	$876,000	$885,000	$876,000	$867,000
Debt Proceeds	$2,128,000	$13,399,000	$6,172,000	$2,189,000	$5,214,000	$3,703,000	$2,937,000	$3,318,000	$3,529,000	$6,780,000
Total Capital Financing	**$7,769,000**	**$16,748,000**	**$8,482,000**	**$4,146,000**	**$7,208,000**	**$5,463,000**	**$4,622,000**	**$5,012,000**	**$5,214,000**	**$8,456,000**

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 Town 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 Town's tax-funded assets is $3.84 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

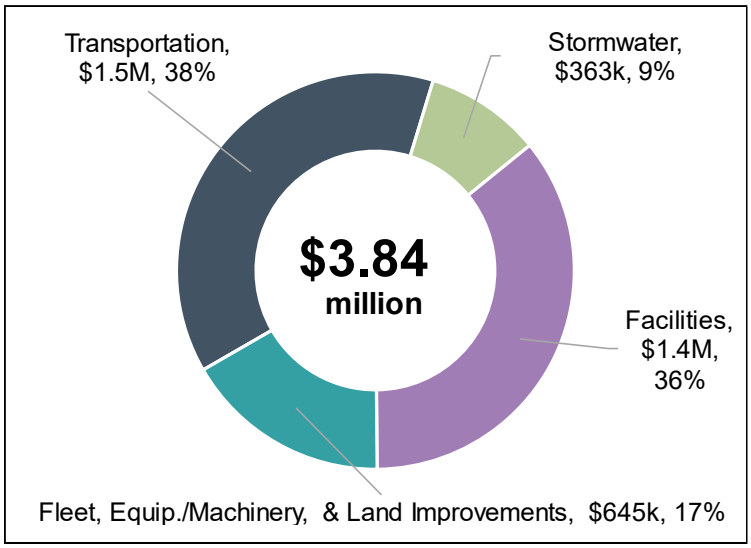


Table 4-3: Tax-funded Assets – Annual Lifecycle Funding Target (2025$) by Asset Category

Asset Category	Annual Lifecycle Funding Target (2025$)
Transportation	$1,460,000
Stormwater	$363,000
Facilities	$1,370,000
Fleet, Equipment/Machinery & Land Improvements	$645,000
Total	**$3,838,000**

Relative to this annual lifecycle funding target, the Town allocated approximately $3.52 million towards capital-related needs in its 2025 budget for tax-funded assets. This allocation comprised approximately $799,000 from on-going transfer payment revenues (i.e., OCIF and CCBF), approximately $761,000 in debt repayments for debt previously incurred to fund tangible capital asset purchases, approximately $797,000 in contributions to capital reserves and reserve funds, and lastly, approximately $1.2 million that was directly allocated from the 2025 tax levy to fund in-year capital expenditures.

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

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

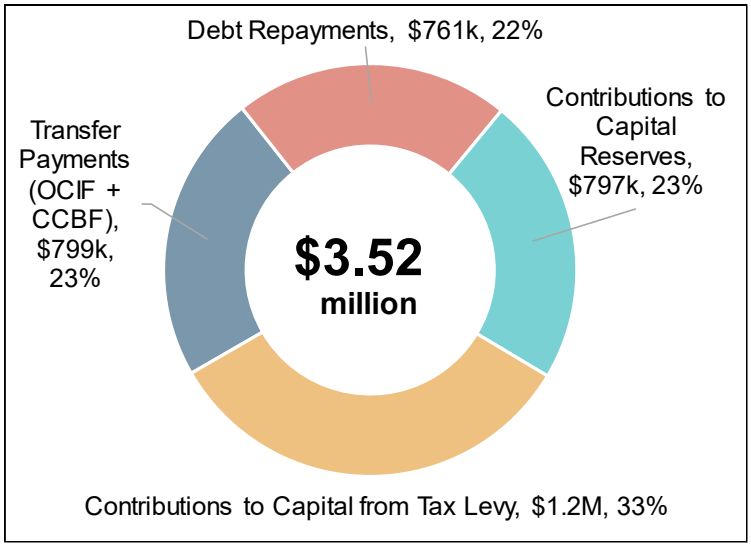


Table 4-4: Tax-funded Assets – Capital Funding Allocated in 2025 Council Approved Budget

Capital Funding Source	Capital Funding Budgeted in 2025
Transfer Payment Revenues (OCIF & CCBF)	$799,000
Debt Repayments (Principal + Interest)	$761,000
Contributions to Capital Reserves & Reserve Funds	$797,000
Contribution to Capital Expenditures from Tax Levy	$1,166,000
Total	**$3,523,000**

The difference between the annual lifecycle funding target and the currently budgeted capital funding represents the Town's annual infrastructure funding gap for its tax-funded assets. Based on this analysis, the Town is currently facing a tax-based annual infrastructure funding gap of approximately $315,000. The financial strategy presented herein has been designed to gradually eliminate this funding gap over the 10-year forecast horizon.

4.2.4 Overall Financial Forecast and Estimated Impact on Tax Levy

This section presents the overall impacts on the Town's financial position of gradually eliminating the tax-based infrastructure funding gap over the next 10 years.

As noted earlier, the capital forecast for tax-supported assets proposes additional debt financing of approximately $49.4 million over the forecast period. As such, annual repayments on external debt are expected to rise from approximately $533,000 in 2025 to approximately $4.3 million by 2035. Further analysis of proposed debt financing is provided in section 4.4.

The Town is expected to have approximately $3.0 million in its tax-funded capital reserves and reserve funds at the end of 2025. These funds, and future contributions made into capital reserves and reserve funds, are expected to be fully utilized throughout the 10-year forecast horizon. To manage risks associated with unexpected capital expenditures that may arise,, the financial strategy maintains a minimum balance in the Town's capital reserve and reserve funds. The minimum balance was set at 10% of average annual capital expenditures over the forecast period, approximately $731,000. The Town's tax-funded capital reserve and reserve fund balances are expected to remain at the minimum balance threshold throughout the 10-year forecast

