CORPORATION OF THE
TOWNSHIP OF BILLINGS

AGENDA

February 1st, 2022 7:30 p.m. **Electronic**

1. OPEN

2. APPROVAL OF AGENDA

3. DISCLOSURE OF PECUNIARY INTEREST

4. ADOPTION OF MINUTES

   a) Regular Council Meeting Minutes – January 17, 2022

5. DELEGATIONS

   a) Asset Management Plan Presentation – Imad Alvi, PSD Citywide Inc.

6. COMMITTEE REPORTS

   a) Economic Development Committee Report – Jan 18, 2022
   b) Parks, Recreation and Wellness Committee Report – Jan 24, 2022
   c) Community Policing Advisory Committee Report – Jan 12, 2022
   d) Lake Kagawong Resource Committee Report – Jan 20, 2022
   e) Library Board Report – Jan 18, 2022

7. OLD BUSINESS

8. NEW BUSINESS

   a) Asset Management Plan
   b) 2022-04 Enter into an Agreement with the Ontario Trillium Foundation

c) 2022-05 Enter into Funding Agreements
d) 2022-06 Signing Officer By-Law
e) Parks, Recreation and Wellness Committee Motion
f) 2022-07 Climate Action Committee Terms of Reference

9. CORRESPONDENCE

a) Ontario Provincial Police Project Lifesaver Request for Support

10. INFORMATION

a) Lake Kagawong Resource Committee Meeting Minutes – Jan 19, 2022
b) Parks, Recreation and Wellness Committee Meeting Minutes – Jan 24, 2022
c) Safer and Vital Communities Grant - All Chiefs Memo

11. ACCOUNTS FOR PAYMENT

12. CLOSED SESSION

a) Information Supplied in Confidence to the Municipality

13. CONFIRMING BY-LAW

14. ADJOURNMENT

Memorandum

To: Mayor, Council
cc: Staff, Public
From: Staff
Date: January 28, 2022

RE: February 1st, 2022 Council Meeting

4. Minutes

a) January 17th, 2022 Regular Council Meeting Minutes

Please review the minutes for approval.

5. Delegations

a) Asset Management Plan Presentation – Imad Alvi, PSD Citywide Inc.

Imad Alvi, PSD Citywide Inc, to present the Asset Management Plan.

A question period will be available following the presentation where Council should use this opportunity to voice any questions or concerns regarding the Asset Management Plan.

6. Committee Reports

a) Economic Development Committee Report – Jan 18, 2022

Sharon Alkenbrack to present report to Council.

b) Parks, Recreation and Wellness Committee Report – Jan 24, 2022

Sharon Jackson to present report to Council.

c) Community Policing Advisory Committee Report – Jan 12, 2022

Bryan Barker will present report to Council.

d) Lake Kagawong Resource Committee Report – Jan 20, 2022

Bryan Barker will present report to Council.

e) Library Board Report – Jan 18, 2022

Michael Hunt will present report to Council.

7. Old Business

None.

8. New Business

a) Asset Management Plan

Recommendation:
That Council accept the Asset Management Plan as presented.

b) 2022-04 Enter into an Agreement with the Ontario Trillium Foundation

Recommendation:
That Council accept By-Law 2022-04, being a By-Law to enter into an agreement with the Ontario Trillium Foundation, as presented.

During the September 7th, 2021 Regular Council meeting, Council passed a resolution directing staff to submit an application to the Ontario Trillium Foundation's Community Building Fund – Capital Stream, for funding to replace the pedestrian bridge in the Kagawong River Park.

The Community Building Fund, Capital Stream – is a program dedicated to strengthening communities by "supporting the repair, renovation, or retrofitting of existing sport and recreation facilities." Eligible costs include capital construction and renovation, as well as developmental costs, which include engineering and project management. Projects for municipalities of our size can be funded 100% by this grant program.

Staff were recently notified that they were successful in their application and the Township of Billings will be receiving $500,000 to replace the pedestrian bridge in the Kagawong River Park. The anticipated start date of this project is February 1st, 2022.

c) 2022-05 Enter into Funding Agreements

Recommendation:
That Council accept By-Law 2022-05, being a By-Law to enter into funding agreements from Government Agencies, as presented.

Government Agencies require Grant Contribution Agreements to be accepted and signed but the submission deadline of these agreements is always before they can be made public. Since these agreements need to be accepted by Council, this By-Law will allow for Staff to meet the deadlines of completing and returning a signed agreement while not announcing the funding publicly.

d) 2022-06 Signing Officer By-Law

Recommendation:
That Council accept By-Law 2022-06, being a By-Law to establish the Signing Officers who have authority to sign on municipal accounts, accepted as presented.

Cheryl McCulligh was hired to replace Bruce Mercer in the Treasurer role and will therefore need signing authority to sign on all municipal accounts.

e) Parks, Recreation and Wellness Committee Motion

Recommendation:
That Council approve the motion received from the Parks, Recreation and Wellness Committee requesting $300 to host a Family Day Skate and Slide Event.

A motion was passed at the January 24th, 2022 Parks, Recreation and Wellness Committee meeting:

Motion by Andrew Preyde, seconded by Catherine Joyce
THAT Council approve $300 for a Family Day Skate and Slide Event.
Carried

The event will take place on Monday February 28th, 2022 from 1pm – 4pm and there will be hot chocolate, coffee and pre-packaged snacks available. The Outdoor Rink will be utilized for a free skate and people will be encouraged to bring their toboggans to slide down Henry Drive. All COVID-19 safety precautions in place at this time will be followed and will be noted on flyers which will advertise the event.

f) 2022-07 Climate Action Committee Terms of Reference

Recommendation:
That Council accept By-Law 2022-07, being a By-Law to change the mandate and to amend the Terms of Reference of the Climate Action Committee, as presented.

Now that the Community Energy Emissions Plan (CEEP) has been completed the Climate Action Committee's role has changed from CEEP creation on behalf of Council, to advising Council on CEEP implementation.

9. Correspondence

a) Ontario Provincial Police Project Lifesaver Request for Support

Recommendation:
That Council supports, in principle, the Ontario Provincial Police in bringing Project Lifesaver to Manitoulin Island with a mission to provide timely response to save lives and reduce potential injury for adults and children who wander.

Police Constable Tessa Kasch, with the Ontario Provincial Police (OPP), delivered the attached letter and requested it be added to the next Regular Council Meeting agenda package. They are looking to receive support for Project Lifesaver in order to bring this to Manitoulin Island.

10. Information

There are a number of items attached for Council's information. Council may move any of these items to new business during the agenda approval for discussion at this meeting, or request that an item(s) be included on a future agenda for discussion.

a) Economic Development Committee Report – Jan 18, 2022
b) Lake Kagawong Resource Committee Meeting Minutes – Jan 19, 2022
c) Parks, Recreation and Wellness Committee Meeting Minutes – Jan 24, 2022
d) Safer and Vital Communities Grant - All Chiefs Memo

12. Closed Session

a) There will be a closed session to discuss a matter of information supplied in confidence to the municipality.

The Corporation of the
Township of Billings
Regular Council Meeting

January 17th, 2022 7:30 p.m. Electronic Meeting

Present: Mayor Anderson, Councillors Sharon Alkenbrack, Bryan Barker, Michael Hunt and Sharon Jackson
Staff: Kathy McDonald, CAO/Clerk; Tiana Mills, Deputy Clerk; Todd Gordon, MPM; Arthur Moran, By Law Officer; Cheryl McCulligh, Treasurer; Floyd Becks, Public Works Superintendent
Media: Tom Sasvari
Members of the General Public

1. OPEN

2022-05 Barker - Alkenbrack
BE IT RESOLVED that this regular meeting of Council be opened with a quorum present at 7:30 p.m. with Mayor Anderson presiding.

Carried

2. APPROVAL OF AGENDA

2022-06 Hunt - Jackson
BE IT RESOLVED that the agenda for the January 17th, 2022 regular meeting of Council be accepted as presented.

Carried

3. DISCLOSURE OF PECUNIARY INTEREST

None.

4. ADOPTION OF MINUTES

a) **December 20th, 2021 Regular Council Minutes**
2022-07 Barker - Jackson
BE IT RESOLVED that the minutes for the December 20th, 2021 regular meeting of Council be accepted as presented.

Carried

b) **January 11th, 2022 Special Council Minutes**
2022-08 Alkenbrack - Hunt
BE IT RESOLVED that the minutes for the January 11th, 2022 special meeting of Council be accepted as presented.

Carried

5. DELEGATIONS

None.

6. COMMITTEE REPORTS

a) **Library Committee Report – Dec 21, 2021**
Council received the report.

b) **Medical Centre Ad Hoc Committee Report**
Council received the report.

7. OLD BUSINESS

None.

8. NEW BUSINESS

a) **Kagawong Drinking Water Inspection Report for 2021**
2022-09 Barker - Hunt
BE IT RESOLVED that Council acknowledges receipt of the 2021 Kagawong Drinking Water System Inspection Report.
Carried

b) **Manitoulin Health Centre (MHC) Donation Surplus**
2022-10 Alkenbrack - Jackson
BE IT RESOLVED that Council directs staff to respond to Tim Vine, Manitoulin Health Centre, that the Township of Billings would like the excess donation funds redirected to support Manitoulin Health Centre's other capital needs.
Carried

c) **Generator Purchase for the Municipal Office**
2022-11 Barker - Hunt
BE IT RESOLVED that Council directs staff to purchase a new generator for the Municipal Office from Henderson Electric.
Carried

d) **Oakville Energy Corporation Lease**
2022-12 Barker - Alkenbrack
BE IT RESOLVED that Council accepts the ten-year extension to the current lease with Oakville Energy Corporation for the operations at the Kagawong Power Generating Station and that Council directs staff to send this lease to the township lawyer, all lawyer fees to be paid by the Oakville Energy Corporation, for review and updating to ensure the extension is current, understandable and protects the township.
Carried

9. CORRESPONDENCE

None.

10. INFORMATION

a) **Health and Safety Report December 2021**
Council received report.

b) **Annual Report on Drinking Water 2021 and 2020-21 Chief Drinking Water Inspector Annual Report**
Council Received Report

c) **Stantec Heritage Impact Assessment – Little Current Swing Bridge**
Council Received Report

d) **Reuse of Excess Soil at Pits and Quarries in Ontario**
Council Received Report

e) **Ontario Clean Water Agency COVID-19 Update for Clients**
Council Received Report

11. ACCOUNTS FOR PAYMENT

2022-13 Barker - Hunt

BE IT RESOLVED that Council Authorizes the following accounts for payment:

General Accounts $635,664.33

and that cheques numbered 7084 to 7111 be authorized for signing as described in the attached register.

Carried

12. CLOSED SESSION

2022-14 Alkenbrack - Jackson

BE IT RESOLVED that in accordance with Section 39(2)(h) Information supplied in confidence to the municipality that Council proceed to a Closed Session at 8:02 p.m. in order to discuss an item involving labour relations.

Carried

…

2022-16 Alkenbrack - Jackson

BE IT RESOLVED that Council move out of Closed Session at 8:12 p.m. and resume their regular meeting.

Carried

13. CONFIRMING BY-LAW

2022-17 Alkenbrack - Barker

BE IT RESOLVED that By-law 2022-02, being a by-law to confirm the proceedings of Council be given first, second, third reading and enacted.

Carried

14. ADJOURNMENT

2022-18 Barker - Hunt

BE IT RESOLVED that this regular meeting of Council be adjourned at 8:15 p.m.

Carried

_____	_____
Ian Anderson, Mayor	Kathy McDonald, CAO/Clerk

Asset Management Plan

Township of Billings

2021

Township of
BILLINGS

This Asset Management Program was prepared by:

Empowering your organization through advanced asset management, budgeting & GIS solutions

Key Statistics

Replacement cost of asset portfolio
$77.64 million

Replacement cost of infrastructure per household
$277,287 (2016)

Percentage of assets in fair or better condition
61%

Percentage of assets with assessed condition data
55%

Annual capital infrastructure deficit
$1.59 million

Recommended timeframe for eliminating annual infrastructure deficit
20 Years

Target reinvestment rate
2.49%

Actual reinvestment rate
0.44%

Table of Contents

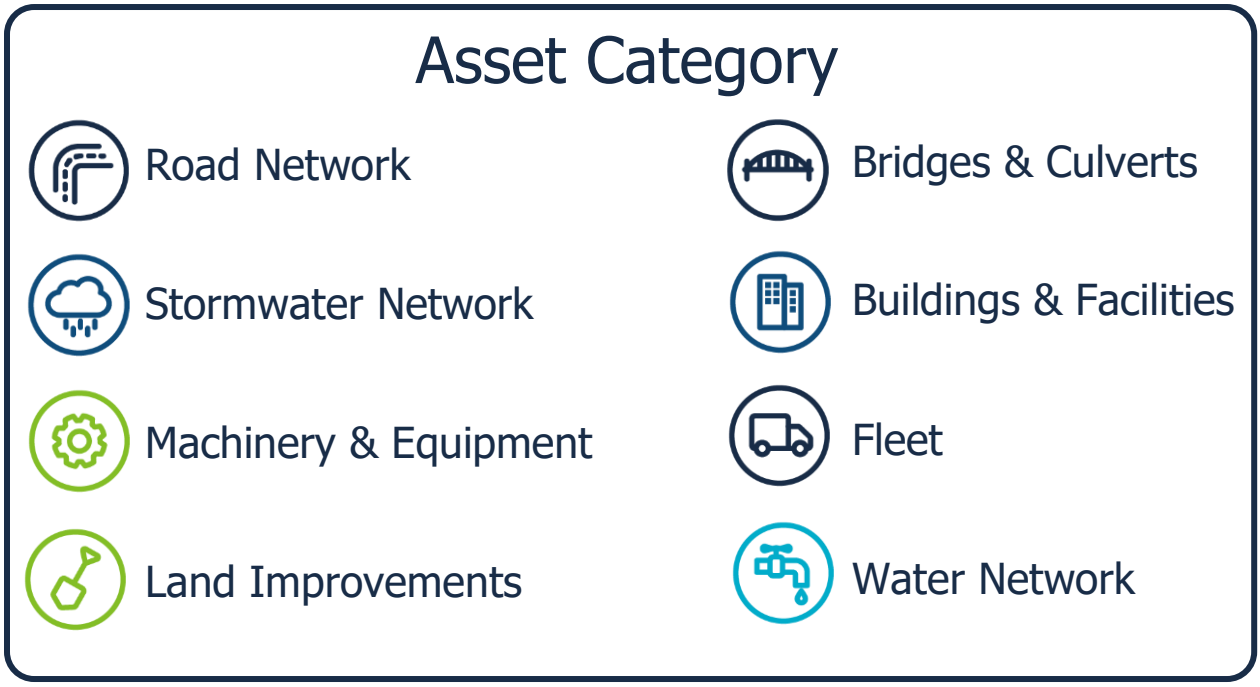
Executive Summary

Municipal infrastructure provides the foundation for the economic, social, and environmental health and growth of a community through the delivery of critical services. The goal of asset management is to deliver an adequate level of service in the most cost-effective manner. This involves the development and implementation of asset management strategies and long-term financial planning.

Scope

This AMP identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

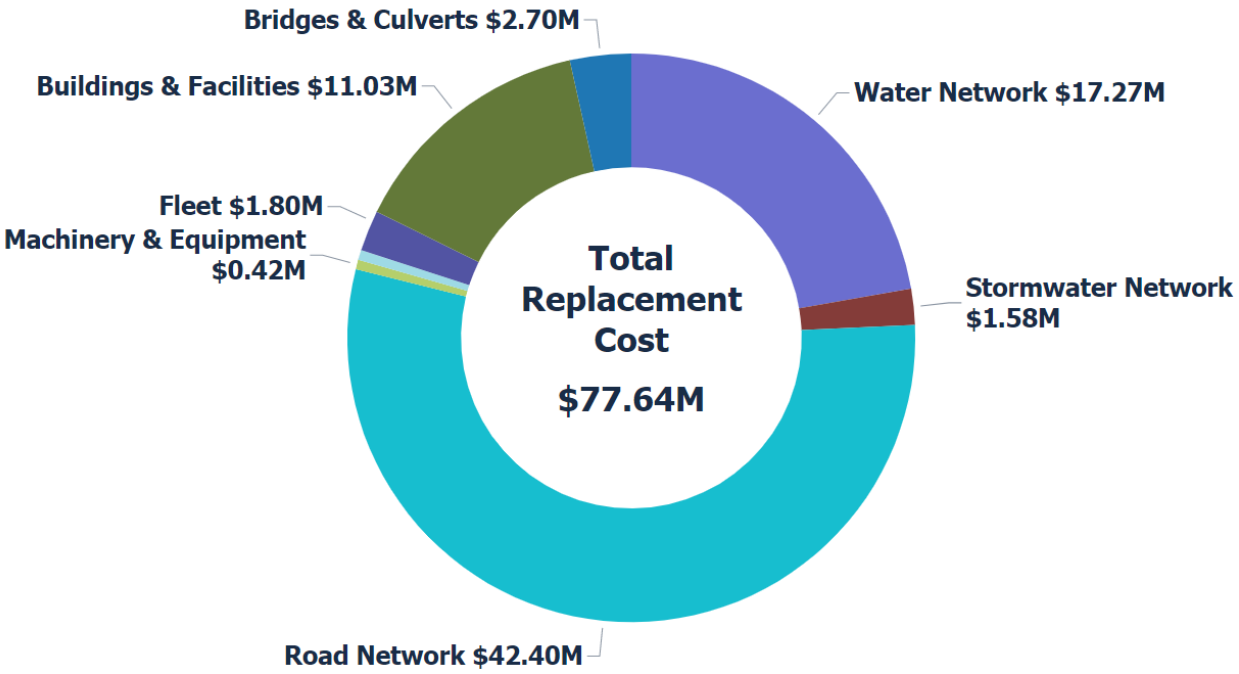
This AMP include the following asset categories:



With the development of this AMP the Township of Billings has achieved compliance with O. Reg. 588/17 to the extent of the requirements that must be completed by July 1, 2022 and 2024. There are additional requirements concerning proposed levels of service and growth that must be met by July 1, 2025.

