



Asset Management Plan

Township of Minden Hills

Final Report

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Report



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 assist in developing this asset management plan, which brings the Township in compliance with the July 1, 2022 and July 1, 2024 requirements of *Ontario Regulation 588/17: Asset Management Planning For Municipal Infrastructure* (O. Reg. 588/17). Following the completion of this asset management plan, the Township will shift its focus to developing a comprehensive asset management plan to meet the July 1, 2025 requirements of O. Reg. 588/17, building upon the asset management work that has been completed to date. Core elements of the comprehensive asset management plan will include an update of asset-related data, filling of identified data gaps, identifying proposed levels of service, establishing lifecycle management strategies to achieve those service levels, and developing a financial strategy that incorporates financial sustainability and affordability factors specific to the Township.

It should be noted that the information presented in this asset management plan is based on the best data available to the Township at this time. For example, the best information currently available regarding the state of the Township's roadways is from the road needs study that the Township completed in 2021. While best efforts have been taken to update the data that was used to develop this asset management plan, this plan is best viewed as a living document that will continue to be refined as newer/better information becomes available. The Township is actively collecting and updating background data related to its assets to support the preparation of the next iteration of this asset management plan that will be developed in 2025.

The total current replacement cost for the Township's infrastructure assets is estimated to be approximately \$306.9 million. Transportation assets comprise the largest share of this replacement cost at approximately \$205 million (67%), followed by facilities at approximately \$46.9 million (15%), wastewater assets at approximately \$28.4 million



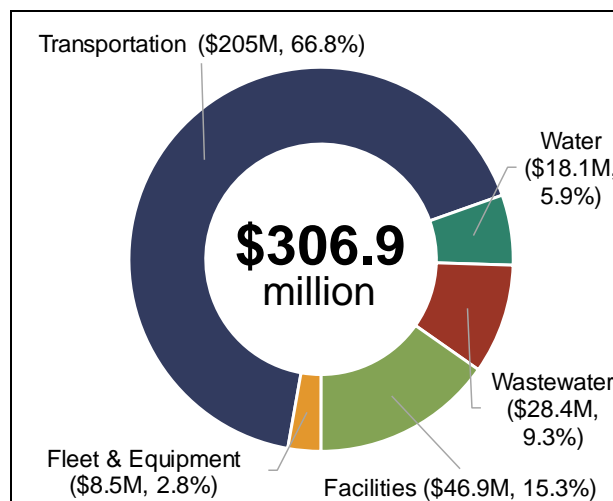
(9%), water assets at approximately \$18.1 million (6%), and lastly, fleet and equipment assets at approximately \$8.5 million (3%).

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

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

Asset Class	Current Replacement Cost	Percentage of Total Replacement Cost
Transportation	\$205,004,000	67%
Water	\$18,126,000	6%
Wastewater	\$28,397,000	9%
Facilities	\$46,891,000	15%
Fleet & Equipment	\$8,465,000	3%
Total	\$306,883,000	100%

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



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.

As noted earlier, this asset management plan was developed to bring the Township into compliance with the July 1, 2022 and July 1, 2024 requirements of O. Reg. 588/17. Over the coming months the Township will be developing the final phase of its asset management plan, which will identify level of service targets and a financial strategy.



The final phase of the asset management plan will bring the Township into full compliance with the 2025 requirements of O. Reg. 588/17.

1.3 Asset Management Plan Development

The development of this asset management plan was guided by asset management strategies and objectives identified through discussions with the Township's asset managers, information gleaned through reviews of existing long-term planning documents and studies, and detailed analyses of the Township's capital asset data. The key steps in the development process of this asset management plan are summarized below:

1. Compile asset information into complete inventories that contain relevant asset attributes such as size, quantity, age, useful service life expectations, and replacement cost. As part of this step, replacement costs were updated, where required, using a combination of the Township's recent procurement data and/or applicable inflationary indices.
2. Define and assess the current condition of assets using a combination of staff input, existing background reports and studies (e.g. Road Needs Study, OSIM Bridge Inspections, Building Condition Assessments), and age-based condition analysis.
3. Define and document current levels of service based on analyses of available data and review of various background reports.
4. Develop lifecycle management strategies that identify the activities required to maintain the current levels of service. The outputs of these strategies were utilized to develop forecasts of annual capital and significant operating expenditures for each asset class.
5. Document the asset management plan in a formal report to inform future decision-making and to communicate planning to municipal stakeholders.



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 support the safe and efficient passage of vehicular and pedestrian traffic as well as contribute to the overall level of service provided by the Township. The Township's transportation assets comprise roadways, bridges, and structural culverts. The estimated current replacement cost of these assets is approximately \$205 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 approximately \$187.5 million. Surface treated roads represent the largest share of replacement cost at approximately \$139.3 million (74%), followed by asphalt roads at approximately \$37.6 million (20%), and lastly, gravel roads at approximately \$10.6 million (6%). The average age of the Township's road surfaces, based on the date of last surface treatment for each road segment, is approximately 19.8 years.

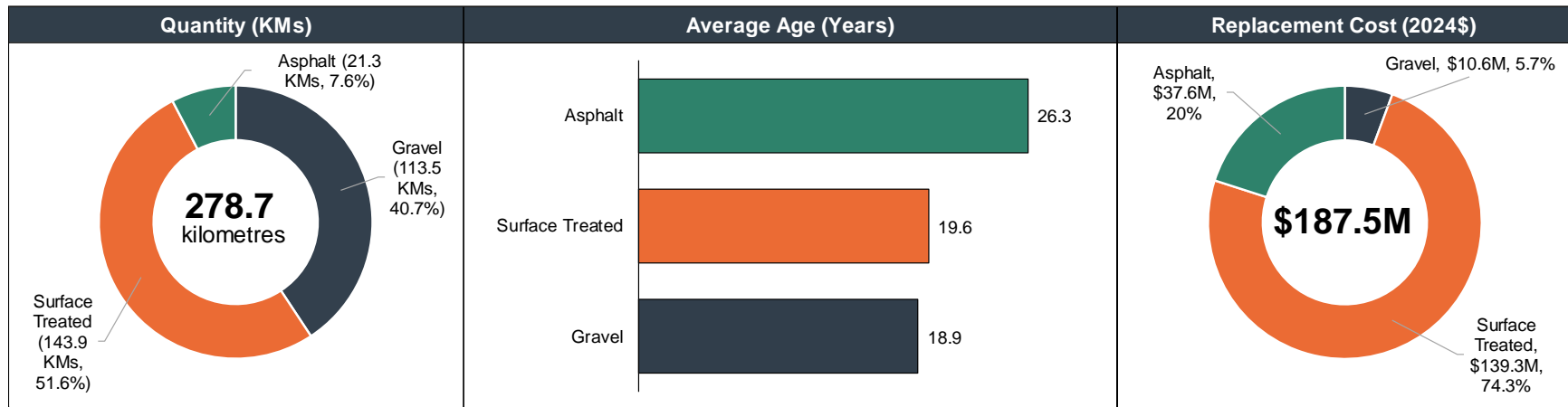
Table 2-1 summarizes the quantity, average age, and estimated current replacement cost of the Township's roadways by surface type. This information is further illustrated in Figure 2-1.

Table 2-1: Roadways – Quantity, Average Age, and Replacement Cost by Surface Type

Surface Type	Quantity	Average Age (Years)	Current Replacement Cost
Gravel	113.5 km	18.9	\$10,598,000
Surface Treated	143.9 km	19.6	\$139,349,000
Asphalt	15.4 km	26.3	\$37,578,000
Total	278.7 km	19.8	\$187,525,000



Figure 2-1: Roadways – Quantity, Average Ae, and Replacement Cost by Surface Type





The Township also owns and manages 18 structures comprising 14 vehicular bridges, three footbridges, and one structural culvert ($\geq 3\text{m}$ span). The estimated current replacement cost of the Township's structures is approximately \$17.5 million. Vehicular bridges on local roads (local bridges) represent the largest share of replacement cost at approximately \$10.6 million (61%), followed by vehicular bridges on collector roads (collector bridges) at approximately \$4.6 million (26%), the Township's one structural culvert at approximately \$1.5 million (8%), and lastly, footbridges at approximately \$856,000 (5%). The average age of the Township's structures is approximately 59.4 years. It is worth noting, however, that ages for the Township's three footbridges are currently unknown. As such, those structures have been excluded from the calculation of average age presented in this subsection. Additionally, the replacement cost of the Minden Boardwalk, one of the Township's three footbridges, has not yet been formally assessed. As such, the Minden Boardwalk is excluded from the total replacement cost of Township structures presented in this subsection. It is recommended that the Township formally assess the replacement cost of this structure through its next OSIM inspection.