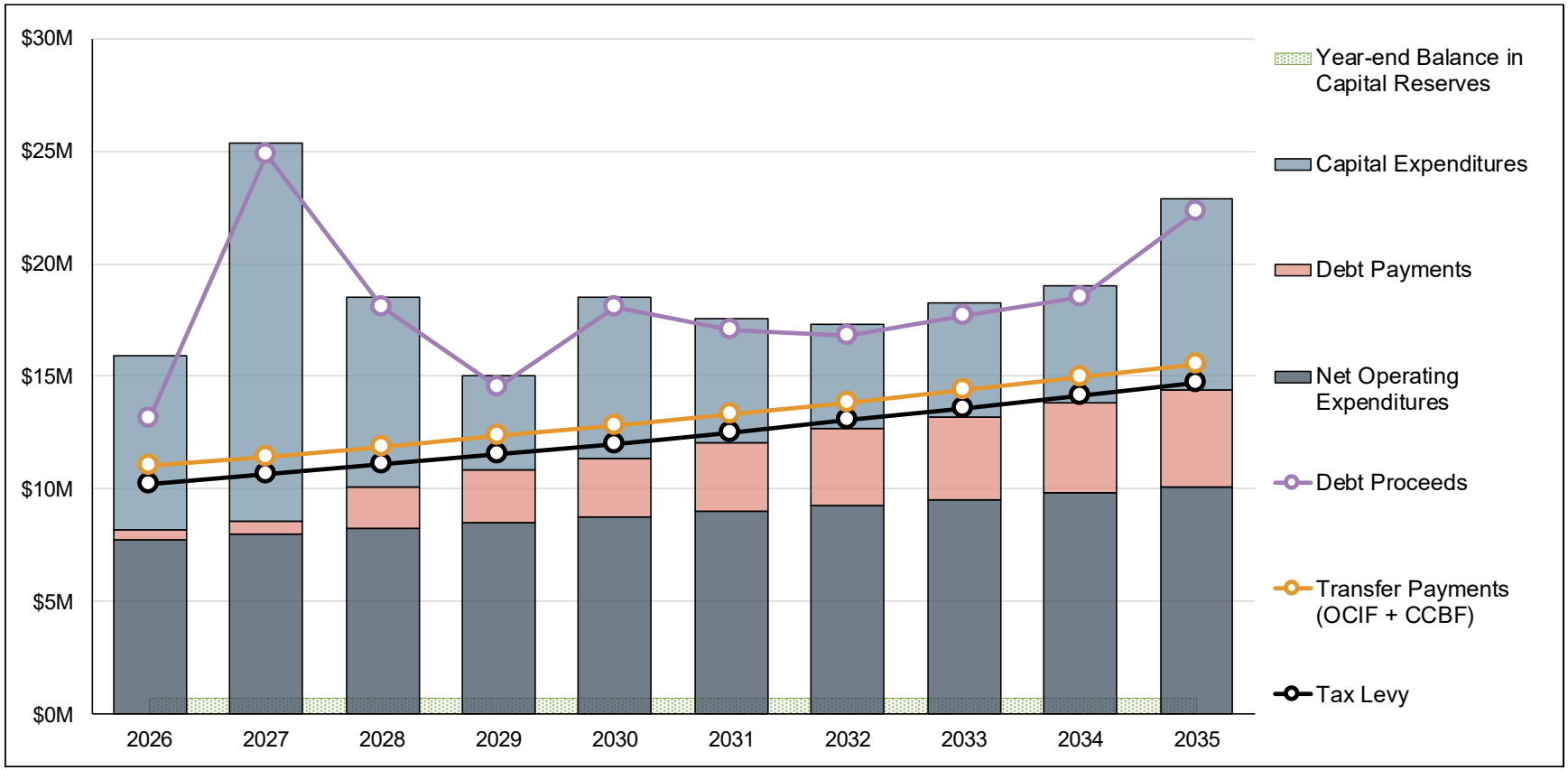
horizon, indicating that any contributions made will be used to finance the planned capital expenditures. A detailed continuity schedule of tax-funded capital reserves/reserve funds can be found in Table A-3 in Appendix A.

In order to fund the recommended lifecycle management strategy using the Town's own available funding sources, and to eliminate the tax-based infrastructure funding gap, the Town's tax levy would need to increase by 4.16% annually from 2026 to 2035. The tax levy is forecasted to rise from the current level of approximately $9.8 million to approximately $14.7 million by 2035.

The taxation impacts identified above include inflationary adjustments to the Town's operating costs and revenues as identified in its 2025 budget (i.e., general operating inflation of 2.21% annually).

Figure 4-5 illustrates the overall financial forecast for the Town's tax funded assets, with full details of the Financial Strategy provided in Appendix A.

Figure 4-5: Tax-funded Assets – Overall Financial Forecast (Inflated)



4.2.5 Estimated Impact on Tax Bills

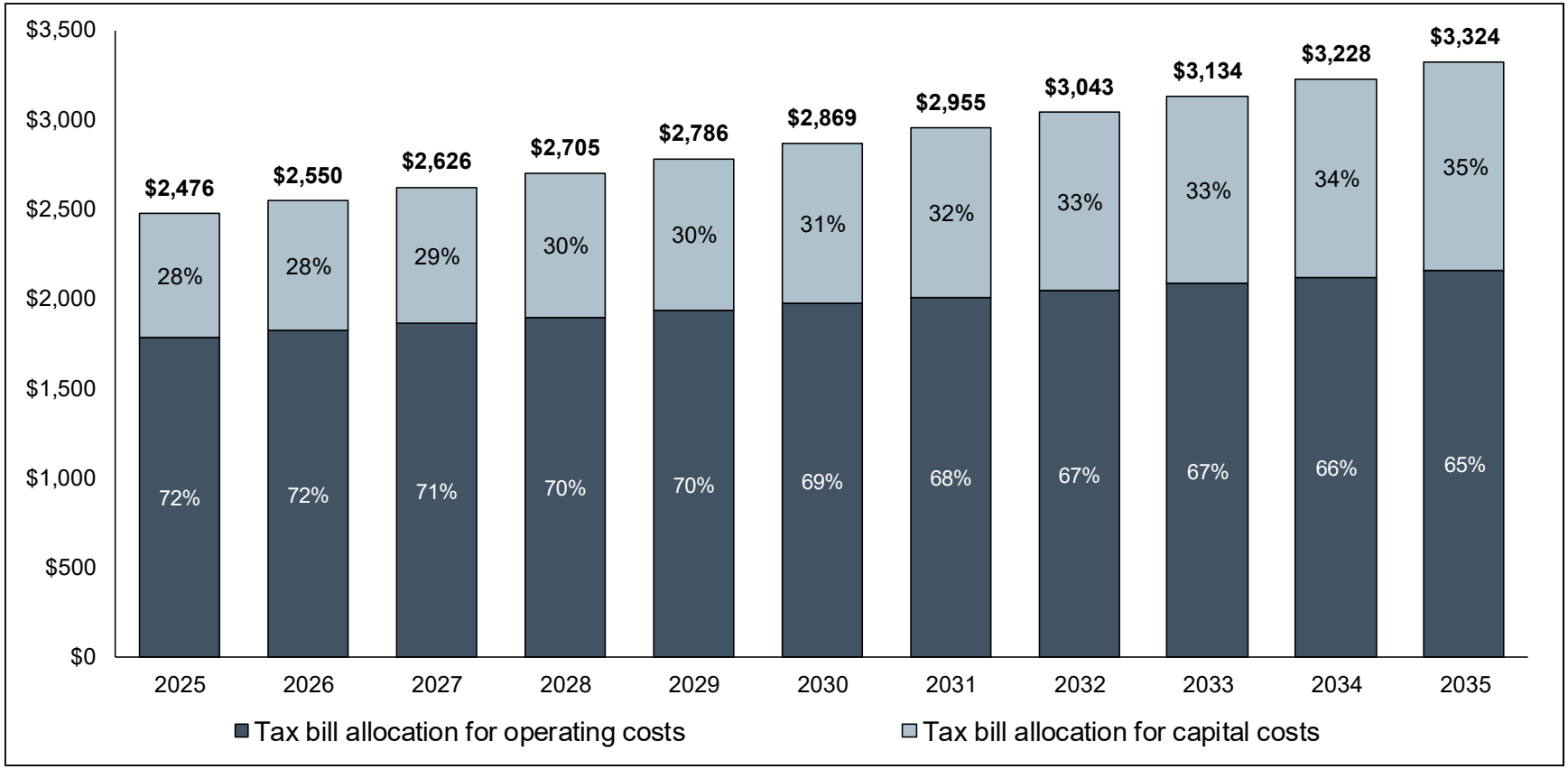
This section presents the estimated impact resulting from the financial strategy on the annual tax bill of a typical single-family detached house in the Town with a current value assessment of $220,000[1].