Findings

The overall replacement cost of the asset categories included in this AMP totals to $77.64 million based on 2020 year-end asset information.



About 61% of all assets analysed in this AMP are in fair or better condition and assessed condition data was available for 55% of assets.

For the remaining assets, assessed condition data was unavailable and age was used to approximate condition – a data gap that persists in most municipalities. Generally, age misstates the true condition of assets, making assessments essential to accurate asset management planning, and a recurring recommendation in this AMP.

The accuracy and completeness of the asset inventory is another critical input to accurate asset management planning. It is important to review and update the primary asset inventory to ensure that it is at a higher level of data maturity for the next iteration of the AMP and that all assets have been accounted for.

The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP uses a combination of proactive lifecycle strategies (for roads, scheduled activities (for roads, bridges & culverts, buildings & facilities, and water network assets) and replacement only strategies (for all other assets) to determine the lowest cost option to maintain the current level of service.

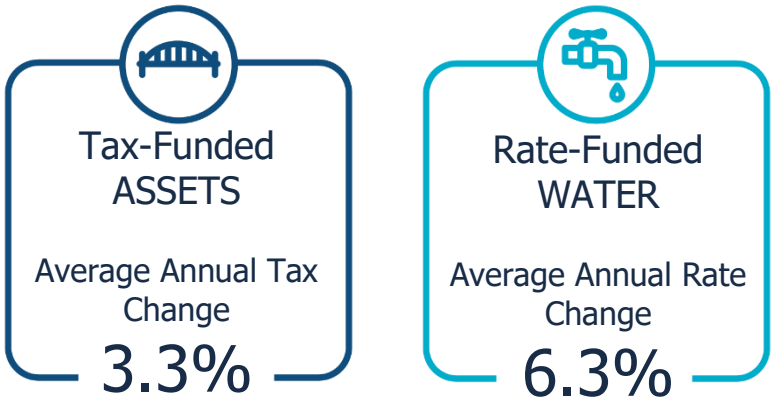
To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the Township's average annual capital requirement totals $1.94 million. Based on a historical analysis of sustainable capital funding sources, the Township is committing approximately $0.35 million towards capital projects or reserves per year. As a result, there is currently an annual capital requirements deficit of $1.59 million.

Annual Infrastructure Deficit Per Household

It is important to note that this AMP represents a snapshot in time and is based on the best available processes, data, and information at the Township. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

Recommendations

A financial strategy was developed to address the annual capital funding gap. The following graphics shows annual tax/rate change required to eliminate the Township's infrastructure deficit based on a 20-year plan for Tax-Funded assets and a 20-year plan for Rate-Funded assets:



Recommendations to guide continuous refinement of the Township's asset management program. These include:

- Reviewing asset data to update and maintain a complete and accurate centralized asset inventory
- Implementing a data governance strategy to increase confidence and continue operationalizing the asset management program
- Developing a condition assessment strategy with a regular schedule
- Reviewing and updating lifecycle management strategies
- Developing and regularly reviewing short- and long-term plans to meet capital requirements
- Continuing to measure current levels of service and identify sustainable proposed levels of service

1 Introduction & Context

Key Insights

- The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio

- A municipal asset management program is a combination of several disciplines or business functions, including management, financial and economic analyses, engineering and operations and maintenance

- The Township's asset management policy provides clear direction to staff on their roles and responsibilities regarding asset management

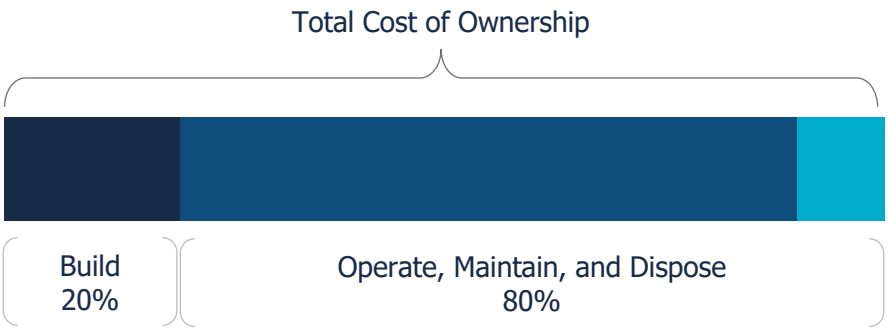
- An asset management plan is a dynamic document that should be updated regularly to inform long-term planning

- Ontario Regulation 588/17 outlines several key milestone and requirements for asset management plans in Ontario between July 1, 2022 and 2025

An Overview of Asset Management

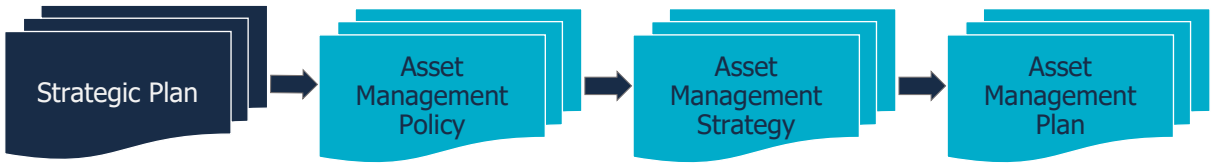
Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% derives from operations and maintenance. This AMP focuses its analysis on the capital costs to maintain, rehabilitate and replace existing municipal infrastructure assets.



These costs can span decades, requiring planning and foresight to ensure fiscal responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of broader asset management program.

The diagram below depicts an industry standard approach and sequence developing a practical asset management program. Beginning with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.



This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

1.1.1 Asset Management Policy

An asset management policy represents a statement of the principles guiding the Township's approach to asset management activities. It aligns with the organizational strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program.

The Township of Billings adopted By-law No. 2019-24 "Asset Management Policy" on May 7th, 2019 in accordance with accordance with Ontario Regulation 588/17.

The stated objectives of the policy are to:

- Continue to develop and implement long-term roads maintenance and improvement.
- Continue to purse rational, cost-effective, and efficient use of municipal property.
- Continue to improve/increase public use washroom facilities.
- Continue with the waterfront development as outlined in the Waterfront Master Plan Study and the project intent.
- Continue to improve municipal waste site efficiency including waste diversion and recycling.
- Continue to insure the most efficient and effective operations of the municipal water treatment and distribution system for the hamlet of Kagawong.
- Engage in joint municipal energy planning initiatives.
- Update our Asset management program with supporting long-term financial plan of major assets to guide the Township's future growth.

The policy provides a foundation for the development of an asset management program within the Township. It covers the key components that define a comprehensive asset management policy:

- The policy's principles dictate the use of asset management practices to ensure all assets meet the agreed levels of service in the most efficient and effective manner;

- the policy commits to, where appropriate, incorporating asset management in the Township's other plans;

- there are formally defined roles and responsibilities of internal staff and stakeholders;

- the policy includes the use of a cost/benefit analysis as well as the acknowledgement of climate change in the management of risk; and

- the policy principles are well defined.

1.1.2 Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than the policy on how the Township plans to achieve asset management objectives through planned activities and decision-making criteria.

The strategy provides a long-term outlook on the overall asset management program development and strengthening key elements of its framework. Unlike the asset management plan, the asset management strategy should not evolve and change frequently

The Township's Strategic Asset Management Policy contains many of the key components of an asset management strategy and may be expanded on in future revisions or as part of a separate strategic document.

1.1.3 Asset Management Plan

The asset management plan (AMP) presents the outcomes of the Township's asset management program and identifies the resource requirements needed to achieve a defined level of service. The AMP typically includes the following content:

- State of Infrastructure
- Asset Management Strategies
- Levels of Service
- Financial Strategies

The AMP is a living document that should be updated regularly as additional asset and financial data becomes available. This will allow the Township to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

The Township's last iteration of the AMP was prepared in 2013 by DFA Infrastructure International Inc. Since then, the Township's central asset inventory has undergone revisions and updates. This document is an AMP that uses the updated asset inventory and has been prepared in accordance with O. Reg. 588/17.

Key Concepts in Asset Management

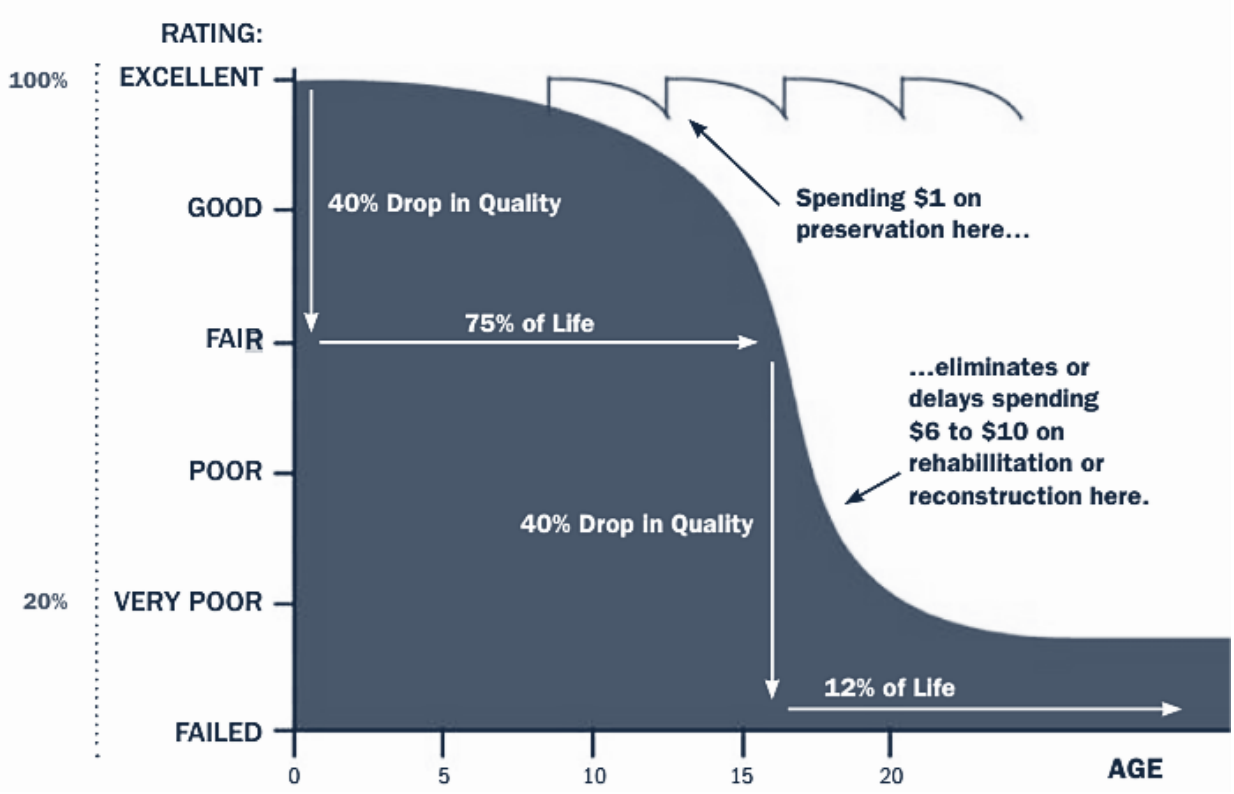
Effective asset management integrates several key components, including lifecycle management, risk management, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail.

1.1.4 Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration. Since costs to rehabilitate tend to increase towards the end of life of an asset, proactive and timely intervention will lead to lower lifecycle costs.

This concept is further illustrated by the graphic below, highlighting the cost impact of a maintenance activity contrasted by the cost impact of a rehabilitative activity later in the life of the asset.



There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation and replacement. The following table provides a description of each type of activity and the general difference in cost.

Lifecycle Activity	Description	Example (Roads)	Cost
Preventative Maintenance	Activities that prevent defects or deteriorations from occurring	Crack Seal	$
General Maintenance	Activities that focus on current defects or inhibit deterioration	Pothole Repairs	$
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	Mill & Re-surface	$$
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	Full Reconstruction	$$$
Replacement Upgrade	Asset end-of-life activities that involve the replacement of an asset to an 'upgraded' asset	Gravel Road to a Surface Treated Road	$$$

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

The Township's approach to lifecycle management is described within each asset category outlined in this AMP. Developing and implementing proactive lifecycle strategies will help staff to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

1.1.5 Risk Management Strategies

Municipalities generally take a 'worst-first' approach to infrastructure spending. Rather than prioritizing assets based on their importance to service delivery, assets in the worst condition are fixed first, regardless of their criticality. However, not all assets are created equal. Some are more important than others, and their failure or disrepair poses more risk to the community than that of others. For example, a road with a high volume of traffic that provides access to critical services poses a higher risk than a low volume rural road. These high-value assets should receive funding before others.

By identifying the various impacts of asset failure and the likelihood that it will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused.

This AMP includes a high-level evaluation of asset risk and criticality. Each asset has been assigned a probability of failure score and consequence of failure score based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation and replacement strategies for critical assets.

1.1.6 Levels of Service

A level of service (LOS) is a measure of what the Township is providing to the community and the nature and quality of that service. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

These measures include a combination of those that have been outlined in O. Reg. 588/17 in addition to performance measures identified by the Township as worth measuring and evaluating. The Township measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service.

Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives.

For core asset categories (Roads, Bridges & Culverts, Water, Sanitary, Storm Water) the Province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in this AMP.

For non-core asset categories, the Township has defined the current qualitative descriptions that will be used to determine the community level of service by the July 2024 deadline.

Technical Levels of Service

Technical levels of service are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of the Township's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories (Roads, Bridges & Culverts, Water, Wastewater, Stormwater) the Province, through O. Reg. 588/17, has provided technical metrics that are required to be included in this AMP.

For non-core asset categories, the Township has defined the current technical metrics that will be used to determine the technical level of service by the July 2024 deadline.

Current and Proposed Levels of Service

This AMP focuses on measuring the current level of service provided to the community. Once current levels of service have been measured, the Township plans to establish proposed levels of service over a 10-year period, in accordance with O. Reg. 588/17.

Proposed levels of service should be realistic and achievable within the timeframe outlined by the Township. They should also be determined with consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals and long-term sustainability. Once proposed levels of service have been established, and prior to July 2025, the Township must identify a lifecycle management and financial strategy which allows these targets to be achieved.

Ontario Regulation 588/17

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure (O. Reg 588/17). Along with creating better performing organizations, more liveable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

The diagram below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.

2019

Strategic Asset Management Policy

2022

Asset Management Plan for Core Assets with the following components:

1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

2024

Asset Management Plan for Core and Non-Core Assets with the following components:

1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

2025

Asset Management Policy Update and an Asset Management Plan for All Assets with the following additional components:

1. Proposed levels of service for next 10 years
2. Updated inventory analysis
3. Lifecycle management strategy
4. Financial strategy and addressing shortfalls
5. Discussion of how growth assumptions impacted lifecycle and financial

1.1.7 O. Reg. 588/17 Compliance Review

The following table identifies the requirements outlined in Ontario Regulation 588/17 for municipalities to meet by July 1, 2022 and July 1, 2024. Next to each requirement a page or section reference is included in addition to any necessary commentary.

Appendix F provides an overall compliance overview that includes requirements for the 2025 deadline.

Requirement	O. Reg. Section	AMP Section Reference	Status
Summary of assets in each category	S.5(2), 3(i)	4.1.1 - 5.2.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	4.1.1 - 5.2.1	Complete
Average age of assets in each category	S.5(2), 3(iii)	4.1.3 - 5.2.3	Complete
Condition of core assets in each category	S.5(2), 3(iv)	4.1.2 – 5.2.2	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	4.1.2 – 5.2.2	Complete
Current levels of service in each category	S.5(2), 1(i-ii)	4.1.6 - 5.2.6	Complete
Current performance measures in each category	S.5(2), 2	4.1.6 - 5.2.6	Complete
Lifecycle activities needed to maintain current levels of service for 10 years	S.5(2), 4	4.1.4 - 5.2.4	Complete
Costs of providing lifecycle activities for 10 years	S.5(2), 4	Appendix B	Complete
Growth assumptions	S.5(2), 5(i-ii) S.5(2), 6(i-vi)	6.1-6.2	Complete

2 Scope and Methodology

Key Insights

- This asset management plan includes 8 asset categories and is divided between tax-funded and rate-funded categories

- Asset data from various data sources was consolidated into the Township's tangible capital asset inventory to establish it as the primary asset inventory

- The source and recency of replacement costs impacts the accuracy and reliability of asset portfolio valuation

- Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life

Asset categories included in this AMP

This asset management plan for the Township of Billings is produced in compliance with Ontario Regulation 588/17. The July 2022 deadline under the regulation—the first of three AMPs—requires analysis of only core assets (roads, bridges & culverts, water, sanitary, and storm). The July 2024 deadline requires analysis of core and non-core assets.

