Asset Management Plan

Township of Minden Hills

Final Report

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Chapter 1
Introduction

1. Introduction

1.1 Overview

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

The Township of Minden Hills (Township) retained Watson & Associates Economists Ltd. (Watson) to develop a comprehensive asset management plan. The project has been completed in two phases. The first phase focused on complying with the July 1, 2022 and July 1, 2024 requirements of Ontario Regulation (O. Reg.) 588/17. This phase culminated in an asset management plan that was approved by Council in January 2025. The second phase of this project built upon the work completed through the previous phase, with a focus on identifying proposed levels of service and developing a financial strategy to support the asset management plan. This report is the outcome of the second phase and brings the Township into full compliance with the July 1, 2025 requirements of O. Reg. 588/17.

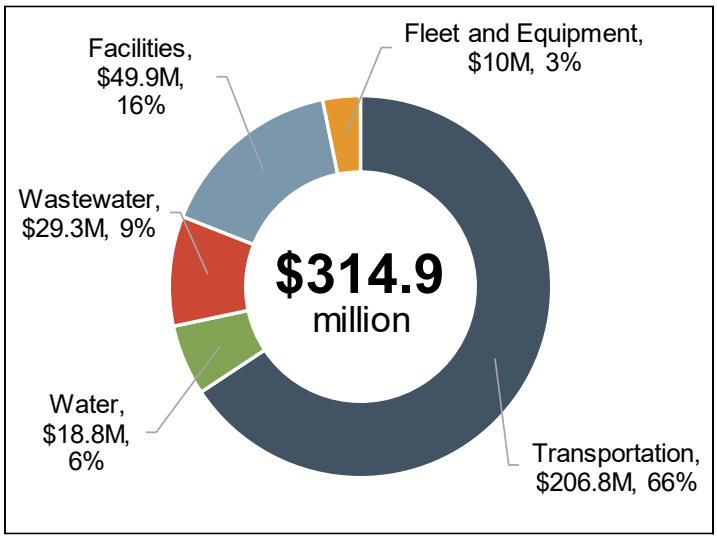
The estimated current replacement cost for the Township's infrastructure assets is estimated to be $314.9 million. Transportation assets comprise the largest share of this replacement cost at $206.8 million (66%), followed by facilities at $49.9 million (16%), wastewater assets at $29.3 million (9%), water assets at $18.8 million (6%), and lastly, fleet and equipment assets at $10.0 million (3%).

A breakdown of the replacement cost by asset category is provided in Table 1-1 and is further illustrated in Figure 1-1.

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

Asset Category	Current Replacement Cost
Transportation	$206,847,000
Water	$18,843,000
Wastewater	$29,302,000
Facilities	$49,867,000
Fleet & Equipment	$10,019,000
Total	**$314,878,000**

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



1.2 Legislative Context for the Asset Management Plan

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

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

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

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

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

1.3 Asset Management Plan Development

The development of this asset management plan was guided by asset management strategies identified through discussions with the Township's asset managers, information gleaned through reviews of long-term planning documents and studies, service-level objectives and their impacts on the management of assets identified through engagements with both staff and Council, and detailed analyses of the Township's capital asset and financial data. The key steps in the development process of this asset management plan are summarized below:

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 Township staff. As part of these workshops, changes to existing lifecycle management strategies to support each level of service scenario were identified. This step resulted in the development of 10-year forecasts of capital and significant operating expenditures to support each scenario. This step also included the determination of the amount of annual capital funding that would be required to achieve and sustain the proposed levels of service for each scenario over the long term.
3. Analyze the Township's financial data and develop a financial strategy model to identify the funding expected to be available to undertake the capital and significant operating expenditures for each scenario identified in the previous step. The financial strategy model was also utilized to determine the financial impacts associated with each scenario (i.e., annual tax levy and tax rate increases to achieve a sustainable level of annual capital funding, debt requirements, impact on capital reserves and reserve funds, etc.).
4. Present each level of service scenario and corresponding 10-year financial forecast to Council in a workshop setting. The feedback received from Council during these workshops was critical in determining the level of service scenario that is most appropriate for the Township (i.e., proposed level of service).
5. Finalize the 10-year lifecycle expenditure forecast 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 asset planning to the public.

Chapter 2
State of Local Infrastructure and Levels of Service

2. State of Local Infrastructure and Levels of Service

2.1 Transportation

2.1.1 State of Local Infrastructure

The Township owns and manages a variety of assets that enable the safe and efficient passage of vehicular and pedestrian traffic as well as contribute to the overall level of service provided by the Township. The Township's transportation assets comprise roads, bridges, structural culverts, sidewalks, and road signs. The estimated current replacement cost of these assets is $206.8 million.

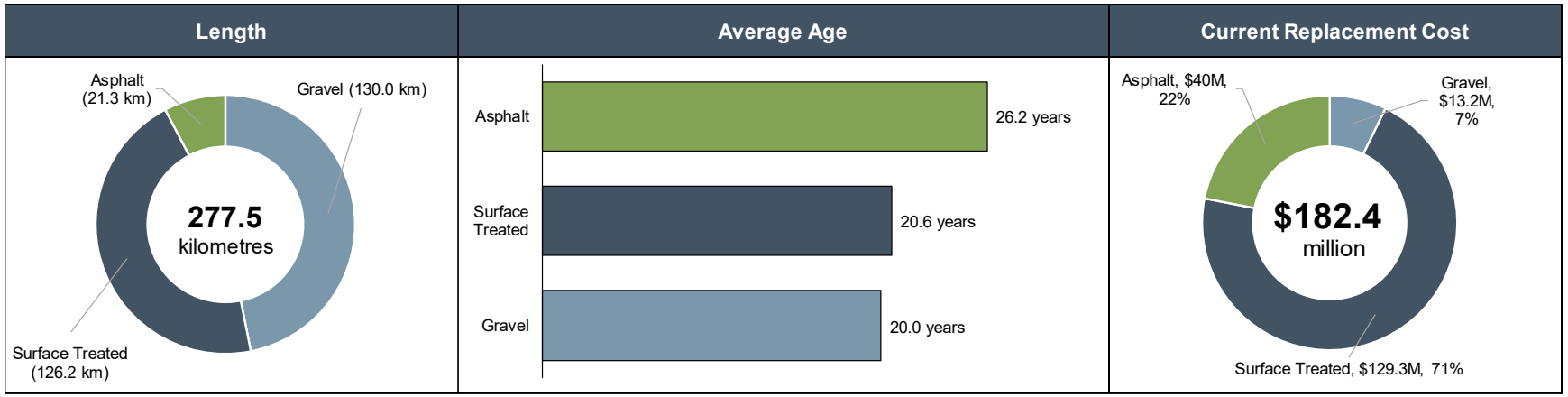
The Township's road network comprises roadways with three surface types: asphalt, surface treated, and gravel. The estimated current replacement cost of the Township's roadways is $182.4 million. Surface treated roads represent the largest share of replacement cost at $129.3 million (71%), followed by asphalt roads at $40.0 million (22%), and gravel roads at $13.2 million (7%). The average age of the Township's roads is 20.8 years.

Table 2-1 summarizes the length, average age, and estimated current replacement cost of the Township's roadways by surface type. This information is further illustrated in Figure 2-1.

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

Surface Type	Length	Average Age[1][2]	Current Replacement Cost
Asphalt	21.3km	26.2 years	$39,998,000
Surface Treated	126.2 km	20.6 years	$129,265,000
Gravel	130.0 km	20.0 years	$13,181,000
Total	**277.5 km**	**20.8 years**	**$182,434,000**

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



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

[2]Based on the age of the surface of each road segment.

The Township also owns and manages 18 structures comprising 14 vehicular bridges, three pedestrian bridges, and one structural culvert[1]. The estimated current replacement cost of the Township's structures is $18.5 million. Vehicular bridges on local roads (i.e., local bridges) represent the largest share of replacement cost at $11.1 million (60%), followed by vehicular bridges on collector roads (i.e., collector bridges) at $4.8 million (26%), the Township's one structural culvert at $1.5 million (8%), and lastly, pedestrian bridges at $1.1 million (6%).

The average age of the Township's structures is 37.1 years. It is noted that five of the Township's bridges have undergone major rehabilitations in the recent past, with two of those bridges having new superstructures installed. As such, the year in which the major rehabilitations were completed is utilized to establish the current age of these five bridges.

Table 2-2 summarizes the quantity, average age, and estimated current replacement cost of the Township's structures by structure type. This information is further illustrated in Figure 2-2.

Table 2-2: Structures – Quantity, Average Age, and Replacement Cost by Asset Type

Structure Type	Quantity	Average Age[2]	Current Replacement Cost
Collector Bridges	4 bridges	42.4 years	$4,784,000
Local Bridges	10 bridges	32.7 years[3]	$11,074,000
Pedestrian Bridges	3 bridges	2.0 years[4]	$1,090,000
Structural Culvert	1 culvert	55.0 years	$1,525,000
Total	**18 structures**	**37.1 years**	**$18,473,000**

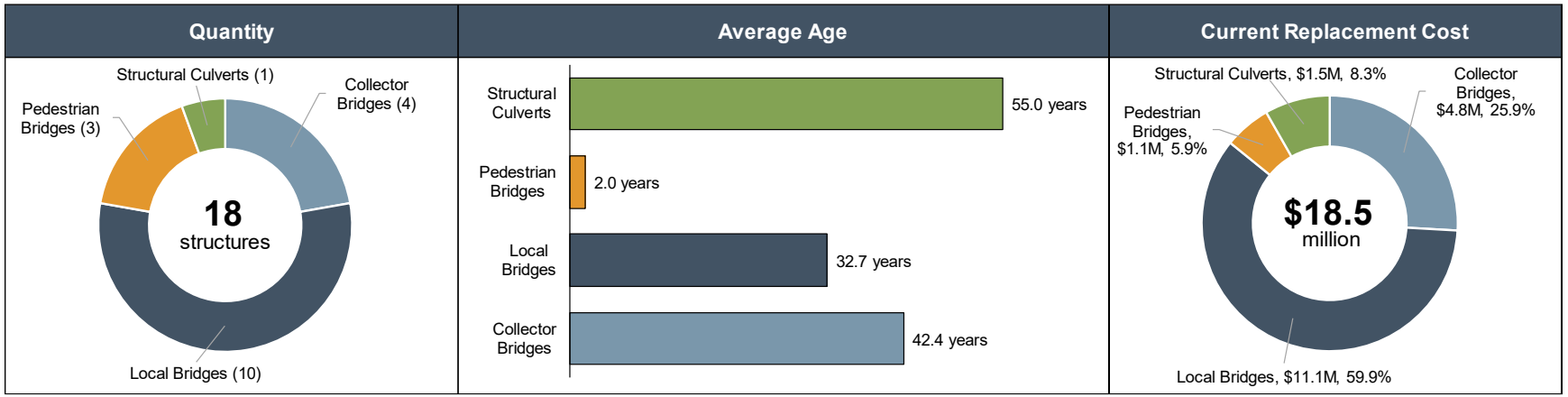
[1]The *Ontario Structure Inspection Manual (2008)* defines structural culverts as structures that form an opening through soil and have a total span of three meters or more.

[2]Weighted average utilizing the replacement cost of each structure as weights.

[3]The ages of the Floating Snowmobile Bridge and Minden Hills Pit Bridge are currently unknown. As such those structures are excluded from the calculation of average age presented herein.

[4]The ages of the Clergy Pedestrian Bridge and Loggers Pedestrian Bridge are currently unknown. As such those structures are excluded from the calculation of average age presented herein.

Figure 2-2: Structures – Quantity, Average Age, and Replacement Cost by Asset Type



Lastly, the Township also owns and manages road-related assets comprising 520 road signs and 6.4 km of sidewalks. The estimated current replacement cost of the Township's road-related assets is $3.7 million. Sidewalks represent $5.8 million (98%) of this replacement cost while road signs represent $130,000 (2%). It is noted that the Township does not currently track the dates of installation for its road signs and sidewalks. As such, an average age cannot be calculated for these assets at this time.

Table 2-3 summarizes the quantity, average age, and estimated current replacement cost of the Township's road-related assets by asset type.

Table 2-3: Road-related Assets – Quantity and Replacement Cost by Asset Type

Asset Type	Quantity	Current Replacement Cost
Road Signs	520 signs	$130,000
Sidewalks	6.4 km	$5,810,000
Total		**$5,940,000**

2.1.2 Condition

The Township evaluates the condition of its roads by periodically completing road needs studies. As part of these studies, assessments are conducted on each individual road segment to evaluate the frequency and severity of observed pavement distresses. Pavement Condition Index (PCI) ratings are also calculated for each assessed road segment by assigning weighted values to observed base-related distresses (e.g., rutting, fatigue cracking, etc.) and surface-related distresses (e.g., raveling, shoving, etc.). Thus, PCI ratings also provide an indication of the structural integrity of the road segment and an objective rationale for forecasting upcoming lifecycle requirements.

To better communicate the condition of the Township's paved roads, PCI ratings have been segmented into qualitative condition states as summarized in Table 2-4

Table 2-4: Roads – Definition of Qualitative Condition States

PCI Rating Range	Condition State	Description
80 ≤ PCI ≤ 100	Very Good	Pavement has very few or no visible distresses and provides a smooth ride quality.
70 ≤ PCI < 80	Good	Pavement exhibits minor signs of wear with presence of some visible distresses. Users can expect a smooth ride quality with infrequent road defects.
50 ≤ PCI < 70	Fair	Pavement exhibits signs of moderate wear with presence of visible distresses affecting ride quality (e.g., cracking, alligatoring, etc.). Road segments in this condition may require some corrective maintenance and/or more extensive localized repairs.
40 ≤ PCI < 50	Poor	Pavement exhibits signs of significant wear and surface degradation with frequent visible distresses affecting ride quality. Nature and severity of distresses visible on road segments in this condition typically indicate some deterioration of structural integrity. Rehabilitation activities should be considered for road segments in this condition.
0 ≤ PCI < 40	Very Poor	Pavement exhibits signs of extensive wear indicating surface failure with frequent visible distresses that severely impact ride quality. Nature and severity of distresses visible on road segments in this condition typically indicate significant deterioration of structural integrity. Major rehabilitation activities and/or reconstruction should be considered for road segments in this condition.

The Township's 2021 Road Needs Study assessed its asphalt roads as having an average PCI rating of 72.5, indicating that these roads were in a 'Good' condition state at the time of the assessment. The Township's surface treated roads were assessed to have an average PCI rating of 62.7, indicating that they were in a 'Fair' condition state at the time of the assessment. It is noted that the Township's asphalt and surface treated roads would have experienced further deterioration since the assessment was conducted, which would impact their respective PCI ratings. It is recommended that the

Township undertake an update of its 2021 Road Needs Study in the near future to more accurately represent the condition of its paved roads in future iterations of this asset management plan.

The Township's 2021 Road Needs Study also estimated PCI ratings for its gravel road segments based on their observed physical state to provide a numeric representation of their condition. The Township's gravel roads were estimated to have an average PCI rating of 60.8, indicating that they were in a 'Fair' condition state at the time of the assessment. It is noted that the condition of gravel roads can change rapidly and unpredictably due to factors such as weather conditions and recency of maintenance activities (e.g., re-grading, application of dust suppressant, spot applications of granular, etc.). Therefore, the current condition of the Township's gravel roads may be significantly different from what was observed during the 2021 Road Needs Study (and is presented herein). It is recommended that the Township develop and implement a protocol to periodically reassess the condition of its gravel roads to more accurately represent their condition in future iterations of this asset management plan.

Table 2-5 summarizes the average PCI rating and associated condition states of the Township's roadways by surface type.

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

Surface Type	Average PCI Rating[1]	Condition State
Asphalt	72.5	Good
Surface Treated	62.7	Fair
Gravel	60.8	Fair
Total	**62.8**	**Fair**

The distribution (surface area) of the Township's roadways by condition state and surface type is illustrated in Figure 2-3 and the distribution (surface area) of the Township's paved roads by PCI rating range is illustrated in Figure 2-4.

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

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

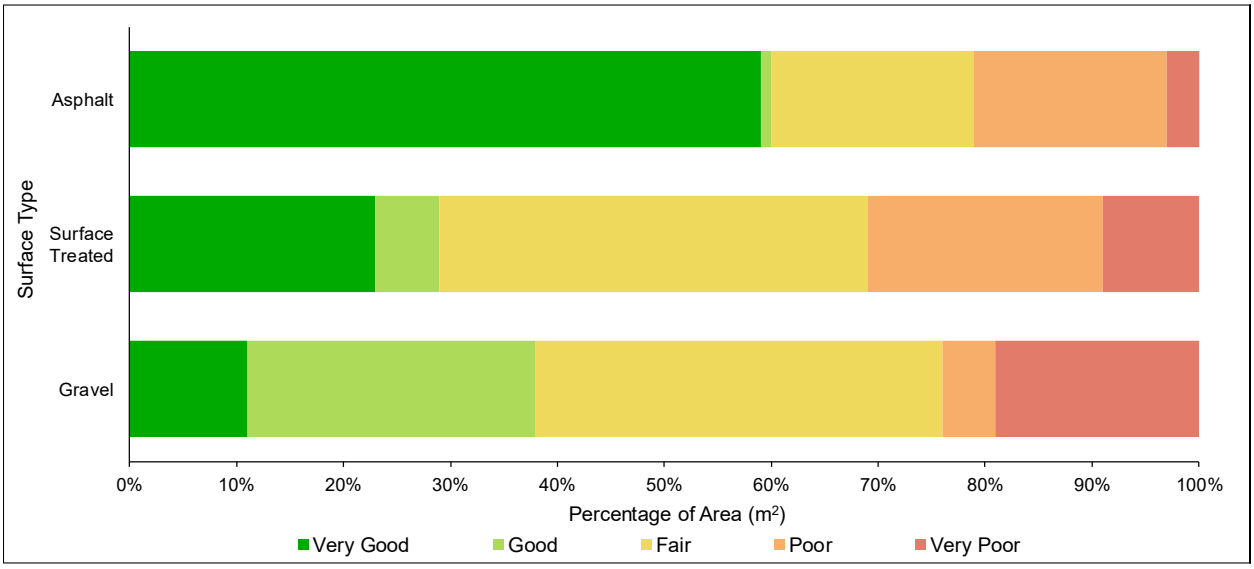
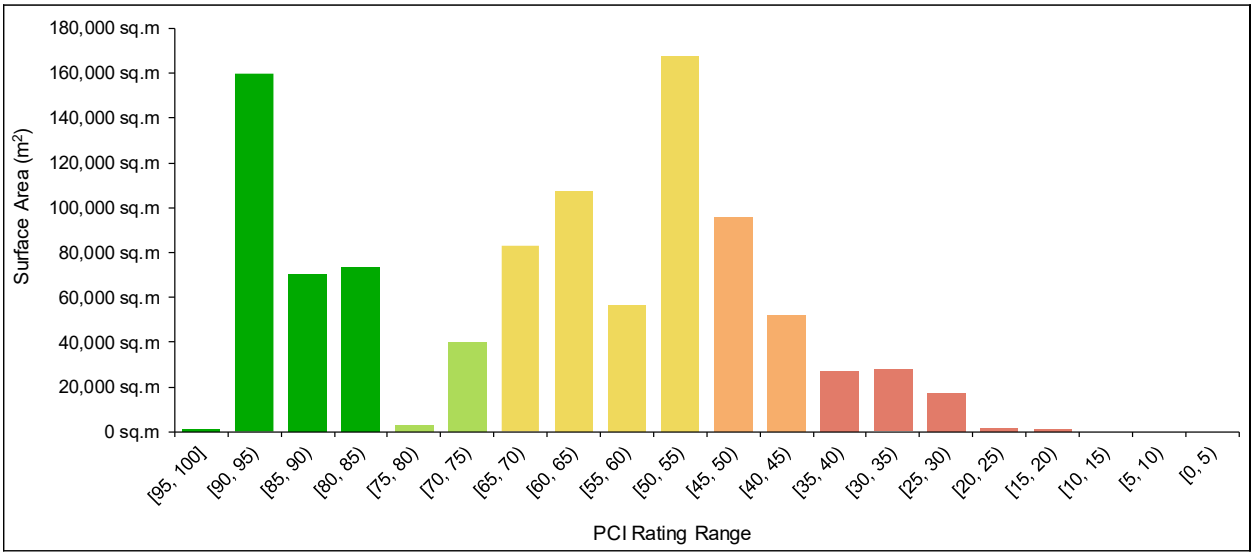


Figure 2-4: Paved Roads – Distribution (surface area) of Roads by PCI Rating Range



In accordance with *Ontario Regulation 104/97: Standards for Bridges* (O. Reg. 104/97), the Township completes biennial inspections of its bridges and structural culverts based on the *Ontario Structure Inspection Manual* (OSIM). To provide an overall measure of the condition of bridges and structural culverts, Bridge Condition Index (BCI) ratings are calculated for each inspected structure. BCI ratings are calculated by assigning weighted values to the condition of various structural (e.g., deck, foundation,

superstructure, substructure, girders/beams, bearings, etc.) and non-structural elements (e.g., sidewalks, curbs, handrails, barriers, signage, etc.).