As noted in the previous section, the Town would need to increase its tax levy by 4.16% annually to eliminate the current infrastructure funding gap by 2035. Layering on assessment increases resulting from new assessment growth, assumed to be 1.14% annually, the impact on the Town portion of individual property tax bills would be increases of 2.99% annually from 2026 to 2035. A typical single-family detached house in the Town with a Current Value Assessment of $220,000 would see the Town portion of its tax bill rise from approximately $2,476 as of 2025 to approximately $3,324 by 2035.

Figure 4-6 illustrates the estimated impact on the Town portion of the tax bill for a typical single-family detached house with a Current Value Assessment of $220,000.

[1]Current Value Assessment is determined by MPAC for taxation purposes, and is not reflective of average market value

Figure 4-6: Estimated Impact on the Municipal Portion of the Tax Bill for Typical Single-family Detached House Assessed at $220,000 (2025-2035)



4.3 Water and Wastewater Rate-funded 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 Town's infrastructure assets funded through its annual water and wastewater rate revenues.

Capital expenditures over the 10-year forecast horizon are expected to total $91.2 million, an average of $9.1 million annually, in current (2025) dollars (i.e., uninflated). Inflation on capital costs has been estimated based on the historical 20-year annual average rate of inflation as witnessed in the Statistics Canada Non-residential Building Construction Price Index and is expected to be approximately 4.50% annually. Once the impacts of estimated inflation on capital costs are incorporated, capital expenditures are expected to total $114.9 million, an average of $11.5 million annually.

The bulk of capital expenditures relate to the planned upgrades to the wastewater control plant to address treatment capacity constraints. Please refer to Section 3.4 for further details on the capital plan for the Town's wastewater system assets.

Figure 4-7 presents the overall capital expenditure forecast for the Town's rate-funded infrastructure assets and this information is provided in tabular form in Table 4-5.

Figure 4-7: Water & Wastewater Rate-funded Assets - Overall Capital Expenditure Forecast (Inflated)

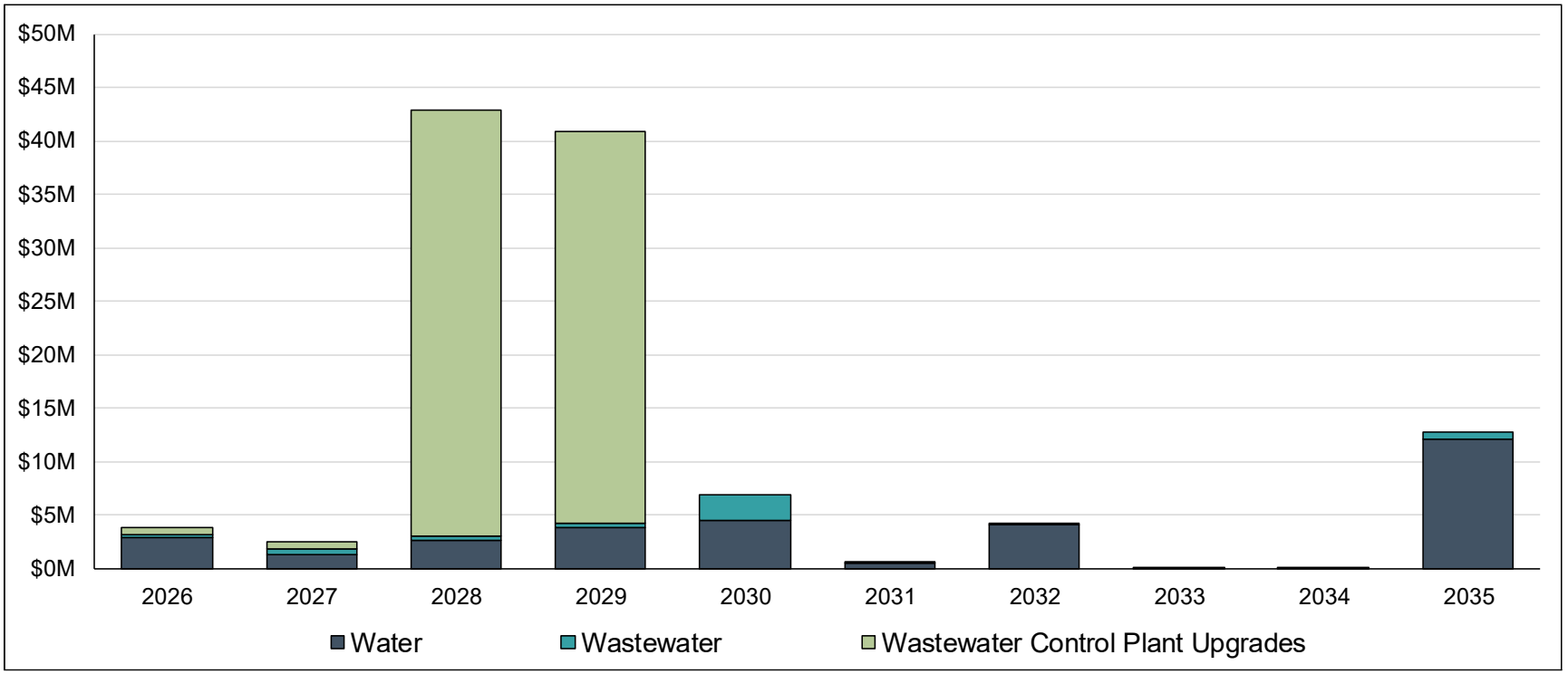


Table 4-5: Water & Wastewater Rate-funded Assets - Overall Capital Expenditure Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Water	$2,876,000	$1,358,000	$2,723,000	$3,912,000	$4,470,000	$568,000	$4,184,000	-	$62,000	$12,163,000
Wastewater	$259,000	$568,000	$321,000	$295,000	$2,483,000	$60,000	$74,000	$128,000	-	$560,000
Wastewater Plant Upgrades	$680,000	$543,000	$39,881,000	$36,720,000	-	-	-	-	-	-
Total Capital Expenditures	**$3,815,000**	**$2,469,000**	**$42,925,000**	**$40,927,000**	**$6,953,000**	**$628,000**	**$4,258,000**	**$128,000**	**$62,000**	**$12,723,000**

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.

Capital expenditures for tax-funded assets are expected to be financed from the following sources:

- Funds expected to be available in the Town's rate-funded capital reserves and reserve funds; and
- Development Charges

The Town expects to fund the cost of upgrades to its wastewater control plant through Development Charges. The Town is currently undertaking a Development Charges Background Study, which is due to be completed later this year. Utilizing development charges to fund the cost of these upgrades ensures that these growth-related expenditures do not introduce additional financial burdens on existing property owners.