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

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

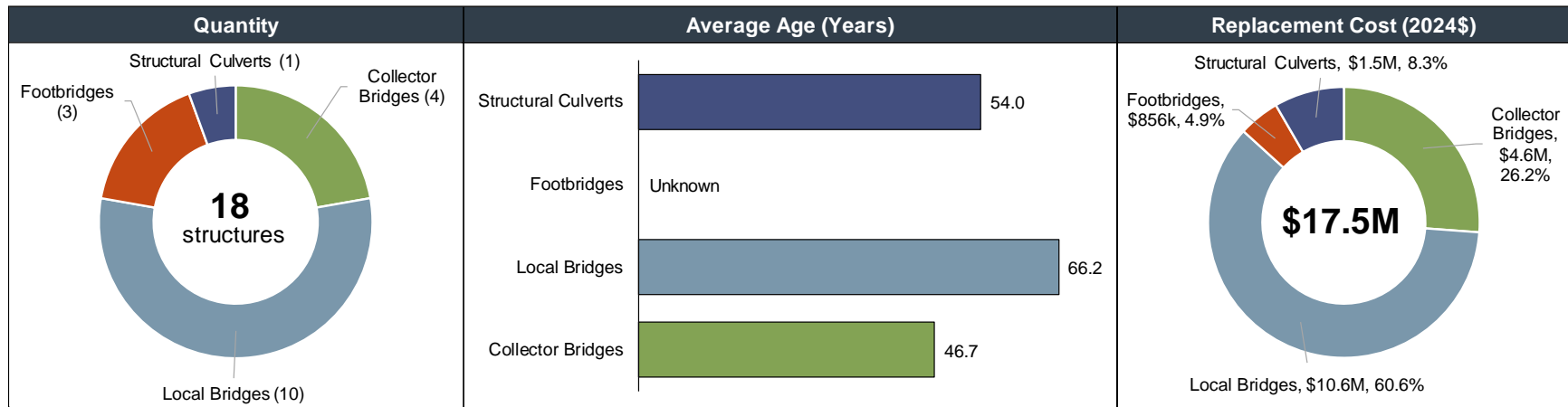
Asset Sub-class	Quantity	Average Age (Years)	Current Replacement Cost
Collector Bridges	4	46.7	\$4,574,000
Local Bridges	10	66.2	\$10,590,000
Footbridges	3	N/A ^[1]	\$856,000 ^[2]
Structural Culvert	1	54.0	\$1,459,000
Total	18	59.4^[1]	\$17,479,000^[2]

^[1] The ages of the Township's three footbridges are currently unknown. Those structures are excluded from the calculation of average age presented in Table 2-2.

^[2] The replacement cost of the Minden Boardwalk has not yet been formally assessed and is excluded from the calculation of replacement costs presented in Table 2-2.



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





2.1.2 Condition

The Township periodically completes roads needs studies which include a condition assessment of the road network. The most recent road needs study was completed in 2021. As part of these studies, each road segment is assigned a Pavement Condition Index (PCI) rating. PCI ratings are calculated for road segments by assigning weighted values to observed base-related distresses (e.g., rutting, fatigue cracking, etc.), surface-related distresses (e.g., raveling, shoving, etc.), and the overall ride condition of the segment. Thus, PCI ratings also provide an indication of the structural integrity of the road segment and an objective rationale for determining upcoming lifecycle requirements (i.e., road rehabilitation and/or reconstruction needs). To better communicate the condition of the Township's roadways, PCI ratings have been segmented into qualitative condition states as summarized in Table 2-3.

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

Condition State	PCI Rating Range
Very Good	$80 \leq \text{PCI} \leq 100$
Good	$70 \leq \text{PCI} < 80$
Fair	$50 \leq \text{PCI} < 70$
Poor	$40 \leq \text{PCI} < 50$
Very Poor	$0 \leq \text{PCI} < 40$

Road segments assessed to be in a Very Good condition state would typically have little to no observable distresses and provide a comfortable ride quality to all users. As road segments degrade over time, their condition would gradually decrease to be in a Good or Fair condition state. These road segments typically have moderate levels of observable distresses that require rehabilitation in the short- to medium-term to prevent the development of more severe distresses. Road segments assessed to be in a Poor or Very Poor condition state would typically have significant observable distresses indicating degradation of structural integrity. These road segments typically also require major rehabilitation or reconstruction in the short-term.

The Township's 2021 Road Needs Study assessed its gravel roadways as having an average^[1] PCI rating of 62.4, indicating that they were in a Fair condition state at the

^[1] Weighted average using length of road segments as weights.



time of the assessment. Similarly, the Township's surface treated roadways were assessed as having an average PCI rating of 60.0, indicating that surface treated roadways were also in a Fair condition at the time of the assessment. Lastly, the Township's asphalt roadways were assessed as having an average PCI rating of 72.3, indicating that they were in a Good condition at the time of the assessment.

In accordance with *Ontario Regulation 104/97: Standards for Bridges* (O. Reg. 104/97), the Township completes biennial inspections of its bridges and structural culverts based on the *Ontario Structure Inspection Manual* (OSIM). To provide an overall measure of the condition of bridges and structural culverts, Bridge Condition Index (BCI) ratings are calculated for each inspected structure. BCI ratings are calculated by assigning weighted values to the condition of various structural elements (e.g., deck, foundation, superstructure, substructure, girders/beams, bearings, etc.) and non-structural elements (e.g., sidewalks, curbs, handrails, barriers, signage, etc.) of the structure being assessed. BCI ratings are typically represented on a scale of 0 to 100, with 100 being a structure in new or as-new condition. To better communicate the condition of the Township's structures, BCI ratings have been segmented into qualitative condition states as summarized in Table 2-4.

Table 2-4: Structures – Definition of Condition States with Respect to BCI Rating

Condition State	BCI Rating Range
Good	$70 \leq \text{BCI} \leq 100$
Fair	$60 \leq \text{BCI} < 70$
Poor	$0 \leq \text{BCI} < 60$

Structures assessed to be in Good condition typically exhibit little to no signs of wear and tear indicating the absence of structural deficiencies. These structures also typically do not require any rehabilitation within the next five years. As structures begin to age and deteriorate, their condition would gradually decrease to be in a Fair condition state. These structures typically exhibit signs of some wear and tear indicating that rehabilitation would be required within the next five years to prevent the development of structural deficiencies. Structures assessed to be in a Poor condition state typically exhibit signs of significant wear and tear indicating the presence of structural deficiencies. These structures also typically require rehabilitation within the next year to prevent asset failures. It is noted that lack of timely maintenance can lead to an accelerated rate of deterioration as structures age over time. It is, therefore,



recommended that the Township ensures the timely maintenance of its structures to mitigate their rate of deterioration, thus reducing overall lifecycle costs.

The Township's footbridges, collector bridges, and structural culverts have been assessed to have average^[1] BCI ratings of 69.3, 69.0, and 62.2, respectively, indicating a Fair condition state for these structures. The Township's local bridges, however, have been assessed to have an average BCI rating of 52.1, indicating a Poor condition state.

It is noted that BCI ratings are currently unavailable for the Sedgewick Road Bridge (collector bridge) and the Minden Hills Pit Bridge (local bridge). A BCI rating is not available for the Sedgewick Road Bridge because this bridge was recently reconstructed and has not undergone an OSIM inspection since that time. Furthermore, a replacement cost for the Minden Boardwalk (footbridge) has not been formally assessed and cannot be established at this time. As such, these three structures have been excluded from the calculation of average BCI ratings provided in this subsection. Due to its recent reconstruction, the Sedgewick Road Bridge is expected to currently be in Good condition.

2.1.3 Current Levels of Service

The levels of service currently provided by the Township's transportation system are, in part, a result of the state of local infrastructure identified above. The levels of service framework presented in this subsection defines the current levels of service that will be tracked over time. In future iterations of the asset management plan, targets will be set for the performance measures presented below.

There are prescribed levels of service reporting requirements under O. Reg. 588/17 for some transportation assets (i.e., roads, bridges, and culverts) that are included in Table 2-5 and Table 2-6.

The tables are structured as follows:

- The Service Attribute headings and columns indicate the high-level attribute being addressed;

^[1] Weighted average using replacement cost of structures as weights.



- The Community Levels of Service column in Table 2-5 explains the Township’s intent in plain language and provides additional information about the service being provided;
- The Performance Measure column in Table 2-6 describes the performance measure(s) connected to the identified service attribute; and
- The Current Performance column in Table 2-6 reports current performance for the performance measure based on the best available data.