To better communicate the condition of the Township's structures, BCI ratings have been segmented into qualitative condition states as summarized in Table 2-6.

Table 2-6: Structures – Definition of Condition States with Respect to BCI Rating

BCI Rating Range	Condition State	Description[1]
70 ≤ BCI ≤ 100	Good	Maintenance is typically not required within the next five years.
60 ≤ BCI < 70	Fair	Maintenance is typically required within the next five years. Structures in this condition state are ideal candidates for scheduling repair and/or rehabilitation activities as further deterioration in condition often leads to uneconomical increases in repair and/or rehabilitation costs.
0 ≤ BCI < 60	Poor	Maintenance is typically required within one year.

Based on its 2024 OSIM Inspection Report, the Township's structures have an average BCI rating of 62.3, indicating that, on average, structures are in a 'Fair' condition state and would likely require repair and/or rehabilitation work to be scheduled in the near future. Table 2-7 summarizes the average BCI rating and associated condition states of the Township's structures.

Table 2-7: Structures – Average BCI Ratings and Condition States by Structure Type

Structure Type	Average BCI Rating[2]	Condition State
Collector Bridges	75.9	Good
Local Bridges	54.0[3]	Poor
Pedestrian Bridges	72.8	Good
Structural Culvert	68.0	Fair
Total	**62.3**	**Fair**

[1]Based on the Township's 2024 OSIM Inspection Report completed by Tulloch Engineering.

[2]Weighted average using replacement cost of structures as weights.

[3]]The Township intends to close the Minden Hills Pitt bridge due to existing loading restrictions. As such, this structure has been excluded from the calculation of average BCI rating presented herein.

The distribution (replacement cost) of the Township's structures by condition state and structure type is illustrated in Figure 2-5 and by BCI rating range is illustrated in Figure 2-6.

Figure 2-5: Structures – Distribution (by replacement cost) of Assets by Condition State and Structure Type

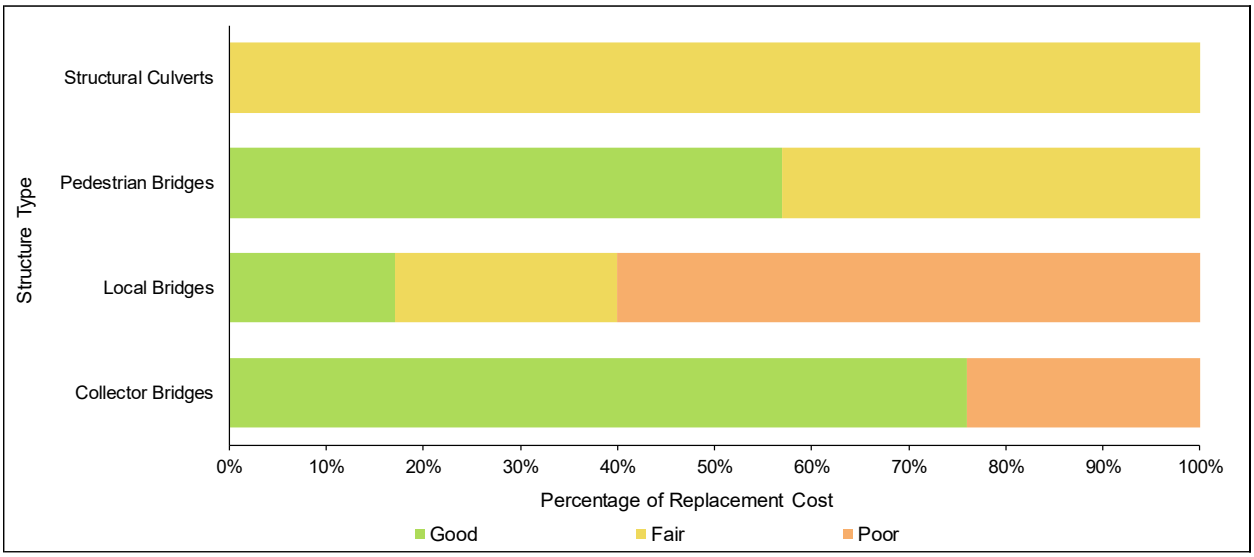
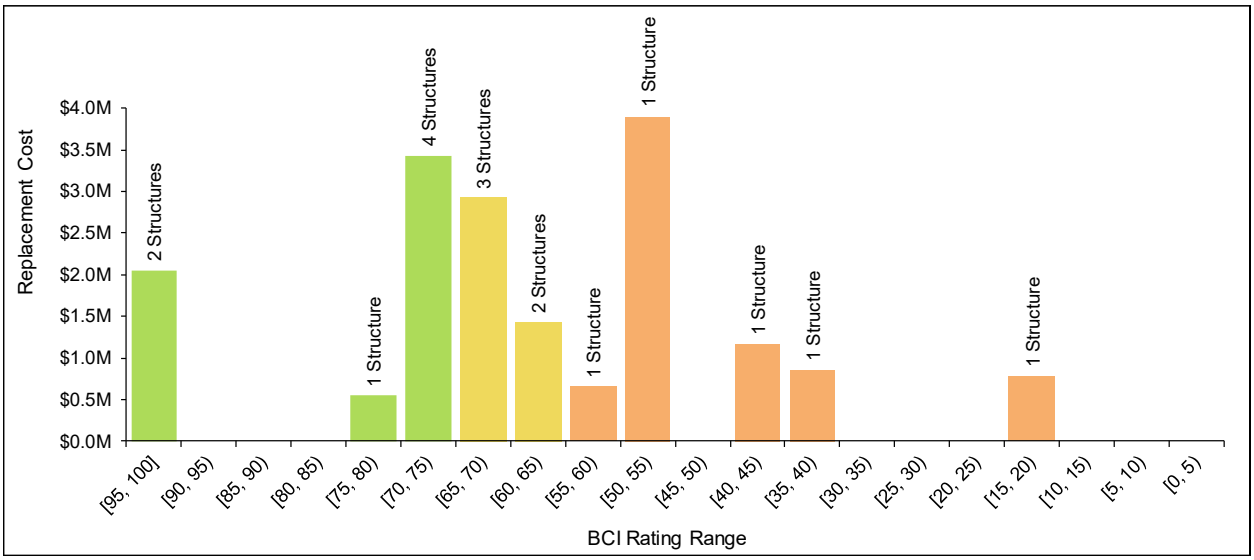


Figure 2-6: Structures – Distribution (by replacement cost) of Assets by BCI Rating Range



The Township assesses the condition of its road signs by conducting retro-reflectivity testing in accordance with O. Reg. 239/02. Any signs that fail retro-reflectivity testing

are replaced as soon as possible and generally prior to the completion of the next annual inspection. Signs that are currently in use but have failed the most recent retro-reflectivity testing are assigned a condition state of 'Poor'. All other signs are assigned a condition state of 'Good'.

Based on testing conducted in 2024, 337 (65%) of the Township's road signs passed retro-reflectivity testing and are classified as being in a 'Good' condition state, while 103 (20%) failed this testing and are classified as being in a 'Poor' condition state. Additionally, 80 road signs were not tested for various reasons (e.g., because they were inaccessible).

Lastly, the Township has not formally assessed the physical condition of its sidewalks. It is noted that sidewalks can be maintained in adequate condition for an extended period through the completion of necessary maintenance and repairs (e.g., grinding of trip edges, crack filling, etc.). It is recommended that the Township develop and implement a protocol to periodically assess the physical condition of its sidewalks to more accurately represent their condition in future iterations of this asset management plan.

2.1.3 Levels of Service

The levels of service currently provided by the Township's transportation assets are, in part, a result of the state of local infrastructure presented 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 (i.e., target performance) that the Township is striving towards. The levels of service frameworks presented in this asset management plan were developed by identifying service aspects that would be of interest to end users (and more broadly, the general public) and in consideration of available data.

It is noted that in developing the Township's proposed levels of service, several options were considered. Through consultations with both Township staff and Council, the proposed levels of service targets deemed most appropriate were selected and are presented in this asset management plan.

The Township's levels of service frameworks are organized in tables, which are structured as follows:

- The ‘Service Attribute’ column in Table 2-8 indicates the high-level attribute being addressed;
- The ‘Community Levels of Service’ column in Table 2-8 explains the Township’s intent in plain language and provides additional information about the service being provided;
- The ‘Performance Measure’ column in Table 2-9 describes the performance measure(s) connected to the identified service attribute;
- The ‘Current Performance’ column in Table 2-9 identifies the current level of service with respect to each performance measure based on the best available data; and
- The ‘Target Performance’ column in Table 2-9 identifies the proposed level of service with respect to each performance measure.

Table 2-8: Transportation Assets – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Township’s roads and bridges enable the safe and efficient movement of people and goods within the Township and provide connectivity to regional roads. In addition to passenger vehicles, the Township’s roads and bridges also support commercial truck traffic, movement of agricultural equipment, and reliable emergency vehicle access to all areas of the Township.
Quality	The Township strives to maintain its transportation assets in adequate condition to support the comfortable passage of vehicular and pedestrian traffic.
	To aid in interpreting the condition of transportation assets, descriptions of different condition states are summarized in Section 2.1.2. A general description of how each condition state affects the timing of forecasted capital requirements is also provided in therein.

Table 2-9: Transportation Assets – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance	Target Performance
Scope	Number of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.	0 km / km²	0 km / km²
	Number of lane-kilometres of collector roads as a proportion of square kilometres of land area of the Township.	0.01 km / km²	0.01 km / km²
	Number of lane-kilometres of local roads as a proportion of square kilometres of land area of the Township.	0.63 km / km²	0.63 km / km²
	Percentage of bridges in the Township with loading or dimensional restrictions.	7.14%[1]	0%
	Surface area of asphalt roads as a percentage of the total surface area of all roads.	9%	9%
	Surface area of surface treated roads as a percentage of the total surface area of all roads.	48%	48%
	Surface area of gravel roads as a percentage of the total surface area of all roads.	43%	43%
Quality	For paved roads in the municipality, the average pavement condition index value.	64.3[2]	65 or higher
	For unpaved roads in the Township, the average surface condition.	Fair	Fair or better

[1]Based on the most recent inspection data, the Minden Hills Pit Bridge has been identified as having loading or dimensional restrictions. Furthermore, the Township's pedestrian bridges are excluded from the calculation of this performance measure.

[2]Based on condition assessments completed as part of the Township's 2021 Road Needs Study.

Service Attribute	Performance Measure	Current Performance	Target Performance
	For bridges in the Township, the average bridge condition index value.	60.9[1]	60 or higher
	For structural culverts in the Township, the average bridge condition index value.	68.0	60 or higher
	Percentage (by quantity) of road signs that passed the most recent retro-reflectivity testing.	65%	Maximize
	Percentage (by length) of sidewalks in a 'Fair' or better condition state.	Unknown	Maximize

2.2 Facilities

2.2.1 State of Local Infrastructure

The Township owns and manages 26 facilities (excluding water and wastewater facilities) that support the delivery of various municipal services. These facilities include the municipal office, public works facilities, community centres and arenas, buildings associated with the Minden Hills Cultural Centre, a fire hall and a storage structure.

The estimated current replacement cost of Township's facilities is $49.9 million. Community centres and arenas represent the largest share of replacement cost at $22.9 million (46%), followed by public works facilities at $11.0 million (22%), buildings utilized by Fire Services at $6.1 million (12%), buildings associated with the Minden Hills Cultural Centre at $5.4 million (11%), and lastly, administrative facilities at $4.5 million (9%). The average age of Township's facilities is 21.7 years[2]. Table 2-10 summarizes the quantity, gross floor area, average age, and estimated current replacement cost of the Township's facilities, buy facility type. This information is further illustrated in Figure 2-7.

[3]The Township's pedestrian bridges and the Minden Hills Pitt Bridge are excluded from the calculation of this performance measure.

[1]The year of construction is currently unavailable for the Irondale Community Centre and Pritchard Lane Storage Building. As such, those facilities are excluded from the calculation of average age presented in this subsection.

Table 2-10: Facilities – Quantity, Gross Floor Area, Average Age, and Replacement Cost

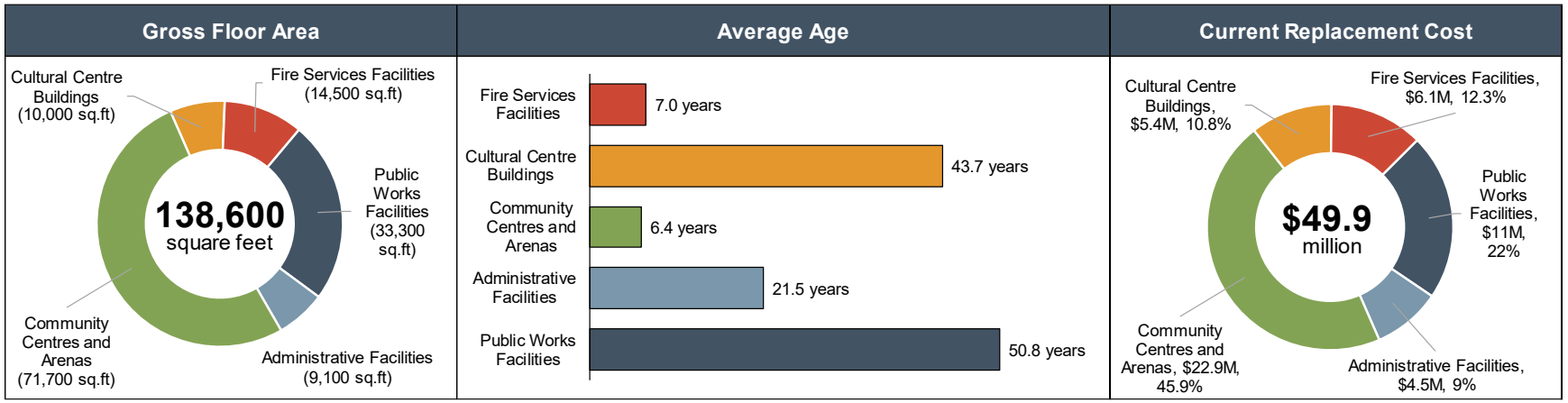
Facility Type	Quantity	Gross Floor Area	Average Age[1]	Current Replacement Cost
Public Works Facilities	9 facilities	33,348 ft^2	50.8 years	$10,966,000
Administrative Facilities	2 facilities	9,050 ft^2	21.5 years	$4,475,000
Community Centres & Arenas	3 facilities	71,696 ft^2	6.4 years[2]	$22,908,000
Cultural Centre Buildings	10 facilities	10,044 ft^2	43.7 years	$5,383,000
Fire Services Facilities	2 facilities	14,450 ft^2	7.0 years[3]	$6,135,000
Total	**26 facilities**	**138,588 ft^2**	**21.7 years**	**$49,867,000**

[1]Weighted average utilizing the gross floor area of each facility as weights.

[2]The year of construction is currently unavailable for the Irondale Community Centre. As such, this facility is excluded from the calculation of average age.

[3]The year of construction is currently unavailable for the Pritchard Lane Storage Building. As such, this facility is excluded from the calculation of average age.

Figure 2-7: Facilities – Gross Floor Area, Average Age, and Replacement Cost



2.2.2 Condition

The Township assesses the condition of its facilities through Building Condition Assessments (BCAs) completed by an external service provider. As part of the BCAs, individual facility components are inspected by qualified assessors. These inspections are subsequently utilized to identify upcoming lifecycle requirements for facilities at a component level. Facility Condition Index (FCI) ratings are subsequently calculated to provide an overall measure of each facility's condition. FCI ratings are calculated by forecasting the lifecycle requirements for each facility over a 10-year forecast horizon and expressing the sum of forecasted requirements as a percentage of the replacement cost of the facility (referred to as '10-year FCI rating').

To better communicate the condition of facilities, FCI ratings are segmented into qualitative condition states as summarized in Table 2-11. The scale is set to show that if the sum of forecasted lifecycle requirements over a 10-year forecast horizon for a given facility is lower than 5% of the building's current replacement value, the facility would be deemed to be in a "Good" condition state. Conversely, if the sum of forecasted lifecycle requirements over a 10-year forecast horizon for a given facility is higher than 30% of the building's current replacement value, the facility would be deemed to be in a "Critical" condition state. Facilities in this condition state are unlikely to be able to meet their functional requirements.

Table 2-11: Facilities – Definition of Condition States with Respect to FCI Ratings

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

The Township has formally assessed upcoming lifecycle requirements for nine of its 26 facilities through recently completed BCAs. These nine facilities represent approximately 72.5% of the total replacement and approximately 73.0% of the total gross floor area of Township facilities. Additionally, although a formal BCA has not been completed for the Minden Hills Cultural Centre, high-level estimates of upcoming lifecycle expenditures for this facility have been identified by Township staff. FCI ratings were calculated for these 10 facilities utilizing the sum of upcoming lifecycle expenditure

requirements covering the 10-year period from 2026 to 2035. The FCI ratings and associated condition states for these facilities are summarized in Table 2-12.

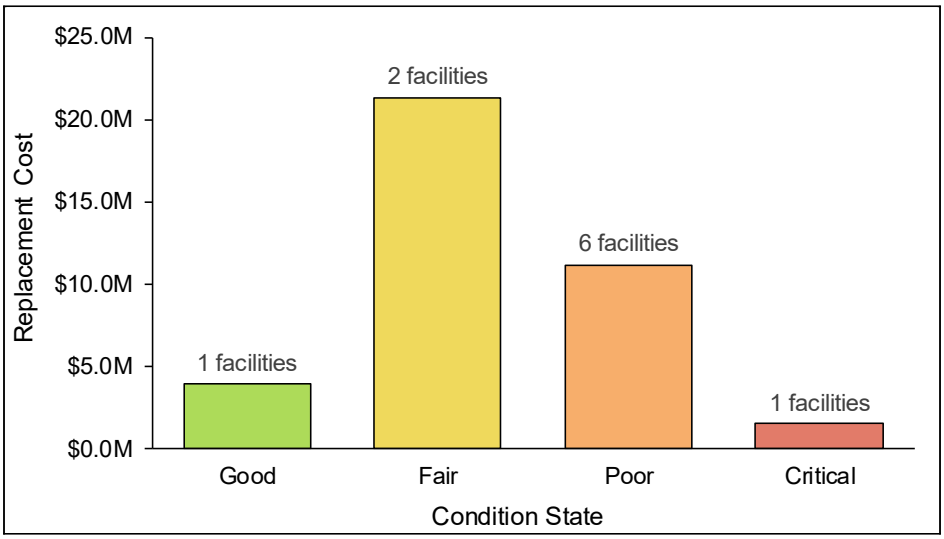
Table 2-12: Facilities – FCI Ratings and Condition States

Facility Name	Location	FCI Rating	Condition State
Garage – Patrol #1	1987 Fleming Road	2.3%	Good
Garage – Patrol #2	11445 Highway 35	10.8%	Poor
PW Office & Training Facility	11445 Highway 35	13.1%	Poor
Garage – Patrol #3	4564 County Road 121	16.4%	Poor
Sand Dome – Patrol #3	4564 County Road 121	5.1%	Fair
Salt Shed – Patrol #3	4564 County Road 121	26.1%	Poor
Municipal Office	7 Milne St	16.2%	Poor
Lochlin Hall Community Centre	4713 Gelert Rd	100.0%	Critical
Minden Hills Cultural Centre	176 Bobcaygeon Road	27.5%	Poor
S.G. Nesbitt Memorial Arena	55 Parkside Street	8.1%	Fair
Overall FCI Rating		**16.2%**	Poor

It is recommended that the Township update and/or complete BCAs on its larger facilities that have not yet been formally assessed (e.g., Minden Hills Fire Hall) in the near future. The recommendations provided in those BCAs would enable further refinement of the forecasts of upcoming lifecycle requirements for facilities presented later in Section 3.3 and allow for a more accurate representation of their condition in future iterations of this plan.

The distribution (replacement cost) of the ten facilities for which upcoming lifecycle expenditure requirements have been identified by condition state is illustrated in Figure 2-3.