The AMP summarizes the state of the infrastructure for the Township's asset portfolio, establishes current levels of service and the associated technical and customer oriented key performance indicators (KPIs), outlines lifecycle strategies for optimal asset management and performance, and provides financial strategies to reach sustainability for the asset categories listed below.

Asset Category	Source of Funding
Road Network	Tax Levy
Buildings & Facilities	
Bridges & Culverts	
Fleet	
Stormwater Network	
Land Improvements	
Machinery & Equipment	
Water Network	User Rates

The Asset Inventory

The asset information presented in this AMP has been developed from the asset inventory in CityWide Asset Manager™. This inventory serves as the Township's tangible capital asset inventory and has been consolidated with additional asset data from the data sources listed below.

Asset Category	Asset Data Source
Bridges & Culverts	2020 Bridge & Culvert Inspections report (OSIMs)
Road Network	Staff Expertise
	GIS Data
Water Network	Water System Financial Plan (2021 - 2027)
	GIS Data
Buildings & Facilities	2018 Building Inspection Report
Stormwater Network	GIS Data
Land Improvements	Staff Expertise
Machinery & Equipment	
Fleet	

The asset inventory was restructured through the establishment of an industry standard asset hierarchy, and critical asset fields were standardized. In addition to this, and where possible, duplicate data was removed and asset data gaps were addressed.

Deriving Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. This AMP relies on two methodologies:

- **User-Defined Cost and Cost/Unit**: Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience
- **Cost Inflation/CPI Tables**: Historical cost of the asset is inflated based on Consumer Price Index or Non-Residential Building Construction Price Index

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs. Cost inflation is typically used in the absence of reliable replacement cost data. It is a reliable method for recently purchased and/or constructed assets where the total cost is reflective of the actual costs that the Township incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

Estimated Useful Life and Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which the Township expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary.

By using an asset's in-service data and its EUL, the Township can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, the Township can more accurately forecast when it will require replacement. The SLR is calculated as follows:

$$Service\ Life\ Remaining\ (SLR) = In\ Service\ Date + Estimated\ Useful\ Life (EUL) - Current\ Year$$

Deriving Annual Capital Requirements

By dividing the replacement cost of an asset with the asset's estimated useful life and factoring in the cost and impact of any lifecycle activities, the average annual capital requirements can be derived. The average annual requirement is calculated as follows:

$$Annual\ Capital\ Requirement\ (Lifecycle\ Scenario) = \\ = \frac{(Replacement\ Cost + Cost\ of\ Lifecycle\ Activities)}{(Estimated\ Useful\ Life\ (EUL) + Impact\ of\ Lifecycle\ Activities)}$$

$$Annual\ Capital\ Requirement\ (Replacement\ Only\ Scenario) = \frac{Replacement\ Cost}{Estimated\ Useful\ Life\ (EUL)}$$

Reinvestment Rate

As assets age and deteriorate they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost.

By comparing the actual vs. target reinvestment rate the Township can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

$$Target\ Reinvestment\ Rate = \frac{Annual\ Capital\ Requirement}{Total\ Replacement\ Cost}$$

$$Actual\ Reinvestment\ Rate = \frac{Annual\ Capital\ Funding}{Total\ Replacement\ Cost}$$

Deriving Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across the Township's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition.

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	60-80
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-60
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-40
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-20

The analysis in this AMP is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition. Appendix E includes additional information on the role of asset condition data and provides basic guidelines for the development of a condition assessment program.

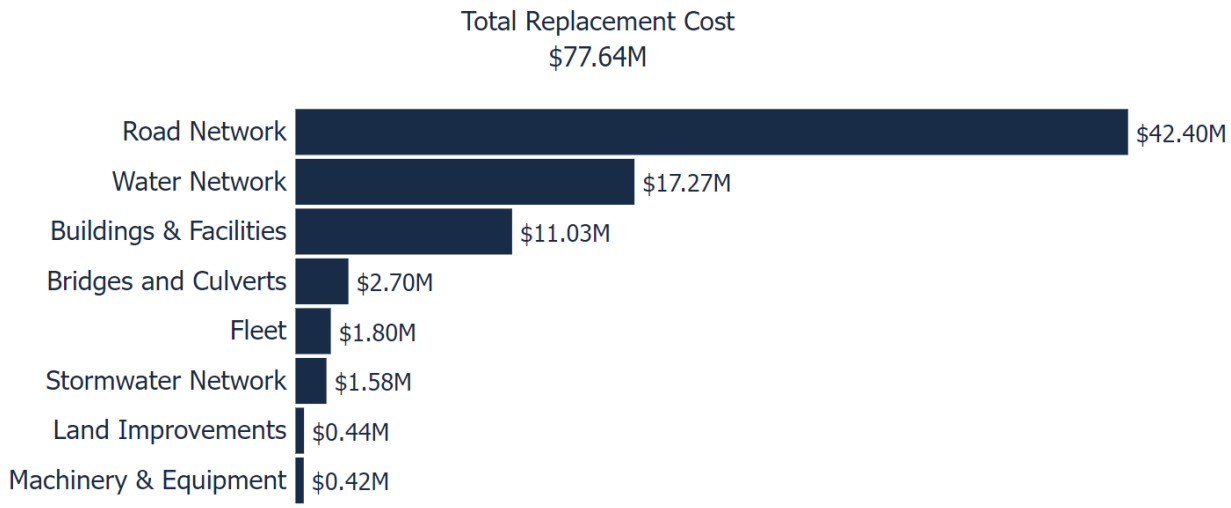
3 Portfolio Overview

Key Insights

- The total replacement cost of the Township's asset portfolio is $77.64 million
- The Township's target re-investment rate is 2.49%, and the actual re-investment rate is 0.44%, contributing to an expanding infrastructure deficit
- 61% of all assets are in fair or better condition
- 31% of assets are projected to require replacement in the next 10 years
- Average annual capital requirements total $1.94 million per year across all assets
- Annual capital funding by the Township totals $0.35 million across all assets

Total Replacement Cost of Asset Portfolio

The asset categories analyzed in this AMP have a total replacement cost of $77.64 million based on inventory data at the end of 2020. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

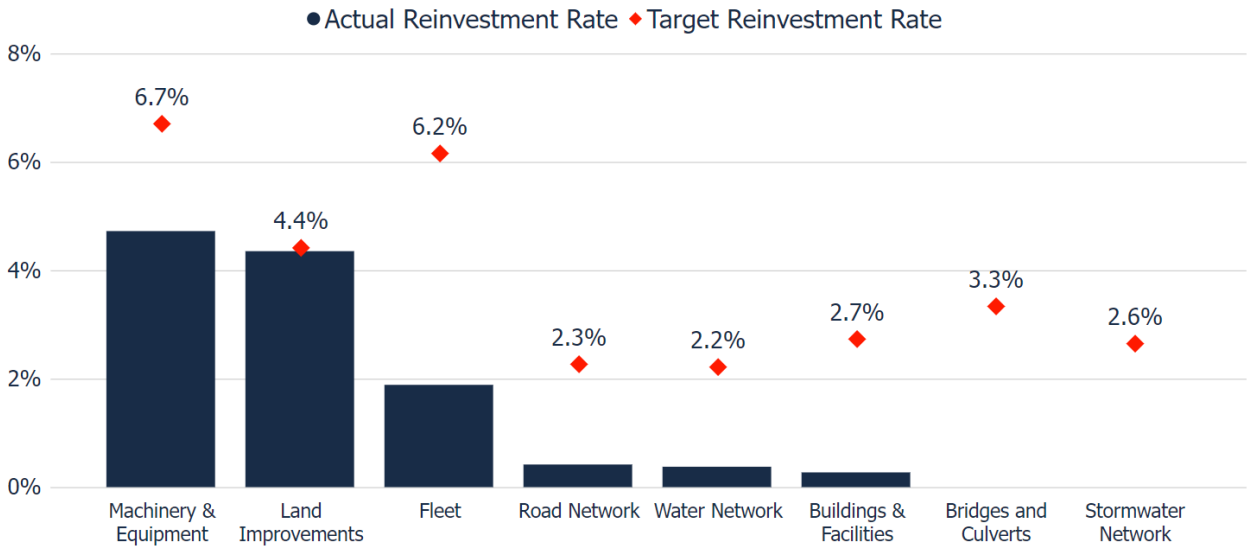


The table below identifies the replacement cost method and sources used throughout this AMP.

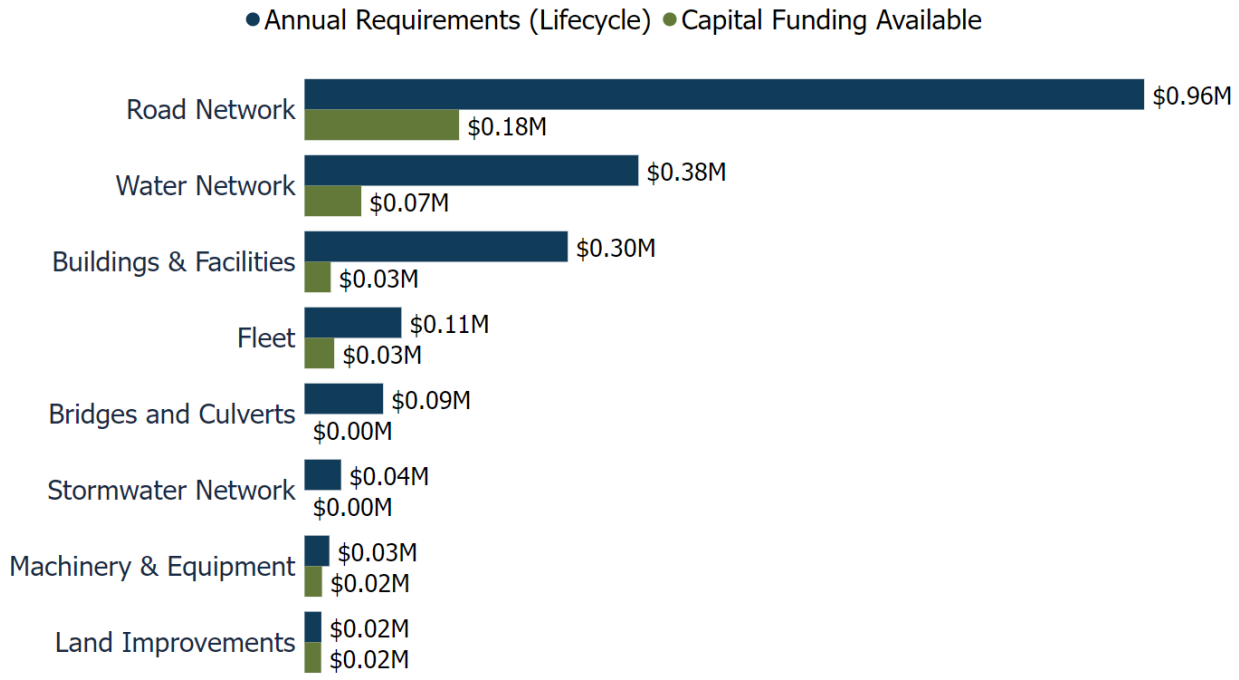
Asset Category	Replacement Cost Method		
	Unit Cost/User-Defined Cost	Historical Cost Inflation	Replacement Cost Source
Road Network	100%	0%	Municipal Staff
Water Network	61%	39%	Water System Financial Plan 2021 - 2027, Municipal Staff
Buildings & Facilities	27%	73%	2018 Building Inspection Report, Municipal Staff
Bridges & Culverts	100%	0%	Municipal Staff
Fleet	0%	100%	Historical Cost Inflation
Stormwater Network	61%	39%	Municipal Staff
Land Improvements	0%	100%	Historical Cost Inflation
Machinery & Equipment	0%	100%	Historical Cost Inflation
Overall	**77%**	**23%**	

Target vs. Actual Reinvestment Rate

The graph below depicts funding gaps or surpluses by comparing the target vs the actual reinvestment rate. To meet the long-term replacement needs, the Township should be allocating $1.94 million annually, for a target reinvestment rate of 2.49%. Actual annual spending on infrastructure totals $0.35 million, for an actual reinvestment rate of 0.44%.

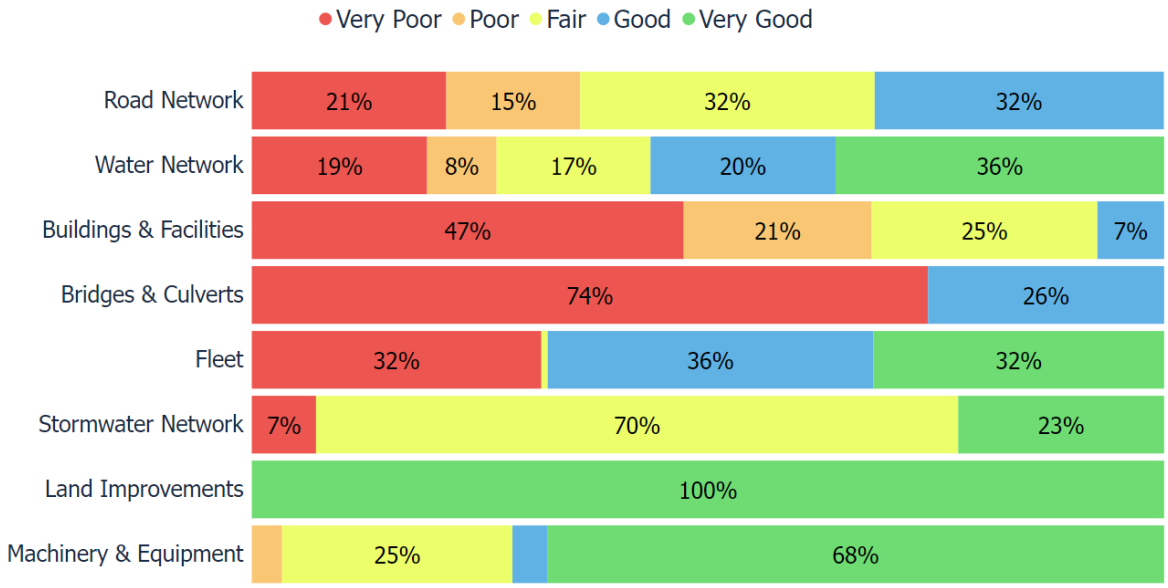


To highlight the monetary magnitude of the reinvestment rates, the graph below compares the capital annual requirements (target investment) versus the current level of service to the capital annual funding that is available (actual reinvestment). This comparison is examined in more detail under Section 7.1.1



Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 61% of assets in the Township are in fair or better condition. This estimate relies on both age-based and field condition data. It is also important to acknowledge that for certain larger assets such as facilities and park structures, having a componentized inventory will produce a more accurate condition and forecast, rather than just an asset.

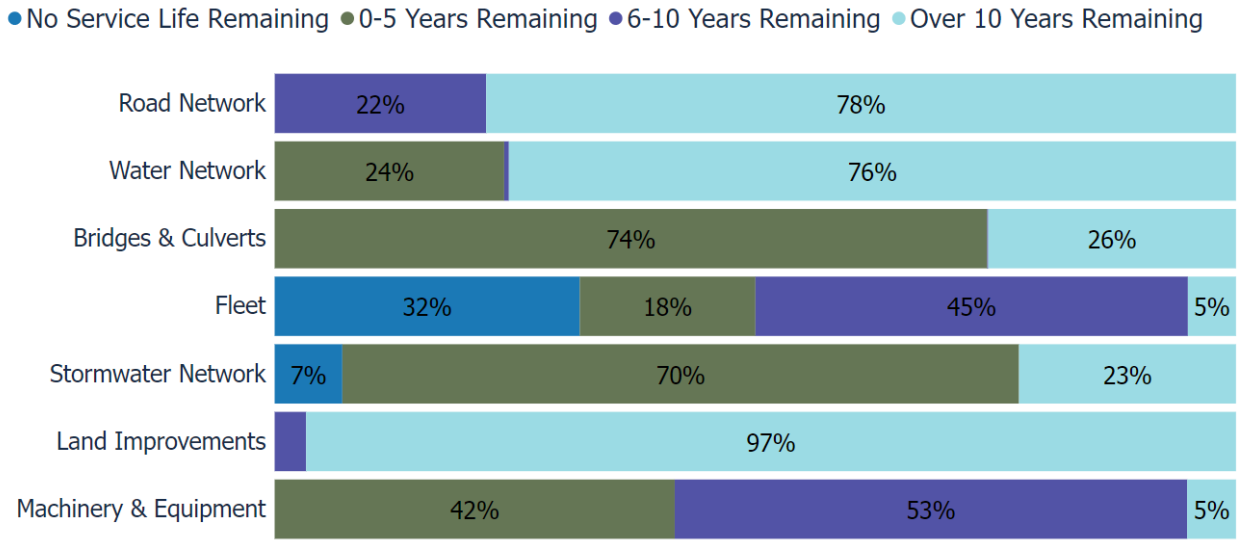


This AMP relies on assessed condition data for 55% of assets; for the remaining portfolio, age is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions. The table below identifies the source of condition data used throughout this AMP.