Table 2-5: 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 for the Township’s roadways and structures. A general description of how each condition state affects the timing of forecasted capital requirements is also provided in therein.

Table 2-6: Transportation Assets – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance
Scope	Number of lane-kilometres of arterial roads as a proportion of square kilometres of land area of the municipality.	0 km / km ²
	Number of lane-kilometres of collector roads as a proportion of square kilometres of land area of the Township.	0.01 km / km ²



Service Attribute	Performance Measure	Current Performance
	Number of lane-kilometres of local roads as a proportion of square kilometres of land area of the Township.	0.63 km / km ²
	Percentage of bridges in the Township with loading or dimensional restrictions.	7.1% ^[1]
Quality	For paved roads in the municipality, the average pavement condition index value.	61.6 ^[2]
	For unpaved roads in the Township, the average surface condition.	Fair
	For bridges in the Township, the average bridge condition index value.	54.3 ^{[3][4]}
	For structural culverts in the Township, the average bridge condition index value.	69.0 ^[3]

2.2 Water

2.2.1 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 community of Lutterworth Pines. The two networks are supported by 16.3 kilometres of watermains, two water treatment facilities, an elevated storage tank, and four wells. It is worth noting that while the

^[1] Based on the most recent inspection data, only the Minden Hills Pit Bridge has been identified as having loading or dimensional restrictions. Please note that the Township's footbridges are excluded from the calculation of current performance.

^[2] Weighted average using length of individual road segments as weights.

^[3] Weighted average using replacement cost of structures as weights. Please note that the Township's footbridges are excluded from the calculation of weighted average bridge condition index value for bridges.

^[4] Bridge condition index values are currently unavailable for the Sedgewick Road Bridge (collector bridge) and the Minden Hills Pit Bridge (local bridge). Furthermore, a replacement cost for the Minden Boardwalk (footbridge) has not been formally assessed and cannot be established at this time. As such, those structures have been excluded from the calculation of weighted average.



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 directly informed by OCWA's 2024 Asset Management Plan for the Township's water & wastewater systems.

The estimated current replacement cost of the Township's water system assets is approximately \$18.1 million. Watermains represent the largest share of this replacement cost at approximately \$15.5 million (85%), followed water treatment and storage assets serving the Village of Minden at approximately \$2.1 million (11%) and water treatment assets serving the community of Lutterworth Pines at approximately \$614,000 (~4%). The average age of the Township's water system is approximately 29.1 years.

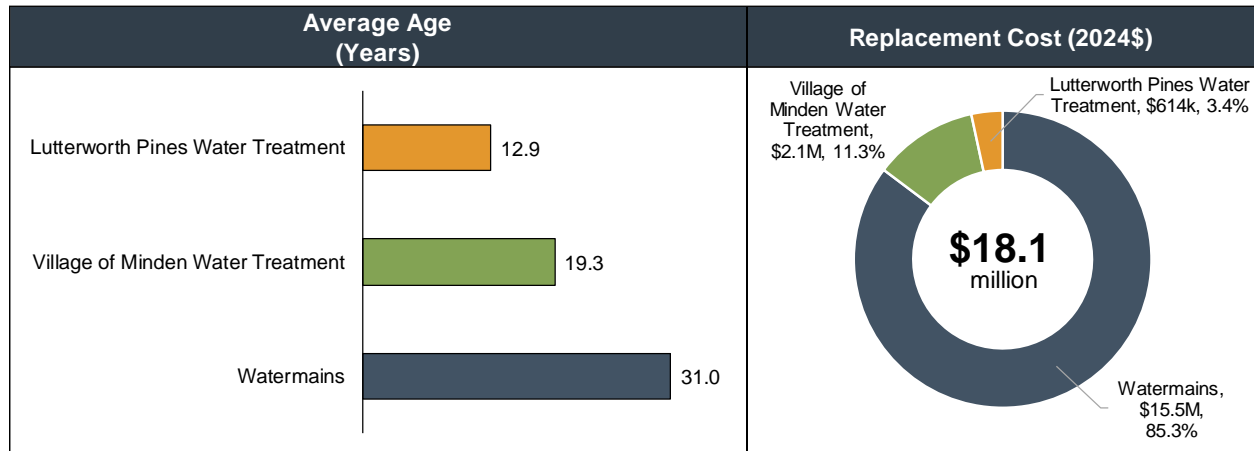
Table 2-7 summarizes the average age and estimated current replacement cost of the Township's water system assets and this information is further illustrated in Figure 2-3.

Table 2-7: Water Assets – Average Age and Replacement Cost

Asset Category	Average Age (Years)	Current Replacement Cost
Watermains	31.0	\$15,456,000
Village of Minden Water Treatment	19.3	\$2,056,000
Lutterworth Pines Water Treatment	12.9	\$614,000
Total	29.1	\$18,126,000



Figure 2-3: Water Assets – Average Age and Replacement Cost



2.2.2 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 their ability to continue fulfilling functional requirements. To better communicate the condition of water system assets, condition ratings are segmented into qualitative condition states as defined in OCWA’s 2024 Asset Management Plan for the Township’s water & wastewater systems. Those segmentations are summarized in Table 2-8 for ease of reference.



Table 2-8: Water Assets – Definition of Condition States with Respect to Condition Ratings

Condition State	Condition Rating	Description
Good	$0.50 \leq \text{Condition Rating} \leq 1.00$	“Asset performance meets or exceeds its objectives/requirements.”
Fair	$0.00 < \text{Condition Rating} < 0.50$	“Asset performance is nearing the point where it will not meet its objectives/requirements.”
Poor	0.00	“Asset performance is not meeting its objectives/requirements.”

The Township’s watermains have been assessed to have an average^[1] condition rating of 0.30, indicating that they are in a Fair condition state. The average condition ratings of water treatment and storage assets serving the Village of Minden and community of Lutterworth Pines have been assessed at 0.51 (Good) and 0.47 (Fair), respectively.

2.2.3 Current Levels of Service

This subsection presents the Township’s levels of service framework for its water system assets, including the levels of service reporting requirements prescribed by O. Reg. 588/17. Table 2-9 presents the Township’s Service Attributes and Community Levels of Service for its water system assets while Table 2-10 presents the Township’s Technical Levels of Service (i.e., performance measures) for its water system assets and their current performance. Please refer to Section 2.1.3 for further details on the Township’s levels of service framework.

[1] Weighted average using segment lengths as weights for watermains and replacement cost as weights for water treatment and storage assets.



Table 2-9: 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	<p>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.</p> <p>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.</p> <p>Service interruptions can be caused by routine municipal work, including watermain replacements, water distribution system repairs, and service connection repairs.</p>

Table 2-10: Water Assets – Technical Levels of Service

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

^[1] Based on best available data from 2021.



2.3 Wastewater

2.3.1 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, and two wastewater pumping stations. It is worth noting that while the Township owns all wastewater system assets and is responsible for funding their lifecycle expenditures, the operation of the Township's wastewater system is contracted to the Ontario Clean Water Agency (OCWA). Similar to the previous section on the Township's water system assets, the information and analyses presented in this section are directly informed by OCWA's 2024 Asset Management Plan for the Township's water & wastewater systems.

The estimated current replacement cost of the Township's wastewater system is approximately \$28.4 million. Wastewater mains represent the largest share of this replacement cost at approximately \$19.9 million (70%) while wastewater treatment assets represent approximately \$8.5 million (30%). The average age of the Township's wastewater system assets is approximately 43.9 years.

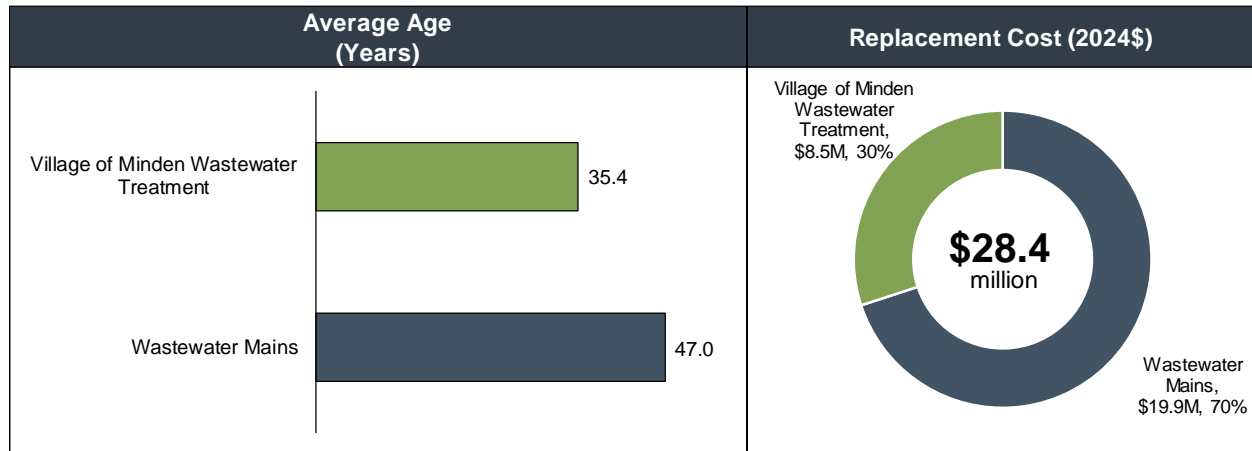
Table 2-11 summarizes the average age and estimated current replacement cost of the Township's wastewater system assets and this information is further illustrated in Figure 2-4.