Figure 2-8: Facilities – Distribution (replacement cost) of Assets by Condition State



2.2.3 Levels of Service

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

Table 2-13: Facilities – Community Levels of Service

Service Attribute	Community Levels of Service
Capacity	The Township strives to align the capacity of its facilities with the service demands of its community.
Quality	The Township strives to maintain its facilities in adequate condition to continue functioning as intended.

Table 2-14: Facilities – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance	Target Performance
Capacity	Gross floor area (square footage) of public works facilities per kilometre of roadways.	120 ft^2 / km	120 ft^2 / km

Service Attribute	Performance Measure	Current Performance	Target Performance
	Gross floor area (square footage) of administrative facilities per 100 residents.	131 ft^2 / 100 residents[1]	131 ft^2 / 100 residents
	Gross floor area (square footage) of community centres & arenas facilities per 100 residents.	1,029 ft^2 / 100 residents[1]	1,029 ft^2 / 100 residents
	Gross floor area (square footage) of fire halls per 100 residents.	109 ft^2 / 100 residents[1]	109 ft^2 / 100 residents
Quality	Number (and percentage of gross floor area) of assessed facilities in a 'Fair' or better condition state.	3 facilities (76%)	Minimize

2.3 Fleet and Equipment

2.3.1 State of Local Infrastructure

The Township's inventory of tax-supported fleet and equipment assets comprises vehicles ranging from passenger cars and light commercial vehicles to larger vehicles such as plow trucks, fire trucks, backhoes, and graders. The inventory also includes trailers, built infrastructure and furnishings located in Township parks, a boat utilized by Fire Services, and various pieces of light and heavy equipment utilized by Public Works.

The estimated current replacement cost of the Township's fleet and equipment assets is $10.0 million. Commercial vehicles represent the largest share of replacement cost at $3.8 million (38%), followed by parks and recreation equipment at $2.4 million (24%), vehicles utilized by Fire Services at $1.6 million (16%), and heavy equipment assets at $1.2 million (12%). The replacement cost of the remainder of the Township's fleet and equipment assets is $1.0 million (10%). The average age of the Township's fleet and equipment assets is 6.9 years.

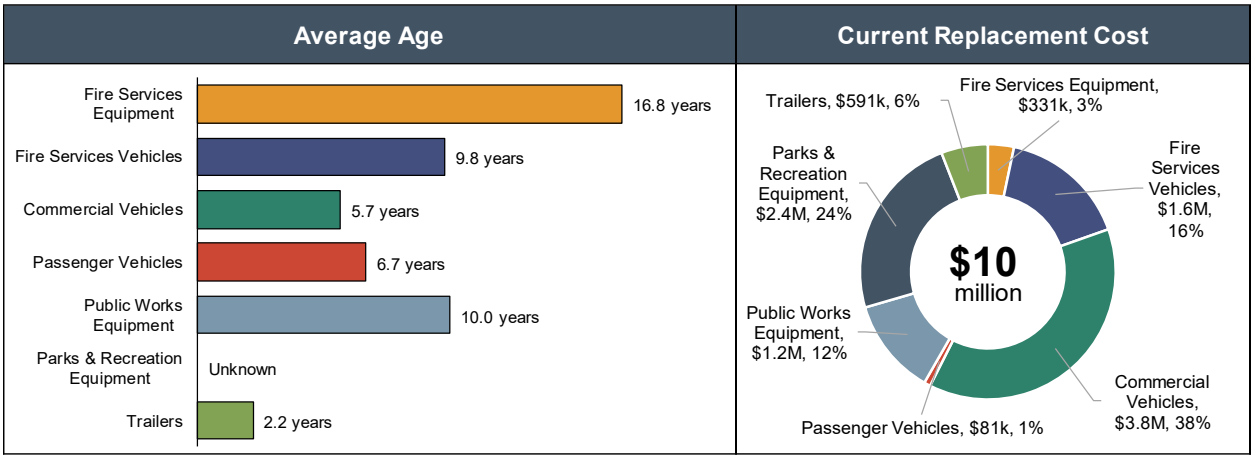
Table 2-15 summarizes the average age and estimated current replacement cost of the Township's fleet and equipment assets. This information is further illustrated in Figure 2-9.

[1]Based on population figures from Statistics Canada 2021 Census results.

Table 2-15: Fleet and Equipment – Average Age and Replacement Cost by Asset Type

Asset Type	Examples	Average Age[1]	Current Replacement Cost
Fire Services Equipment	Portable pumps, trailers, boat, rapid deployment craft, etc.	16.8 years	$331,000
Fire Services Vehicles	Pumpers, tankers, rescue vehicles, etc.	9.8 years	$1,632,000
Commercial Vehicles	Plows, heavy-duty pickups, etc.	5.7 years	$3,794,000
Passenger Vehicles	Compact SUVs	6.7 years	$81,000
Public Works Equipment	Sidewalk plow, loader, backhoe, etc.	10.0 years	$1,225,000
Parks and Recreation Equipment	Play structures, sports fields and courts, park amenities, etc.	N/A[2]	$2,365,000
Trailers	Trailers utilized by various departments ranging in sizes	2.2 years	$591,000
Total		**6.9 years**	**$10,019,000**

Figure 2-9: Fleet and Equipment – Average Age and Replacement Cost by Asset Type



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

[2]Dates of purchase or installation are not readily available for Parks and Recreation Equipment. As such, an average age for these assets is not reported in this asset management plan.

2.3.2 Condition

The Township directly assessed the physical condition of 43 of its 98 fleet and equipment assets (note: the 43 assessed assets represent approximately 55% of the total replacement cost of fleet and equipment) in 2024 and assigned condition state to each asset based on its estimated remaining useful service life utilizing the 3-point scale presented in Table 2-16.

Table 2-16: Fleet and Equipment – Definition of Condition States

Condition State	Description
Good	Replacement not required for at least 5 years.
Fair	Replacement required within the next 3 to 5 years.
Poor	Replacement required within the next 1 to 2 years.

The condition of the remainder of the Township's fleet and equipment assets is assessed based on age relative to useful service life (i.e. based on the percentage of useful service life consumed (ULC%)). A brand-new asset would have a ULC% of 0%, indicating that none of the asset's life expectancy has been utilized. Conversely, 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, may exhibit reduced reliability, and may have increasing repair and maintenance costs. Calculated ULC% for the remainder of the Township's fleet and equipment assets were utilized to determine each asset's expected remaining useful service life and consequently the expected timing of their replacement. Based on this age-based calculation, assets were subsequently segmented into the qualitative condition states defined in Table 2-16.

It is noted here condition cannot be established at this time for approximately 24% (by replacement cost) of the Township's fleet and equipment assets. These assets were not assessed through the aforementioned physical condition assessments conducted in 2024. Furthermore, the age of these assets is also unknown and as such, an age-based condition analysis cannot be completed.

Based on the condition assessment methodologies described above, the Township's fleet and equipment assets are, on average, in a 'Good' condition state. This indicates that the majority of assets are functioning as originally intended and would likely not require replacement in the near future due to deterioration in their physical condition and/or performance.

Table 2-17 summarizes the average condition states of the Township's fleet and equipment.

Table 2-17: Fleet and Equipment – Average Condition States by Asset Type

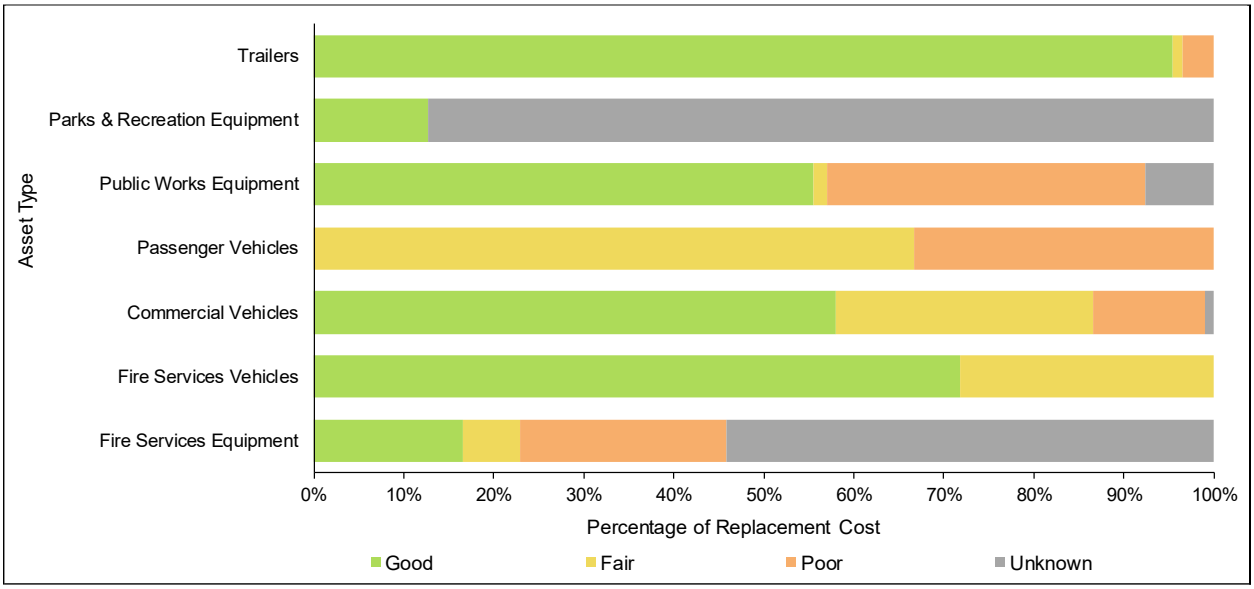
Asset Type	Average Condition State of Assessed Assets[1]	Percentage of Assets Assessed Through Physical Condition Assessments[2]	Percentage of Assets Assessed Based on Age Relative to Useful Service Life[2]
Fire Services Equipment	Fair	46%	0%
Fire Services Vehicles	Good	94%	6%
Commercial Vehicles	Fair	69%	30%
Passenger Vehicles	Fair	100%	0%
Public Works Equipment	Fair	87%	5%
Parks and Recreation Equipment	Good	0%	13%
Trailers	Good	11%	89%
Total	**Good**	**55%**	**21%**

The distribution (replacement cost) of the Township's fleet and equipment assets by condition state and asset type is illustrated in Figure 2-10.

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

[2]Percentage by replacement cost of asset types.

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



2.3.3 *Levels of Service*

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

Table 2-18: Fleet and Equipment – Community Levels of Service

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

Table 2-19: Fleet and Equipment – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance	Target Performance
Reliability	Percentage (by replacement cost) of Fire Services equipment in a 'Fair' or better condition state.	23%	Maximize

Service Attribute	Performance Measure	Current Performance	Target Performance
	Percentage (by replacement cost) of Fire Services vehicles in a 'Fair' or better condition state.	100%	Maximize
	Percentage (by replacement cost) of commercial vehicles in a 'Fair' or better condition state.	87%	Maximize
	Percentage (by replacement cost) of passenger vehicles in a 'Fair' or better condition state.	67%	Maximize
	Percentage (by replacement cost) of Public Works equipment in a 'Fair' or better condition state.	57%	Maximize
	Percentage (by replacement cost) of Parks and Recreation equipment in a 'Fair' or better condition state.	13%	Maximize

2.4 Water

2.4.1 State of Local Infrastructure

The Township's water system provides potable water for residential and business consumption, as well as for the Township's maintenance operations, recreational facilities, and firefighting operations. It is separated into two treatment and distribution networks serving primarily residential customers but also some light commercial and industrial customers in the Village of Minden and the community of Lutterworth Pines. The two networks are supported by 16.3 kilometres of watermains, two water treatment facilities, an elevated storage tank, four wells, and a box trailer that also supports wastewater operations.

It is noted that while the Township owns all water system assets and is responsible for funding their lifecycle expenditures, the operation of the Township's water system is contracted to the Ontario Clean Water Agency (OCWA). The information and analyses presented in this section are based directly on the asset management plan for the Township's water and wastewater systems that was prepared by OCWA in 2024.

The estimated current replacement cost of the Township's water system assets is $18.8 million. Watermains represent the largest share of this replacement cost at $16.2 million (86%), followed by water treatment and storage assets serving the Village of Minden at $2.1 million (11%), water treatment assets serving the community of Lutterworth Pines at $614,000 (3%), and lastly, the shared water and wastewater trailer at $10,000 (0.1%; representing 50% utilization by the water system). The average age of the Township's water system assets is approximately 30.1 years.

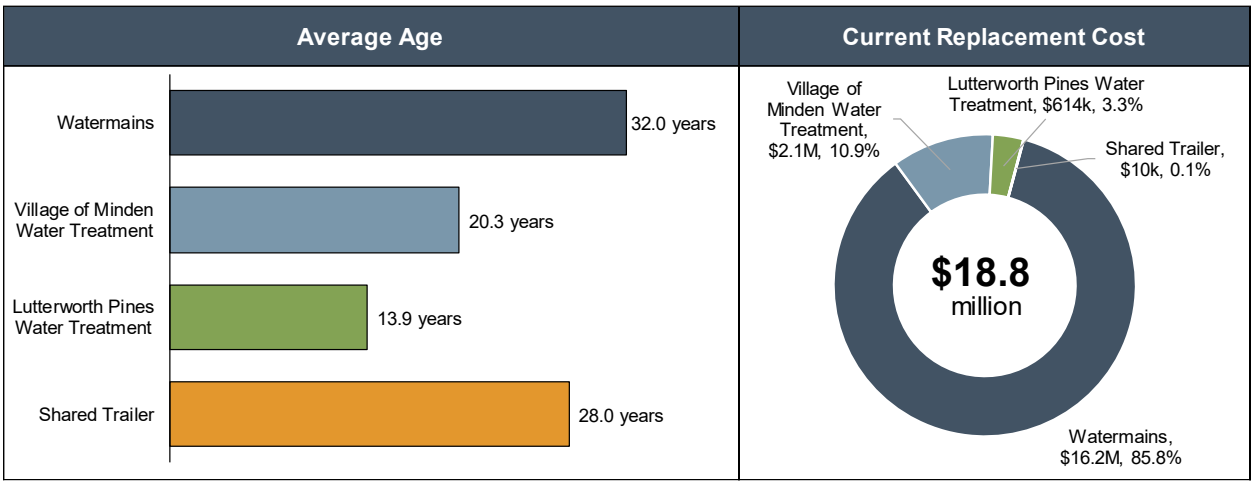
Table 2-20 summarizes the average age and estimated current replacement cost of the Township's water system assets and this information is further illustrated in Figure 2-11.

Table 2-20: Water Assets – Average Age and Replacement Cost

Asset Type	Average Age[1]	Current Replacement Cost
Watermains	32.0 years	$16,163,000
Village of Minden Water Treatment	20.3 years	$2,056,000
Lutterworth Pines Water Treatment	13.9 years	$614,000
Trailer (shared with wastewater system)	28.0 years	$10,000
Total	**30.1 years**	**$18,843,000**

[1]Weighted average utilizing the length of watermains and replacement cost of each asset or individual water treatment plant components as weights.

Figure 2-11: Water Assets – Average Age and Replacement Cost



2.4.2 Condition

The condition of the Township's water system assets is directly assessed by its operating authority (OCWA). As part of these assessments, assets are assigned a condition rating ranging from 0 to 1 based on an evaluation of their ability to continue fulfilling their respective functional requirements.

To better communicate the condition of water system assets, condition ratings are segmented into qualitative condition states as outlined in OCWA's 2024 Asset Management Plan for the Township's water & wastewater systems and summarized in Table 2-21 for ease of reference.

Table 2-21: Water Assets – Definition of Condition States with Respect to Condition Ratings

Condition State	Condition Rating Range	Description[1]
Good	0.5 ≤ Rating ≤ 1	Asset is performing as originally intended and meeting its functional requirements.
Fair	0 < Rating < 0.5	Asset performance has degraded and is nearing the point where it can no longer meet its functional requirements.
Poor	Rating = 0	Asset is no longer able to meet its functional requirements.

The Township's water assets have been assessed to have an average condition rating of 0.33, indicating that, on average, they are in a 'Fair' condition state and nearing the point of requiring rehabilitation or replacement. Table 2-22 summarizes the average condition rating and associated condition states of the Township's water system assets.

Table 2-22: Water Assets – Average Condition Rating and Condition States by Asset Type

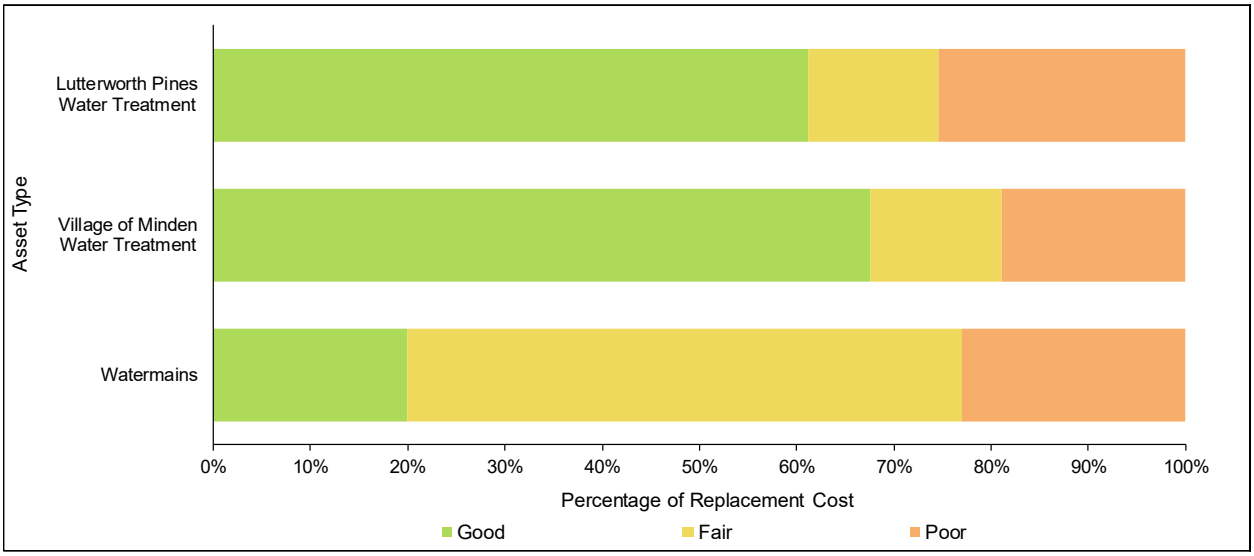
Asset Type	Average Condition Rating[2]	Condition State
Watermains	0.30	Fair
Village of Minden Water Treatment	0.51	Good
Lutterworth Pines Water Treatment	0.47	Fair
Average	**0.33**	**Fair**

The distribution (replacement cost) of the Township's water system assets by condition state and asset type is illustrated in Figure 2-12.

[1]Based on OCWA's 2024 Asset Management Plan for the Township's water and wastewater systems.

[2]Weighted average utilizing the length of watermains and replacement cost of each individual water treatment plant components as weights.

Figure 2-12: Water Assets – Distribution (replacement cost) of Assets by Condition State and Asset Type



The distribution (length) of the Township's watermains by condition rating range is illustrated in Figure 2-13. Furthermore, the distribution (replacement cost) of the Township's water treatment and storage assets by condition rating range is illustrated in Figure 2-14.