Asset Category	% of Assets with Age-based Condition	% of Assets with Assessed Condition	Source of Condition Data
Road Network	59%	41%	Municipal Staff
Water Network	27%	73%	Municipal Staff
Buildings & Facilities	6%	94%	2018 Building Inspection Report
Bridges & Culverts	0%	100%	2020 OSIM
Fleet	100%	0%	Age-based
Stormwater Network	100%	0%	Age-based
Land Improvements	100%	0%	Age-based
Machinery & Equipment	100%	0%	Age-based
Overall	**45%**	**55%**	

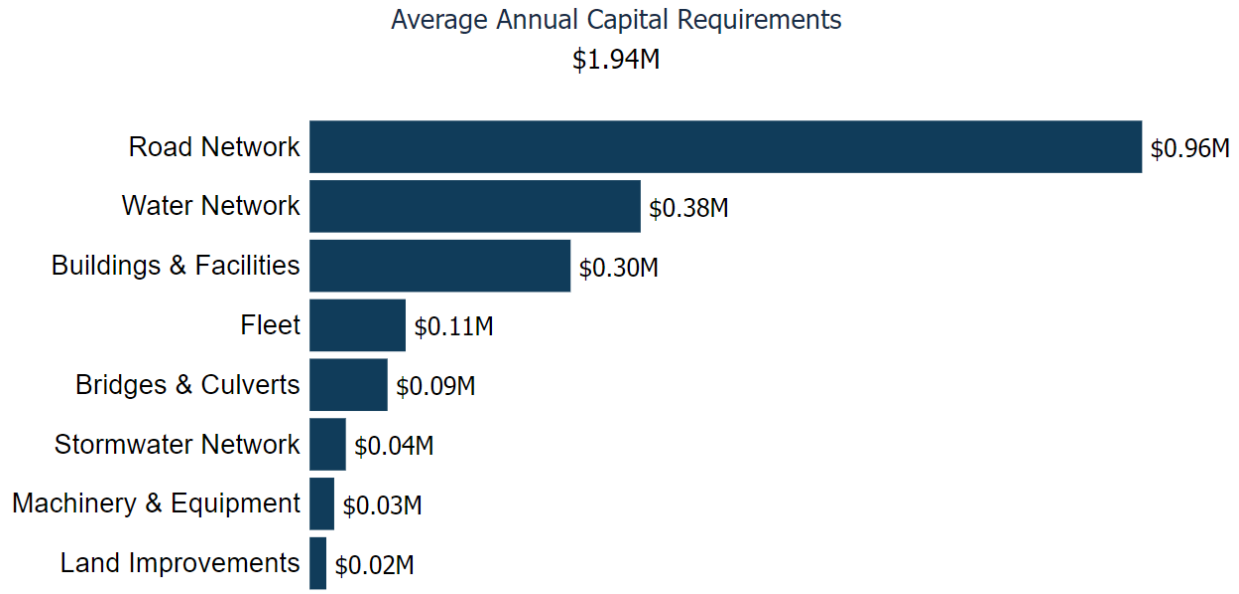
Service Life Remaining

Based on asset age, available assessed condition data and estimated useful life, 31% of the Township's assets will require replacement within the next 10 years. Capital requirements over the next 10 years are identified in Appendix B.



Annual Capital Requirements

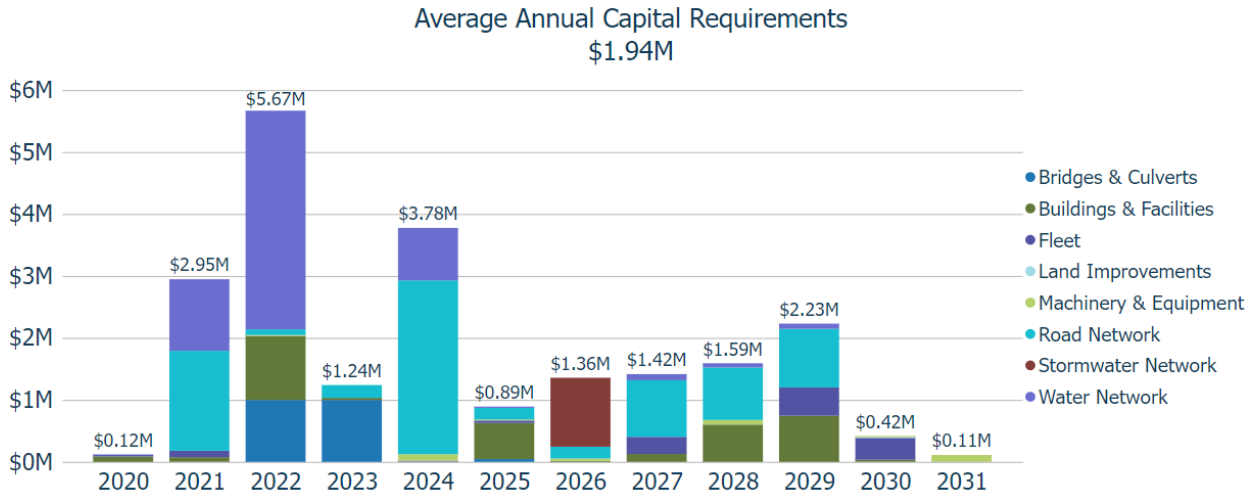
Based on the replacement cost of the assets, the estimated useful life, the cost and impact of lifecycle activities, the average annual capital requirements can be calculated for each category in the asset portfolio. This is the average annual amount required to maintain the current level of service that the Township is providing.



Forecasted Capital Requirements

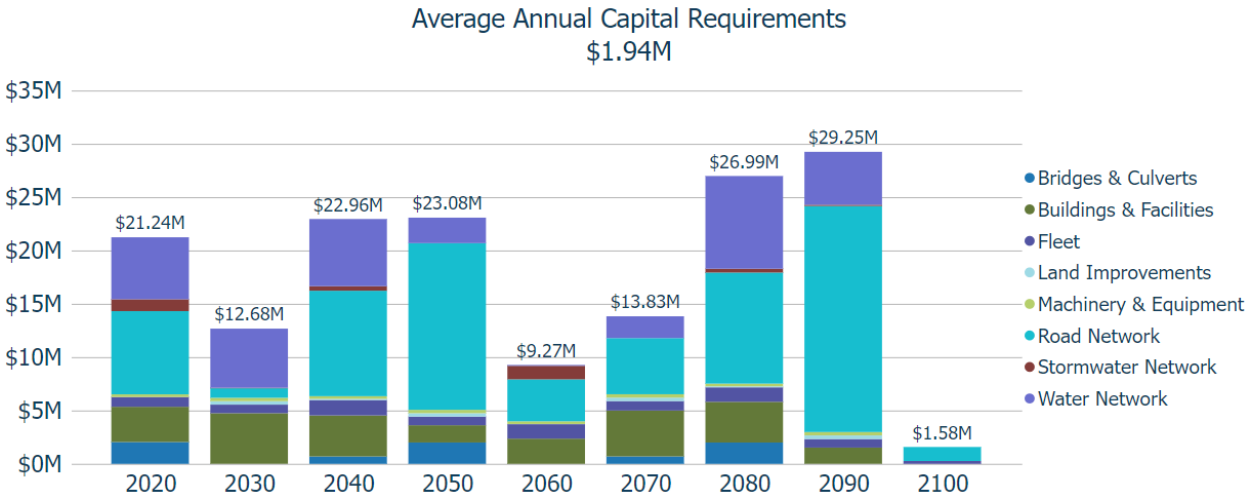
The development of a long-term capital forecast should include both asset rehabilitation and replacement requirements. With the development of asset-specific lifecycle strategies that include the timing and cost of future capital events and the refinement of the asset inventory, the Township can produce an accurate short- and long-term capital forecast.

The graph below identifies the annual capital requirements over the next 10 years and is based on the Township's asset inventory as of 2020, not including assets that may be required due to growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

The following graph identifies the average annual capital requirements required over the next 80 years. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 10-year bins and are based on the Township's asset inventory as of 2020 and do not include assets that may be required for growth.



Risk & Criticality

Advanced risk models for core linear assets and high-level risk models for all other assets were developed as part of this asset management plan. The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the asset portfolio based on 2020 inventory data.

Municipal staff also identified and grouped assets based on service areas, including those that support the delivery of fire and emergency services, with a higher risk rating attribute to ensure that a prioritization process is in place.

See Appendix C for the criteria used to determine the risk rating of each asset.

4 Analysis of Tax-funded Assets

Key Insights

- Tax-funded assets are valued at $60.38 million
- 58% of tax-funded assets are in fair or better condition
- The average annual capital requirement to sustain the current level of service for tax-funded assets is approximately $1.55 million
- To reach sustainability, tax revenues need to be increased by 3.3% annually for the next 20 years to eliminate annual deficits

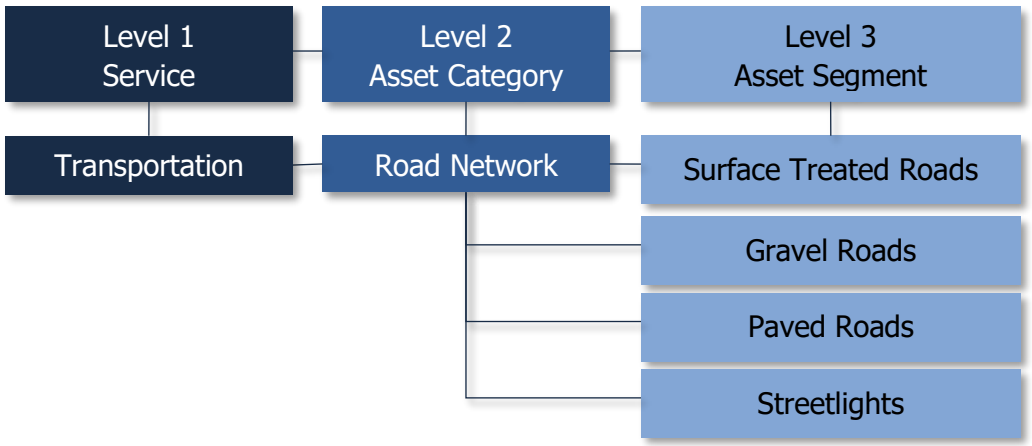
Road Network

The Township's Road Network inventory is managed in CityWide™, and comprises of 100 unique assets, including 188 lane kilometres of paved and unpaved roads, and roadway appurtenances such as streetlights.

The Public Works department, along with supporting assets such as facilities, fleet and machinery & equipment, is responsible for planning and managing the road network. The department is also responsible for winter snow clearing, ice control and snow removal operations.

4.1.1 Asset Hierarchy & Segmentation

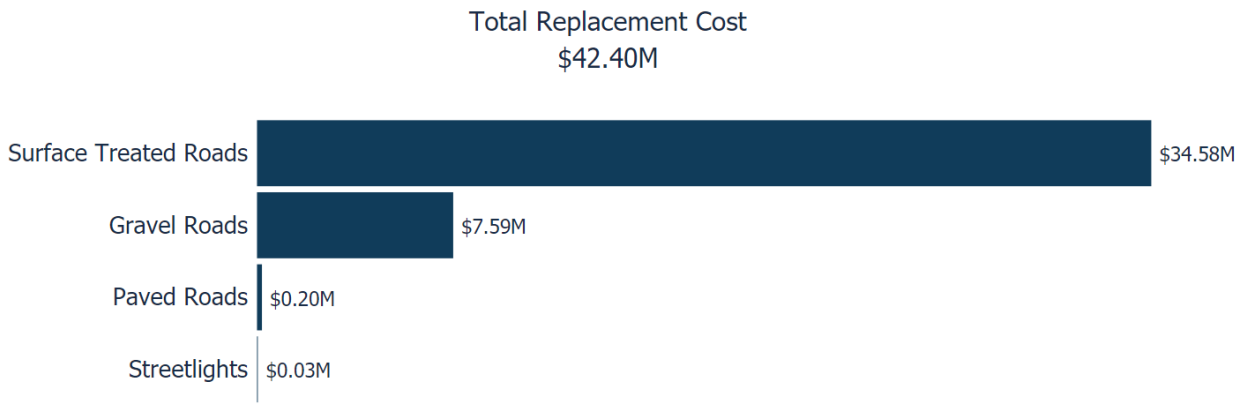
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.2 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Road Network inventory.

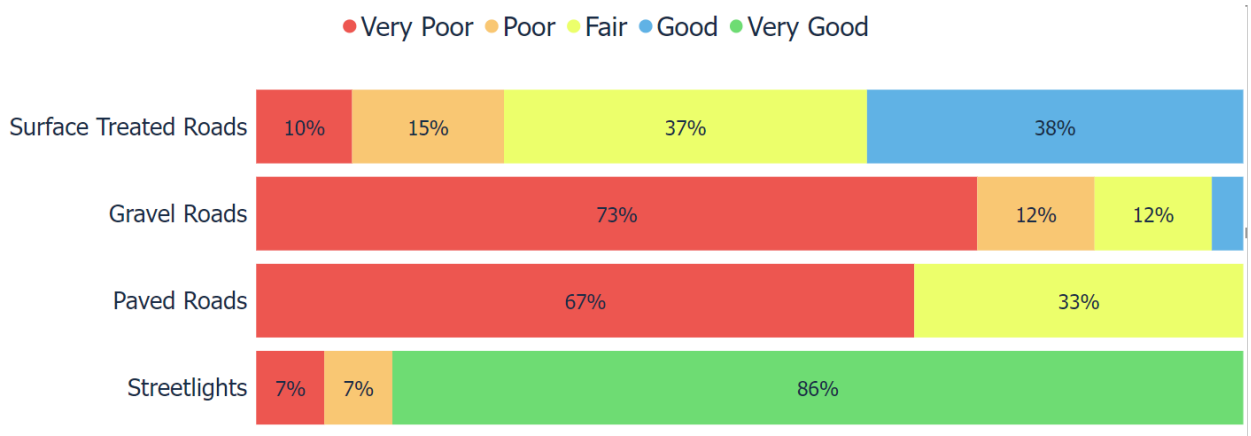
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Surface Treated Roads	103 lane-km	Cost per Unit	$34,580,550
Gravel Roads	35 lane-km	Cost per Unit	$7,592,000
Paved Roads	6 lane-km	Cost per Unit	$197,100
Streetlights	30	Cost per Unit	$31,900
			$42,401,550



4.1.3 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Surface Treated Roads	64%	Good	50% Assessed
Gravel Roads	35%	Poor	98% Assessed
Paved Roads	48%	Fair	100% Assessed
Streetlights	87%	Very Good	Age-based
	59%	**Fair**	



Current Approach to Condition Assessment

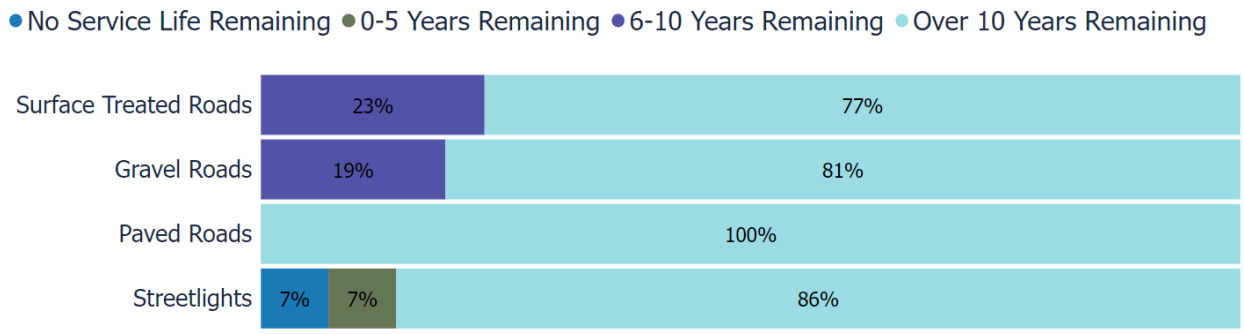
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Roads are assessed on a 7-year cycle
- Road patrols are undertaken every 2 weeks, granular roads are also visually inspected during grading activities
- Road Network assets are inspected as per O. Reg. 239/02

4.1.4 Estimated Useful Life & Average Age

The Estimated Useful Life for Road Network assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Surface Treated Roads	20 Years	21.2	15.3
Gravel Roads	40 Years	53.8	15.0
Paved Roads	25 Years	57.0	17.0
Streetlights	20 Years	1.3	16.1
		24.6	**15.5**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.5 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment.