Table 2-11: Wastewater Assets – Average Age, and Replacement Cost

Asset Sub-class	Average Age (Years)	Current Replacement Cost
Wastewater Mains	47.0	\$19,872,000
Village of Minden Wastewater Treatment	35.4	\$8,525,000
Total	43.9	\$28,397,000



Figure 2-4: Wastewater Assets – Average Age and Replacement Cost



2.3.2 Condition

The condition of the Township’s wastewater system assets is directly assessed by its operating authority (OCWA). As part of these assessments, components are assigned a condition rating ranging from 0 to 1. To better communicate the condition of wastewater system assets, condition ratings are segmented into qualitative condition states as defined in OCWA’s 2024 Asset Management Plan for the Township’s water & wastewater systems. Those segmentations are summarized in Table 2-8 in Section 2.2.2 for ease of reference.

The Township’s wastewater mains and wastewater treatment assets have been assessed to have average^[1] condition ratings of 0.31 and 0.26, respectively, indicating that they are in a Fair condition state.

2.3.3 Current Levels of Service

This subsection presents the Township’s levels of service framework for its wastewater system assets, including the levels of service reporting requirements prescribed by O. Reg. 588/17. Table 2-12 presents the Township’s Service Attributes and Community Levels of Service for its wastewater system assets while Table 2-13 presents the Township’s Technical Levels of Service (i.e. performance measures) for its wastewater

^[1] Weighted average using segment lengths as weights for wastewater mains and replacement cost as weights for wastewater treatment assets.



system assets and their current performance. Please refer to Section 2.1.3 for further details on the Township’s levels of service framework.

Table 2-12: Wastewater Assets – Community Levels of Service

Service Attribute	Community Levels of Service
<p>Scope</p>	<p>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.</p>
<p>Reliability</p>	<p>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 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.</p> <p>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.</p>



Table 2-13: Wastewater Assets – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance
Scope	Percentage of properties connected to the municipal wastewater system.	20% ^[1]
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
	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
	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

2.4 Facilities

2.4.1 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 approximately \$46.9 million. Community centres and arenas represent the largest share of replacement cost at approximately \$21.1 million (45%), followed by public works facilities at approximately \$10.5 million (22%), buildings belonging to Fire Services at approximately \$5.9 million (13%), buildings associated with the Minden Hills Cultural Centre at approximately \$5.2 million (11%), and lastly, administrative facilities at approximately \$4.3 million (9%). The average age of Township’s facilities is approximately 22.4 years. It is worth noting, however, that year of construction is currently unavailable for the Irondale Community

^[1] Based on best available data from 2021.



Centre and Pritchard Lane Storage Building. As such, those facilities have been excluded from the calculation of average age presented in this subsection.

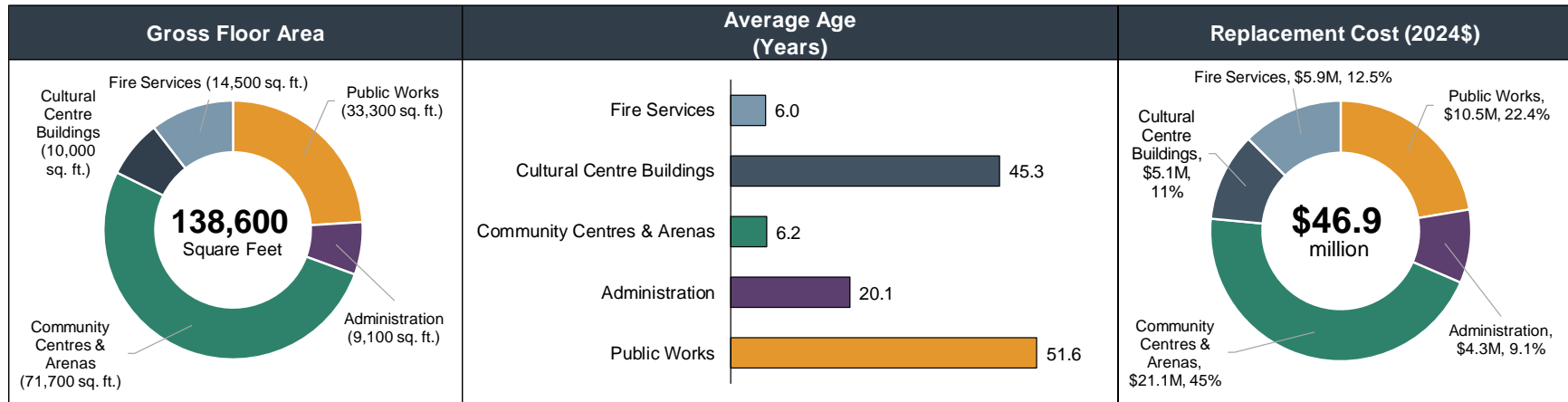
Table 2-14 summarizes the quantity, gross floor area, average age, and estimated current replacement cost of the Township's facilities. This information is further illustrated in Figure 2-5.

Table 2-14: Facilities – Quantity, Gross Floor Area, Average Age, and Replacement Cost

Category	Quantity	Gross Floor Area	Average Age (Years)	Current Replacement Cost
Public Works	9 facilities	33,300 ft ²	51.6	\$10,486,000
Administration	2 facilities	9,100 ft ²	20.1	\$4,280,000
Community Centres & Arenas	3 facilities	71,700 ft ²	6.2	\$21,111,000
Cultural Centre Buildings	10 facilities	10,000 ft ²	45.3	\$5,148,000
Fire Services	2 facilities	14,500 ft ²	6.0	\$5,866,000
Total	26 facilities	138,600 ft²	22.4	\$46,891,000



Figure 2-5: Facilities – Gross Floor Area, Average Age, and Replacement Cost





2.4.2 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 and qualified assessors assign a remaining useful life to each component based on its observed condition. These condition assessments are subsequently utilized to identify upcoming repair, maintenance, rehabilitation, and replacement 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 repair, maintenance, rehabilitation, and replacement requirements for each building over a 10-year forecast horizon and expressing the sum of forecasted requirements as a percentage of the replacement cost of the facility (termed 10-year FCI rating).

To better communicate the condition of facilities, the BCAs convert FCI ratings into qualitative condition states as summarized in Table 2-15. The scale is set to show that if the sum of forecasted capital requirements over a 10-year forecast horizon for a given facility is lower than 5% of the building's current replacement value, the facility would be deemed to be in a "Good" condition state. On the other hand, if the sum of forecasted capital requirements over a 10-year forecast horizon for a given facility is higher than 30% of the building's current replacement value, the facility would be deemed to be in a "Critical" condition state. The Township should ensure that facility components are repaired, rehabilitated, and/or replaced in a timely manner to reduce the potential for component failures, which may lead to shutdowns of facilities or portions within.

Table 2-15: Facilities – Definition of Condition States with Respect to FCI Ratings

Condition State	FCI Rating Range
Good	$0\% \leq \text{FCI} < 5\%$
Fair	$5\% \leq \text{FCI} < 10\%$
Poor	$10\% \leq \text{FCI} \leq 30\%$
Critical	$30\% \leq \text{FCI}$

The Township has formally assessed upcoming lifecycle requirements for nine of its 26 facilities through recently completed BCAs. FCI ratings were calculated for these facilities utilizing the costs of upcoming lifecycle requirements for the period from 2024



to 2033. The FCI ratings and associated condition states for these nine facilities are summarized in Table 2-16.