Figure 2-13: Watermains – Distribution (length) of Assets by Condition Rating Range

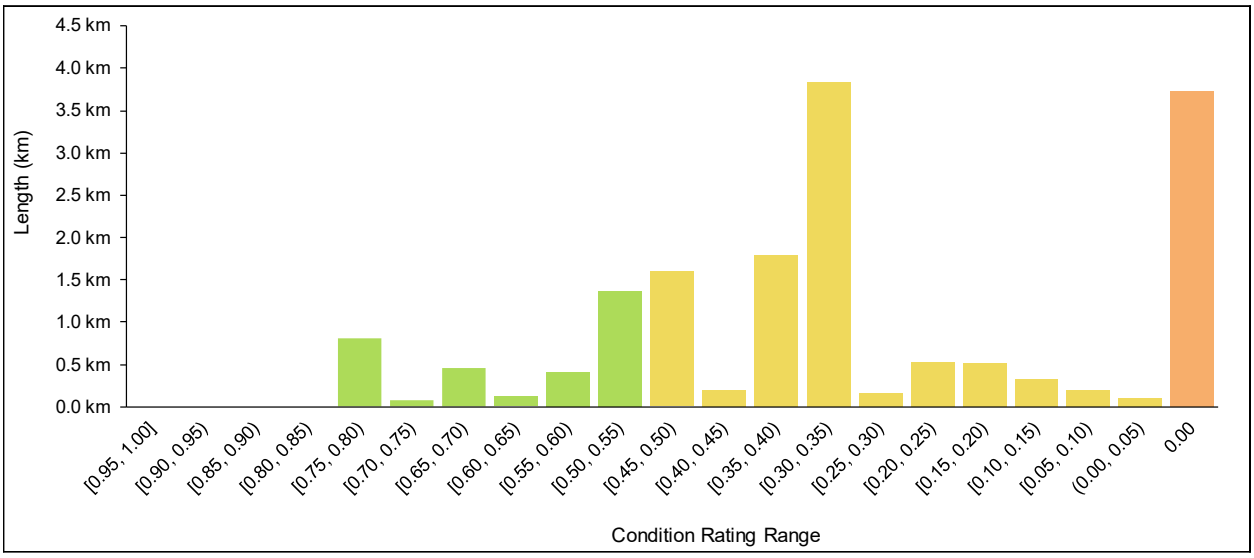
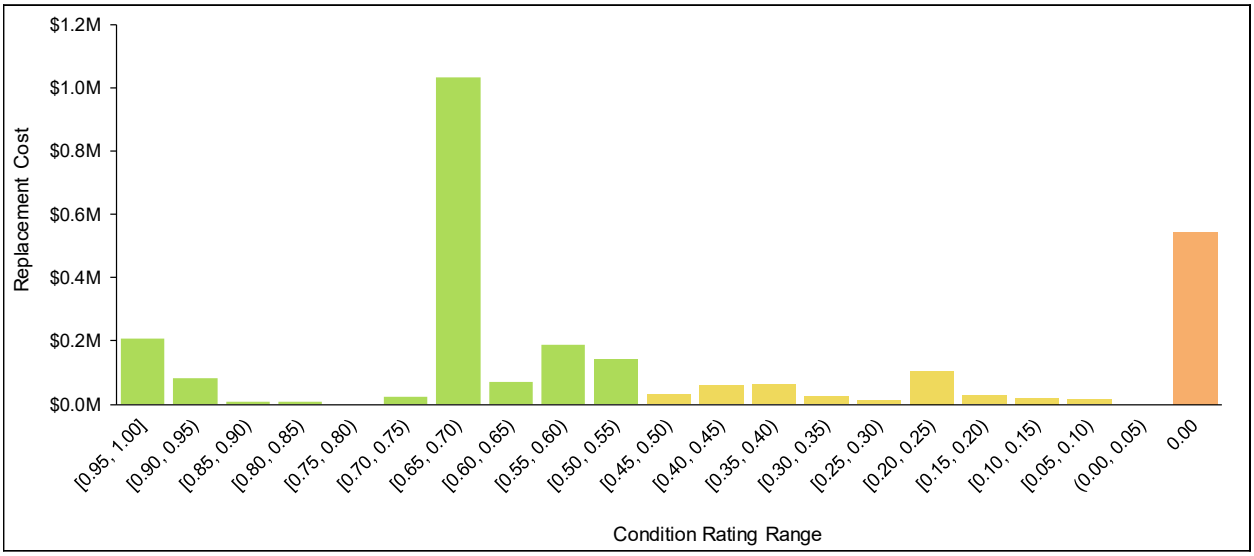


Figure 2-14: Water Treatment and Storage Assets – Distribution (replacement cost) of Assets by Condition Rating Range



The Township directly assessed the physical condition of the shared water and wastewater trailer in 2024, using the same rating scale used for fleet and equipment assets (as described in section 2.3.2). Based on this assessment, the shared water and wastewater trailer is in a 'Good' condition state and not expected to require replacement for at least the next five years.

2.4.3 Levels of Service

This subsection presents the Township's levels of service frameworks for its water assets. Table 2-23 presents the Service Attributes and Community Levels of Service, while Table 2-24 presents the Technical Levels of Service (i.e., performance measures). Please refer to section 2.1.3 for further details on the Township's levels of service framework.

Table 2-23: Water Assets – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Township's water system provides potable water for residential and business consumption, as well as the Township's maintenance operations and recreational facilities. Most properties within the settlement areas of Minden and Lutterworth are connected to the municipal water system and fire flow is available to approximately 95% of connected properties.
Reliability	The Township 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.

Table 2-24: Water Assets – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance	Target Performance
Scope	Percentage of properties connected to the municipal water system.	21%[1]	21%
	Percentage of properties where fire flow is available.	20%[1]	20%
Reliability	The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system.	0 connection days / connection	0 connection days / connection
	The number of connection-days per year lost due to water main breaks compared to the total number of	0 connection days / connection	0 connection days / connection

[1]Based on best available data from 2021.

Service Attribute	Performance Measure	Current Performance	Target Performance
	properties connected to the municipal water system.		
	Percentage (by replacement cost) of watermains in a 'Fair' or better condition state.	77%	Maximize
	Percentage (by replacement cost) of Village of Minden Water Treatment assets in a 'Fair' or better condition state.	81%	Maximize
	Percentage (by replacement cost) of Lutterworth Pines Water Treatment assets in a 'Fair' or better condition state.	75%	Maximize

2.5 Wastewater

2.5.1 State of Local Infrastructure

The Township's wastewater collection and treatment system services primarily residential customers but also some light commercial and industrial customers in the Village of Minden. The system is supported by 16.3 kilometres of wastewater mains, a wastewater treatment plant, two wastewater pumping stations, and a box trailer that also supports the water system.

As with the Township's water system, the operation of the Township's wastewater system is contracted to OCWA. The information and analyses presented in this section are based directly on the asset management plan for the Township's water and wastewater systems that was prepared by OCWA in 2024.

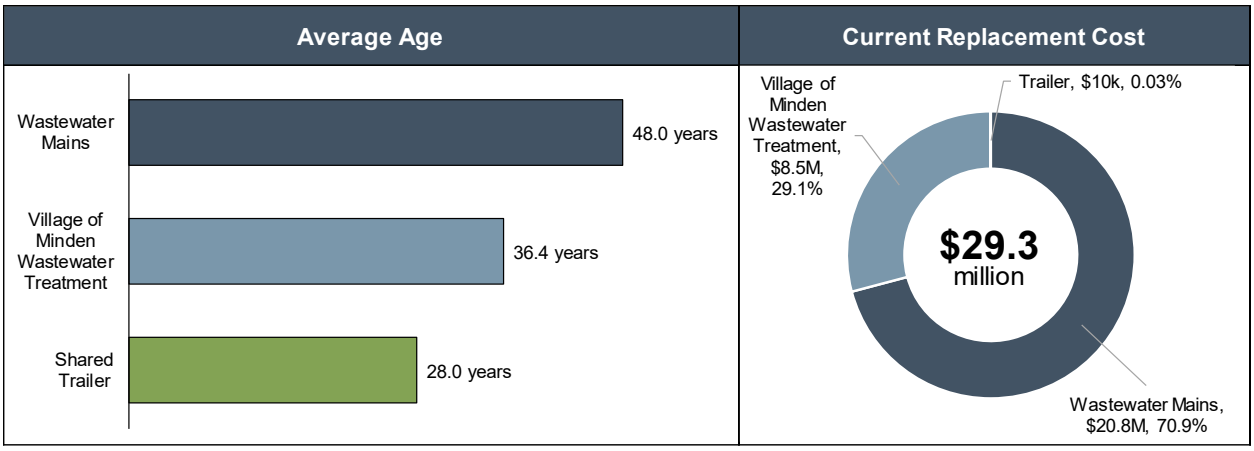
The estimated current replacement cost of the Township's wastewater system is $29.3 million. Wastewater mains represent the largest share of this replacement cost at $20.8 million (71%), followed by wastewater treatment assets serving the Village of Minden at $8.5 million (29%), and the shared water and wastewater trailer at $10,000 (<0.1%; representing 50% utilization by the wastewater system). The average age of the Township's wastewater system assets is 44.6 years.

Table 2-25 summarizes the average age and estimated current replacement cost of the Township's wastewater system assets and this information is further illustrated in Figure 2-15.

Table 2-25: Wastewater Assets – Average Age, and Replacement Cost

Asset Type	Average Age[1]	Current Replacement Cost
Wastewater Mains	48.0 years	$20,767,000
Village of Minden Wastewater Treatment	36.4 years	$8,525,000
Trailer (shared with water system)	28.0 years	$10,000
Total	**44.6 years**	**$29,302,000**

Figure 2-15: Wastewater Assets – Average Age and Replacement Cost



2.5.2 Condition

Similar to water system assets, the condition of the Township's wastewater system assets is directly assessed by its operating authority (OCWA). As part of these assessments, assets are assigned a condition rating ranging from 0 to 1 based on an evaluation of their ability to continue fulfilling their respective functional requirements. To better communicate the condition of wastewater system assets, condition ratings are segmented into qualitative condition states as outlined in OCWA's 2024 Asset

[1]Weighted average utilizing the length of wastewater mains and replacement cost of each asset or individual wastewater treatment plant components as weights.

Management Plan for the Township's water & wastewater systems and summarized earlier in Table 2-21 for ease of reference.

The Township's wastewater assets have been assessed to have an average condition rating of 0.29, indicating that, on average, they are in a 'Fair' condition state and nearing the point of requiring rehabilitation or replacement. Table 2-26 summarizes the average condition ratings and associated condition states of the Township's wastewater assets by asset type.

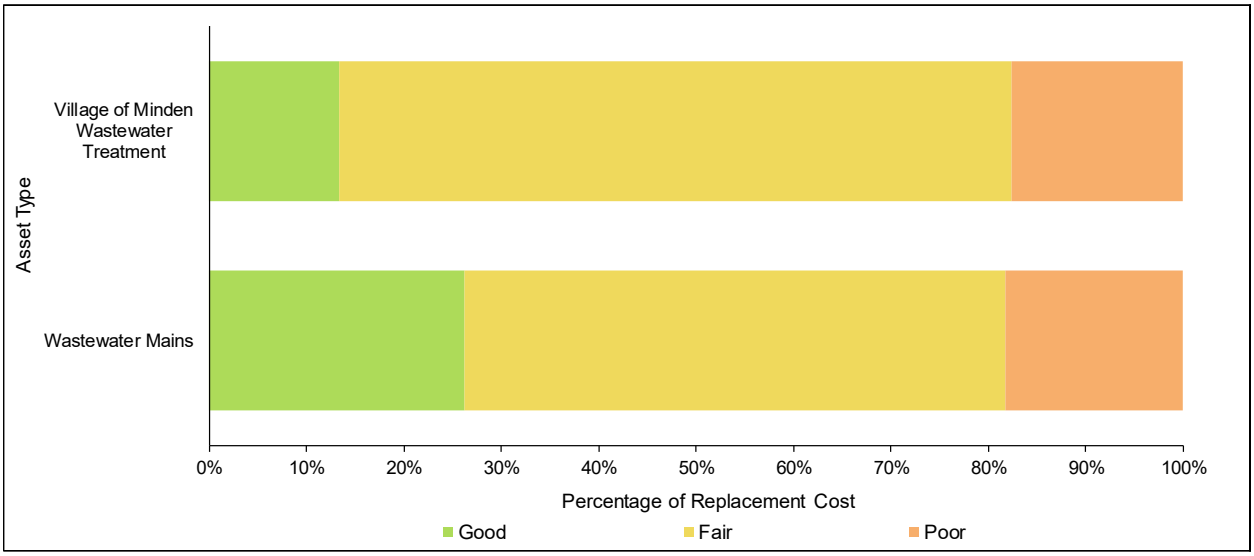
Table 2-26: Wastewater Assets – Average Condition Rating and Condition States by Asset Type

Asset Type	Average Condition Rating[1]	Condition State
Wastewater Mains	0.31	Fair
Village of Minden Wastewater Treatment	0.26	Fair
Average	**0.29**	**Fair**

The distribution (replacement cost) of the Township's wastewater assets by condition state and asset type is illustrated in Figure 2-16.

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

Figure 2-16: Wastewater Assets – Distribution (replacement cost) of Assets by Condition State and Asset Type



The distribution (length) of the Township's wastewater mains by condition rating range is illustrated in Figure 2-17. Furthermore, the distribution (replacement cost) of the Township's wastewater treatment plant components by condition rating range is illustrated in Figure 2-18.

Figure 2-17: Wastewater Mains – Distribution (length) of Assets by Condition Rating Range

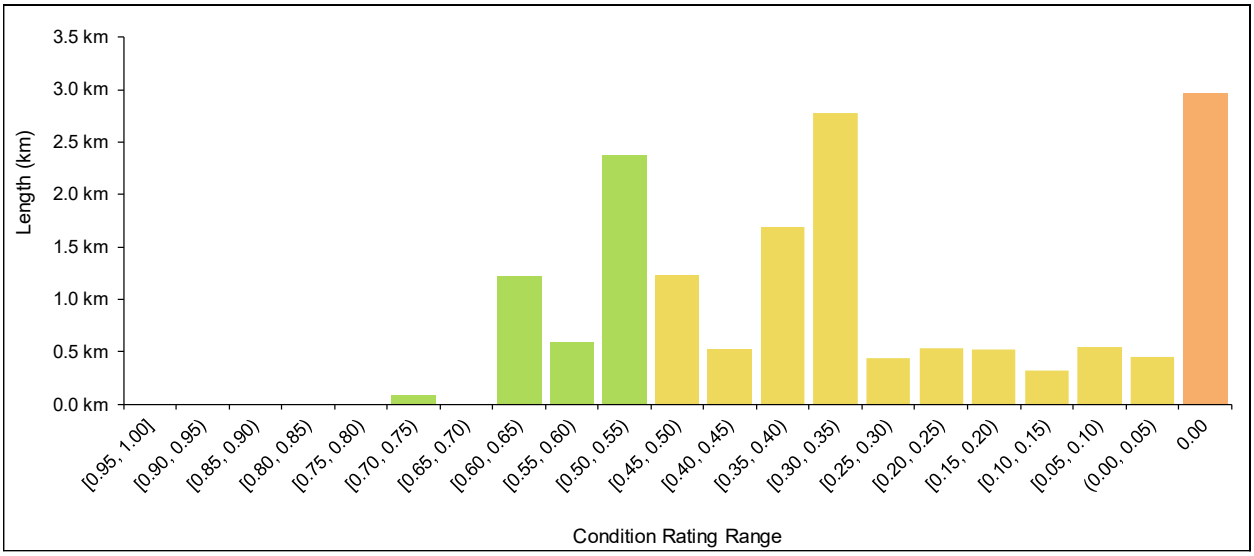
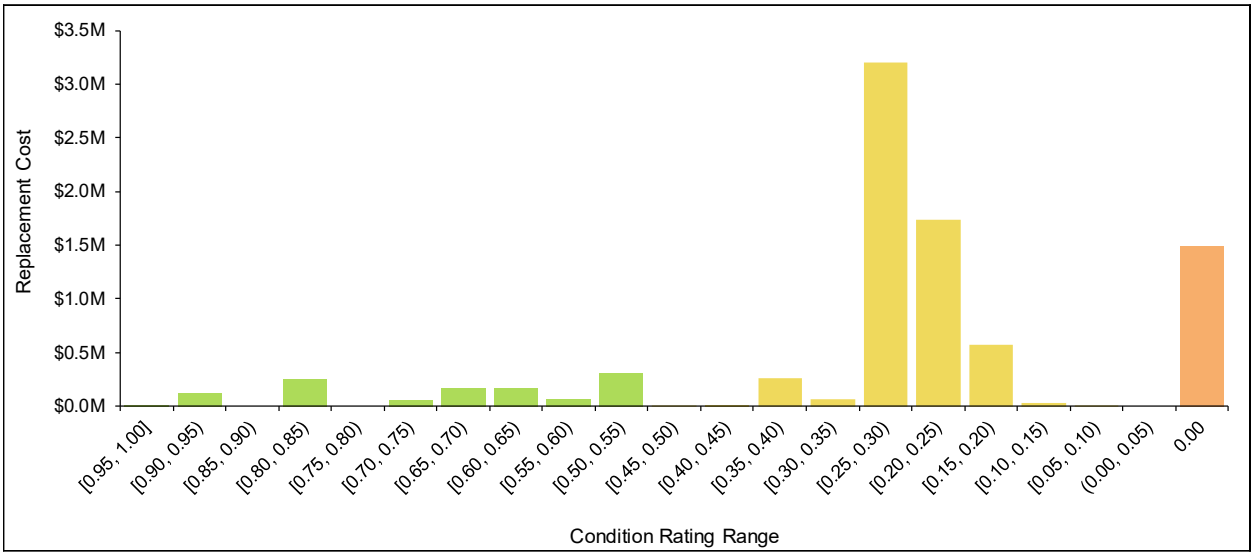


Figure 2-18: Wastewater Treatment Plant Components – Distribution (replacement cost) of Assets by Condition Rating Range



Please refer to Section 2.4.2 for information on the condition of the Township's shared water and wastewater trailer.

2.5.3 Levels of Service

This subsection presents the Township's levels of service frameworks for its wastewater assets. Table 2-27 presents the Service Attributes and Community Levels of Service while Table 2-28 presents the Technical Levels of Service (i.e., performance measures). Please refer to section 2.1.3 for further details on the Township's levels of service framework.

Table 2-27: Wastewater Assets – Community Levels of Service

Service Attribute	Community Levels of Service
Scope	The Township's wastewater collection and treatment system services primarily residential customers and some light commercial and industrial customers. Most properties within the Village of Minden are connected to the municipal wastewater system.
Reliability	The Township's wastewater collection system typically only carries sanitary flows, as stormwater flows are efficiently conveyed through natural means to nearby water bodies. At times, however, infiltration or 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. In light of this, the Township's wastewater collection network is designed with appropriate overflows at strategic locations to mitigate the number and impact of wastewater backups. The Township currently has sufficient wastewater treatment capacity to address the expected 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 Township's wastewater treatment facilities are operated in accordance with Environmental Compliance Approvals (E.C.A.) as issued by the Ministry of Environment, Conservation and Parks. A description of the effluent that is discharged from the wastewater treatment facilities is provided in ECA No. 5475-BPYLDH, issued October 2, 2020.

Table 2-28: Wastewater Assets – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance	Target Performance
Scope	Percentage of properties connected to the municipal wastewater system.	20%[1]	20%
Reliability	The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system.	N/A	N/A
	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.	0.007 violations / connection	0 violations / connection
	Percentage (by replacement cost) of wastewater mains in a 'Fair' or better condition state.	82%	Maximize
	Percentage (by replacement cost) of Village of Minden wastewater treatment assets in a 'Fair' or better condition state.	82%	Maximize

2.6 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 the impacts of future changes in population and economic activity on the lifecycle management of assets as well as the supporting financial strategy. The County of Haliburton recently completed an update to its Growth Strategy earlier in 2025. Based on the projections provided in that study, the Township's

[1]Based on best available data from 2021.

permanent resident population is expected to increase by approximately 1,700 residents over the next 25 years, totaling approximately 8,900 permanent residents by 2051. This represents an average increase of approximately 0.7% annually relative to the Township's 2021 permanent resident population.

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

It should be noted that the Township is currently undertaking a Development Charges Background Study jointly with the County of Haliburton and its other lower-tier municipalities. It is expected that the Township's current forecast of growth-related expenditures will be further refined through the on-going study process. Further details on the Township'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 the upcoming Development Charges Background Study.

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 achieve and sustain the proposed levels of service presented in Chapter 2. Within the context of this asset management plan, lifecycle activities are the specified actions that can be performed on an asset in order to ensure it is performing adequately, and/or to extend its service life[1]. These actions can be carried out on a planned schedule in a prescriptive manner, or through a dynamic approach where the lifecycle activities are only carried out when specified conditions are met.

In accordance with O. Reg. 588/17, the lifecycle activities and associated costs presented in this chapter consider the full lifecycle of assets. In general terms, an asset's lifecycle starts with its initial planning and acquisition (or construction), includes both the capital and significant operating/maintenance activities the asset is expected to undergo throughout its life, and ends with its eventual disposal. The lifecycle management strategies presented in this asset management plan have been developed with the aim of identifying the set of lifecycle activities that can be undertaken at the lowest cost to achieve and sustain target service levels.

The following subsections summarize the ten-year forecasts of lifecycle activities and associated costs that would be required for the Township to provide the proposed levels of service. Brief descriptions of the methodologies and data sources utilized to develop the forecasts are also provided in the following subsections.

It is noted that the ten-year forecasts of lifecycle expenditures presented in this chapter do not account for unforeseen circumstances that may introduce additional costs (e.g., natural disasters, etc.). There is a level of inherent uncertainty in lifecycle forecasts, reinforcing the need to review and update this asset management plan on a regular basis.

[1]The full lifecycle of an asset includes activities such as initial planning and maintenance which are typically addressed through master planning studies and maintenance management, respectively.