Figure 4-8 presents the capital financing forecast for the Town's rate-funded infrastructure assets and this information is provided in tabular form in Table 4-6.

Figure 4-8: Water & Wastewater Rate-funded Assets - Capital Financing Forecast (Inflated)

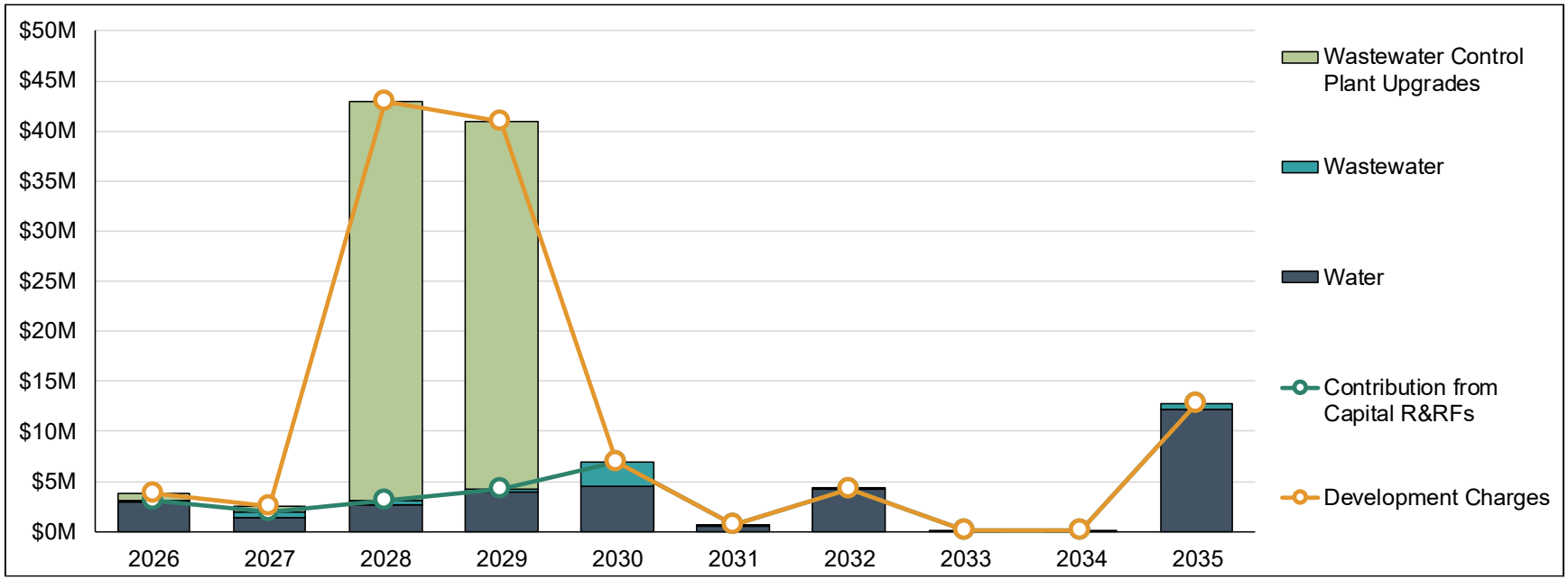


Table 4-6: Water & Wastewater Rate-funded Assets - Capital Financing Forecast (Inflated)

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Water	$2,876,000	$1,358,000	$2,723,000	$3,912,000	$4,470,000	$568,000	$4,184,000	-	$62,000	$12,163,000
Wastewater	$259,000	$568,000	$321,000	$295,000	$2,483,000	$60,000	$74,000	$128,000	-	$560,000
Wastewater Plant Upgrades	$680,000	$543,000	$39,881,000	$36,720,000	-	-	-	-	-	-
Total Capital Expenditures	**$3,815,000**	**$2,469,000**	**$42,925,000**	**$40,927,000**	**$6,953,000**	**$628,000**	**$4,258,000**	**$128,000**	**$62,000**	**$12,723,000**
Capital Financing										
Contribution from Capital R&RFs	$3,135,000	$1,926,000	$3,044,000	$4,207,000	$6,953,000	$628,000	$4,258,000	$128,000	$62,000	$12,723,000
Development Charges	$680,000	$543,000	$39,881,000	$36,720,000	-	-	-	-	-	-
Total Capital Financing	**$3,815,000**	**$2,469,000**	**$42,925,000**	**$40,927,000**	**$6,953,000**	**$628,000**	**$4,258,000**	**$128,000**	**$62,000**	**$12,723,000**

4.3.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

The annual lifecycle funding target for the Town's rate-funded assets is $3.94 million (in 2025 dollars). To note, this funding target includes the expected increase to the annual lifecycle cost of wastewater system assets incurred by undertaking the planned upgrades to the Town's wastewater control plant. 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 4-9 and provided in tabular form in Table 4-7.

Figure 4-9: Water & Wastewater Rate-funded Assets - Annual Lifecycle Funding Target (2025$) by Asset Category

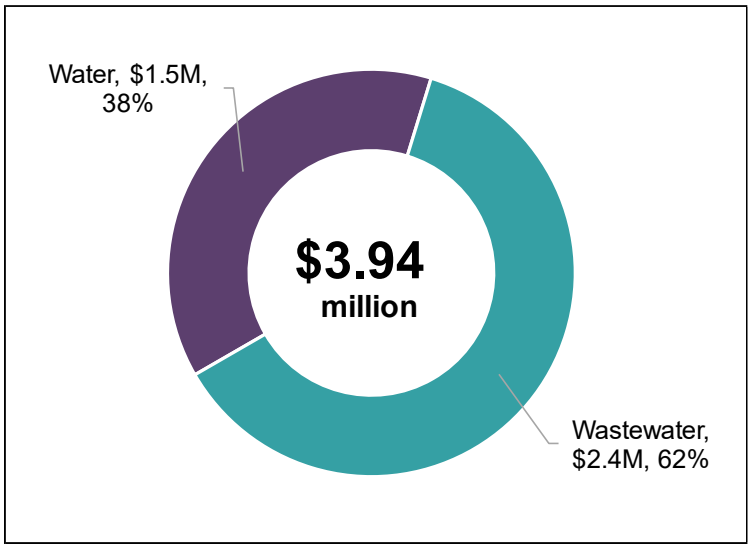


Table 4-7: Water & Wastewater Rate-funded Assets - Annual Lifecycle Funding Target (2025$) by Asset Category

Asset Category	Annual Lifecycle Funding Target (2025$)
Water	$1,499,000
Wastewater	$2,438,000
Total	**$3,937,000**

Relative to this annual lifecycle funding target, the Town allocated approximately $2.69 million towards capital-related needs in its 2025 Council approved budget for its rate-

funded assets. This allocation comprised approximately $680,000 in contributions to capital reserves and reserve funds and approximately $2.0 million that was directly allocated from 2025 rate revenues to fund in-year capital expenditures.

A breakdown of the capital funding budgeted in the Town's 2025 Council approved budget for its rate-funded assets is illustrated in Figure 4-10 and provided in tabular form in Table 4-8.