Table 2-16: Facilities – FCI Ratings and Condition States

Facility Name	Location	FCI Rating	Condition State
Garage-Patrol #1	1987 Fleming Road	2.34%	Good
Garage-Patrol #2	11445 Highway 35	10.83%	Poor
Office, Lunchroom & Training Facility	11445 Highway 35	13.14%	Poor
Garage-Patrol #3	4564 County Road 121	16.39%	Poor
Sand Dome - 3500 sq.m. - Patrol #3	4564 County Road 121	5.12%	Fair
Salt Shed - 500 tonne - Patrol #3	4564 County Road 121	26.07%	Poor
Municipal Office	7 Milne St	7.69%	Fair
Lochlin Hall - Community Centre	4713 Gelert Rd	61.00%	Critical
S.G. Nesbitt Memorial Arena	55 Parkside Street	8.10%	Fair
Average		9.34%	Fair

It is recommended that the Township update and/or complete BCAs on the 17 facilities for which forecasts of upcoming lifecycle requirements do not currently exist. Those forecasts can subsequently be used to inform the condition ratings for the remainder of Township facilities in future iterations of this asset management plan.

2.4.3 Current Levels of Service

This subsection presents the Township’s levels of service framework for its facilities. Table 2-17 presents the Township’s Service Attributes and Community Levels of Service for its facilities while Table 2-18 presents the Township’s Technical Levels of Service (i.e. performance measures) for its facilities and their current performance. Please refer to Section 2.1.3 for further details on the Township’s levels of service framework.

Table 2-17: 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 2-18: Facilities – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance
Capacity	Gross floor area (square footage) of public works facilities per kilometre of roadways.	119 ft ²
	Gross floor area (square footage) of administrative facilities per 100 residents.	120 ft ²
	Gross floor area (square footage) of community centres & arenas facilities per 100 residents.	948 ft ²
	Gross floor area (square footage) of fire halls per 100 residents.	101 ft ²
Quality	Cumulative FCI rating and associated condition state of all assessed facilities.	9.34% (Fair)
	Number of assessed facilities in “Poor” or worse condition.	5

2.5 Fleet and Equipment

2.5.1 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 approximately \$8.5 million and their average age is approximately 9.5 years.

2.5.2 Condition

The Township directly assessed the physical condition of 29 of its 35 vehicles in 2023 and assigned condition ratings to each asset based on its estimated remaining useful service life on a 3-point scale as summarized in Table 2-19.



Table 2-19: Fleet & Equipment – Definition of Condition States

Condition State	Description
Good	Replacement not required within the next 5 years.
Fair	Replacement required within the next 5 years.
Poor	Replacement required immediately.

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. On the other hand, an asset that has reached the end of its life expectancy would have a ULC% of 100%. 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 2-19.

It is noted that 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.

The Township’s fleet and equipment assets have been assessed to be in a Fair condition state on average^[1].

2.5.3 Current Levels of Service

This subsection presents the Township’s levels of service framework for its fleet and equipment assets. Table 2-20 presents the Township’s Service Attributes and Community Levels of Service for its fleet and equipment assets while Table 2-21 presents the Township’s Technical Levels of Service (i.e. performance measures) for its

^[1] Weighted average using replacement costs as weights.



fleet and equipment assets and their current performance. Please see Section 2.1.2 for further details on the Township’s levels of service framework.

Table 2-20: 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 2-21: Fleet and Equipment – Technical Levels of Service

Service Attribute	Performance Measure	Current Performance
Reliability	Weighted average (by replacement cost) condition state of fleet and equipment assets.	Fair

2.6 Population and Employment Growth

O. Reg. 588/17 requires municipalities with a population less than 25,000, as reported by Statistics Canada in the most recent census, to provide assumptions of future changes in population or economic activity and their impact on the lifecycle activities that need to be undertaken to maintain current levels of service. The County of Haliburton’s 2017 Official Plan estimated the Township’s population to increase by 1,450 residents to a total of 7,105 residents in the 25-year period from 2011 to 2036, representing an average year-over-year increase of approximately 0.9%. The County is currently undertaking a Comprehensive Review which will form the basis of its upcoming Official Plan update. It is noted that the estimated population growth figures presented in this section are subject to change based on potential revisions to the Township’s population forecast completed as part of that update.

Continued population growth may result in incremental service demands that would impact levels of service. If needed, the Township would address these pressures through established planning processes such as the development of master plans for specific services. If future master planning studies identify the need for new infrastructure and/or upgrades of existing infrastructure to accommodate future population growth, the Township should consider the option of imposing development



charges. Utilizing development charges would ensure that the effects of future population growth do not increase the cost of maintaining levels of service for existing tax and rate payers.



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 maintain the current levels of service presented in Chapter 2.^[1] 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 at an appropriate level, and/or to extend its service life.^[2] 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.

O. Reg. 588/17 requires that all potential lifecycle activity options be assessed, with the aim of identifying the set of lifecycle activities that can be undertaken at the lowest cost to maintain current levels of service. Asset management plans must include a ten-year capital forecast, identifying the lifecycle activities resulting from the lifecycle management strategy.

The following subsections show summaries of the lifecycle models developed for the Township's assets and detail the ten-year forecasts of lifecycle activities and associated costs that would be required for the Township to maintain current levels of service. The 10-year lifecycle expenditure forecasts are preliminary estimates generated based on the lifecycle management models and current condition/age profile of the assets. Further adjustments may be made in the next phase of the asset management plan when level of service targets are going to be established.

^[1] Upcoming iterations of the Township's asset management plan will include proposed levels of service and the lifecycle management strategies will identify the lifecycle activities that would need to be undertaken to provide the proposed levels of service.

^[2] 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

3.2.1 Roadways

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's roadways.

The lifecycle 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 term of the 10-year forecast horizon, in consultation with Township staff, to better align with the Township's operational capabilities and spending capacity.

The lifecycle expenditure forecast for the Township's gravel roadways includes an annual allowance which is based on their estimated average annual lifecycle costs. This estimate includes the cost of annual lifecycle activities such as regular grading and the application of maintenance and spot gravel. It is assumed that gravel roadways are maintained in adequate condition through the completion of these activities and thus would not require a full-scale reconstruction throughout their lifecycles. It is worth noting, however, that the cost associated with dust control activities has been excluded from the calculation of the average annual lifecycle cost for gravel roadways as the Township funds these activities through its operating budget.

The 10-year lifecycle expenditure forecast for the Township's roadways is summarized in Figure 3-1 and provided in tabular form in Table 3-1. Average annual expenditures over the forecast period have been estimated at approximately \$5.2 million. Based on



the lifecycle requirements identified in the Road Implementation Plan presented in the Township's 2021 Road Needs Study, the current backlog of lifecycle requirements is approximately \$23.2 million. As mentioned earlier, the cost of addressing the identified backlog has been spread over the term of the 10-year forecast horizon presented in this subsection to ensure alignment with the Township's operational capabilities and spending capacity.