3.2 Transportation

This section presents an estimate of costs associated with providing the proposed levels of service for the Township's transportation assets presented earlier in Section 2.1.3. In general terms, the proposed levels of service involve maintaining the quality of road surfaces so that they continue providing a satisfactory user experience, maintaining bridges and structural culverts in adequate condition to enable the safe and efficient passage of vehicular and pedestrian traffic, and maintaining road-related assets in adequate condition so that they can continue effectively supporting the broader transportation network.

The capital expenditure forecast for the Township's asphalt and surface treated roadways was developed utilizing the Road Implementation Plan presented in the Township's 2021 Road Needs Study. The Road Implementation Plan identified lifecycle requirements for paved roadways by comparing the existing physical characteristics of road segments (i.e., road deficiencies) to the minimum tolerable standards as defined in the *Inventory Manual for Municipal Roads* as well as the Township's design standards and guidelines. Several lifecycle activities were considered as part of the road improvement strategy including road resurfacing (with and without replacing a portion of the granular base), pulverizing and resurfacing, widening and resurfacing (to address surface width deficiencies and/or capacity constraints), and full-depth reconstruction. Identified lifecycle requirements were subsequently assigned a priority rating based on the physical road condition (measured through PCI ratings), traffic volumes, and cost. Given the high level of capital investment required to remediate the Township's roadways to acceptable standards, expenditures were spread out over the initial five years of the forecast horizon, in consultation with Township staff, to better align with the Township's operational and spending capacities.

The Township expects to maintain its gravel roadways by ensuring the timely completion of maintenance activities (e.g., dust suppressant applications, periodic re-grading, period re-application of granular, etc.) which are funded through its annual operating budgets. As such, the annual cost of gravel road maintenance is excluded from the capital expenditure forecast presented in this section but has been incorporated into the operating budget forecast of the financial strategy presented later in Chapter 4. However, the Township's 2021 Road Needs Study recommended that approximately 12% (by surface area) of its gravel roads be reconstructed in the immediate term to address existing deficiencies. The capital expenditure forecast

presented in this section includes the cost associated with the reconstruction of these gravel road segments, which has also been spread out over the initial five years of the forecast horizon.

The capital expenditure forecast for the Township's bridges and structural culverts is derived based on the recommendations contained in its most recent (2024) OSIM inspection report and ensures the timely completion of rehabilitation and replacement activities. It is noted that the most recent OSIM inspection conducted on the Minden Hills Pitt Bridge indicated that the structure is currently in an overall 'Poor' condition state with significant structural deterioration. A load review was also conducted on this bridge and concluded that, in its current condition, the bridge is incapable of supporting truckloads of any axel count. It was concluded that the structure would need to be replaced in its entirety in order to bring it back into compliance with acceptable standards. Following the recommendations of assessors, the Township has temporarily closed this bridge to all traffic. Through discussions with Township staff, it was determined that the Township would not be replacing this bridge and instead intends to permanently close it in the near future. As such, the capital expenditure forecasted presented in this section does not include any costs related to the Minden Hills Pitt Bridge.

The Township undertakes the replacements of its road-related assets in coordination with road reconstruction projects. The lifecycle expenditure forecast for the Township's sidewalks and streetlights includes an annual allowance to address their reconstruction/replacement requirements when road reconstructions are being completed. As such, the allowance varies annually based on the length of roads that are expected to undergo reconstruction in that year.

The 10-year capital expenditure forecast for the Township's transportation network 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 $2.75 million.

Figure 3-1: Capital Expenditure Forecast for Transportation (2025$)

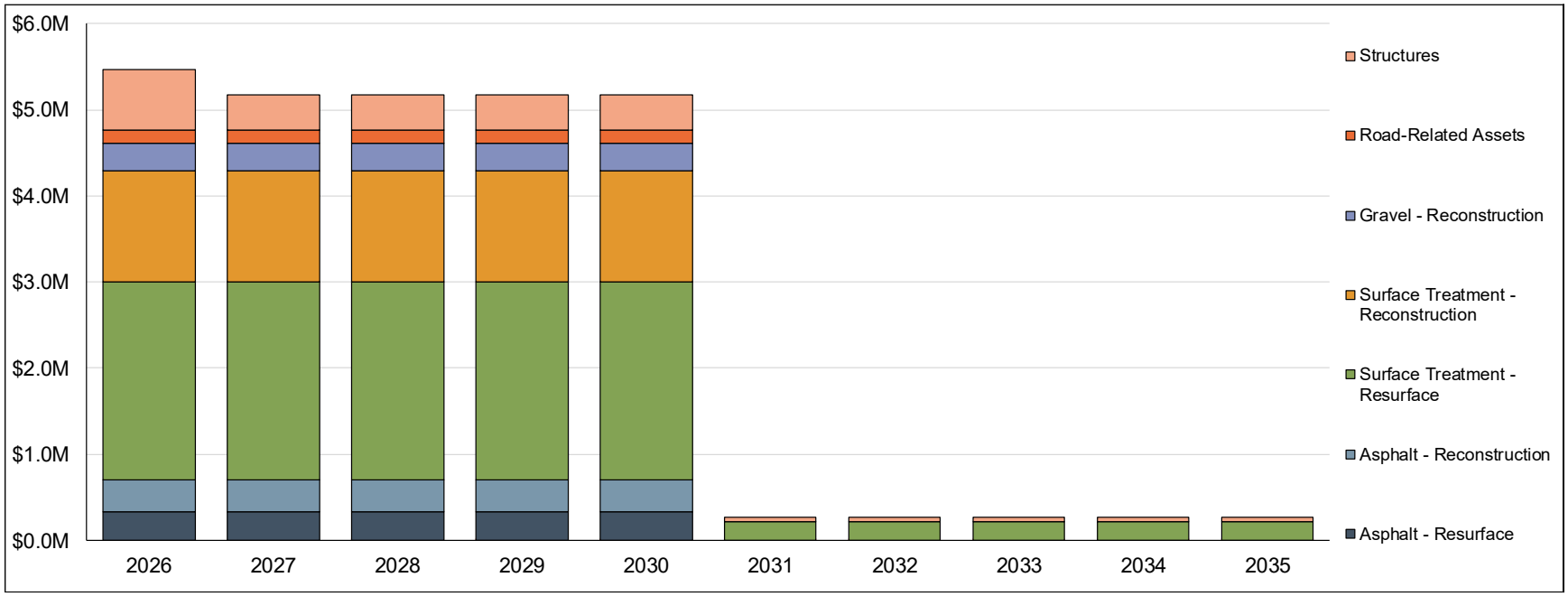


Table 3-1: Capital Expenditure Forecast for Transportation (2025$)

Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Asphalt - Resurface	$ 326,000	$ 326,000	$ 326,000	$ 326,000	$ 326,000	$ -	$ -	$ -	$ -	$ -
Asphalt - Reconstruction	$ 369,000	$ 369,000	$ 369,000	$ 369,000	$ 369,000	$ -	$ -	$ -	$ -	$ -
Surface Treated - Resurface	$2,306,000	$2,306,000	$2,306,000	$2,306,000	$2,306,000	$ 211,000	$ 211,000	$ 211,000	$ 211,000	$ 211,000
Surface Treated - Reconstruction	$1,290,000	$1,290,000	$1,290,000	$1,290,000	$1,290,000	$ -	$ -	$ -	$ -	$ -
Gravel - Reconstruction	$ 317,000	$ 317,000	$ 317,000	$ 317,000	$ 317,000	$ -	$ -	$ -	$ -	$ -
Structures	$ 693,000	$ 403,000	$ 403,000	$ 403,000	$ 403,000	$ 56,000	$ 56,000	$ 56,000	$ 56,000	$ 56,000
Road-related Assets	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Expenditures	**$ 5,461,000**	**$ 5,171,000**	**$ 5,171,000**	**$ 5,171,000**	**$ 5,171,000**	**$ 267,000**	**$ 267,000**	**$ 267,000**	**$ 267,000**	**$ 267,000**

3.3 Facilities

This section presents an estimate of costs associated with providing the proposed levels of service for the Township's facilities presented earlier in Section 2.2.3. In general terms, the proposed levels of service involve ensuring that the current capacity of facilities (i.e., gross floor area) is sufficient to meet the service demands of its community as well as ensuring that facilities are maintained in adequate condition to continue effectively supporting the provision of municipal services. Through consultations with both Township staff and Council, it was determined that current capacities are sufficient and as such, there are no upgrades, expansions, consolidations, or demolitions of facilities that are proposed over the next 10 years. Upcoming capital expenditures for nine of the Township's 26 facilities were formally assessed through recently completed BCAs. The capital expenditure forecast for these facilities is based on the component-level repair, rehabilitation, and replacement requirements identified as part of those BCAs. Additionally, as noted in Section 2.2.2, the Township has completed high-level estimates of upcoming lifecycle expenditures for the Minden Hills Cultural Centre, which are also included within the capital expenditure forecast presented in this section. A summary of other notable items included within the capital expenditure forecast is provided below:

- Demolition and reconstruction of Lochlin Hall Community Centre (forecasted to occur in 2026);
- Roof replacement at the Minden Curling Club (forecasted to occur in 2026);
- Roof replacement at the Municipal Office (forecasted to occur in 2027); and
- Annual allowance to make accessibility improvements at facilities, in accordance with the *Accessibility for Ontarians with Disabilities Act* (AODA).

As noted earlier in Section 2.2.2, the Township should consider completing BCAs for its larger, currently unassessed, facilities (e.g., Minden Hills Fire Hall) to identify upcoming lifecycle needs at those facilities. This will allow future iterations of the asset management plan to incorporate updated component-level forecasts and refine the lifecycle expenditure projections presented in this section. The 10-year capital expenditure forecast for the Township's facilities 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 $610,000.

Figure 3-2: Facilities: Lifecycle Expenditure Forecast (2025$)

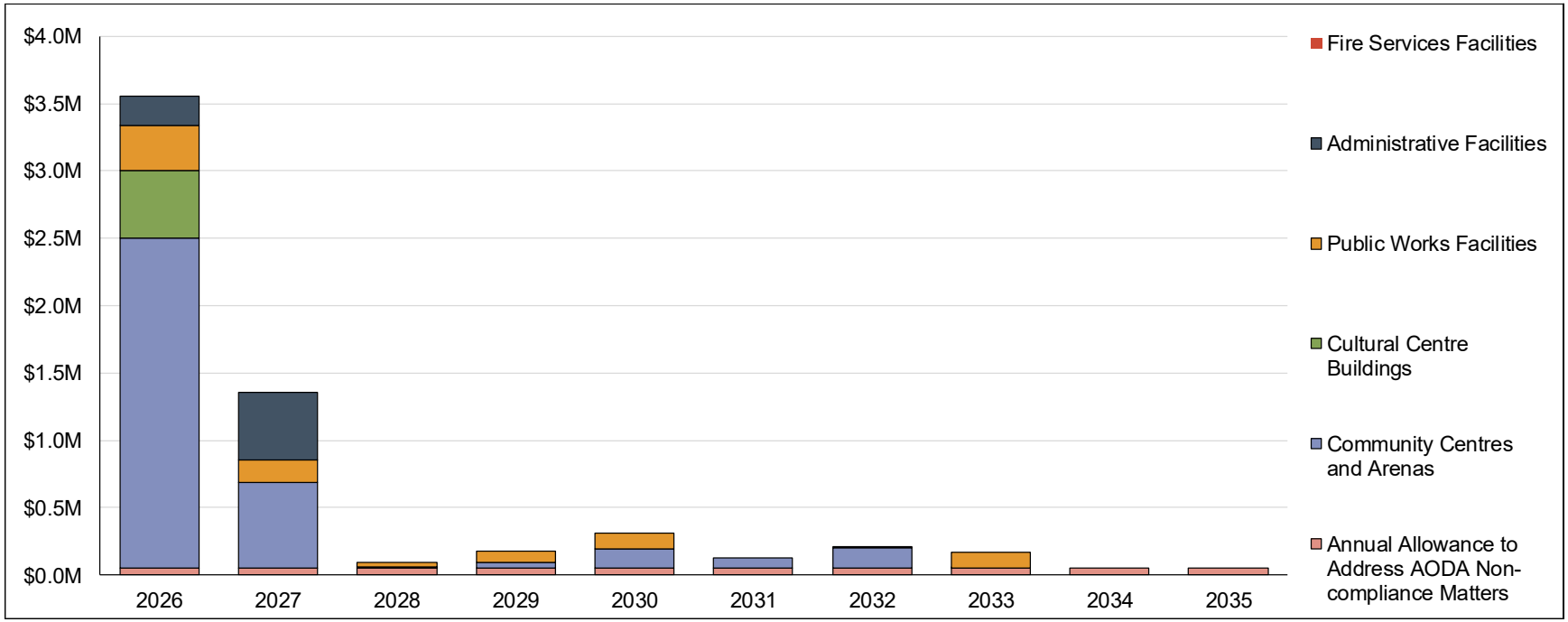


Table 3-2: Facilities - Lifecycle Expenditure Forecast (2025$)

Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Public Works Facilities	$ 331,000	$ 173,000	$ 35,000	$ 82,000	$ 118,000	$ -	$ 12,000	$ 115,000	$ -	$ -
Administrative Facilities	$ 215,000	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Community Centres and Arenas	$2,456,000	$ 635,000	$ 12,000	$ 41,000	$ 146,000	$ 77,000	$ 149,000	$ 4,000	$ -	$ -
Cultural Centre Buildings	$ 500,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Fire Services Facilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Annual Allowance to Address AODA Non-compliance Matters	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000
Total Annual Capital Expenditures	**$ 3,552,000**	**$ 1,358,000**	**$ 97,000**	**$ 173,000**	**$ 314,000**	**$ 127,000**	**$ 211,000**	**$ 169,000**	**$ 50,000**	**$ 50,000**

3.4 Fleet and Equipment

This section presents an estimate of costs associated with providing the proposed levels of service for the Township's fleet and equipment presented earlier in Section 2.3.3. In general terms, the proposed levels of service for fleet and equipment assets involve maintaining them in adequate condition to continue performing as expected and reliably support the delivery of municipal services. The Township will accomplish this by undertaking timely replacements of ageing and poorly performing assets and through the completion of regular maintenance activities. The lifecycle expenditure forecast presented in this subsection includes the costs associated with the replacement of these assets based on current estimates of their remaining service lives.

The capital expenditure forecast for the Township's fleet and equipment assets that were formally assessed as part of the physical condition assessment conducted in 2024 was developed based on the timing of asset replacements identified through that assessment. Please refer to Section 2.3.2 for further information on the condition assessment for fleet and equipment assets. The lifecycle expenditure forecast for the remainder of fleet and equipment assets was developed based on ages and expected useful service lives of individual assets. For assets for which age is currently unknown, the lifecycle expenditure forecast includes an annual allowance based on each asset's estimated average annual lifecycle cost. This approach ensures that sufficient funds are being allocated on an annual basis to fund the asset's eventual replacement.

The 10-year capital expenditure forecast for the Township's fleet and equipment 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 $777,000. The current backlog for the Township's fleet and equipment assets has been estimated to be approximately $826,000. This represents the estimated current replacement value of all fleet and equipment assets that are in a 'Poor' condition state. The backlog is forecasted to be addressed gradually over the next five years (i.e., from 2026 to 2030).

Figure 3-3: Fleet and Equipment: Capital Expenditure Forecast (2025$)

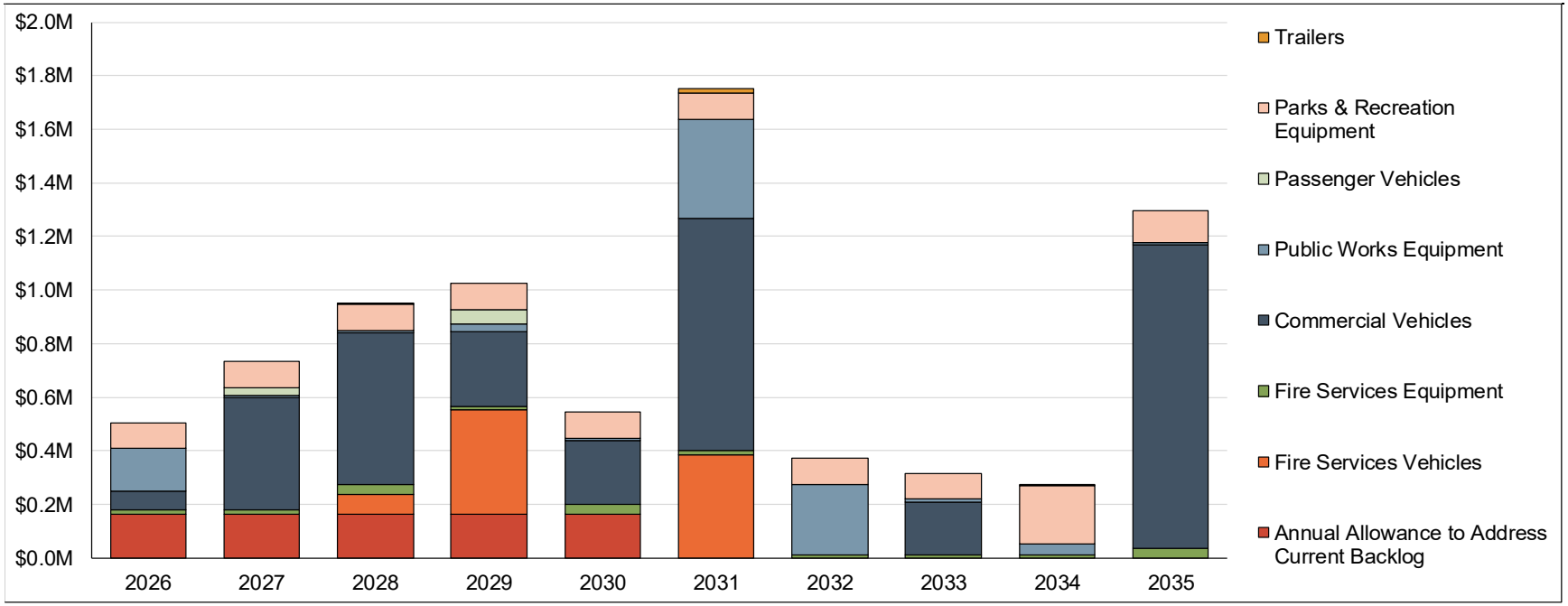


Table 3-3: Fleet and Equipment - Capital Expenditure Forecast (2025$)

Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Fire Services Equipment	$ 13,000	$ 13,000	$ 34,000	$ 13,000	$ 34,000	$ 13,000	$ 13,000	$ 13,000	$ 13,000	$ 34,000
Fire Services Vehicles	$ -	$ -	$ 73,000	$ 387,000	$ -	$ 387,000	$ -	$ -	$ -	$ -
Commercial Vehicles	$ 70,000	$ 420,000	$ 568,000	$ 280,000	$ 238,000	$ 868,000	$ -	$ 197,000	$ -	$1,133,000
Passenger Vehicles	$ -	$ 27,000	$ -	$ 54,000	$ -	$ -	$ -	$ -	$ -	$ -
Public Works Equipment	$ 160,000	$ 10,000	$ 10,000	$ 29,000	$ 10,000	$ 370,000	$ 261,000	$ 10,000	$ 39,000	$ 10,000
Parks & Recreation Equipment	$ 97,000	$ 97,000	$ 97,000	$ 97,000	$ 97,000	$ 97,000	$ 97,000	$ 97,000	$ 217,000	$ 120,000
Trailers	$ -	$ -	$ 6,000	$ -	$ -	$ 15,000	$ -	$ -	$ 7,000	$ -
Annual Allowance to Address Current Backlog	$ 165,000	$ 165,000	$ 165,000	$ 165,000	$ 165,000	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Expenditures	**$ 505,000**	**$ 732,000**	**$ 953,000**	**$ 1,025,000**	**$ 544,000**	**$ 1,750,000**	**$ 371,000**	**$ 317,000**	**$ 276,000**	**$ 1,297,000**

3.5 Water

This section presents an estimate of costs associated with providing the proposed levels of service for the Township's water system assets presented earlier in Section 2.4.3. In general terms, the proposed levels of service for the Township's water system assets include maintaining assets in adequate condition to reliably support the provision of safe drinking water to the public, while minimizing service interruptions and occurrences of adverse water quality events. The Township 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 for the Township's water system assets was derived utilizing the forecast of capital activities developed by OCWA as part of its 2024 Asset Management Plan for the Township's water and wastewater systems. The 10-year capital expenditure forecast for the Township's water system assets is summarized 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 $167,000.