Figure 4-10: Water & Wastewater Rate-funded Assets - Capital Funding Allocated in 2025 Council Approved Budget

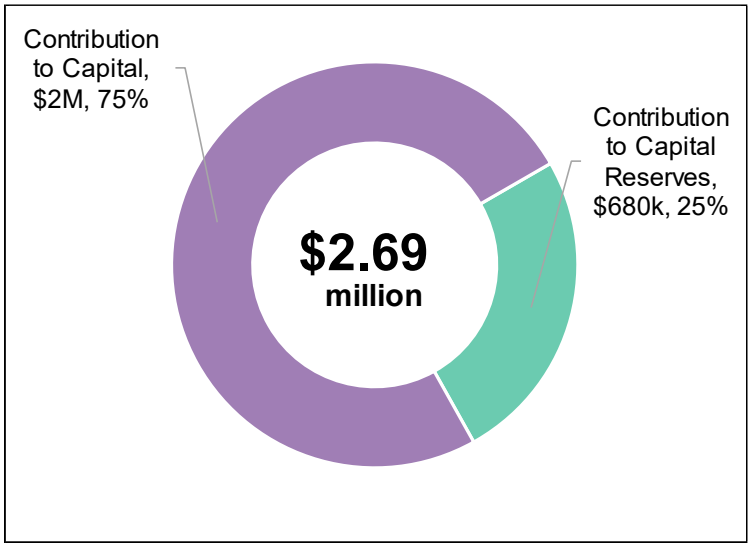


Table 4-8: Water & Wastewater Rate-funded Assets - Capital Funding Allocated in 2025 Council Approved Budget

Capital Funding Source	Capital Funding Budgeted in 2025
Contributions to Capital Reserves & Reserve Funds	$680,000
Contribution to Capital Expenditures from Rate Revenues	$2,014,000
Total	**$2,694,000**

The difference between the annual lifecycle funding target and the currently budgeted capital funding represents the Town's annual infrastructure funding gap for its rate-funded assets. Based on this analysis, the Town is currently facing a rate-based annual infrastructure funding gap of approximately $1.24 million. The financial strategy

presented herein has been designed to gradually eliminate this funding gap over the 10-year forecast horizon.

4.3.4 Overall Financial Forecast (Inflated) & Estimated Impact on Rate Revenues

This section presents the overall impacts on the Town's financial condition of gradually eliminating the rate-based infrastructure funding gap over the next 10 years.

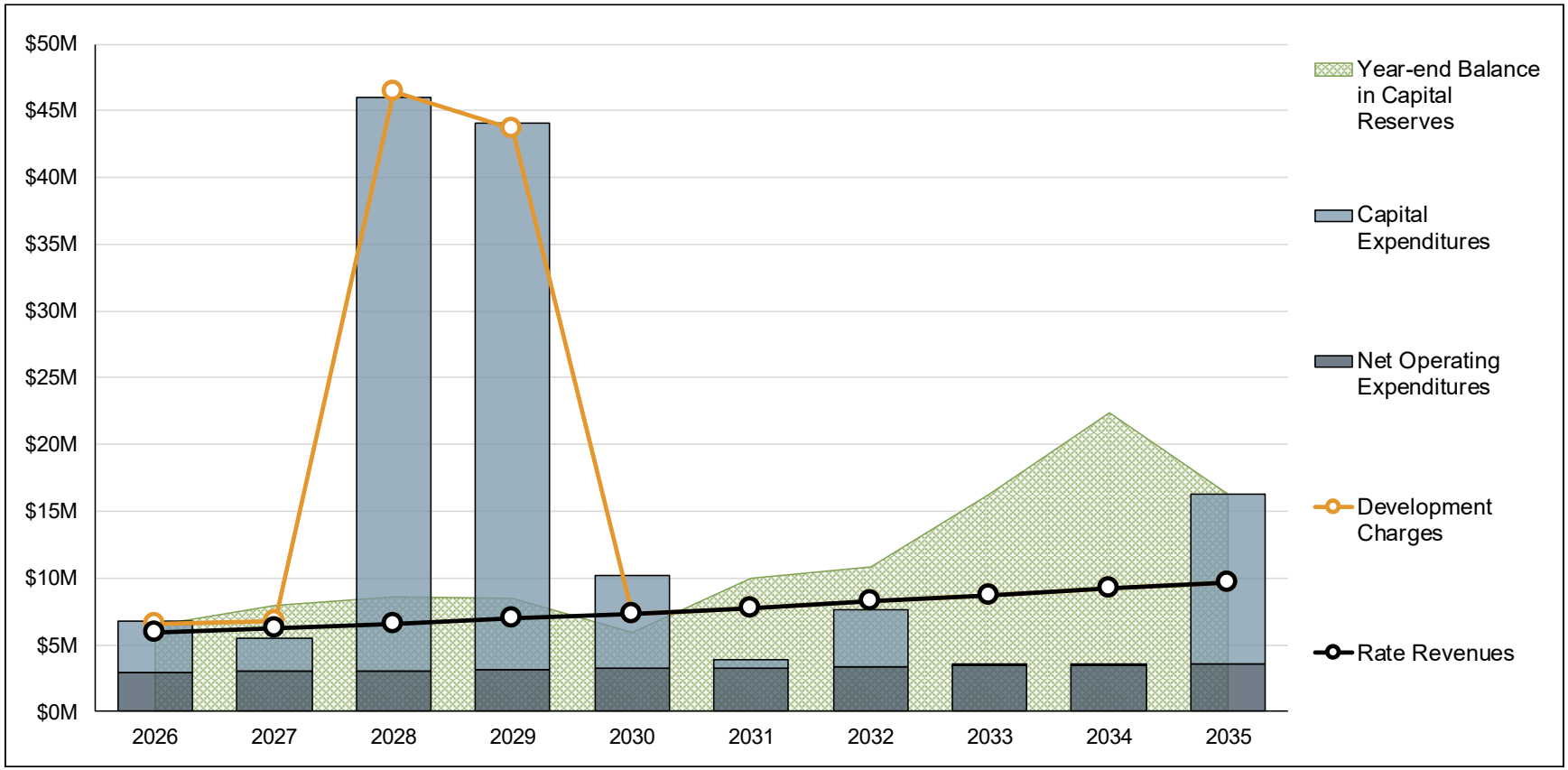
The Town is expected to have approximately $6.4 million in its rate-funded capital reserves and reserve funds at the end of 2025. Balance of funds held in the Town's rate-funded capital reserves and reserve funds are expected to rise to approximately $16.3 million by 2035. It should be noted here that the annual contributions being made into the Town's rate-based capital reserves and reserve funds are modelled based on the annual funding target for water and wastewater system assets. As such, it is expected that funds held in these reserves will be eventually utilized to fund major replacements of water and wastewater infrastructure over the medium- to long-term (i.e., beyond the 10-year forecast horizon presented in this asset management plan). To manage risks associated with unexpected capital expenditures that may arise, the financial strategy maintains a minimum balance in the Town's capital reserve and reserve funds. The minimum balance for rate-funded capital reserves and reserve funds was set at 10% of average annual capital expenditures over the forecast period, approximately $1.15 million. A detailed continuity schedule of rate-funded capital reserves/reserve funds can be found in Table A-8 in Appendix A.