Figure 3-1: Lifecycle Expenditure Forecast for Roads

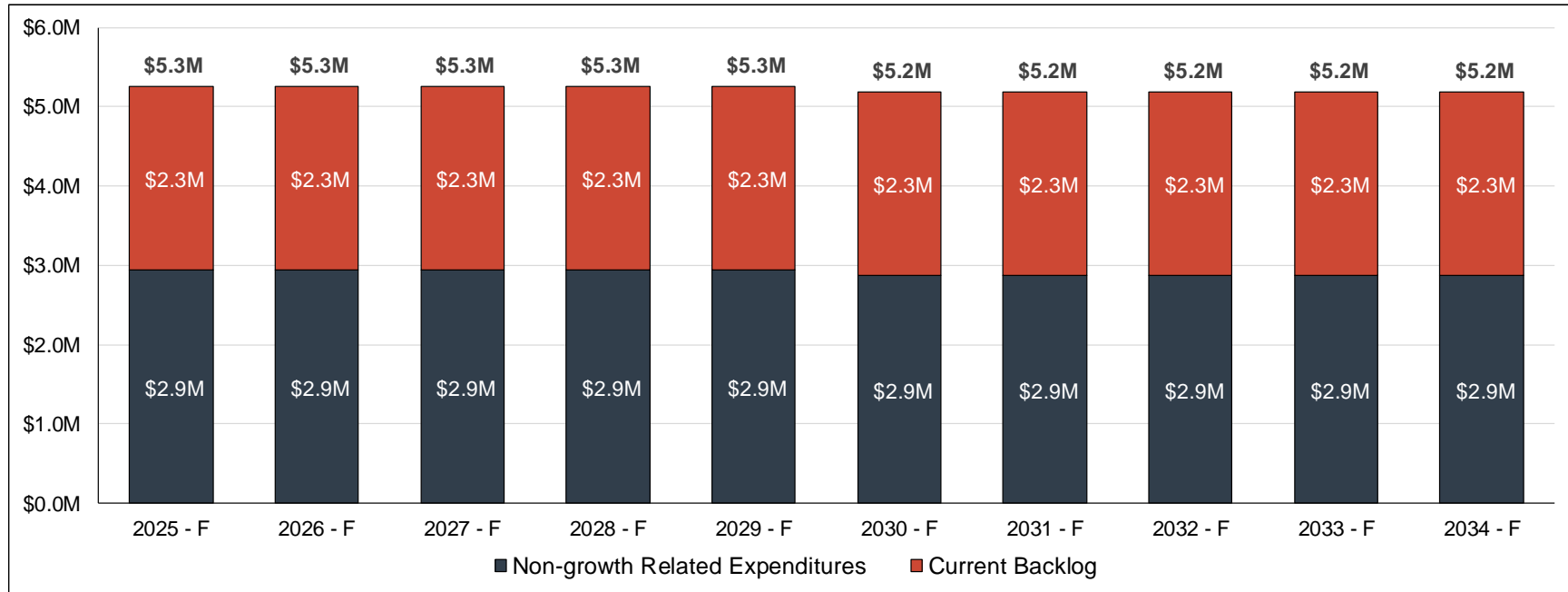


Table 3-1: Lifecycle Expenditure Forecast for Roads (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Gravel	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000	\$1,154,000
Surface Treated	\$1,415,000	\$1,415,000	\$1,415,000	\$1,415,000	\$1,415,000	\$1,715,000	\$1,715,000	\$1,715,000	\$1,715,000	\$1,715,000
Asphalt	\$370,000	\$370,000	\$370,000	\$370,000	\$370,000	-	-	-	-	-
Current Backlog	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000	\$2,318,000
Total	\$5,257,000	\$5,257,000	\$5,257,000	\$5,257,000	\$5,257,000	\$5,187,000	\$5,187,000	\$5,187,000	\$5,187,000	\$5,187,000



3.2.2 Structures

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's structures.

The lifecycle expenditure forecast for 17 of the Township's 18 structures was developed utilizing the lifecycle expenditure requirements identified in the Township's most recent OSIM inspection reports. Since the Sedgewick Road Bridge is newly reconstructed, no OSIM inspections have been performed on this structure at the time of writing of this asset management plan. The lifecycle expenditure forecast for this structure includes an annual allowance based on the structure's estimated average annual lifecycle cost to ensure sufficient funds are allocated annually in lifecycle reserves to fund future replacement and rehabilitation requirements as they are formally identified. Please note that although a replacement value cannot be established for the Minden Boardwalk at this time, the most recent OSIM inspection did identify its upcoming lifecycle requirements which are included in the 10-year lifecycle expenditure forecast presented in this subsection.

The 10-year lifecycle expenditure forecast for the Township's structures is summarized in Figure 3-2 and provided in tabular form in Table 3-2. Average annual expenditures over the forecast period have been estimated at approximately \$327,000. Based on the most recent OSIM inspections, the current backlog of lifecycle requirements is approximately \$1.5 million. It is noted that this backlog includes the cost to reconstruct the Minden Hills Pit Bridge in its entirety. The most recent OSIM inspection and load review conducted on this bridge identified it as being in an overall Poor condition with significant structural deterioration. Furthermore, the load review concluded that the bridge is incapable of supporting truckloads of any axel count in its current condition. It was the recommendation of assessors that the bridge is be closed to all traffic and undergo a full-scale replacement before re-opening.



Figure 3-2: Structures - Lifecycle Expenditure Forecast (2024\$)

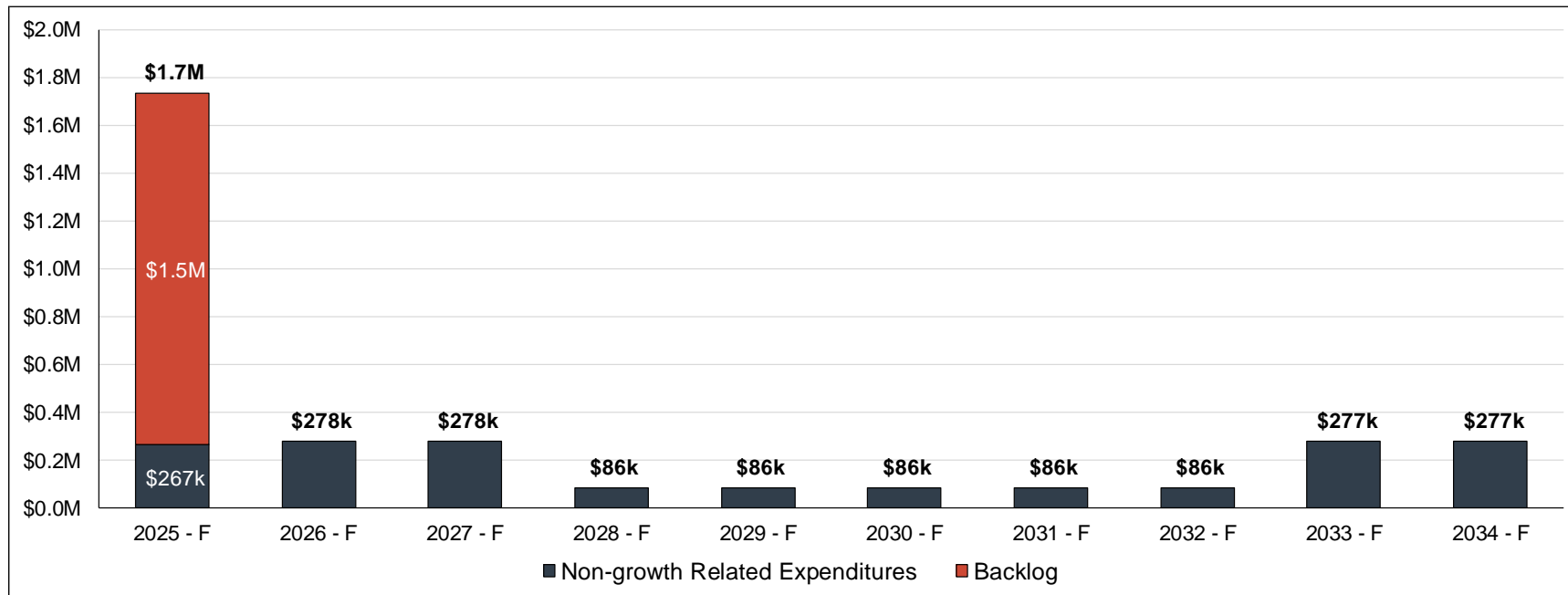


Table 3-2: Structures - Lifecycle Expenditure Forecast (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Collector Bridges	\$53,000	\$53,000	\$53,000	\$28,000	\$28,000	\$28,000	\$28,000	\$28,000	\$73,000	\$73,000
Local Bridges	\$201,000	\$212,000	\$212,000	\$56,000	\$56,000	\$56,000	\$56,000	\$56,000	\$165,000	\$165,000
Footbridges	\$12,000	\$12,000	\$12,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$14,000	\$14,000
Structural Culverts	\$1,000	\$1,000	\$1,000	-	-	-	-	-	\$25,000	\$25,000
Current Backlog	\$1,465,000									
Total	\$1,732,000	\$278,000	\$278,000	\$86,000	\$86,000	\$86,000	\$86,000	\$86,000	\$277,000	\$277,000



3.3 Water

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's water system assets.

The lifecycle 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 lifecycle expenditure forecast for the Township's water system assets is summarized in Figure 3-3 and provided in tabular form in Table 3-3. Average annual expenditures over the forecast period have been estimated at approximately \$201,000.