Figure 3-4: Water Assets - Capital Expenditure Forecast (2025$)

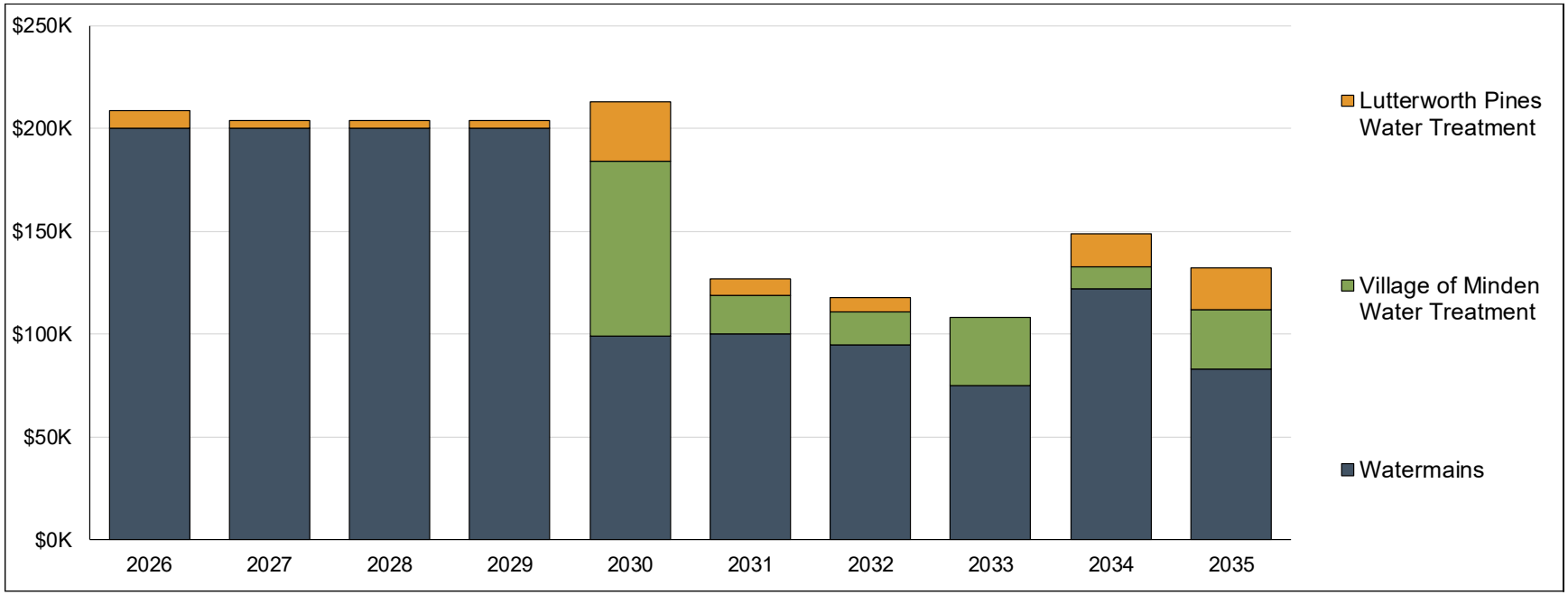


Table 3-4: Water Assets - Capital Expenditure Forecast (2025$)

Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Watermains	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 99,000	$ 100,000	$ 95,000	$ 75,000	$ 122,000	$ 83,000
Village of Minden Water Treatment	$ -	$ -	$ -	$ -	$ 85,000	$ 19,000	$ 16,000	$ 33,000	$ 11,000	$ 29,000
Lutterworth Pines Water Treatment	$ 9,000	$ 4,000	$ 4,000	$ 4,000	$ 29,000	$ 8,000	$ 7,000	$ -	$ 16,000	$ 20,000
Shared Box Trailer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Expenditures	**$ 209,000**	**$ 204,000**	**$ 204,000**	**$ 204,000**	**$ 213,000**	**$ 127,000**	**$ 118,000**	**$ 108,000**	**$ 149,000**	**$ 132,000**

3.6 Wastewater

This section presents an estimate of costs associated with providing the proposed levels of service for the Township's wastewater system assets presented earlier in Section 2.5.3. In general terms, the proposed levels of service for the Township's wastewater system assets include maintaining assets in adequate condition to reliably support the efficient collection and treatment of sanitary flows, minimizing occurrences of wastewater backups due to failure of municipal infrastructure, and minimizing occurrences of effluent violations. The Township will accomplish this by ensuring the timely replacement of ageing and poorly performing assets and through the completion of regular maintenance activities.

Similar to the Township's water system assets, the lifecycle expenditure forecast for the Township's wastewater system assets was derived utilizing the forecast of capital activities developed by OCWA as part of its 2024 Asset Management Plan for the Township's water and wastewater systems. The 10-year lifecycle expenditure forecast for the Township's wastewater system assets is summarized 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 $235,000.

Figure 3-5: Wastewater Assets - Capital Expenditure Forecast (2025$)

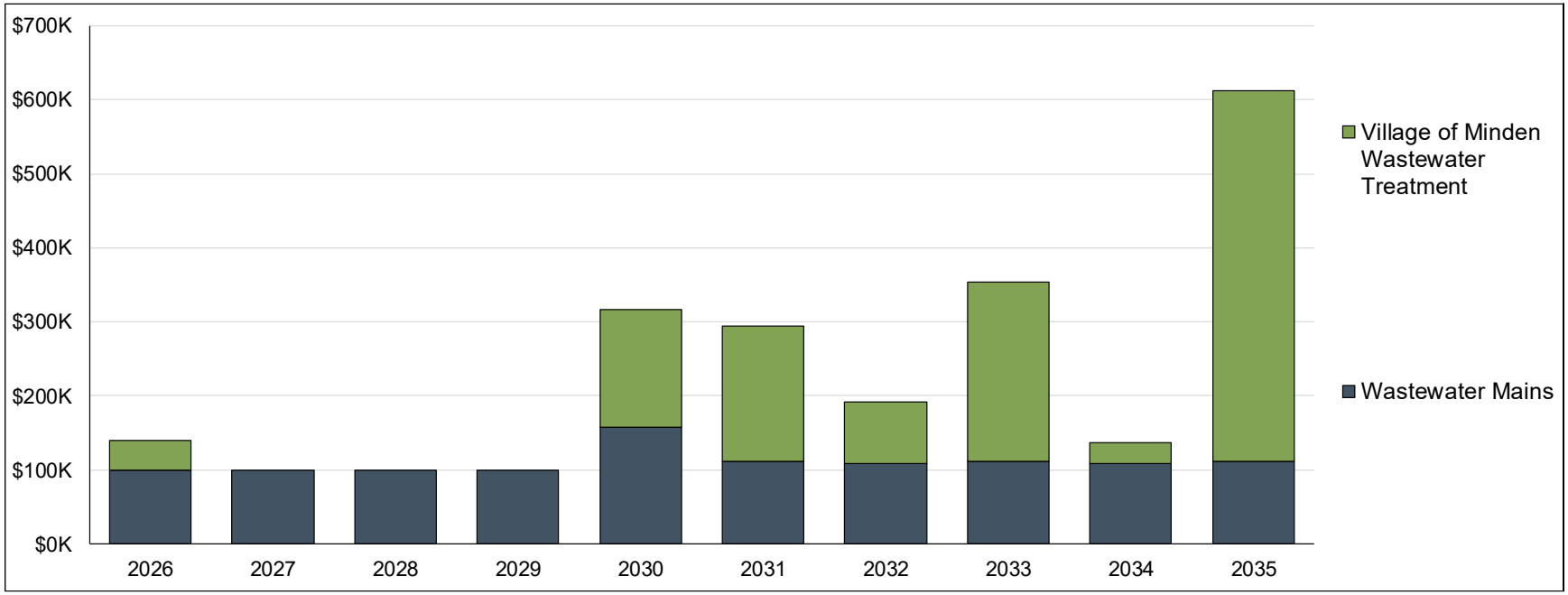


Table 3-5: Wastewater Assets - Capital Expenditure Forecast (2025$)

Category	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Wastewater Mains	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 158,000	$ 111,000	$ 109,000	$ 111,000	$ 109,000	$ 111,000
Village of Minden Wastewater Treatment	$ 40,000	$ -	$ -	$ -	$ 159,000	$ 184,000	$ 82,000	$ 242,000	$ 28,000	$ 502,000
Shared Box Trailer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Expenditures	**$ 140,000**	**$ 100,000**	**$ 100,000**	**$ 100,000**	**$ 317,000**	**$ 295,000**	**$ 191,000**	**$ 353,000**	**$ 137,000**	**$ 613,000**

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

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

- The Township's most recent (2025) operating budget;
- The Township's most recent (2025) capital budget;
- The Township's reserve and reserve fund continuity schedules; and
- The Township's debt continuity schedules.

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 Township will fund the forecasts of lifecycle activities presented in Chapter 3. Furthermore, the financial strategy also identifies the level of capital funding required annually to sustain 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 Township's financial position (i.e., reserve balances and additional debt requirements) as well as on property owners (i.e., property tax bills).

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

4.2 Tax-funded Assets

4.2.1 Annual Capital Expenditure Forecast

This section summarizes the expenditures associated with undertaking the lifecycle activities identified earlier in Chapter 3 for the Township's assets that are funded through the general tax levy (i.e., transportation assets, facilities, fleet, and equipment assets).

Capital expenditures over the 10-year forecast horizon are expected to total $41.4 million, an average of $4.14 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 4.57% annually. Once inflationary impacts are incorporated, lifecycle expenditures over the next 10 years are expected to total $49.4 million, an average of $4.94 million annually.

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

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

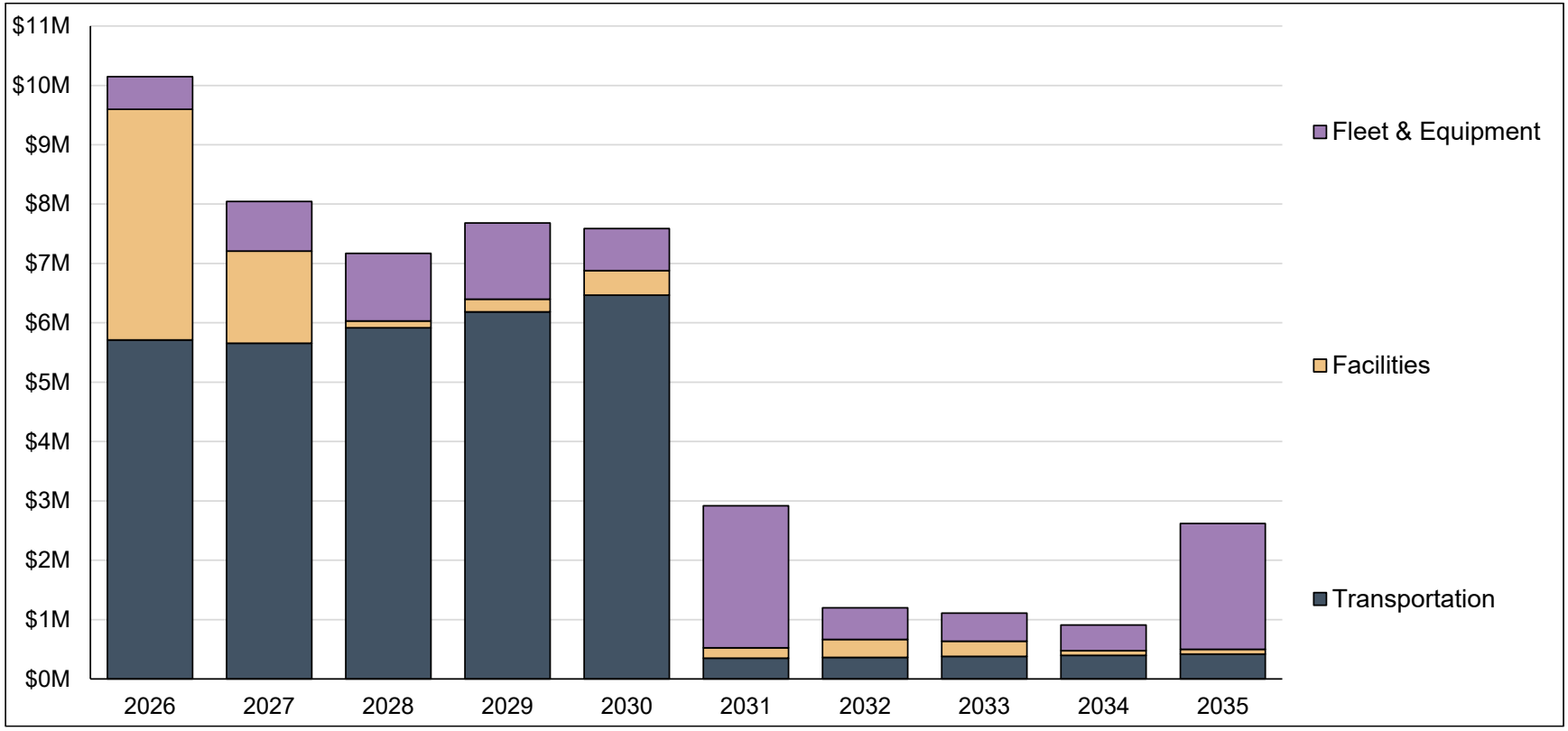


Table 4-1: Tax-funded Assets – Overall Capital Expenditure Forecast (Inflated)

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Capital Expenditures for Transportation	$ 5,711,000	$ 5,655,000	$ 5,914,000	$ 6,184,000	$ 6,467,000	$ 349,000	$ 365,000	$ 382,000	$ 399,000	$ 418,000
Capital Expenditures for Fleet & Equipment	$ 552,000	$ 837,000	$ 1,140,000	$ 1,282,000	$ 712,000	$ 2,393,000	$ 531,000	$ 474,000	$ 432,000	$ 2,121,000
Capital Expenditures for Facilities	$ 3,884,000	$ 1,553,000	$ 116,000	$ 216,000	$ 411,000	$ 174,000	$ 302,000	$ 253,000	$ 78,000	$ 82,000
Total Annual Capital Expenditures	**$ 10,147,000**	**$ 8,045,000**	**$ 7,170,000**	**$ 7,682,000**	**$ 7,590,000**	**$ 2,916,000**	**$ 1,198,000**	**$ 1,109,000**	**$ 909,000**	**$ 2,621,000**

4.2.2 Annual Capital Financing Forecast

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

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

- Annual Ontario Community Infrastructure Fund (OCIF) formula-based funding (approximately $154,000 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 Township's OCIF allocation may continue to change in the coming years. The amount of OCIF funding will need to be monitored by Township 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 Township's allocations for 2026 to 2028 and held constant thereafter (approximately $237,000 annually from 2029 to 2035);
- Proceeds from external debt financing. The financial strategy for tax-supported infrastructure assets includes approximately $19.9 million in additional debt financing to fund forecasted capital expenditures; and
- Funds projected to be available in the Township's tax-funded capital reserves and reserve funds. To manage risks associated with unexpected capital expenditures that may arise, the financial strategy maintains a minimum balance in the Township's capital reserve and reserve funds. The minimum balance was set at 10% of average annual capital expenditures over the forecast period, approximately $494,000.

Table 4-2 summarizes the capital financing forecast for the Township's tax-funded assets.

Table 4-2: Capital Financing by Source (2026-2035)

Capital Financing Source	Total Capital Financing (2026-2035)	Percentage of Total
Transfer Payment Revenues (i.e., OCIF + CCBF)	$3,907,000	8%
Contributions from Capital Reserves and Reserve Funds	$25,591,000	52%
Proceeds from External Debt Financing	$19,888,000	40%
Total	**$49,386,000**	**100%**

4.2.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

An annual lifecycle funding target represents the level of funding that would be required annually to fully finance a lifecycle management strategy over the long term. By planning to achieve this annual funding level, the Township would theoretically be able to fully fund capital works as they arise. In practice, however, capital expenditures are characterized by peaks and valleys and often fluctuate year-to-year based on the lifecycle activities being undertaken. By planning to achieve the lifecycle funding target over the long term, the periods of relatively low capital needs would allow for the building up of lifecycle reserve funds that could be drawn upon in times of relatively high capital needs.

Table 4-3 summarizes the modelling approaches that have been utilized to derive the annual lifecycle funding target for tax-funded assets.

Table 4-3: Modelling Approaches Utilized to Determine Annual Lifecycle Funding Targets by Asset Category

Asset Category	Modelling Approach
Transportation	Roads: Based on lifecycle management strategy recommended in 2021 Road Needs Study and further refined through staff consultations Bridges & Culverts: Annual reinvestment rate equal to 1.35% of current replacement cost Road-related Assets: Useful life analysis (i.e., determined by dividing the current replacement cost of each asset by its expected useful service life)
Facilities	Annual reinvestment rate equal to 2.1% of current replacement cost
Fleet and Equipment	Useful life analysis (i.e., determined by dividing the current replacement cost of each asset by its expected useful service life)

The annual lifecycle funding target for the Township's tax-funded assets is $6.62 million (in 2025 dollars). A breakdown of the lifecycle funding target by asset category for illustrated in Figure 4-2 and provided in tabular form in Table 4-4.

Figure 4-2: Tax-funded Assets – Annual Lifecycle Funding Target (2025$) by Asset Category

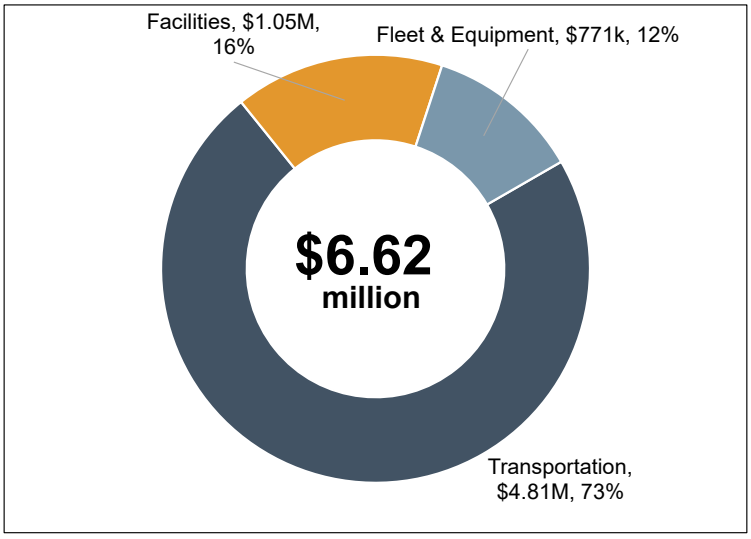


Table 4-4: Tax-funded Assets – Annual Lifecycle Funding Target (2025$) by Asset Category

Asset Category	Annual Lifecycle Funding Target (2025$)
Transportation	$4,806,000
Facilities	$1,047,000
Fleet & Equipment	$771,000
Total	**$6,624,000**

Relative to this annual lifecycle funding target, the Township allocated approximately $3.18 million in its 2025 budget towards capital-related needs for tax-funded assets. This allocation comprised approximately $712,000 in repayments for debt previously incurred to fund tangible capital asset purchases, approximately $939,000 in contributions to capital reserves and reserve funds, approximately $1.1 million that was directly allocated from the 2025 tax levy to fund in-year capital expenditures, and approximately $383,000 from ongoing transfer payment revenues (i.e., OCIF and CCBF).

A breakdown of the capital funding budgeted in the Township's 2025 Council-approved budget for tax-supported assets is illustrated in Figure 4-3 and provided in tabular form in Table 4-5.

Figure 4-3: Tax-funded Services – Capital Funding Allocated in 2025 Budget

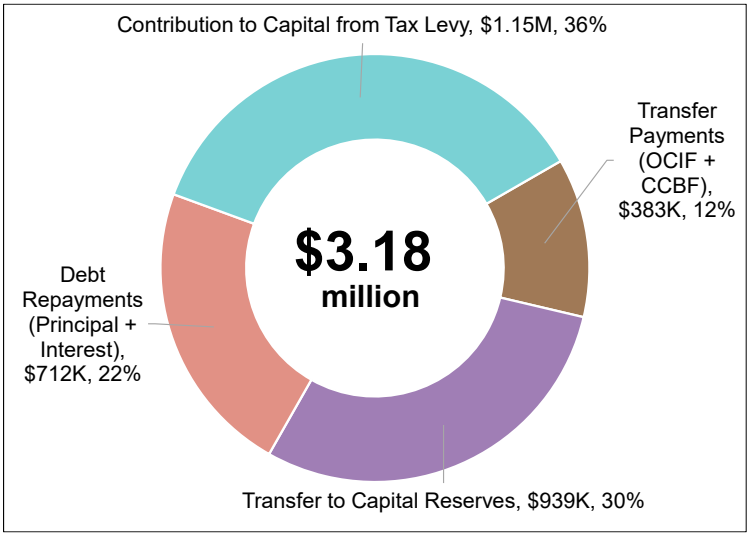


Table 4-5: Tax-funded Services – Capital Funding Allocated in 2025 Budget

Capital Funding Source	Capital Funding Budgeted in 2025
Transfer Payment Revenues (OCIF & CCBF)	$383,000
Debt Repayments (Principal + Interest)	$712,000
Contributions to Capital Reserves & Reserve Funds	$939,000
Contribution to Capital Expenditures from Tax Levy	$1,147,000
Total	**$3,181,000**

The difference between the annual lifecycle funding target and the currently budgeted capital funding represents the Township's annual infrastructure funding gap for its tax-funded assets. Based on this analysis, the Township is facing a tax-based annual infrastructure funding gap of $3.44 million. The financial strategy presented herein aims to eliminate this funding gap gradually over a 15-year period (i.e., by 2040).