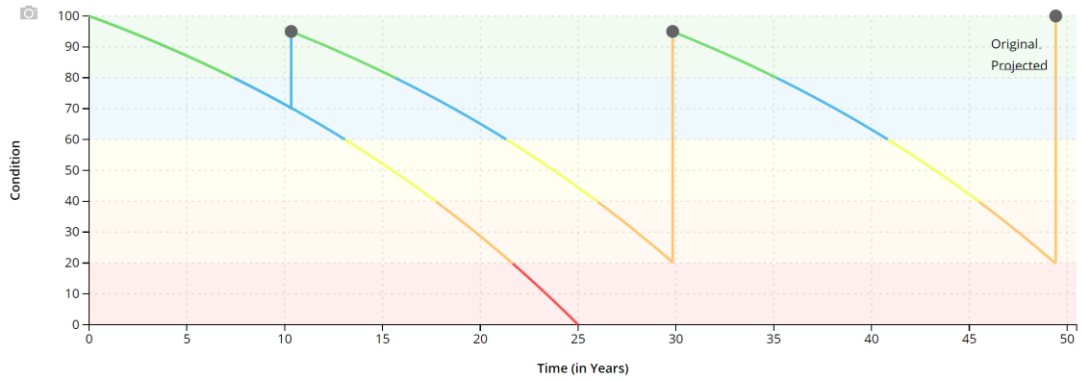
The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Pothole repairs are completed annually based on deficiencies identified through regular road patrols and feedback from the public.
	Roads are graded twice annually.
	Seasonal maintenance activities include asphalt patching, graveling, and tree cutting.
	Summer maintenance activities include sidewalk repairs, grading, re-gravelling, dust control, ditching, roadside mowing, tree trimming, brush cleanup, road sign installation/maintenance, and line painting.
	Winter maintenance activities include snow plowing, snow removal, salt/sand application, de-icing, frost control, and drift control.
	Crack sealing is done for paved roads as needed to reduce erosion caused by poor drainage.
Rehabilitation	On an annual basis, Staff aim to hard surface about 5 km of roads
	Rehabilitation activities include: cold mix & single surface treatment, base repairs & 40mm asphalt overlay, single surface treatment, double surface treatment, and G/ST rehabilitation.
	Road replacement prioritization is determined by consideration of growth, risk, condition, health and safety, and social impact.
Replacement	Road reconstruction projects (base & surface) are identified based on road condition, risk, and sub-surface asset requirements (water/storm)

The following lifecycle strategies have been developed to formalize the current approach to manage the lifecycle of Paved, Surface Treated and Gravel roads. Instead of allowing the roads to deteriorate until replacement is required, strategic rehabilitation is expected to extend the service life of roads at a lower total cost.

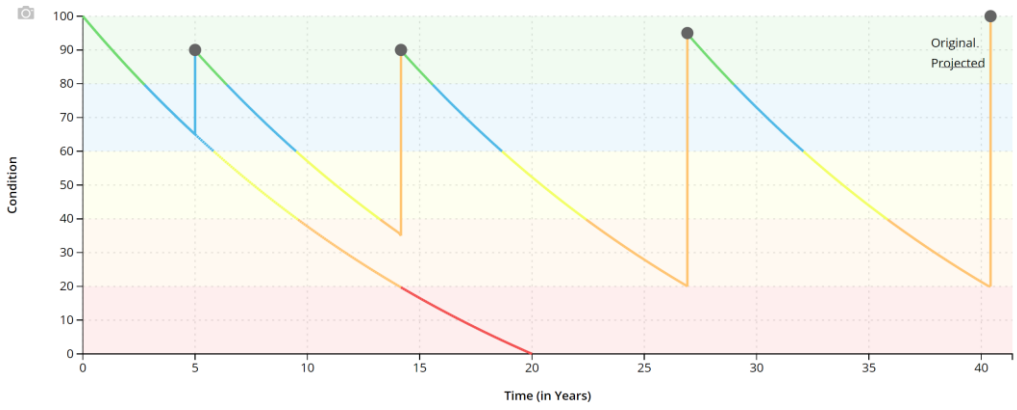
Paved Roads

Event Name	Event Class	Event Trigger
Crack Sealing & Asphalt Patching	Preventative Maintenance	Condition: 75 - 85
Cold Mix & Single Surface Treatment	Rehabilitation	Condition: 70 - 85
Base Repairs & 40mm asphalt overlay	Rehabilitation	Condition: 20 - 70
Full Reconstruction	Replacement	Condition: 20

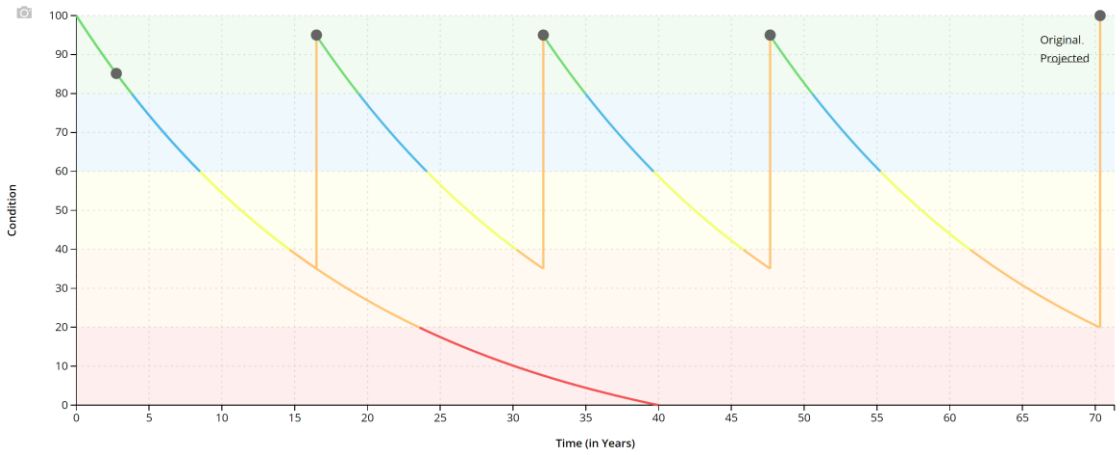


Surface Treated Roads

Event Name	Event Class	Event Trigger
Single Surface Treatment	Rehabilitation	Condition: 65 - 85
Double Surface Treatment	Rehabilitation	Condition: 35 - 65
G/ST Rehabilitation	Rehabilitation	Condition: 20 - 35
Full Reconstruction	Replacement	Condition: 20



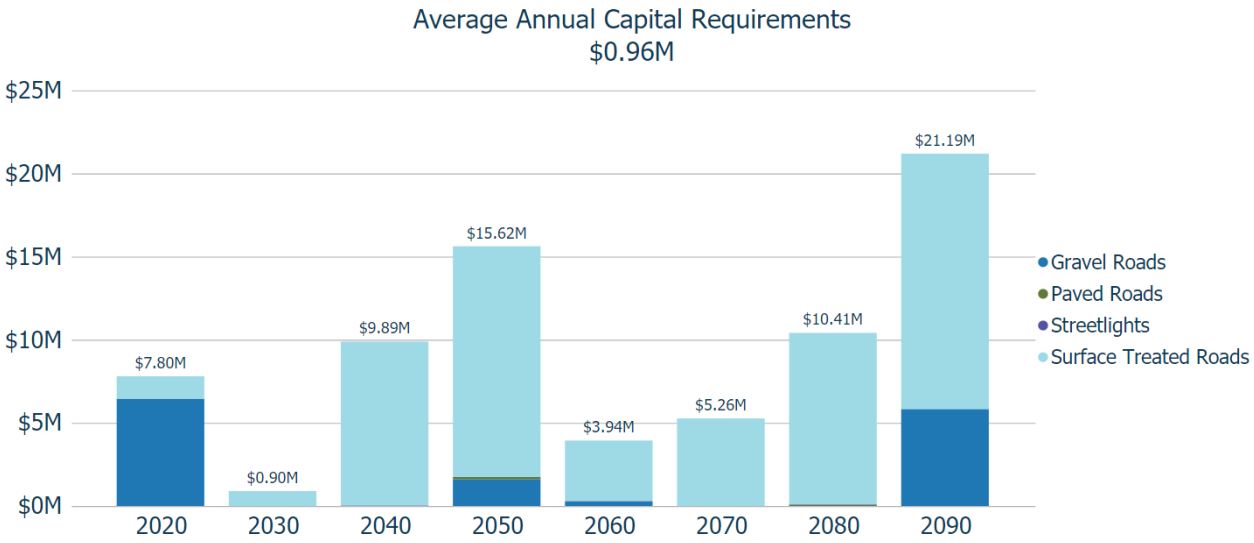
Gravel Roads		
Event Name	**Event Class**	**Event Trigger**
Annual Grading (2 Treatments)	Maintenance	Condition: 85 - 95
G/ST Rehabilitation	Rehabilitation	Condition: 35 - 85
Full Reconstruction	Replacement	Condition: 20



Forecasted Capital Requirements

Based on the lifecycle strategies identified previously for Paved, Surface Treated, and Gravel Roads, the 10-year Road Improvement Plan, and assuming the end-of-life replacement of all other assets in this category, the following graphs forecasts short- and long-term capital requirements for the Road Network.

The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs to meet future capital needs. The graph below provides a 70-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.6 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Climate Change & Extreme Weather Events

An increase in freeze/thaw cycles causes road pavement to heave and settle. This can cause the accelerated deterioration of road surface pavement which leads to an increased need for maintenance and rehabilitation. The uncertainty surrounding the impact of extreme weather events can make changing conditions difficult to plan for.

Organizational Knowledge & Capacity

Both short- and long-term planning requires the regular collection, storage and maintenance of infrastructure data to support asset management decision-making. Staff can find it challenging to dedicate resource time towards data collection to ensure that asset condition and asset attribute data is regularly reviewed and updated.

4.1.7 Levels of Service

The following tables identify the Township's current level of service for the Road Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Road Network.

Service Attribute	Qualitative Description	Current LOS (2021)
Scope	Description, which may include maps, of the road network in the municipality and its level of connectivity	The Township's transportation network comprises of 144 lane-km of roads, of which: - 35 lane-km are gravel roads - 103 lane-km are surfrace treated roads - 6 lane-km are paved roads The network mostly consists of roads with MMS classes of 3, 4, 5 and 6. In addition, the network consists of 30 streetlight assets, and other roadside appurtenances.
Quality	Description or images that illustrate the different levels of road class pavement condition	The Condition Rating number is a visual assessment of the structural condition or integrity of the road. The rating numbers were assigned on a scale of 1 to 10 with the lower numbers describing those roads with the most structural distress or poorest shaped road cross section. (1-5) Road surface exhibits moderate to significant deterioration and requires improvement. (6-10) Road surface is in generally good condition, with localized deficiencies.

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Road Network.

Service Attribute	Technical Metric	Current LOS (2021)
Scope	Number of lane-km of arterial roads (MMS classes 1 and 2) per land area of municipality (km/km^2)	0 km/km^2
	Number of lane-km of collector roads (MMS classes 3 and 4) per land area of municipality (km/km^2)	0.36 km km/km^2
	Number of lane-km of local roads (MMS classes 5 and 6) per land area of municipality (km/km^2)	0.33 km/km^2
Quality	Average pavement condition index for paved roads in the municipality	Paved Roads - 48%
		Surface Treated Roads - 64%
	Average surface condition for unpaved roads in the municipality (e.g., excellent, good, fair, poor)	Poor - 35%
Performance	Capital reinvestment rate	0.42%
	Operating costs for unpaved (loose top) roads per lane kilometre	$691

4.1.8 Recommendations

Asset Inventory

- Review streetlight inventory to determine whether all municipal assets within this asset segment has been accounted for.
- Continue to consolidate critical asset information from other asset data sources into the Township's centralized asset inventory.

Lifecycle Management Strategies

- Gather unit costs for assets that have relied primarily on historical inflation and review periodically to ensure a higher level of accuracy and within the context of current market condition.
- Evaluate the efficacy of the Township's lifecycle management strategies at regular intervals to determine the impact cost, condition and risk.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

Buildings & Facilities

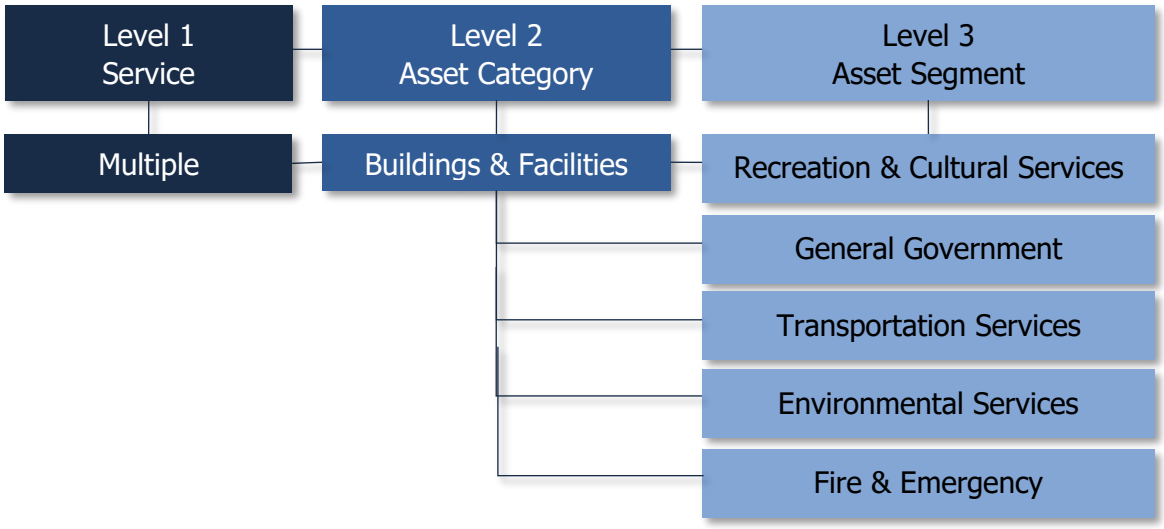
The Township's Buildings & Facilities inventory is managed in CityWide™, and comprises of 27 unique assets, that represent around 20 individual facilities. These are owned by the Township and maintained by various departments that provide key administrative, protective, recreational and cultural services to the community.

In 2018, the Township retained Tulloch Engineering Ltd. to carry out an assessment of the building structures within the Township.

The current buildings & facilities inventory poses serious limitations for accurate and long-term asset management planning. Due to its origins from a pooled, finance-based inventory, the current inventory is not componentized and lacks accuracy.

4.1.9 Asset Hierarchy & Segmentation

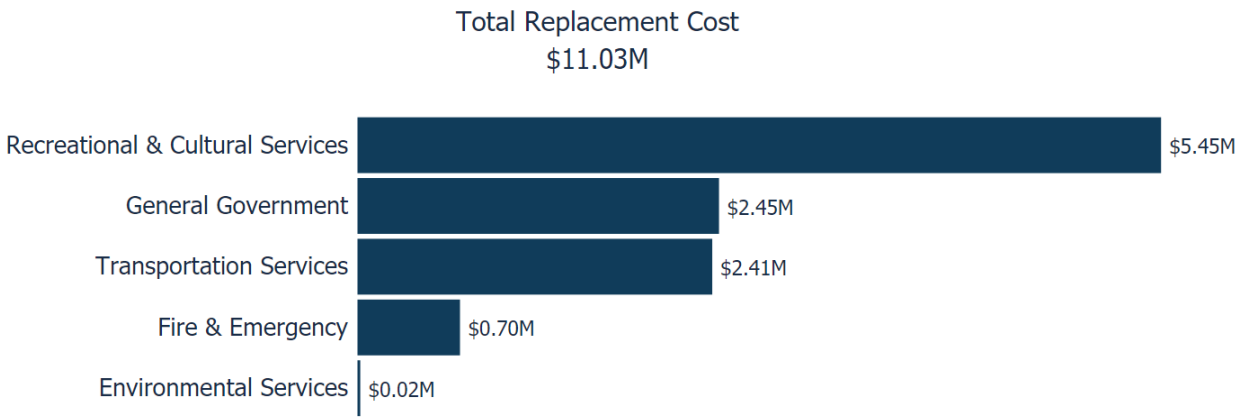
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.10 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Buildings & Facilities inventory.