Figure 3-3: Water Assets - Lifecycle Expenditure Forecast (2024\$)

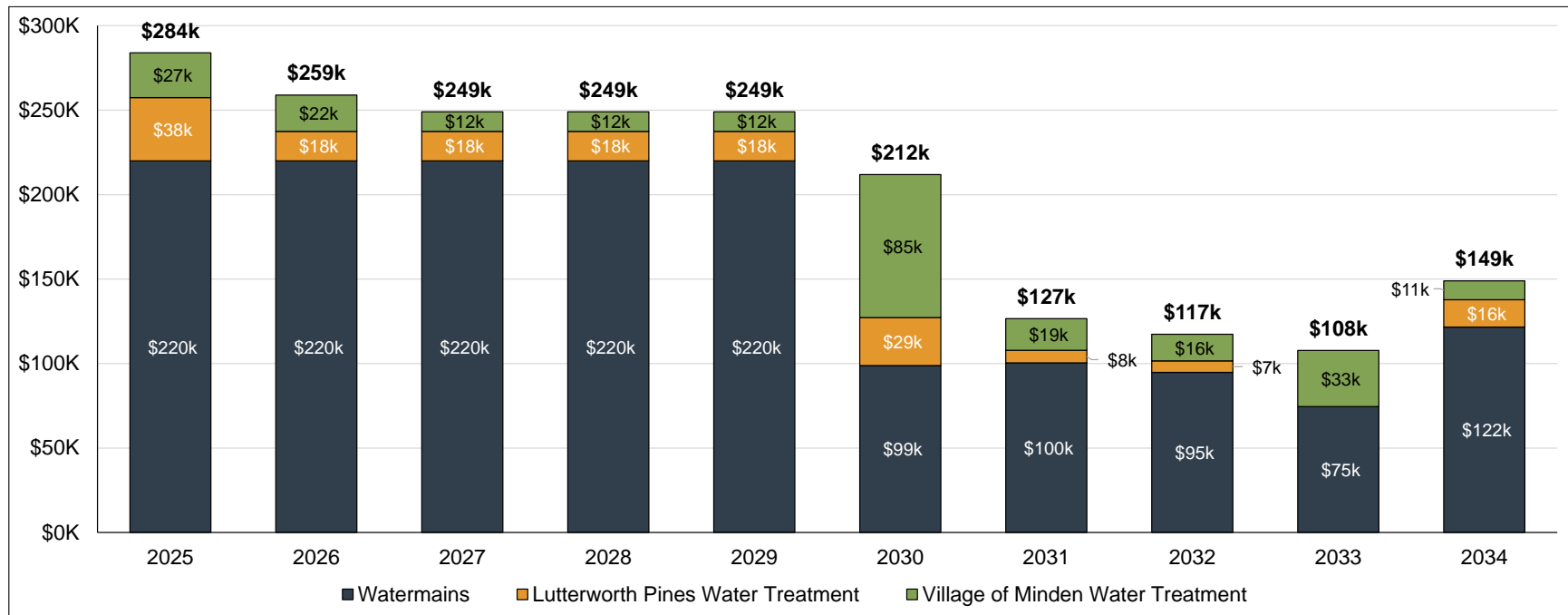


Table 3-3: Water Assets - Lifecycle Expenditure Forecast (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Village of Minden WT	\$27,000	\$22,000	\$12,000	\$12,000	\$12,000	\$85,000	\$19,000	\$16,000	\$33,000	\$11,000
Lutterworth Pines WT	\$247,000	\$56,000	\$16,000	\$16,000	\$16,000	\$159,000	\$184,000	\$82,000	\$242,000	\$28,000
Watermains	\$38,000	\$18,000	\$18,000	\$18,000	\$18,000	\$29,000	\$8,000	\$7,000	-	\$16,000
Total	\$285,000	\$260,000	\$250,000	\$250,000	\$250,000	\$213,000	\$127,000	\$118,000	\$108,000	\$149,000



3.4 Wastewater

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's wastewater system assets.

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 3-3 and provided in tabular form in Table 3-3. Average annual expenditures over the forecast period have been estimated at approximately \$242,000.



Figure 3-4: Wastewater Assets - Lifecycle Expenditure Forecast (2024\$)

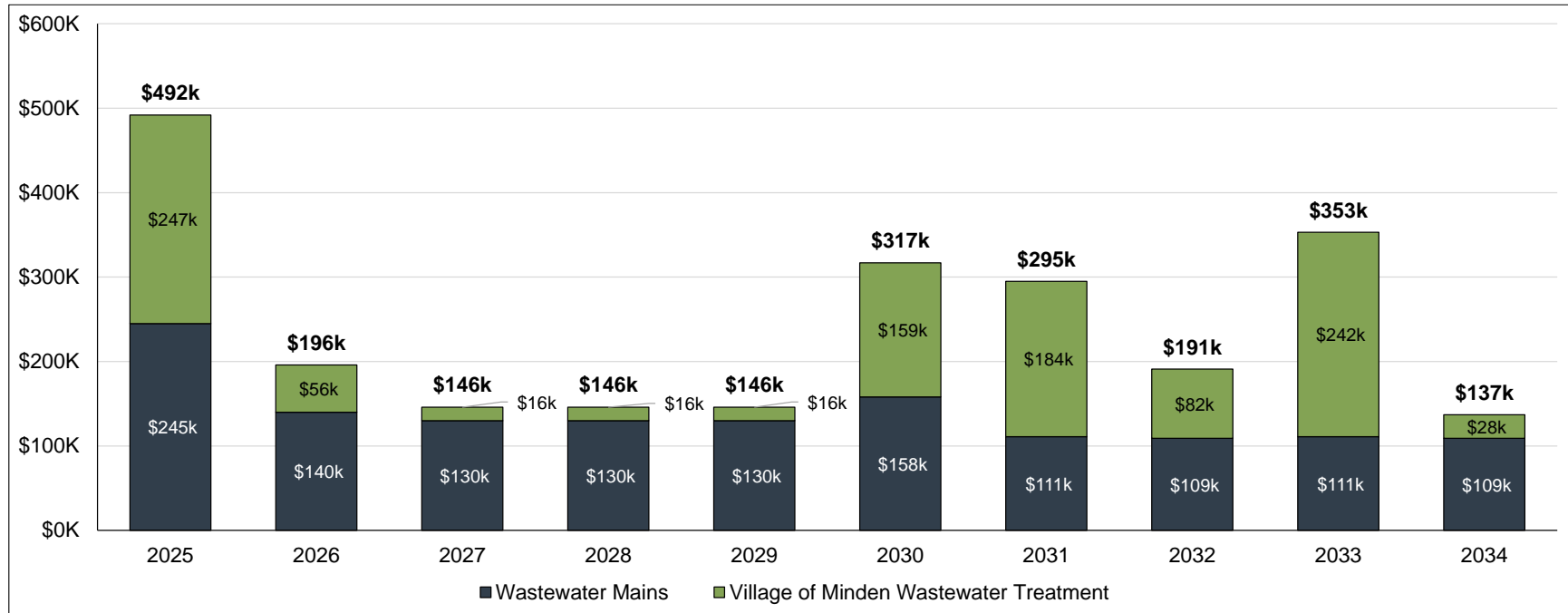


Table 3-4: Wastewater Assets - Lifecycle Expenditure Forecast (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Village of Minden WWT	\$247,000	\$56,000	\$16,000	\$16,000	\$16,000	\$159,000	\$184,000	\$82,000	\$242,000	\$28,000
Wastewater Mains	\$245,000	\$140,000	\$130,000	\$130,000	\$130,000	\$158,000	\$111,000	\$109,000	\$111,000	\$109,000
Total	\$492,000	\$196,000	\$146,000	\$146,000	\$146,000	\$317,000	\$295,000	\$191,000	\$353,000	\$137,000



3.5 Facilities

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's facilities.

Upcoming lifecycle expenditures for nine of the Township's 26 facilities were formally assessed through BCAs completed since 2020. The lifecycle expenditure forecast for these facilities is based on the component-level repair, rehabilitation, and replacement requirements identified as part of those BCAs. The lifecycle expenditure forecast for the remainder of the Township's facilities includes an annual allowance based on each facility's estimated average annual lifecycle cost. Although this approach does not identify the specific facility components that require rehabilitation and/or replacement, it ensures that sufficient funds are allocated annually to fund lifecycle expenditure requirements as they are identified and allows for the building up of lifecycle reserves to fund future expenditures. As noted earlier in Section 2.4.2, it is recommended that the Township formally assess upcoming lifecycle expenditure requirements for the remainder of its facilities through BCAs in the near future so that future iterations of this asset management plan can utilize the updated component-level forecasts to refine the lifecycle expenditure forecast presented in this subsection.

The 10-year lifecycle expenditure forecast for Township facilities is summarized in Figure 3-5 and provided in tabular form in Table 3-5. Average annual expenditures over the forecast period have been estimated at approximately \$603,000. The current backlog of lifecycle requirements for Township facilities has been estimated at approximately \$510,000. This backlog comprises \$390,000 of capital investment required to remediate the Lochlin Hall Community Centre and \$120,000 of capital investment to complete identified rehabilitation activities at the municipal office.