4.2.4 Overall Financial Forecast and Estimated Impact on Tax Levy

Through consultations with both Township staff and Council, it was determined that the Township would seek to eliminate its tax-based annual infrastructure funding gap over a 15-year timeframe. This section presents the overall impacts on the Township's financial position of gradually eliminating the funding gap by 2040.

As noted earlier, the capital forecast for tax-supported assets proposes additional debt financing of approximately $19.9 million over the forecast period. As such, annual repayments on external debt (i.e., principal and interest payments) are expected to rise from approximately $712,000 in 2025 to approximately $2.42 million by 2035.

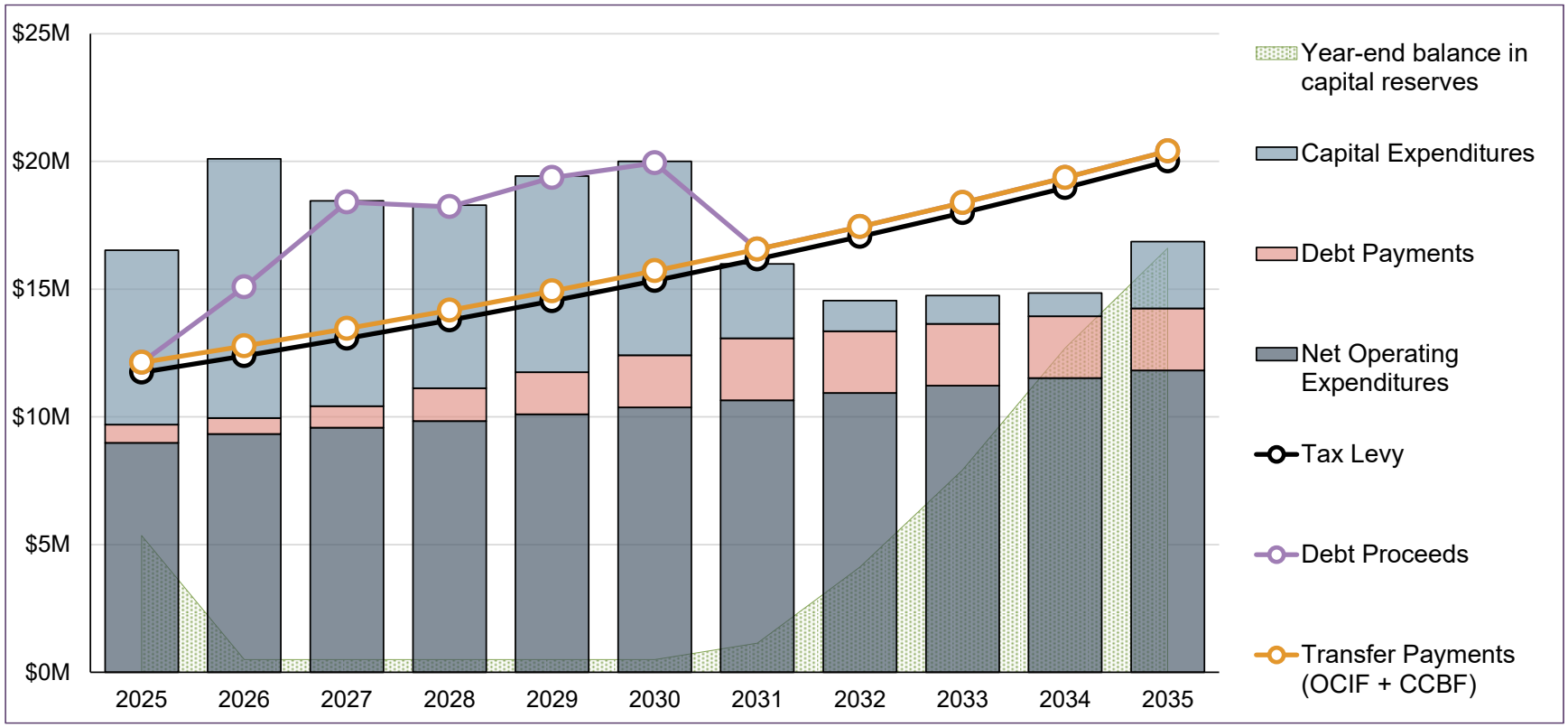
The Township is expected to have approximately $5.4 million in its tax-funded capital reserves and reserve funds at the end of 2025. By 2035, that balance is expected to grow to approximately $16.6 million. A detailed continuity schedule of tax-funded capital reserves and reserve funds can be found in Appendix A.

In order to fund the recommended lifecycle management strategy and gradually eliminate the tax-based infrastructure funding gap over the next 15 years, the Township's tax levy would need to increase by 5.47% annually from 2026 to 2035, increasing from approximately $11.75 million in 2025 to approximately $20.01 million by 2035.

The taxation impacts identified above include inflationary adjustments to the Township's operating costs and revenues as identified in its 2025 budget (i.e., general operating inflation of 2.22% annually).

Figure 4-4 illustrates the overall financial forecast for the Township's tax-funded assets. Full details of the financial strategy are provided in Appendix A.

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



4.2.5 Estimated Impact on Tax Bills (2026-2035)

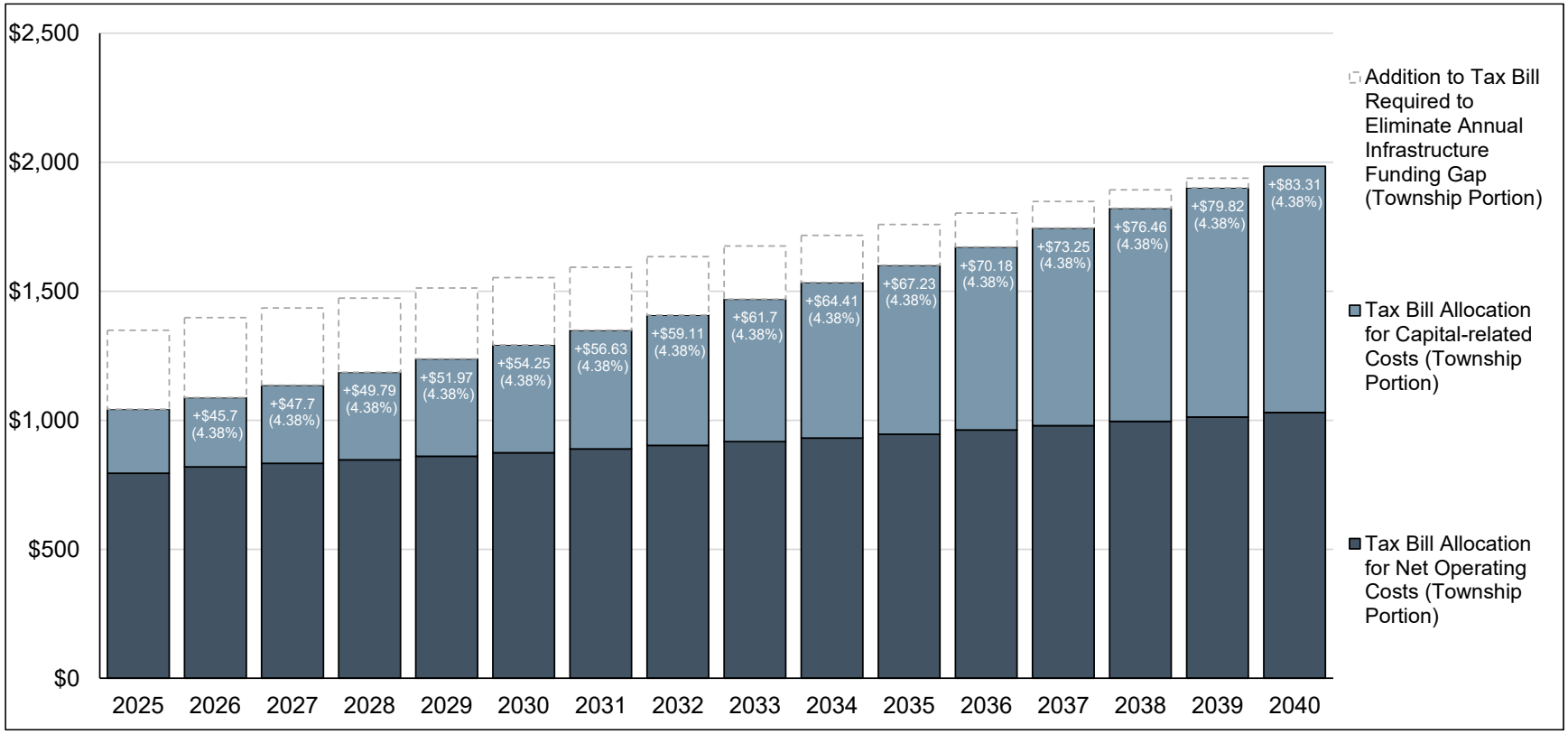
This section presents the estimated impact resulting from the financial strategy on the annual tax bill of a typical single-family detached house in the Township with a current value assessment of $223,000[1].

As noted in the previous section, the Township would need to increase its tax levy by 5.47% annually to eliminate the current infrastructure funding gap by 2040. Layering on assessment increases resulting from new assessment growth, assumed to be 1.04% annually over the forecast period, the impact on the Township portion of individual property tax bills would be increases of 4.38% annually from 2026 to 2035. A typical single-family detached house in the Township with a current value assessment of $223,000 would see the Township portion of its tax bill rise from approximately $1,043 as of 2025 to approximately $1,984 by 2040.

Figure 4-5 illustrates the estimated impact on the Township portion of the tax bill for a typical single-family detached house with a current value assessment of $223,000.

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

Figure 4-5: Estimated Impact on the Municipal Portion of the Tax Bill for Typical Single-family Detached House Assessed at $223,000 (2025-2040)



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 Township's water and wastewater assets.

Capital expenditures over the 10-year forecast horizon are expected to total $4.0 million, an average of $401,000 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 4.57% annually. Once the impacts of estimated inflation on capital costs are incorporated, capital expenditures are expected to total $5.5 million, an average of $554,000 annually.

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

Figure 4-6: Water & Wastewater Rate-funded Assets - Overall Capital Expenditure Forecast (Inflated)

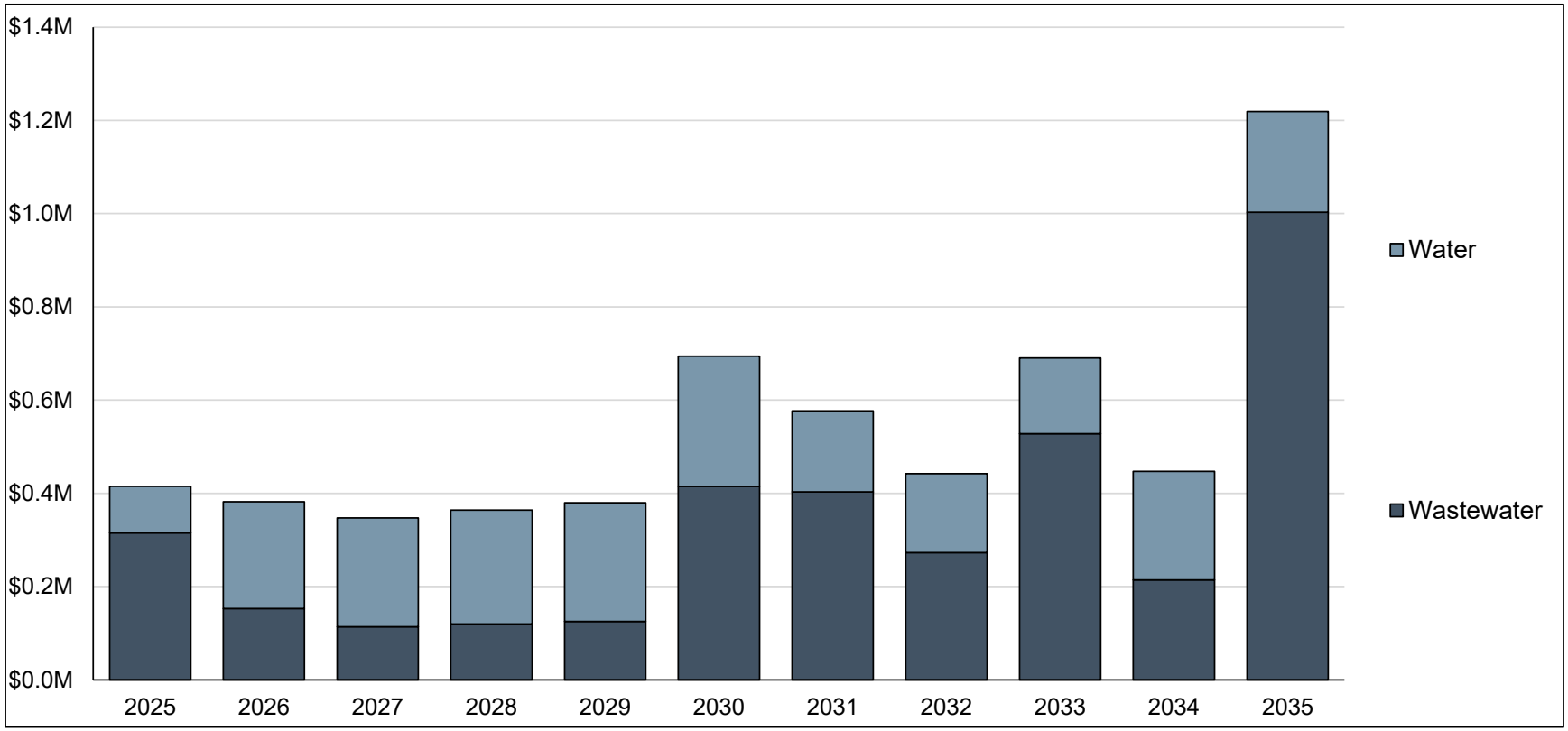


Table 4-6: Water & Wastewater Rate-funded Assets - Overall Capital Expenditure Forecast (Inflated)

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Capital Expenditures for Water	$ 229,000	$ 233,000	$ 244,000	$ 255,000	$ 279,000	$ 174,000	$ 169,000	$ 162,000	$ 233,000	$ 216,000
Capital Expenditures for Wastewater	$ 153,000	$ 114,000	$ 120,000	$ 125,000	$ 415,000	$ 403,000	$ 273,000	$ 528,000	$ 214,000	$ 1,003,000
Total Annual Capital Expenditures	**$ 382,000**	**$ 347,000**	**$ 364,000**	**$ 380,000**	**$ 694,000**	**$ 577,000**	**$ 442,000**	**$ 690,000**	**$ 447,000**	**$ 1,219,000**

4.3.2 Annual Capital Financing Forecast

This section summarizes the recommended strategy to finance the capital expenditures identified in Section 4.3.1.

Capital expenditures for water and wastewater assets are expected to be fully financed from the Township's rate-funded capital reserves and reserve funds. A total of approximately $5.5 million is expected to be available in the Township's water and wastewater rate-funded capital reserves and reserve funds to finance the forecasted capital expenditures over 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 Township's capital reserve and reserve funds. The minimum balance was set at 10% of average annual capital expenditures over the forecast period, approximately $55,000 for water and wastewater rate-funded capital reserves and reserve funds.

4.3.3 Current Annual Lifecycle Funding Target & Infrastructure Funding Gap

The annual lifecycle funding target for the Township's rate-funded assets is $698,000 (in 2025 dollars). Please refer to Section 4.2.3 for further information on annual lifecycle funding targets. Table 4-7 summarizes the modelling approaches that have been utilized to derive the annual lifecycle funding target for rate-funded assets.

Table 4-7: Modelling Approaches Utilized to Determine Annual Lifecycle Funding Targets by Asset Category

Asset Category	Modelling Approach
Water	Watermains: Useful life analysis (i.e., determined by dividing the current replacement cost of each watermain segment by an 80-year expected useful service life) Water Treatment Facilities: Annual reinvestment rate equal to 2.1% of current replacement cost Shared Box Trailer: Useful life analysis (i.e., determined by dividing the current replacement cost of the trailer by its expected useful service life)
Wastewater	Wastewater Mains: Useful life analysis (i.e., determined by dividing the current replacement cost of each wastewater main segment by an 80-year expected useful service life) Water Treatment Facilities: Annual reinvestment rate equal to 2.1% of current replacement cost Shared Box Trailer: Useful life analysis (i.e., determined by dividing the current replacement cost of the trailer by its expected useful service life)

A breakdown of the lifecycle funding target by asset category is illustrated in Figure 4-7 and provided in tabular form in Table 4-8.

Figure 4-7: Water & Wastewater Rate-funded Assets - Annual Lifecycle Funding Target (2025$)

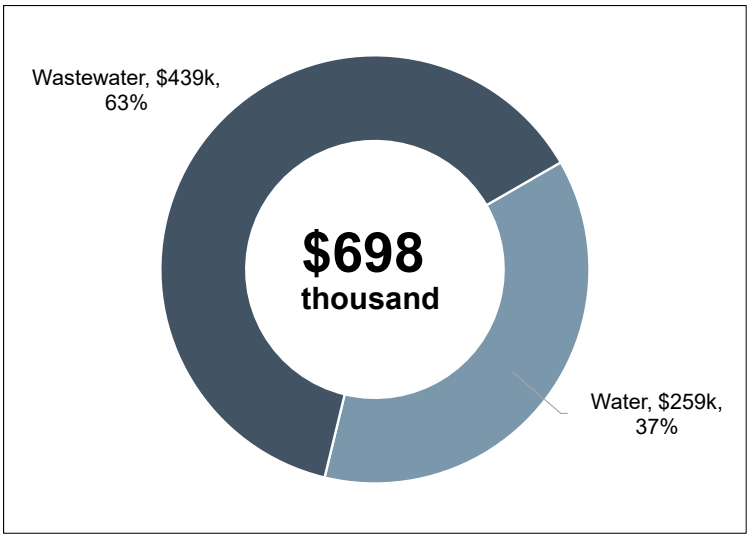


Table 4-8: Water & Wastewater Rate-funded Assets - Annual Lifecycle Funding Target (2025$)

Asset Category	Annual Lifecycle Funding Target
Water	$259,000
Wastewater	$439,000
Total	**$698,000**

Relative to this annual lifecycle funding target, the Township allocated approximately $205,000 million towards capital-related needs in its 2025 budget for rate-funded assets, which comprised contributions made into the Township's water and wastewater rate-funded capital reserves and reserve funds. The difference between the annual lifecycle funding target and the currently budgeted capital funding represents the Township's annual infrastructure funding gap for its rate-funded assets. Based on this analysis, the Township is currently facing a rate-based annual infrastructure funding gap of approximately $493,000. The financial strategy presented herein aims to eliminate this funding gap gradually over the next 10 years (i.e., by 2035).

4.3.4 Overall Financial Forecast and Estimated Impact on Rate Revenues

Through consultations with both Township staff and Council, it was determined that the Township would seek to eliminate its annual infrastructure funding gap for rate-funded assets over a 10-year timeframe. This section presents the overall impacts on the Township's financial position of gradually eliminating the funding gap by 2035.

As noted earlier in Section 4.3.2, the capital forecast for rate-funded assets does not require any additional debt financing over the 10-year forecast period. Furthermore, The Township does not currently have any outstanding debt related to its water and wastewater system assets. As such, there are no costs related to debt repayments expected over the 10-year forecast period.