In order to fund the recommended lifecycle management strategy using the Town's own available funding sources, and to eliminate the rate-based infrastructure funding gap, the Town's water and wastewater rate revenues would need to increase by 5.70% annually from 2026 to 2035. Rate revenues are forecasted to rise from the current level of approximately $5.6 million to approximately $9.7 million by 2035.

The identified rate-revenue impacts include inflationary adjustments to the Town's operating costs and revenues as identified in its 2025 budget (i.e., general operating inflation of 2.21% annually).

Figure 4-11 illustrates the overall financial forecast for the Town's rate-funded assets, with full details of the Financial Strategy provided in Appendix A.

Figure 4-11: Water & Wastewater Rate-funded Assets - Overall Financial Forecast (Inflated)



4.4 Debt Financing

The Ministry of Municipal Affairs and Housing regulates the level of debt incurred by Ontario municipalities through its powers established under the *Municipal Act*. O. Reg. 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own-source revenue may be allotted for servicing the debt (i.e., debt charges).

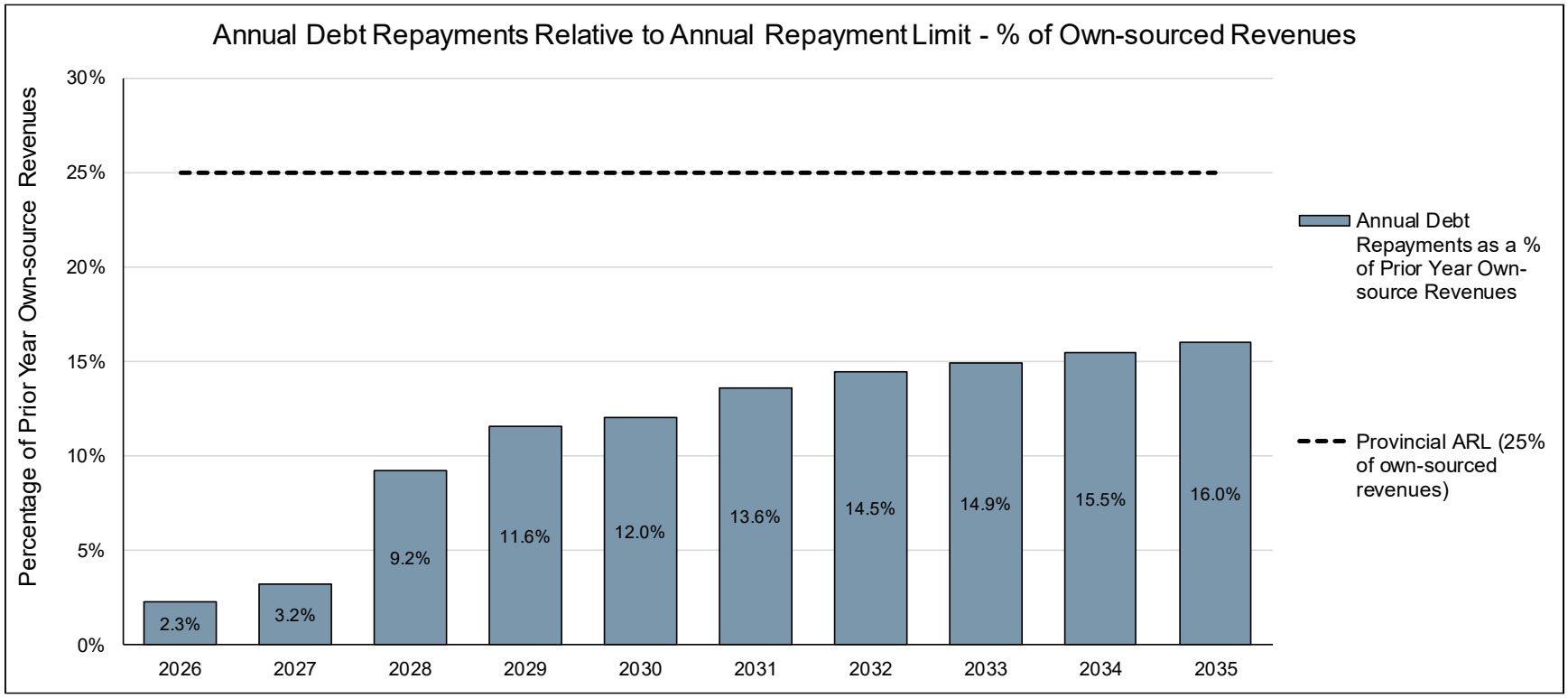
As noted in sections 4.2.2 and 4.3.2, the capital forecast proposes additional debt financing of $49.4 million over the forecast period for tax-supported assets and none for the rate-supported assets. Based on a forecast of the Town's own-source revenue, the projected annual debt payments would stay within the provincial policy limit over the forecast period, totaling approximately 16.0% of own-source revenue by 2035.

However, it should be noted that while the Town expects to eventually recover the costs associated with the planned upgrades to its wastewater control plant through development charges, it is expected that the initial construction costs would require additional debt financing. The level of additional debt financing required would depend on several factors including the amount of development charges that the Town is able to collect up to the date of construction. Furthermore, it is expected that once this additional debt is incorporated into the analysis, the Town would exceed the provincial policy limit noted above.

In light of this, the Town should consider all of its available options to manage the level of debt required to fund the initial construction costs of the wastewater control plant upgrades. Those options may include entering into front-end financing arrangements with developers as well as proactively seeking out grant funding opportunities.

Figure 4-12 presents the debt load forecast for the Town over the 10-year forecast horizon. Please note that this forecast does not include debt that the Town would require to fund expenditures associated with the wastewater control plant upgrades.

Figure 4-12: Annual Debt Load Forecast



Chapter 5
Recommendations and Next Steps

5. Recommendations

5.1 Recommendations

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

- That the Town of Hanover 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 Town's asset management journey will transition from developing the plan to its operationalization. The Town 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 Town 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 Town 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 Town 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 Towns 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 Town 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.

Appendix A
Financial Strategy Tables

Table A-1: Tax-supported Capital Budget Forecast (Inflated)
Town of Hanover

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Transportation	$3,994,000	$2,568,000	$3,170,000	$2,478,000	$3,311,000	$3,396,000	$4,002,000	$3,537,000	$4,410,000	$4,357,000
Stormwater	-	-	-	-	-	-	-	-	-	-
Facilities	$1,946,000	$12,194,000	$3,391,000	$904,000	$2,071,000	$481,000	$394,000	$1,273,000	$106,000	$1,839,000
Fleet, Equipment, Land Improv.	$1,829,000	$1,986,000	$1,921,000	$764,000	$1,826,000	$1,586,000	$226,000	$202,000	$698,000	$2,260,000
Total Capital Expenditures	**$7,769,000**	**$16,748,000**	**$8,482,000**	**$4,146,000**	**$7,208,000**	**$5,463,000**	**$4,622,000**	**$5,012,000**	**$5,214,000**	**$8,456,000**
Capital Financing										
Transfer Payments (OCIF + CCBF)	$799,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000	$809,000
Contribution from Capital R&RFs	$4,842,000	$2,540,000	$1,501,000	$1,148,000	$1,185,000	$951,000	$876,000	$885,000	$876,000	$867,000
Debt Proceeds	$2,128,000	$13,399,000	$6,172,000	$2,189,000	$5,214,000	$3,703,000	$2,937,000	$3,318,000	$3,529,000	$6,780,000
Total Capital Financing	**$7,769,000**	**$16,748,000**	**$8,482,000**	**$4,146,000**	**$7,208,000**	**$5,463,000**	**$4,622,000**	**$5,012,000**	**$5,214,000**	**$8,456,000**