Asset Segment	Number of Facilities	Replacement Cost Method	Total Replacement Cost
Recreational & Cultural Services	8	Historical Cost Inflation, 2018 Building Inspection Report	$5,454,000
General Government	2	Historical Cost Inflation, 2018 Building Inspection Report	$2,454,349
Transportation Services	2	Historical Cost Inflation, 2018 Building Inspection Report	$2,408,571
Fire & Emergency	1	Historical Cost Inflation, 2018 Building Inspection Report	$696,731
Environmental Services	1	Historical Cost Inflation, 2018 Building Inspection Report	$20,070
			$11,033,721



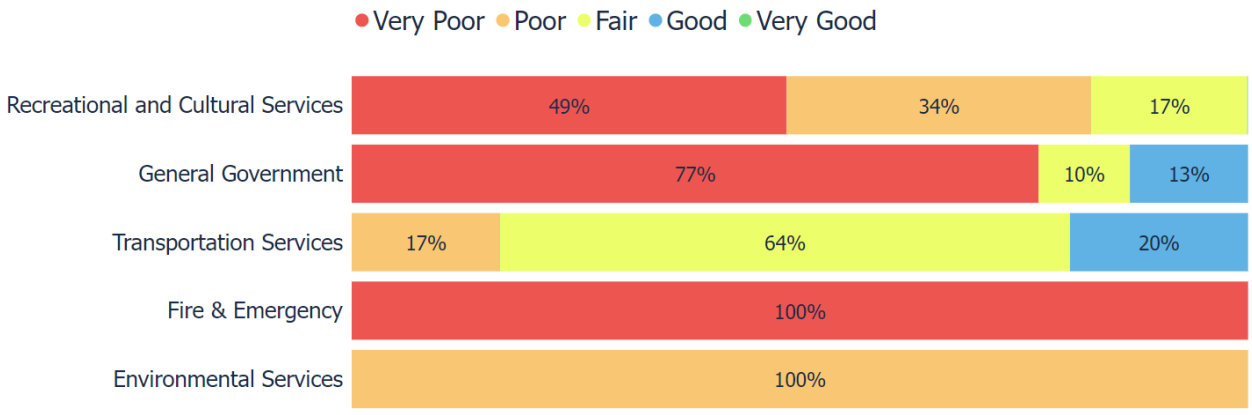
4.1.11 Asset Condition

The 2018 Building Inspection Report by Tulloch Engineering, and the resulting Facility Condition Index (FCI) has been consolidated into the Township's asset inventory. The table below provides the accepted definition of varying levels of the FCI.

Condition	FCI Value	Condition Rating
Very Good	0 to 0.5	Very Good or Good condition with minimal ongoing maintenance/upgrading.
Good		
Fair	0.5 to 1.0	Fair condition with typical annual maintenance requirements
Poor	1.0 to 3.0	Poor condition with increasing anticipated annual maintenance and upgrading
Very Poor	3.0 to 10.0	Critical condition with significant repair/upgrading and potential need for short term shut down or loss of use.

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition is a weighted value based on replacement cost.

Asset Segment	Average Condition	Average Condition Rating	Condition Source
Recreational & Cultural Services	5.8	Very Poor	98% Assessed
General Government	1.6	Poor	77% Assessed
Transportation Services	0.7	Fair	100% Assessed
Fire & Emergency	10.0	Very Poor	100% Assessed
Environmental Services	1.7	Poor	Age-based
	4.1	**Very Poor**	



The current condition overview of Buildings & Facilities is based on its pooled and incomplete inventory, as such this should be considered supplementary and/or discarded if a componentized inventory is developed.

To ensure that the Township's Buildings & Facilities continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Buildings & Facilities.

Current Approach to Condition Assessment

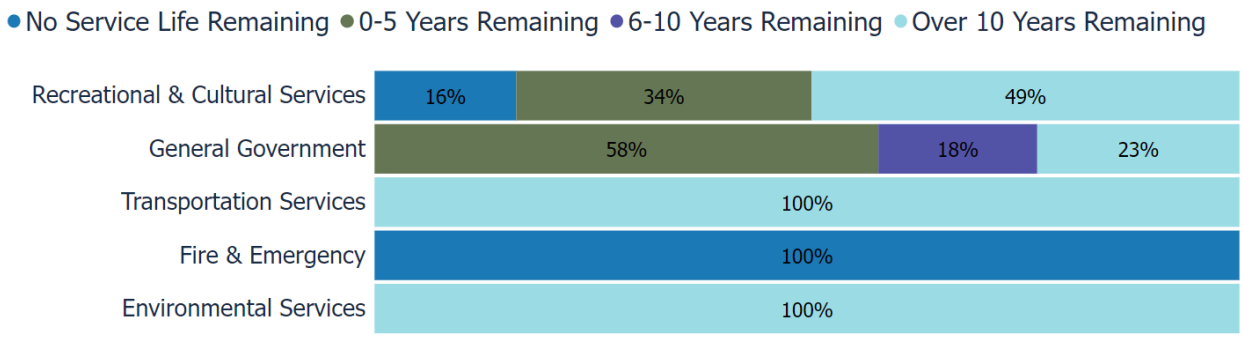
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- There was a 2018 condition assessment conducted by Tulloch Engineering Inc.
- Formal workplace inspections conducted every year through the Township's health and safety program.
- High-level assessments by internal staff are performed annually to determine the condition of facilities.

4.1.12 Estimated Useful Life & Average Age

The Estimated Useful Life for Buildings & Facilities assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Recreational & Cultural Services	10 - 40 Years	23.2	8.1
General Government	40 Years	17.8	24.7
Transportation Services	40 Years	58.7	24.3
Fire & Emergency	40 Years	41.5	-3.0
Environmental Services	40 Years	23.5	16.4
		26.4	**14.1**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.13 Lifecycle Management Strategy

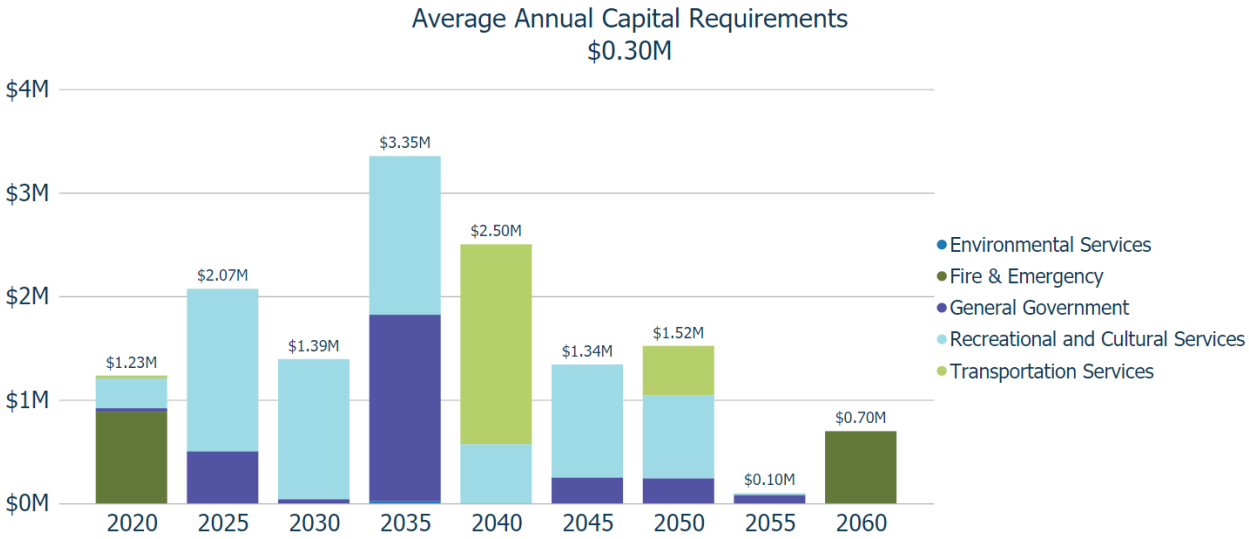
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration. The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance / Rehabilitation	Municipal buildings are subject to regular inspections to identify health & safety requirements as well as structural deficiencies that require additional attention
	The 2018 Building Inspection report also included a 25-year forecast that is incorporated into the decicion-making process.
	Critical buildings have a detailed maintenance and rehabilitation schedule, while the maintenance of other facilities are dealt with on a case-by-case basis
Replacement	Assessments are completed strategically as buildings approach their end-of-life to determine whether replacement or rehabilitation is appropriate

Forecasted Capital Requirements

Based on the current buildings and facilities inventory, the 2018 building inspection report, and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the Buildings & Facilities category.

The graph below provides a 40-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



It is important to acknowledge the limitations of the current buildings and facilities inventory due to its pooled asset listing. Accuracy and reliability can be improved by collecting asset data on the specific components that make up the facilities and consolidating it into the current inventory.

The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.14 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Asset Data Confidence

The current inventory for buildings & facilities is pooled and not componentized, resulting in a basic level of data maturity. This is a limiting factor in allowing for accurate and reliable projections, and Staff have indicated that the current inventory is incomplete.

Organizational Knowledge & Capacity

Both short- and long-term planning requires the collection of infrastructure data to support asset management decision-making. Staff find it a continuous challenge to dedicate resource time towards data collection and consolidation.

4.1.15 Levels of Service

The following tables identify the Township's current level of service for Buildings & Facilities. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Buildings & Facilities.

Service Attribute	Qualitative Description	Current LOS (2021)
Accessible & Reliable	List of facilities that meet accessibility standards and any work that has been undertaken to achieve alignment	No facilities meet accessibility standards at this time.
Safe & Regulatory	Description of monthly and annual facilities inspection process	TBD[1]
Affordable	Description of the lifecycle activities (maintenance, rehabilitation and replacement) performed on municipal facilities	TBD[1]
Sustainable	Description of the current condition of municipal facilities and the plans that are in place to maintain or improve the provided level of service	TBD[1]

[1] The Township does not currently have data available to determine this qualitative metric. Staff are working to gather this metric for the next iteration of the AMP that is required in 2025.

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Buildings & Facilities.

Service Attribute	Technical Metric	Current LOS (2021)
Accessible & Reliable	Number of unplanned facility closures	0
Safe & Regulatory	Number of service requests about unsafe conditions in facilities	0
	Number of identified defects	0
Affordable	O&M cost / # of municipal facilities	$7,924
	Annual capital reinvestment rate	0.27%
Sustainable	% of facilities that are in good or very good condition	0%
	% of facilities that are in poor or very poor condition	17%

4.1.16 Recommendations

Asset Inventory

- The Township's asset inventory contains a single or a few assets for all facilities. Facilities consist of several separate capital components that have unique estimated useful lives and require asset-specific lifecycle strategies. Staff should work towards implementing a component-based inventory of all facilities that is based on the UNIFORMAT II data structure.

Condition Assessment Strategies

- While the 2018 condition assessment did provide an overall condition of each facility that was inspected. A comprehensive structural assessment of all buildings & facilities, based on the UNIFORMAT II data structure, is highly recommended to gain a better understanding of the overall heath and condition of each facility to identify accurate short- and long-term capital requirements.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in in this AMP and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

Bridges & Culverts

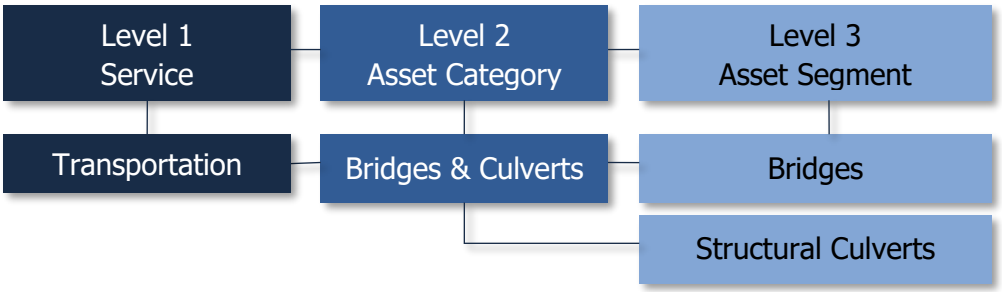
The Township's Bridges and Culverts inventory is managed in CityWide™ and comprises of 3 structures that have a span of 3 meters or more and are therefore categorized as a bridge or a structural culvert asset.

The Public Works department is responsible for the planning and managing of all bridges and structural culverts located across municipal roads with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

Based on the requirements outlined by the Ministry of Transportation, the most recent Bridge and Culvert inspection was conducted by K. Smart Associates Limited in 2020.

4.1.17 Asset Hierarchy & Segmentation

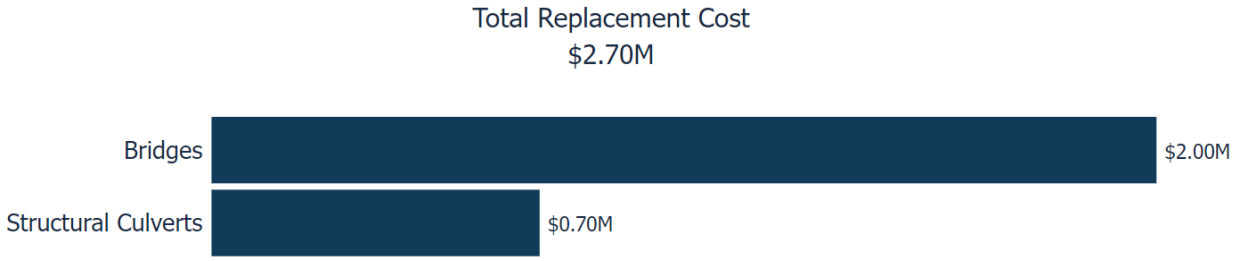
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.18 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Bridges & Culverts inventory.

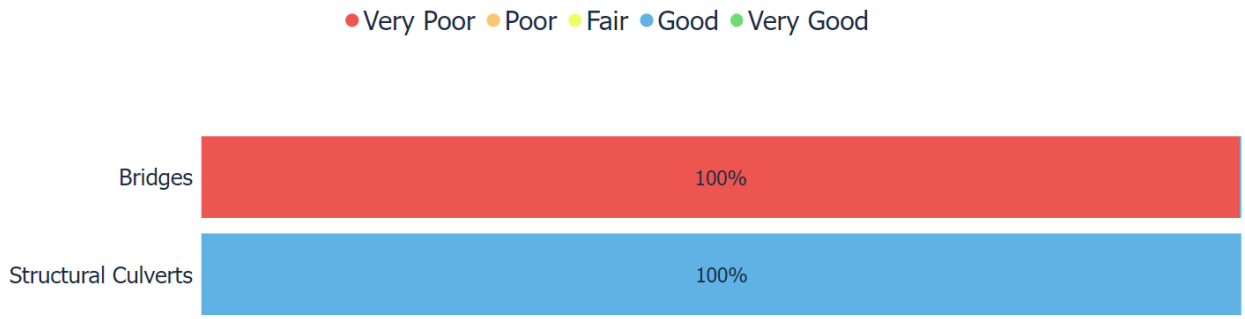
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Bridges	2	User-Defined Cost	$2,002,895
Structural Culverts	1	User-Defined Cost	$695,400
			$2,698,295



4.1.19 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Bridges	16%	Very Poor	100% Assessed
Structural Culverts	89%	Good	100% Assessed
	35%	**Poor**	



To ensure that the Township's Bridges & Culverts continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation, and replacement activities is required to increase the overall condition of the Bridges & Culverts.

Current Approach to Condition Assessment

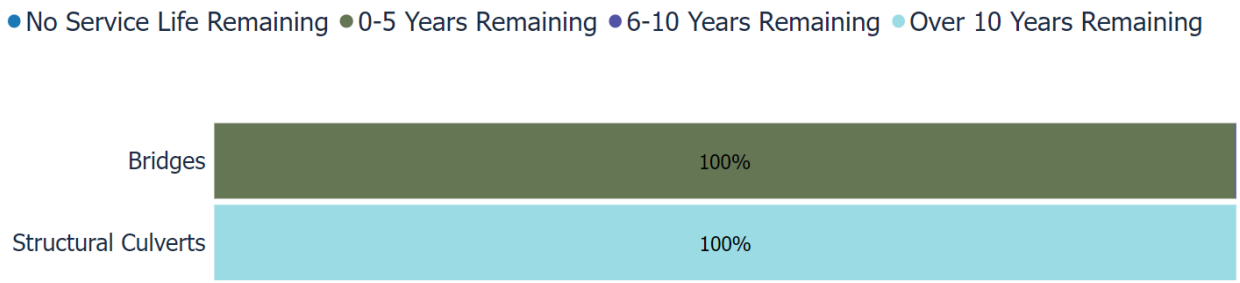
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Condition assessments of all bridges and culverts with a span greater than or equal to 3 meters are completed every 2 years in accordance with the Ontario Structure Inspection Manual (OSIM)
- The most recent OSIM inspection was conducted in 2020 by K. Smart Associates Limited

4.1.20 Estimated Useful Life & Average Age

The Estimated Useful Life for Bridges & Culverts assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Bridges	20 - 30 Years	22.7	3.0
Structural Culverts	30 Years	42.0	21.3
		27.5	**7.6**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.21 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

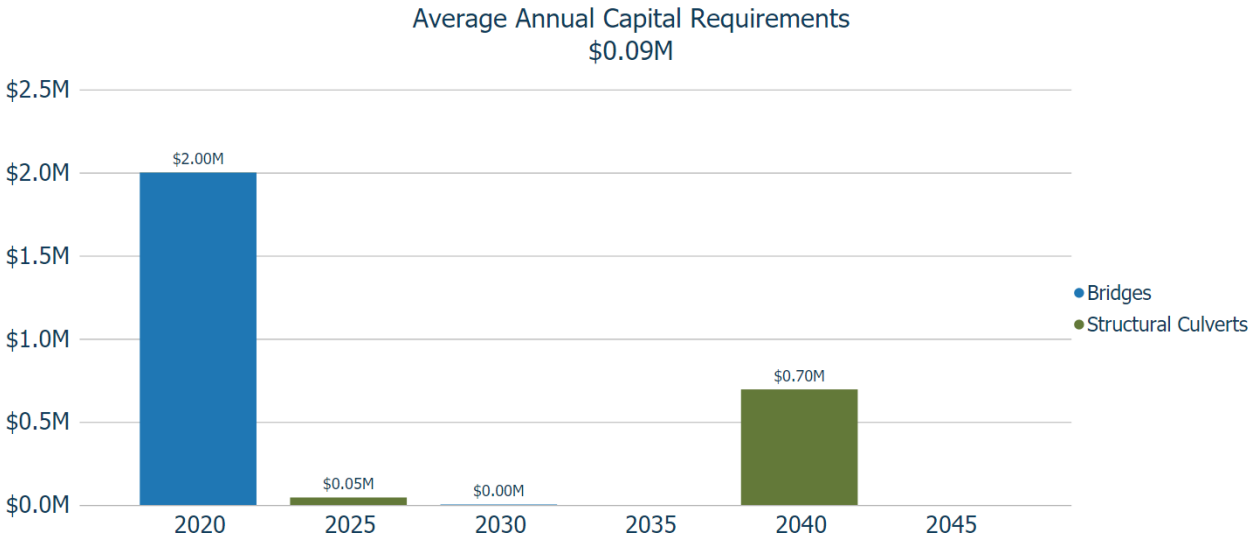
Activity Type	Description of Current Strategy
Maintenance	Typical maintenance includes: • Obstruction removal • Cleaning/sweeping • Erosion control • Brush/tree removal
	Biennial OSIM inspections including a list of recommended maintenance activities that the Township considers and completes according to cost and urgency.
Rehabilitation / Replacement	Biennial OSIM inspection reports including a Capital Needs List identifying recommended rehabilitation and replacement activities with estimated costs.
Inspection	The most recent inspection report was completed in 2020 by K. Smart Associates Limited

Forecasted Capital Requirements

Based on the lifecycle activities identified in the 2020 inspection report, staff expertise and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the Bridges & Culverts category.