The Township is expected to have approximately $2.6 million in its rate-funded capital reserves and reserve funds at the end of 2025. By 2035, this balance is expected to grow to approximately $4.2 million. A detailed continuity schedule of rate-funded capital reserves/reserve funds can be found in Appendix B

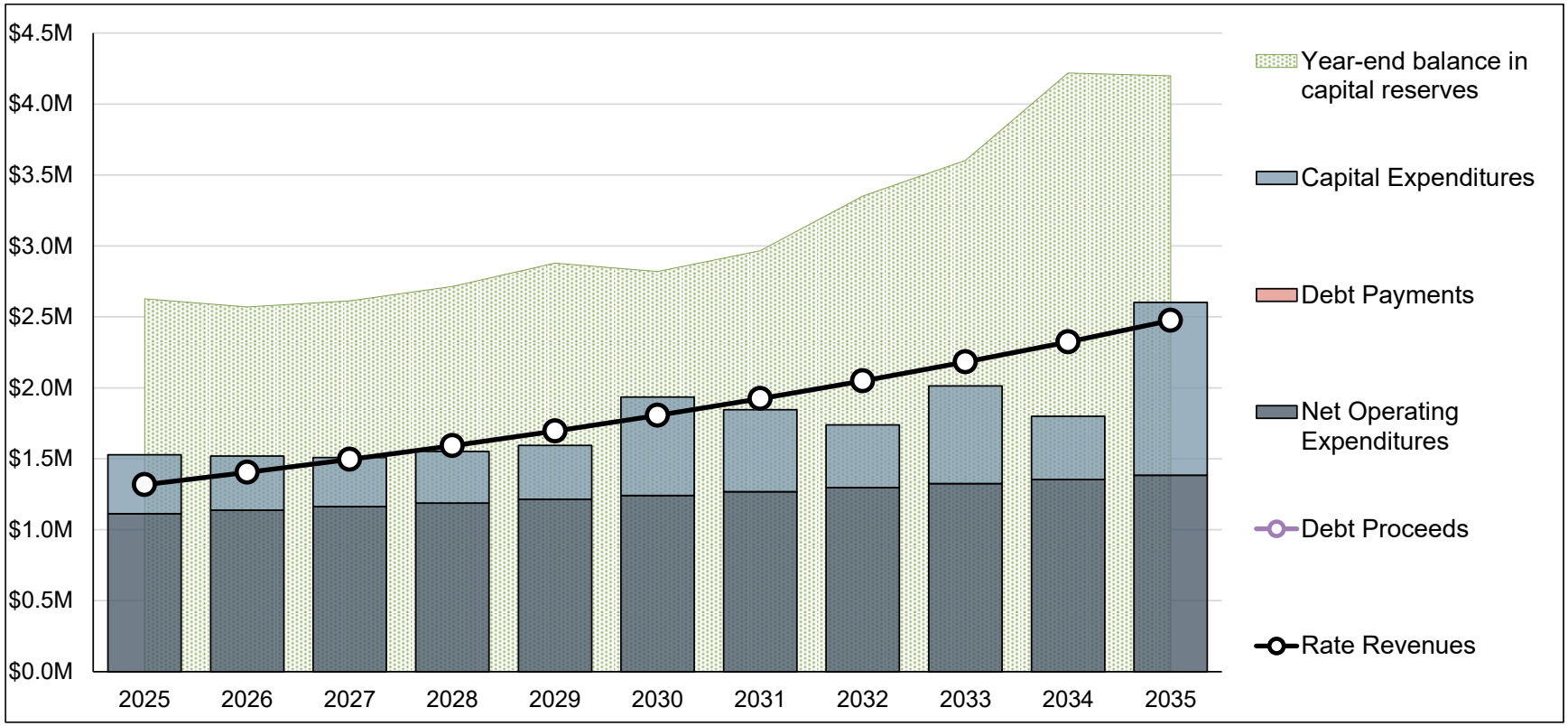
In order to fund the recommended lifecycle management strategy and eliminate the rate-based infrastructure funding gap, the Township's water and wastewater rate revenues would need to increase by 6.51% annually from 2026 to 2035[1]. Rate revenues are forecasted to rise from the current level of approximately $1.32 million to approximately $2.48 million by 2035.

The identified rate-revenue impacts include inflationary adjustments to the Township's operating costs and revenues as identified in its 2025 budget (i.e., general operating inflation of 2.22% annually).

Figure 4-8 illustrates the overall financial forecast for the Township's rate-funded assets, with full details of the Financial Strategy provided in Appendix B.

[1]Please note that this may not necessarily lead to an equivalent increase in the water and wastewater rates that are charged to users. The Township's water and wastewater rates are determined as part of its annual budgeting process and are dependent on other factors (such as consumption), which are outside the scope of the analyses presented herein.

Figure 4-8: Water & Wastewater Rate-funded Assets - Overall Financial Forecast (Inflated)



Chapter 5
Recommendations and Next Steps

5. Recommendations and Next Steps

5.1 Recommendations

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

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

5.2 Next Steps

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

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

O. Reg. 588/17 requires updates to this asset management plan to be conducted at a minimum every five years. To maximize the reliability of the updated analyses, the Township should proactively plan to conduct updates of background studies and underlying asset data in a timely manner prior to undertaking an update of this asset management plan. The Township should also plan to proactively update the underlying data utilized to inform the current performance of the 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.

Appendix A
Financial Strategy Tables for Tax-funded Assets

Table A-1: Tax-Supported Capital Budget Forecast (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Capital Expenditures for Transportation	$ 5,711,000	$ 5,655,000	$ 5,914,000	$ 6,184,000	$ 6,467,000	$ 349,000	$ 365,000	$ 382,000	$ 399,000	$ 418,000
Capital Expenditures for Fleet & Equipment	$ 552,000	$ 837,000	$ 1,140,000	$ 1,282,000	$ 712,000	$ 2,393,000	$ 531,000	$ 474,000	$ 432,000	$ 2,121,000
Capital Expenditures for Facilities	$ 3,884,000	$ 1,553,000	$ 116,000	$ 216,000	$ 411,000	$ 174,000	$ 302,000	$ 253,000	$ 78,000	$ 82,000
Total Annual Capital Expenditures	**$ 10,147,000**	**$ 8,045,000**	**$ 7,170,000**	**$ 7,682,000**	**$ 7,590,000**	**$ 2,916,000**	**$ 1,198,000**	**$ 1,109,000**	**$ 909,000**	**$ 2,621,000**
Capital Financing										
Annual Transfer Payment Revenues (OCIF + CCBF)	$ 383,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000	$ 392,000
Contributions from Capital R&RFs	$ 7,450,000	$ 2,712,000	$ 2,725,000	$ 2,853,000	$ 2,983,000	$ 2,524,000	$ 806,000	$ 717,000	$ 517,000	$ 2,229,000
Proceeds from External Debt	$ 2,314,000	$ 4,941,000	$ 4,053,000	$ 4,437,000	$ 4,215,000	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Financing	**$ 10,147,000**	**$ 8,045,000**	**$ 7,170,000**	**$ 7,682,000**	**$ 7,590,000**	**$ 2,916,000**	**$ 1,198,000**	**$ 1,109,000**	**$ 909,000**	**$ 2,621,000**

Table A-2: Tax-Supported Schedule of Debt Payments (Inflated)
Township of Minden Hills

Year	New Debt	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Existing		$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000	$ 629,000
2026	$ 2,315,000		$ 208,000	$ 208,000	$ 208,000	$ 208,000	$ 208,000	$ 208,000	$ 208,000	$ 208,000	$ 208,000
2027	$ 4,941,000			$ 443,000	$ 443,000	$ 443,000	$ 443,000	$ 443,000	$ 443,000	$ 443,000	$ 443,000
2028	$ 4,054,000				$ 364,000	$ 364,000	$ 364,000	$ 364,000	$ 364,000	$ 364,000	$ 364,000
2029	$ 4,437,000					$ 398,000	$ 398,000	$ 398,000	$ 398,000	$ 398,000	$ 398,000
2030	$ 4,216,000						$ 378,000	$ 378,000	$ 378,000	$ 378,000	$ 378,000
2031	$ -							$ -	$ -	$ -	$ -
2032	$ -								$ -	$ -	$ -
2033	$ -									$ -	$ -
2034	$ -										$ -
2035	$ -										
Total Annual Debt Repayments		**$ 629,000**	**$ 837,000**	**$ 1,280,000**	**$ 1,644,000**	**$ 2,042,000**	**$ 2,420,000**	**$ 2,420,000**	**$ 2,420,000**	**$ 2,420,000**	**$ 2,420,000**

Table A-3: Tax-Supported Schedule of Capital Reserves and Reserve Funds Continuity (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	$ 5,356,000	$ 494,000	$ 494,000	$ 494,000	$ 494,000	$ 494,000	$ 1,139,000	$ 4,128,000	$ 7,924,000	$ 12,698,000
Add: Transfer from Operating	$ 2,432,000	$ 2,649,000	$ 2,662,000	$ 2,788,000	$ 2,915,000	$ 3,098,000	$ 3,699,000	$ 4,343,000	$ 5,033,000	$ 5,770,000
Add: Interest Earned	$ 156,000	$ 63,000	$ 63,000	$ 66,000	$ 68,000	$ 72,000	$ 97,000	$ 169,000	$ 259,000	$ 369,000
Less: Transfer to Fund Capital Expenditures	$ 7,450,000	$ 2,712,000	$ 2,725,000	$ 2,853,000	$ 2,983,000	$ 2,524,000	$ 806,000	$ 717,000	$ 517,000	$ 2,229,000
Closing Balance	**$ 494,000**	**$ 494,000**	**$ 494,000**	**$ 495,000**	**$ 494,000**	**$ 1,140,000**	**$ 4,129,000**	**$ 7,923,000**	**$ 12,699,000**	**$ 16,608,000**
Minimum Reserve Balance Theshold (10% of avg. inflated CAPEX)	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*	*$ 494,000*

Table A-4: Tax-Supported Operating Budget Forecast (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Operating Expenditures										
Salaries & Benefits	$ 6,965,000	$ 7,119,000	$ 7,277,000	$ 7,438,000	$ 7,603,000	$ 7,772,000	$ 7,944,000	$ 8,120,000	$ 8,300,000	$ 8,484,000
Purchase of Goods & Services	$ 6,853,000	$ 7,005,000	$ 7,160,000	$ 7,319,000	$ 7,481,000	$ 7,647,000	$ 7,817,000	$ 7,990,000	$ 8,167,000	$ 8,348,000
Internal Transfer Expense	$ 36,000	$ 37,000	$ 38,000	$ 39,000	$ 40,000	$ 41,000	$ 42,000	$ 43,000	$ 44,000	$ 45,000
Contribution to Other Funds	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000	$ 17,000
Contribution to Fund ARO Liability	$ 48,000	$ 50,000	$ 52,000	$ 55,000	$ 57,000	$ 60,000	$ 63,000	$ 65,000	$ 68,000	$ 72,000
Contribution to Operating Reserves	$ 107,000	$ 109,000	$ 111,000	$ 113,000	$ 116,000	$ 119,000	$ 122,000	$ 125,000	$ 128,000	$ 131,000
Sub-total: Operating Expenditures	**$ 14,026,000**	**$ 14,337,000**	**$ 14,655,000**	**$ 14,981,000**	**$ 15,314,000**	**$ 15,656,000**	**$ 16,005,000**	**$ 16,360,000**	**$ 16,724,000**	**$ 17,097,000**
Capital-related Expenditures										
Transfer to Capital Reserves	$ 2,432,000	$ 2,649,000	$ 2,662,000	$ 2,788,000	$ 2,915,000	$ 3,098,000	$ 3,699,000	$ 4,343,000	$ 5,033,000	$ 5,770,000
Debt Repayment	$ 629,000	$ 837,000	$ 1,280,000	$ 1,644,000	$ 2,042,000	$ 2,420,000	$ 2,420,000	$ 2,420,000	$ 2,420,000	$ 2,420,000
Sub-total: Capital-related Expenditures	**$ 3,061,000**	**$ 3,486,000**	**$ 3,942,000**	**$ 4,432,000**	**$ 4,957,000**	**$ 5,518,000**	**$ 6,119,000**	**$ 6,763,000**	**$ 7,453,000**	**$ 8,190,000**
Total Annual Expenditures	**$ 17,087,000**	**$ 17,823,000**	**$ 18,597,000**	**$ 19,413,000**	**$ 20,271,000**	**$ 21,174,000**	**$ 22,124,000**	**$ 23,123,000**	**$ 24,177,000**	**$ 25,287,000**
Operating Revenues										
Tax Levy	$ 12,390,000	$ 13,067,000	$ 13,781,000	$ 14,536,000	$ 15,331,000	$ 16,170,000	$ 17,055,000	$ 17,988,000	$ 18,972,000	$ 20,012,000
Taxation-related	$ 145,000	$ 150,000	$ 153,000	$ 156,000	$ 159,000	$ 163,000	$ 167,000	$ 170,000	$ 175,000	$ 178,000
User Fees	$ 1,168,000	$ 1,193,000	$ 1,220,000	$ 1,247,000	$ 1,275,000	$ 1,303,000	$ 1,332,000	$ 1,362,000	$ 1,392,000	$ 1,423,000
Penalties & Interest	$ 744,000	$ 760,000	$ 777,000	$ 794,000	$ 812,000	$ 830,000	$ 848,000	$ 867,000	$ 886,000	$ 906,000
Other Revenue	$ 368,000	$ 376,000	$ 384,000	$ 393,000	$ 402,000	$ 411,000	$ 420,000	$ 429,000	$ 439,000	$ 449,000
Internal Transfer Revenue	$ 128,000	$ 131,000	$ 134,000	$ 137,000	$ 140,000	$ 143,000	$ 146,000	$ 149,000	$ 152,000	$ 155,000
OMPF	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000	$ 2,044,000
Grants & Donations	$ 100,000	$ 102,000	$ 104,000	$ 106,000	$ 108,000	$ 110,000	$ 112,000	$ 114,000	$ 117,000	$ 120,000
Total Annual Revenues	**$ 17,087,000**	**$ 17,823,000**	**$ 18,597,000**	**$ 19,413,000**	**$ 20,271,000**	**$ 21,174,000**	**$ 22,124,000**	**$ 23,123,000**	**$ 24,177,000**	**$ 25,287,000**

Table A-5: Tax Levy Forecast (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Prior-year Tax Levy	$ 11,746,000	$ 12,389,000	$ 13,067,000	$ 13,782,000	$ 14,536,000	$ 15,331,000	$ 16,170,000	$ 17,055,000	$ 17,988,000	$ 18,973,000
Add: Tax Revenues from Incremental Assessment Growth	$ 124,000	$ 129,000	$ 135,000	$ 144,000	$ 151,000	$ 160,000	$ 169,000	$ 178,000	$ 187,000	$ 199,000
Add: Tax Revenues from Existing Assessment Base	$ 520,000	$ 549,000	$ 579,000	$ 610,000	$ 644,000	$ 679,000	$ 716,000	$ 755,000	$ 797,000	$ 840,000
Total Tax Levy	**$ 12,390,000**	**$ 13,067,000**	**$ 13,781,000**	**$ 14,536,000**	**$ 15,331,000**	**$ 16,170,000**	**$ 17,055,000**	**$ 17,988,000**	**$ 18,972,000**	**$ 20,012,000**
Tax Levy Increase %		*5.47%*	*5.47%*	*5.47%*	*5.47%*	*5.47%*	*5.47%*	*5.47%*	*5.47%*	*5.47%*
Tax Rate Increase %		*4.38%*	*4.38%*	*4.38%*	*4.38%*	*4.38%*	*4.38%*	*4.38%*	*4.38%*	*4.38%*

Appendix B
Financial Strategy Tables for Rate-funded Assets

Table B-1: Water & Wastewater Capital Budget Forecast (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital Expenditures										
Capital Expenditures for Water	$ 229,000	$ 233,000	$ 244,000	$ 255,000	$ 279,000	$ 174,000	$ 169,000	$ 162,000	$ 233,000	$ 216,000
Capital Expenditures for Wastewater	$ 153,000	$ 114,000	$ 120,000	$ 125,000	$ 415,000	$ 403,000	$ 273,000	$ 528,000	$ 214,000	$ 1,003,000
Total Annual Capital Expenditures	**$ 382,000**	**$ 347,000**	**$ 364,000**	**$ 380,000**	**$ 694,000**	**$ 577,000**	**$ 442,000**	**$ 690,000**	**$ 447,000**	**$ 1,219,000**
Capital Financing										
Contributions from Capital R&RFs	$ 382,000	$ 347,000	$ 364,000	$ 380,000	$ 694,000	$ 577,000	$ 442,000	$ 690,000	$ 447,000	$ 1,219,000
Proceeds from External Debt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Annual Capital Financing	**$ 382,000**	**$ 347,000**	**$ 364,000**	**$ 380,000**	**$ 694,000**	**$ 577,000**	**$ 442,000**	**$ 690,000**	**$ 447,000**	**$ 1,219,000**

Table B-2: Water & Wastewater Schedule of Debt Payments (Inflated)
Township of Minden Hills

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 Repayments		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Table B-3: Water & Wastewater Schedule of Capital Reserves and Reserve Funds Continuity (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Opening Balance	$ 2,628,000	$ 2,570,000	$ 2,614,000	$ 2,714,000	$ 2,879,000	$ 2,819,000	$ 2,967,000	$ 3,352,000	$ 3,604,000	$ 4,219,000
Add: Transfer from Operating	$ 266,000	$ 333,000	$ 404,000	$ 482,000	$ 565,000	$ 655,000	$ 753,000	$ 858,000	$ 971,000	$ 1,092,000
Add: Interest Earned	$ 58,000	$ 58,000	$ 60,000	$ 64,000	$ 69,000	$ 69,000	$ 74,000	$ 84,000	$ 91,000	$ 106,000
Less: Transfer to Fund Capital Expenditures	$ 382,000	$ 347,000	$ 364,000	$ 380,000	$ 694,000	$ 577,000	$ 442,000	$ 690,000	$ 447,000	$ 1,219,000
Closing Balance	**$ 2,570,000**	**$ 2,614,000**	**$ 2,714,000**	**$ 2,880,000**	**$ 2,819,000**	**$ 2,966,000**	**$ 3,352,000**	**$ 3,604,000**	**$ 4,219,000**	**$ 4,198,000**
Minimum Reserve Balance Theshold (10% of avg. inflated CAPEX)	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*	*$ 55,000*

Table B-4: Water & Wastewater Operating Budget Forecast (Inflated)
Township of Minden Hills

Description	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Operating Expenditures										
Purchase of Goods & Services	$ 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	$ 1,320,000
Internal Transfer Expense	$ 92,000	$ 94,000	$ 96,000	$ 98,000	$ 100,000	$ 102,000	$ 104,000	$ 106,000	$ 108,000	$ 110,000
Sub-total: Operating Expenditures	**$ 1,175,000**	**$ 1,201,000**	**$ 1,228,000**	**$ 1,255,000**	**$ 1,283,000**	**$ 1,311,000**	**$ 1,340,000**	**$ 1,369,000**	**$ 1,399,000**	**$ 1,430,000**
Capital-related Expenditures										
Transfer to Capital Reserves	$ 266,000	$ 333,000	$ 404,000	$ 482,000	$ 565,000	$ 655,000	$ 753,000	$ 858,000	$ 971,000	$ 1,092,000
Debt Repayment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sub-total: Capital-related Expenditures	**$ 266,000**	**$ 333,000**	**$ 404,000**	**$ 482,000**	**$ 565,000**	**$ 655,000**	**$ 753,000**	**$ 858,000**	**$ 971,000**	**$ 1,092,000**
Total Annual Expenditures	**$ 1,441,000**	**$ 1,534,000**	**$ 1,632,000**	**$ 1,737,000**	**$ 1,848,000**	**$ 1,966,000**	**$ 2,093,000**	**$ 2,227,000**	**$ 2,370,000**	**$ 2,522,000**
Operating Revenues										
Water & Wastewate Rate Revenues	$ 1,403,000	$ 1,495,000	$ 1,592,000	$ 1,696,000	$ 1,806,000	$ 1,923,000	$ 2,049,000	$ 2,182,000	$ 2,324,000	$ 2,475,000
Penalties & Interest	$ 38,000	$ 39,000	$ 40,000	$ 41,000	$ 42,000	$ 43,000	$ 44,000	$ 45,000	$ 46,000	$ 47,000
Total Annual Revenues	**$ 1,441,000**	**$ 1,534,000**	**$ 1,632,000**	**$ 1,737,000**	**$ 1,848,000**	**$ 1,966,000**	**$ 2,093,000**	**$ 2,227,000**	**$ 2,370,000**	**$ 2,522,000**
Water & Wastewate Rate Revenues Increase %		*6.51%*	*6.51%*	*6.51%*	*6.51%*	*6.51%*	*6.51%*	*6.51%*	*6.51%*	*6.51%*