Table A-2: Tax-supported Schedule of Debt Payments (Inflated)
Town of Hanover

Debenture Year	New Debt	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing	$5,403,000	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000
2026	$2,128,000		$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000
2027	$13,399,000			$1,226,000	$1,226,000	$1,226,000	$1,226,000	$1,226,000	$1,226,000	$1,226,000	$1,226,000
2028	$6,172,000				$565,000	$565,000	$565,000	$565,000	$565,000	$565,000	$565,000
2029	$2,189,000					$200,000	$200,000	$200,000	$200,000	$200,000	$200,000
2030	$5,214,000						$477,000	$477,000	$477,000	$477,000	$477,000
2031	$3,703,000							$339,000	$339,000	$339,000	$339,000
2032	$2,937,000								$269,000	$269,000	$269,000
2033	$3,318,000									$303,000	$303,000
2034	$3,529,000										$323,000
2035	$6,780,000										
Total Annual Debt Payments		**$420,000**	**$615,000**	**$1,841,000**	**$2,406,000**	**$2,606,000**	**$3,083,000**	**$3,422,000**	**$3,691,000**	**$3,994,000**	**$4,317,000**

Table A-3: Tax-supported Schedule of Capital Reserves and Reserve Funds Continuity (Inflated)
Town of Hanover

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	$2,988,000	$731,000	$731,000	$731,000	$731,000	$731,000	$731,000	$731,000	$731,000	$731,000
Contribution to Capital R&RFs	$2,476,000	$2,476,000	$1,457,000	$1,111,000	$1,147,000	$918,000	$844,000	$853,000	$844,000	$836,000
Contribution from Capital R&RFs	$4,842,000	$2,540,000	$1,501,000	$1,148,000	$1,185,000	$951,000	$876,000	$885,000	$876,000	$867,000
Interest Earned	$109,000	$64,000	$44,000	$37,000	$38,000	$33,000	$32,000	$32,000	$32,000	$31,000
Closing Balance	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**	**$731,000**

Table A-4: Tax-supported Operating Budget Forecast (Inflated)
Town of Hanover

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Operating Expenditures										
General Government	$2,133,000	$2,178,000	$2,225,000	$2,272,000	$2,320,000	$2,370,000	$2,421,000	$2,472,000	$2,525,000	$2,579,000
Protective Services	$5,520,000	$5,642,000	$5,767,000	$5,895,000	$6,026,000	$6,160,000	$6,296,000	$6,436,000	$6,579,000	$6,725,000
Transportation	$1,740,000	$1,779,000	$1,818,000	$1,859,000	$1,900,000	$1,942,000	$1,985,000	$2,029,000	$2,074,000	$2,120,000
Environmental Services	$622,000	$636,000	$650,000	$665,000	$680,000	$695,000	$710,000	$726,000	$742,000	$758,000
Health Services	$415,000	$425,000	$434,000	$444,000	$454,000	$464,000	$474,000	$484,000	$495,000	$506,000
Rec. and Cultural Services	$3,924,000	$4,011,000	$4,100,000	$4,191,000	$4,284,000	$4,379,000	$4,476,000	$4,576,000	$4,677,000	$4,781,000
Planning and Development	$517,000	$528,000	$540,000	$552,000	$564,000	$576,000	$589,000	$602,000	$616,000	$629,000
Sub-total Operating Exp.	**$14,871,000**	**$15,199,000**	**$15,534,000**	**$15,878,000**	**$16,228,000**	**$16,586,000**	**$16,951,000**	**$17,325,000**	**$17,708,000**	**$18,098,000**
Capital-related Expenditures										
Contrib. to Capital R&RFs	$2,476,000	$2,476,000	$1,457,000	$1,111,000	$1,147,000	$918,000	$844,000	$853,000	$844,000	$836,000
Debt Payment	$420,000	$615,000	$1,841,000	$2,406,000	$2,606,000	$3,083,000	$3,422,000	$3,691,000	$3,994,000	$4,317,000
Sub-total Capital-related Exp.	**$2,896,000**	**$3,091,000**	**$3,298,000**	**$3,517,000**	**$3,753,000**	**$4,001,000**	**$4,266,000**	**$4,544,000**	**$4,838,000**	**$5,153,000**
Total Expenditures	**$17,767,000**	**$18,290,000**	**$18,832,000**	**$19,395,000**	**$19,981,000**	**$20,587,000**	**$21,217,000**	**$21,869,000**	**$22,546,000**	**$23,251,000**
Operating Revenues										
Tax Levy	$10,209,000	$10,634,000	$11,077,000	$11,538,000	$12,018,000	$12,518,000	$13,039,000	$13,582,000	$14,147,000	$14,737,000
General Government	$1,060,000	$1,083,000	$1,107,000	$1,132,000	$1,157,000	$1,183,000	$1,209,000	$1,236,000	$1,263,000	$1,291,000
Protective Services	$460,000	$467,000	$474,000	$481,000	$488,000	$496,000	$504,000	$512,000	$520,000	$528,000
Transportation	$333,000	$340,000	$347,000	$354,000	$362,000	$369,000	$377,000	$384,000	$392,000	$400,000
Environmental Services	$225,000	$230,000	$235,000	$240,000	$246,000	$251,000	$257,000	$262,000	$268,000	$274,000
Health Services	$423,000	$432,000	$442,000	$452,000	$462,000	$472,000	$483,000	$493,000	$504,000	$515,000
Rec. and Cultural Services	$991,000	$1,013,000	$1,035,000	$1,058,000	$1,082,000	$1,106,000	$1,130,000	$1,155,000	$1,181,000	$1,207,000
Planning and Development	$73,000	$75,000	$76,000	$78,000	$80,000	$82,000	$83,000	$85,000	$87,000	$89,000
OMPF	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000	$2,242,000
Other Grants	$1,329,000	$1,342,000	$1,356,000	$1,369,000	$1,383,000	$1,397,000	$1,411,000	$1,425,000	$1,439,000	$1,453,000
Transfer from Operating Res.	$422,000	$432,000	$441,000	$451,000	$461,000	$471,000	$482,000	$493,000	$503,000	$515,000
Total Revenues	**$17,767,000**	**$18,290,000**	**$18,832,000**	**$19,395,000**	**$19,981,000**	**$20,587,000**	**$21,217,000**	**$21,869,000**	**$22,546,000**	**$23,251,000**