Figure 3-5: Facilities: Lifecycle Expenditure Forecast (2024\$)

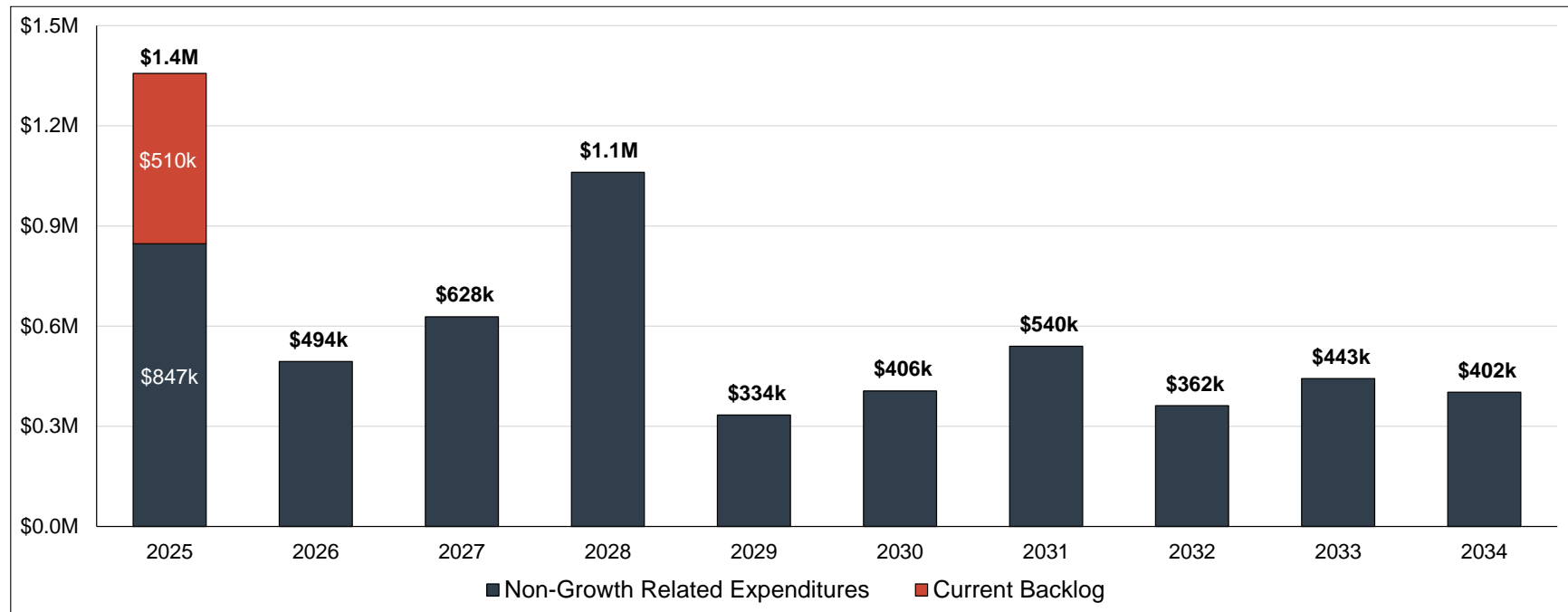


Table 3-5: Facilities - Lifecycle Expenditure Forecast (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Facilities	\$847,000	\$494,000	\$628,000	\$1,061,000	\$334,000	\$406,000	\$540,000	\$362,000	\$443,000	\$402,000
Current Backlog	\$510,000									
Total	\$1,357,000	\$494,000	\$628,000	\$1,061,000	\$334,000	\$406,000	\$540,000	\$362,000	\$443,000	\$402,000



3.6 Fleet and Equipment

This section presents a preliminary estimate of the costs associated with maintaining current level of service for the Township's fleet and equipment assets.

The lifecycle expenditure forecast for the Township's vehicles that were formally assessed as part of the physical condition assessment conducted in 2023 (please see Section 2.5.2 for further information) was developed based on the timing of asset replacements identified through that assessment. To ensure that the level of capital investment required on an annual basis aligns with the Township's spending capacity, the cost of asset replacements was spread out over the term of the 10-year forecast horizon with assets in worse condition given higher priority for replacement.

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 lifecycle expenditure forecast for the Township's fleet and equipment assets is summarized in Figure 3-6 and provided in tabular form in Table 3-6. Average annual expenditures over the forecast period have been estimated at approximately \$706,000. Based on the best information available on the Township's assets, the current fleet and equipment backlog is approximately \$1.9 million. This represents the estimated current replacement value of all fleet and equipment assets that have been identified to be in Poor condition and in need of immediate replacement.



Figure 3-6: Fleet and Equipment: Lifecycle Expenditure Forecast (2024\$)

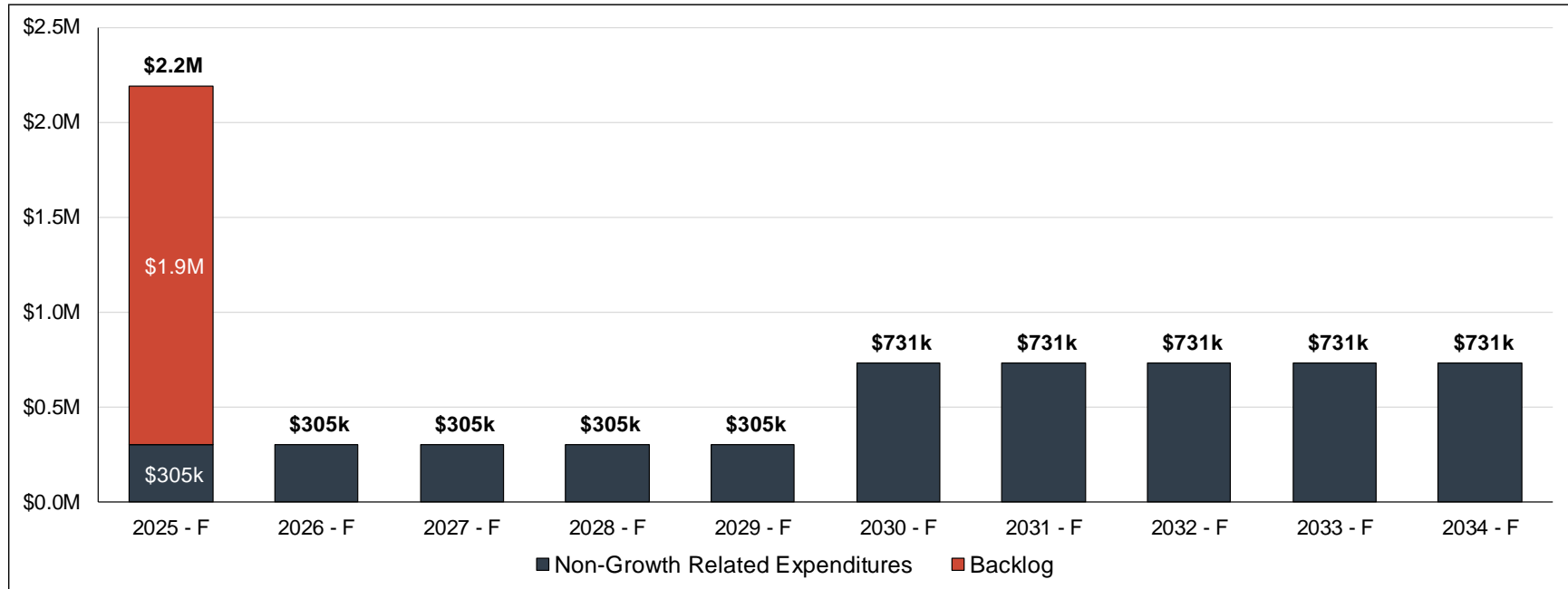


Table 3-6: Fleet and Equipment - Lifecycle Expenditure Forecast (2024\$)

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures										
Fleet & Equipment	\$305,000	\$305,000	\$305,000	\$305,000	\$305,000	\$305,000	\$731,000	\$731,000	\$731,000	\$731,000
Current Backlog	\$1,882,000									
Total	\$2,187,000	\$305,000	\$305,000	\$305,000	\$305,000	\$305,000	\$731,000	\$731,000	\$731,000	\$731,000



Chapter 4

Summary



4. Summary

This asset management plan has been developed to address the July 1, 2022 and July 1, 2024 requirements of O. Reg. 588/17. The plan provides summary information for the Township's infrastructure assets (including replacement cost valuation and condition), identifies current levels of service, and includes a 10-year forecast of lifecycle activities and associated costs that would be required for the Township to maintain current levels of service. The plan is based on the best information available to the Township at this time. The Township will now need to shift its focus to have targets set for levels of service performance measures, and to include a detailed financial strategy. The ongoing development of the AMP will ensure the Township's compliance with the July 1, 2025 requirements of O. Reg. 588/17.

Beyond regulatory compliance, the Township should continue working on integrating asset management planning with other municipal financial and planning documents. Furthermore, the Township will need to establish processes for reviewing and updating assumptions underlying the asset management plan on a regular basis to keep the plan relevant and reliable.