The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs to meet future capital needs.

The graph below provides a 25-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.22 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Aging Infrastructure

As municipal bridges and culverts continue to age and deteriorate, the 2020 OSIM inspections have indicated assets that have a low bridge condition index (BCI) and will require significant capital investment over the next 5 years.

Capital Funding Strategies

Major capital rehabilitation projects for bridges and culverts are almost entirely dependent on the availability of grant funding opportunities. When grants are not available, bridge rehabilitation may be deferred. An annual capital funding strategy can reduce dependency on grant funding and help prevent deferral of capital works.

Climate Change & Extreme Weather Events

Flooding and extreme weather can cause damage to multiple elements of the Township's bridges including the deck, superstructure, substructure, and approaches. The rising levels of freshwater and the increased frequency and intensity of precipitation events are likely to advance the deterioration of bridge components. Staff should identify and monitor affected bridges and culverts. The Township should also prioritize infrastructure maintenance, rehabilitation, and replacement based on susceptibility to climate impacts.

4.1.23 Levels of Service

The following tables identify the Township's current level of service for Bridges & Culverts. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Bridges & Culverts.

Service Attribute	Qualitative Description	Current LOS (2021)
Scope	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	Bridges and structural culverts are a key component of the municipal transportation network. The 2020 OSIM report has recommended posting load limits on two structures: 1) Old Mill Road Bridge = 15 tonnes 2) Mud Creek Road Bridge = 5 tonnes
Quality	Description or images of the condition of bridges & culverts and how this would affect use of the bridges & culverts	**Good (BCI 70-100):** Generally considered to be in good-excellent condition, and repair or rehabilitation work is not usually required within the next 5 years. Routine maintenance, such as sweeping, cleaning, and washing are still recommended. **Fair (BCI 50-70):** Generally considered to be in good-fair condition. Repair or rehabilitation work recommended is ideally scheduled to be completed within the next 5 years. **Poor (BCI Less than 50):** Generally considered poor with lower numbers representing structures nearing the end of their service life. The repair or rehabilitation of these structures is ideally best scheduled to be completed within approximately 1 year. However, if it is determined that the replacement of the structure would be a more viable, the structure can be identified for continued monitoring and scheduled for replacement within the short-term.

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by Bridges & Culverts.

Service Attribute	Technical Metric	Current LOS (2021)
Scope	% of bridges in the Township with loading or dimensional restrictions	67%
Quality	Average bridge condition index value for bridges in the Township	29%
	Average bridge condition index value for structural culverts in the Township	89%
Performance	Capital re-investment rate	0.00%
	Average duration of unplanned bridge closure	0

4.1.24 Recommendations

Data Review/Validation

- Continue to review and validate inventory data, assessed condition data and replacement costs for all bridges and structural culverts upon the completion of OSIM inspections every 2 years.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Lifecycle Management Strategies

- Continue to incorporate the recommended maintenance, rehabilitative and renewal activities from the OSIM inspections.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believe to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

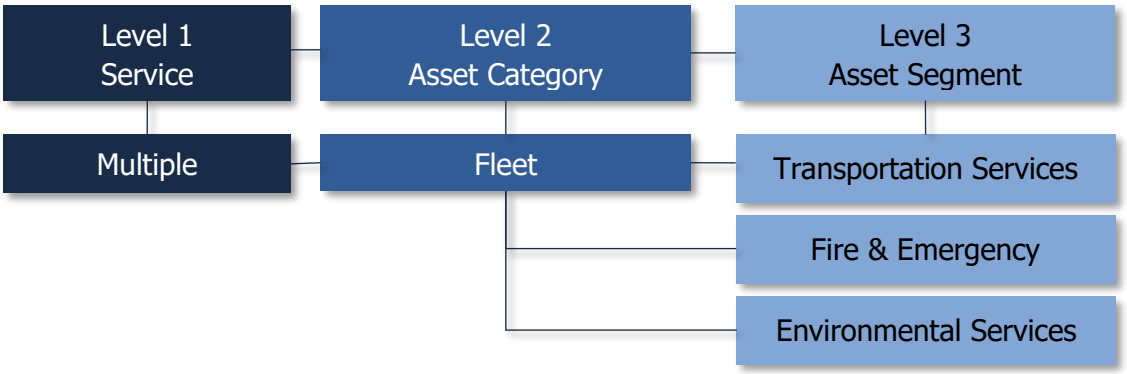
Fleet

The Township's Fleet inventory is managed in CityWide™ and comprises of 19 assets. Fleet assets allow staff to efficiently deliver municipal services and personnel. Municipal fleet assets are used to support several service areas, some of which include the use of:

- fire rescue and emergency vehicles to support emergency services, and
- light-duty and heavy-duty vehicles to support the maintenance of municipal infrastructure and address service requests.

4.1.25 Asset Hierarchy & Segmentation

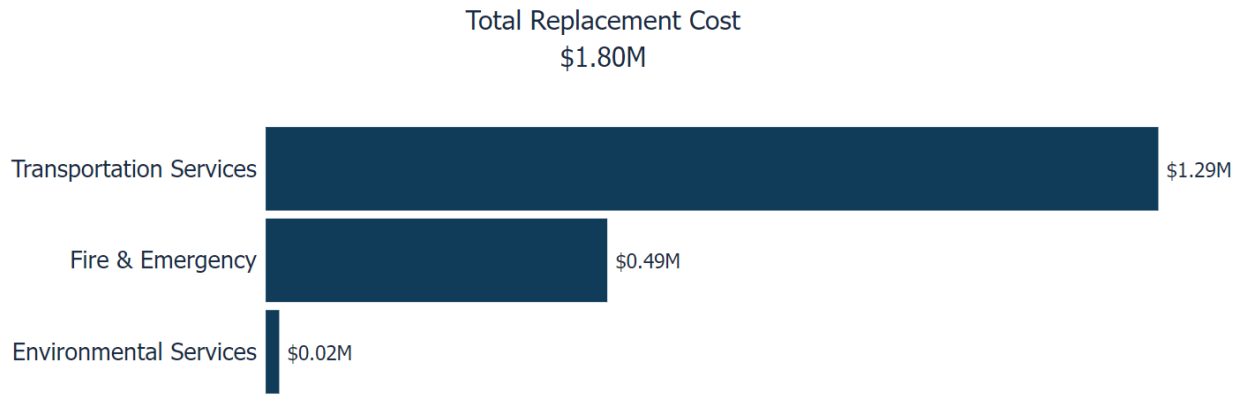
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.26 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Fleet category.

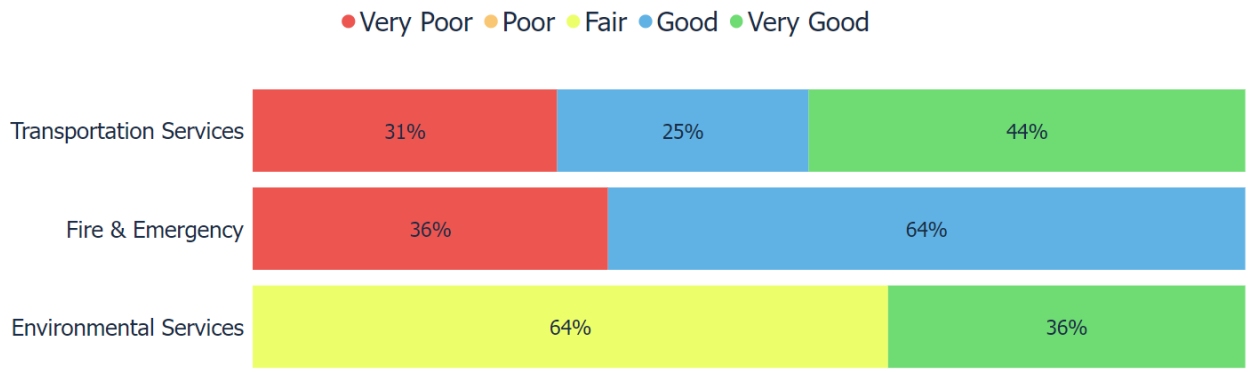
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Transportation Services	12	Historical Cost Inflation	$1,288,850
Fire & Emergency	4	Historical Cost Inflation	$493,220
Environmental Services	2	Historical Cost Inflation	$19,545
			$1,801,615



4.1.27 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Transportation Services	59%	Fair	Age-based
Fire & Emergency	47%	Fair	Age-based
Environmental Services	70%	Good	Age-based
	56%	**Fair**	



To ensure that the Township's Fleet assets continue to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Vehicles.

Current Approach to Condition Assessment

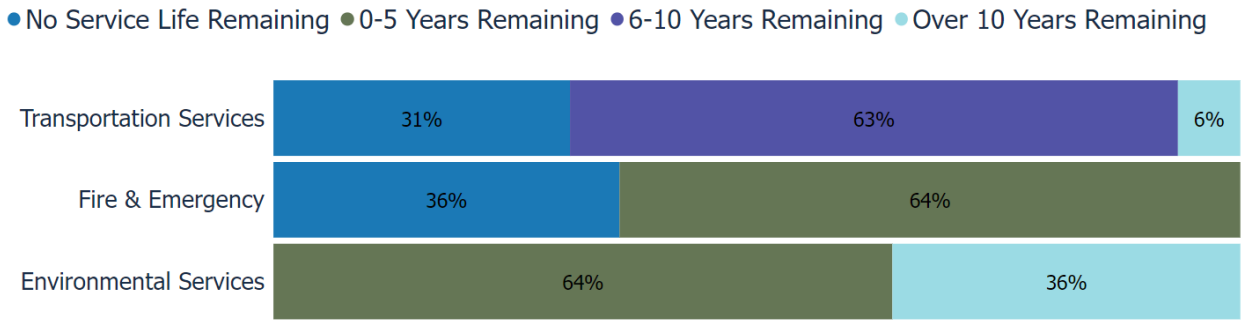
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Staff complete regular visual inspections of fleet assets to ensure they are in state of adequate repair prior to operation
- The mileage of vehicles is used as a proxy to determine remaining useful life and relative vehicle condition
- Condition assessments are conducted on Fire & Emergency fleet assets in accordance with regulations for health and safety regulations including National Fire Protection Association (NFPA) codes and standards for fire service-related fleet assets

4.1.28 Estimated Useful Life & Average Age

The Estimated Useful Life for Vehicles assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Transportation Services	15 - 20 Years	11.2	4.7
Fire & Emergency	15 Years	17.4	-2.4
Environmental Services	15 Years	8.0	7.0
		12.2	**3.3**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.29 Lifecycle Management Strategy

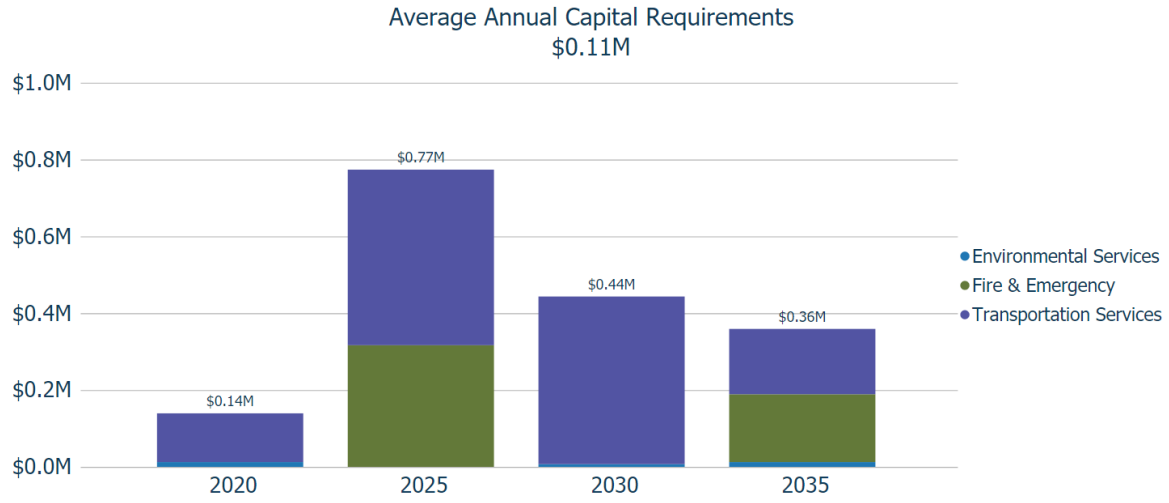
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration. The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance / Rehabilitation	Visual inspections completed and documented daily; fluids inspected at every fuel stop; tires inspected monthly
	Every 4-7000km includes a detailed inspection; tires are rotated and oil changed
	Annual preventative maintenance activities include system components check and additional detailed inspections
Replacement	Vehicle age, kilometres and annual repair costs are taken into consideration when determining appropriate treatment options

Forecasted Capital Requirements

Based on the current fleet inventory, and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the fleet category.

The graph below provides a 15-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.30 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Aging Assets

As fleet assets continue to age, there are several assets that have approached and/or exceeded their original useful life. Staff have recognized this and are developing a decision-making process to determine how to plan and prioritize for assets that will require replacement or disposal.

4.1.31 Levels of Service

The following tables identify the Township's current level of service for Buildings & Facilities. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Road Network.

Service Attribute	Qualitative Description	Current LOS (2021)
Safe & Reliable	Description of the routine maintenance and check-up procedures	TBD[2]
Sustainable	List of day-to-day vehicles in operation and the replacement values of those assets	3/4 GMC Truck 2015 - $50,000
		1/2 Ton 2020 Chevrolet Silverado - $40,000
		1992 Ford Plow Truck - $340,000
		2010 International Plow Truck - $340,000
		2016 Western Star - $340,000[3]
		2021 International Plow truck - $340,000

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Road Network.

Service Attribute	Technical Metric	Current LOS (2021)
Sustainable	Annual Capital Reinvestment Rate	1.89%
	% of fleet that is idle	0%
	% of fleet utilization	100%
	% of fleet that are in good or very good condition	80%
	% of fleet that are in poor or very poor condition	20%

[2] The Township does not currently have data available to determine this technical metric. Staff are working to gather this metric for the next iteration of the AMP that is required in 2025.

4.1.32 Recommendations

Replacement Costs

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk fleet assets.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in in this AMP and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

Stormwater Network

The Township's Stormwater inventory is managed in CityWide™, and comprises of 131 unique assets, including about 308 metres of storm lines, around a kilometre of culverts, catch basins and catch basin leads.

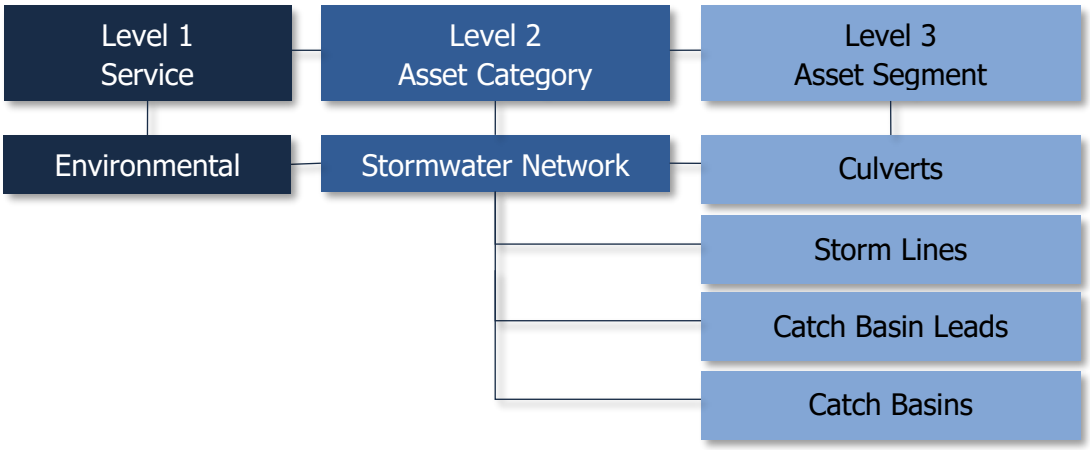
The Public Works department, along with supporting assets such as facilities, fleet and machinery & equipment, is responsible for planning and managing the Stormwater Network.