Table A-5: Tax Levy Forecast (Inflated)
Town of Hanover

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Target Tax Levy	$10,209,000	$10,634,000	$11,077,000	$11,538,000	$12,018,000	$12,518,000	$13,039,000	$13,582,000	$14,147,000	$14,737,000
Prior Year Tax Levy	$9,801,000	$10,209,000	$10,634,000	$11,077,000	$11,538,000	$12,018,000	$12,518,000	$13,039,000	$13,582,000	$14,147,000
Add Rev. from Incr. Ass.	$112,000	$116,000	$121,000	$126,000	$131,000	$137,000	$143,000	$149,000	$155,000	$161,000
Tax Rev. at 0% Rate Increase	$9,913,000	$10,325,000	$10,755,000	$11,203,000	$11,669,000	$12,155,000	$12,661,000	$13,188,000	$13,737,000	$14,308,000
Add. Increase in Tax Levy	$296,000	$309,000	$322,000	$335,000	$349,000	$363,000	$378,000	$394,000	$410,000	$429,000
Total Tax Revenues	**$10,209,000**	**$10,634,000**	**$11,077,000**	**$11,538,000**	**$12,018,000**	**$12,518,000**	**$13,039,000**	**$13,582,000**	**$14,147,000**	**$14,737,000**
Estimated Impact on Tax Bills	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*	*2.99%*

Table A-6: Water & Wastewater Capital Budget Forecast (Inflated)
Town of Hanover

Service Area	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Water	$2,876,000	$1,358,000	$2,723,000	$3,912,000	$4,470,000	$568,000	$4,184,000	-	$62,000	$12,163,000
Wastewater	$259,000	$568,000	$321,000	$295,000	$2,483,000	$60,000	$74,000	$128,000	-	$560,000
Wastewater Plant Upgrades	$680,000	$543,000	$39,881,000	$36,720,000	-	-	-	-	-	-
Total Capital Expenditures	**$3,815,000**	**$2,469,000**	**$42,925,000**	**$40,927,000**	**$6,953,000**	**$628,000**	**$4,258,000**	**$128,000**	**$62,000**	**$12,723,000**
Capital Financing										
Contribution from Capital R&RFs	$3,135,000	$1,926,000	$3,044,000	$4,207,000	$6,953,000	$628,000	$4,258,000	$128,000	$62,000	$12,723,000
Development Charges	$680,000	$543,000	$39,881,000	$36,720,000	-	-	-	-	-	-
Total Capital Financing	**$3,815,000**	**$2,469,000**	**$42,925,000**	**$40,927,000**	**$6,953,000**	**$628,000**	**$4,258,000**	**$128,000**	**$62,000**	**$12,723,000**

Table A-7: Water & Wastewater Schedule of Debt Payments (Inflated)
Town of Hanover

Debenture Year	New Debt	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing	-	-	-	-	-	-	-	-	-	-	-
2026	-		-	-	-	-	-	-	-	-	-
2027	-			-	-	-	-	-	-	-	-
2028	-				-	-	-	-	-	-	-
2029	-					-	-	-	-	-	-
2030	-						-	-	-	-	-
2031	-							-	-	-	-
2032	-								-	-	-
2033	-									-	-
2034	-										-
2035	-										
Total Annual Debt Payments		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Table A-8: Water & Wastewater Schedule of Capital Reserves and Reserve Funds Continuity (Inflated)
Town of Hanover

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	$6,415,000	$6,416,000	$7,900,000	$8,590,000	$8,442,000	$5,881,000	$9,949,000	$10,846,000	$16,291,000	$22,338,000
Contribution to Capital R&RFs	$2,949,000	$3,217,000	$3,506,000	$3,811,000	$4,140,000	$4,489,000	$4,859,000	$5,251,000	$5,670,000	$6,115,000
Contribution from Capital R&RFs	$3,135,000	$1,926,000	$3,044,000	$4,207,000	$6,953,000	$628,000	$4,258,000	$128,000	$62,000	$12,723,000
Interest Earned	$187,000	$193,000	$228,000	$248,000	$252,000	$207,000	$296,000	$322,000	$439,000	$569,000
Closing Balance	**$6,416,000**	**$7,900,000**	**$8,590,000**	**$8,442,000**	**$5,881,000**	**$9,949,000**	**$10,846,000**	**$16,291,000**	**$22,338,000**	**$16,299,000**

Table A-9: Water & Wastewater Operating Budget Forecast (Inflated)
Town of Hanover

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Operating Expenditures										
Waterworks Administration	$306,000	$313,000	$320,000	$327,000	$334,000	$341,000	$349,000	$357,000	$365,000	$373,000
Waterworks Metering	$38,000	$39,000	$40,000	$41,000	$41,000	$42,000	$43,000	$44,000	$45,000	$46,000
Water Treatment Plant	$989,000	$1,011,000	$1,034,000	$1,057,000	$1,080,000	$1,104,000	$1,128,000	$1,153,000	$1,179,000	$1,205,000
Pumping Stations	$105,000	$108,000	$110,000	$112,000	$115,000	$117,000	$120,000	$123,000	$125,000	$128,000
Waterworks Distribution	$217,000	$222,000	$227,000	$232,000	$237,000	$242,000	$247,000	$253,000	$258,000	$264,000
Sewage Plant Operations	$1,091,000	$1,116,000	$1,140,000	$1,166,000	$1,191,000	$1,218,000	$1,245,000	$1,273,000	$1,301,000	$1,330,000
Sewage Plant Administration	$292,000	$299,000	$305,000	$312,000	$319,000	$326,000	$333,000	$341,000	$348,000	$356,000
Sanitary Sewers	$48,000	$49,000	$50,000	$52,000	$53,000	$54,000	$55,000	$56,000	$58,000	$59,000
Sub-total Operating Exp.	**$3,086,000**	**$3,157,000**	**$3,226,000**	**$3,299,000**	**$3,370,000**	**$3,444,000**	**$3,520,000**	**$3,600,000**	**$3,679,000**	**$3,761,000**
Capital-related Expenditures										
Contrib. to Capital R&RFs	$2,949,000	$3,217,000	$3,506,000	$3,811,000	$4,140,000	$4,489,000	$4,859,000	$5,251,000	$5,670,000	$6,115,000
Debt Payment	-	-	-	-	-	-	-	-	-	-
Sub-total Capital-related Exp.	**$2,949,000**	**$3,217,000**	**$3,506,000**	**$3,811,000**	**$4,140,000**	**$4,489,000**	**$4,859,000**	**$5,251,000**	**$5,670,000**	**$6,115,000**
Total Expenditures	**$6,035,000**	**$6,374,000**	**$6,732,000**	**$7,110,000**	**$7,510,000**	**$7,933,000**	**$8,379,000**	**$8,851,000**	**$9,349,000**	**$9,876,000**
Operating Revenues										
Rate Revenues	$5,894,000	$6,230,000	$6,585,000	$6,960,000	$7,357,000	$7,776,000	$8,219,000	$8,687,000	$9,182,000	$9,705,000
Other Revenues	$141,000	$144,000	$147,000	$150,000	$153,000	$157,000	$160,000	$164,000	$167,000	$171,000
Total Revenues	**$6,035,000**	**$6,374,000**	**$6,732,000**	**$7,110,000**	**$7,510,000**	**$7,933,000**	**$8,379,000**	**$8,851,000**	**$9,349,000**	**$9,876,000**