Staff have indicated that some of the stormwater infrastructure has been rebuilt in 2021.

Stormwater Network infrastructure generals poses the greatest uncertainty for municipalities, including this Township. Staff have expressed a lack of confidence in the accuracy and completeness of the current inventory. However, they are working towards improving the accuracy and reliability of the inventory to assist with long-term asset management planning.

4.1.33 Asset Hierarchy & Segmentation

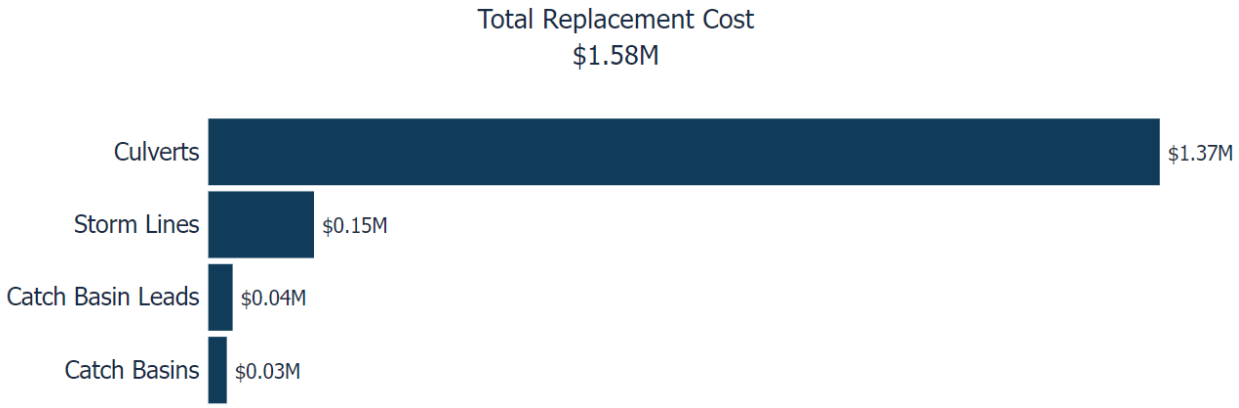
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.34 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Stormwater Network inventory.

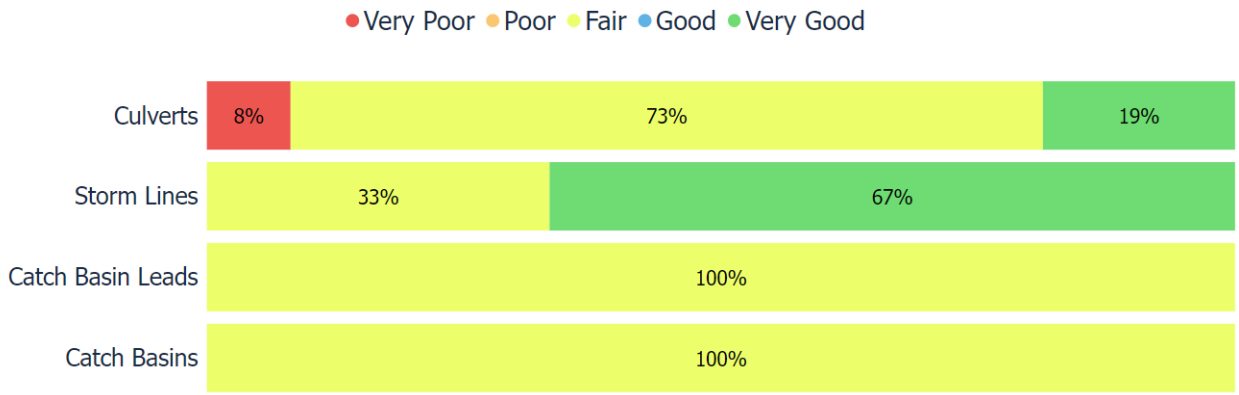
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Culverts	1 km	Cost per Unit	$1,366,717
Storm Lines	234 m	Cost per Unit	$151,853
Catch Basin Leads	104 m	Cost per Unit	$35,000
Catch Basins	7	Cost per Unit	$26,600
			$1,580,170



4.1.35 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

	Average Condition (%)	Average Condition Rating	Condition Source
Culverts	52%	Fair	Age-based
Storm Lines	77%	Good	Age-based
Catch Basin Leads	48%	Fair	Age-based
Catch Basins	48%	Fair	Age-based
	55%[4]	**Fair**	



To ensure that the Township's Stormwater Network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Stormwater Network.

[4] The average condition is based on asset inventory data as of 2020 and does not include the storm infrastructure that has been rebuilt in 2021.

Current Approach to Condition Assessment

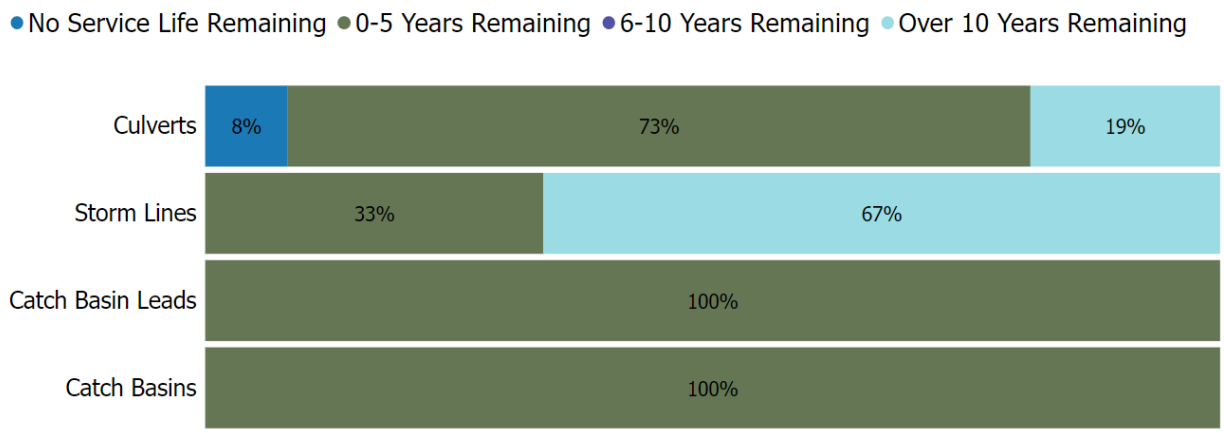
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- There are no formal condition assessment programs in place for storm sewer infrastructure currently and CCTV inspections are not completed regularly
- Age-based estimates of condition are used to project current condition, although confidence in accuracy of these estimates is low
- As the Township refines the available asset inventory for the storm sewer system, a regular assessment cycle should be established

4.1.36 Estimated Useful Life & Average Age

The Estimated Useful Life for Stormwater Network assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Culverts	40 Years	31.6	8.1
Storm Lines	40 Years	18.2	21.8
Catch Basin Leads	40 Years	35.0	5.0
Catch Basins	40 Years	35.0	5.0
		30.4	**9.3**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.37 Lifecycle Management Strategy

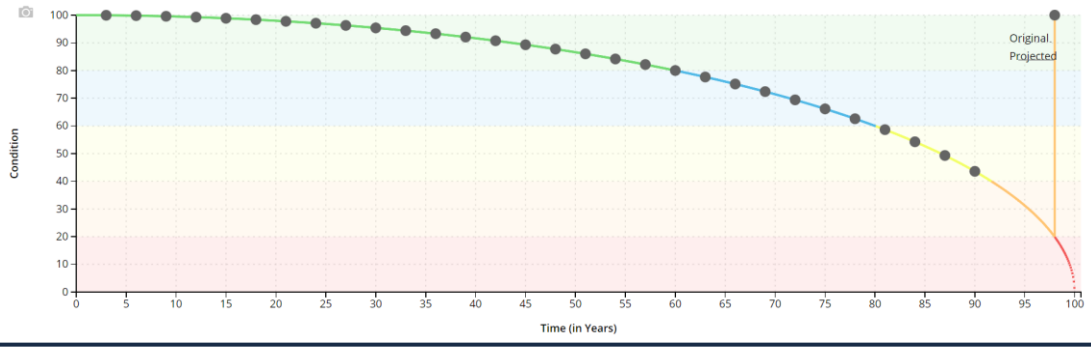
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Catch basins are cleaned annually and outlets are inspected regularly to ensure unobstructed flow
	With the installation of new stormwater infrastructure in 2021, Staff have indicated that there will be a flushing and cleaning program implemented in the near future.
	All other maintenance activities are completed on a reactive basis when operational issues are identified (e.g., blockages, backups)
Rehabilitation	Trenchless re-lining has the potential to reduce total lifecycle costs but would require a formal condition assessment program to determine viability
Replacement	Without the availability of up-to-date condition assessment information replacement activities are purely reactive in nature

The following lifecycle strategy has been documented to formalize the current strategy used to manage the lifecycle of storm mains.

Storm Mains		
Event Name	**Event Class**	**Event Trigger**
Catch Basin Cleaing	Maintenance	Annually
Storm Sewer Flushing	Maintenance	Every 3 Years
Full Reconstruction	Replacement	Condition: 20

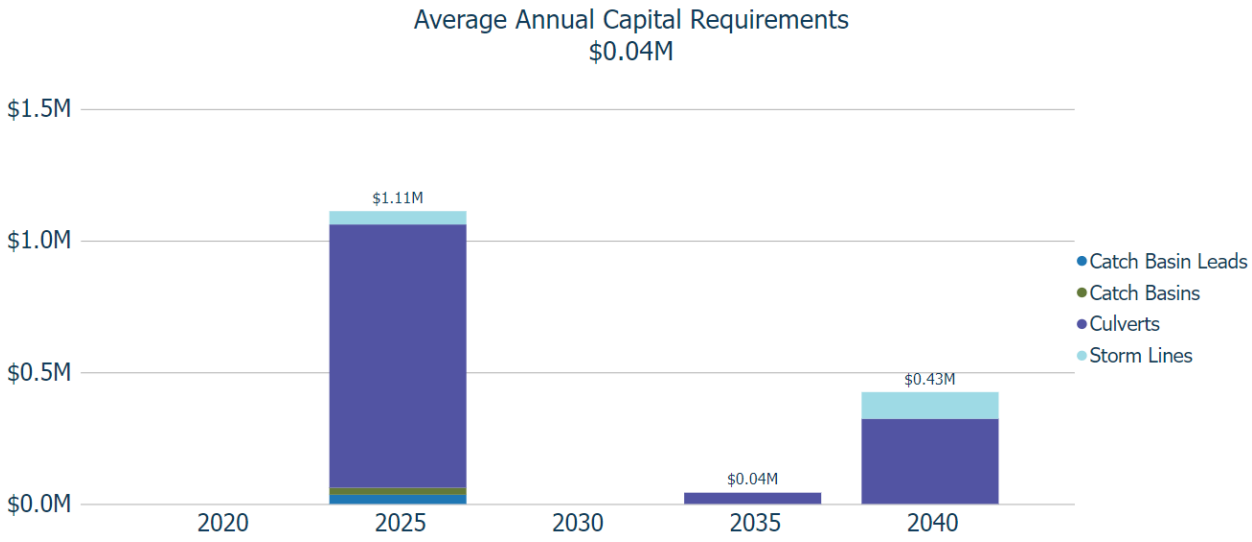


Forecasted Capital Requirements

Based on the current storm sewer inventory and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the Stormwater Network category.

The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs to meet future capital needs.

The graph below provides a 20-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.38 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Asset Lifecycle Management

Operations tend to be reactive rather than proactive for this category. Problems are generally only known when issues arise, and complaints are made.

4.1.39 Levels of Service

The following tables identify the Township's current level of service for Stormwater Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Stormwater Network.

Service Attribute	Qualitative Description	Current LOS (2021)
Scope	Description, which may include map, of the user groups or areas of the municipality that are protected from flooding, including the extent of protection provided by the municipal stormwater system	TBD[5]

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Stormwater Network.

Service Attribute	Technical Metric	Current LOS (2021)
Scope	% of properties in municipality resilient to a 100-year storm	0%[6]
	% of the municipal stormwater management system resilient to a 5-year storm	100%
Performance	Capital reinvestment rate	0.00%

[5] The Township does not currently have data available to determine this technical metric. Staff are working to gather this metric for the next iteration of the AMP that is required in 2025.
[6] Staff have also indicated that the 2021 stormwater infrastructure installation located on Main Street in Kagawong has been designed to be resilient to a 25-year storm

4.1.40 Recommendations

Asset Inventory

- With the installation of the 2021 stormwater infrastructure, it is important to gather and consolidate relevant asset data into the central asset inventory to ensure all relevant assets are accounted for.

Condition Assessment Strategies

- The development of a comprehensive inventory should be accompanied by a system-wide assessment of the condition of all assets in the Stormwater Network through CCTV inspections.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Lifecycle Management Strategies

- Gather unit costs for assets that have relied primarily on historical inflation and review periodically to ensure a higher level of accuracy and within the context of current market condition.
- Document and review lifecycle management strategies for the Stormwater Network on a regular basis to achieve the lowest total cost of ownership while maintaining adequate service levels.

Levels of Service

- Begin measuring current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believe to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

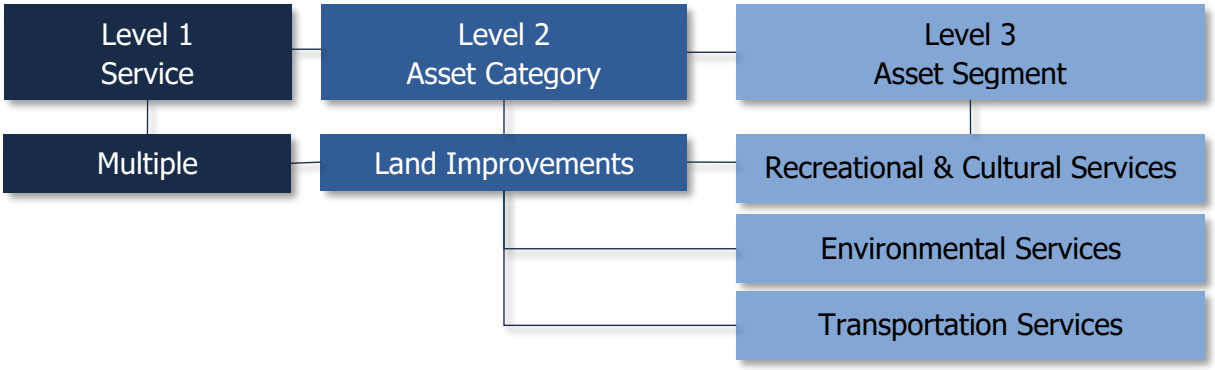
Land Improvements

The Land Improvements inventory is managed in CityWide™ and comprises of 5 unique assets that assist the Township in providing community recreation, cultural and natural outdoor space. This includes:

- Waterfront Improvements
- Parking Lots and Paved Surfaces
- Miscellaneous landscaping, irrigation and other purposed assets

4.1.41 Asset Hierarchy & Segmentation

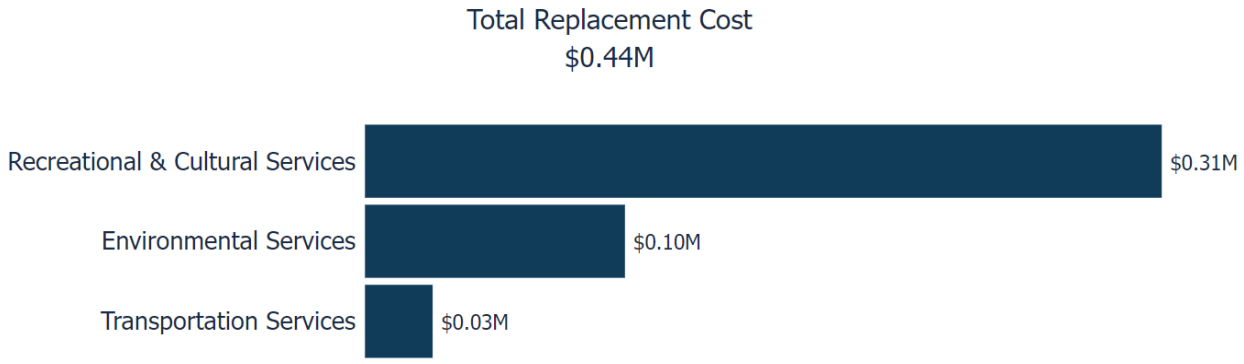
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.42 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Land Improvements inventory.

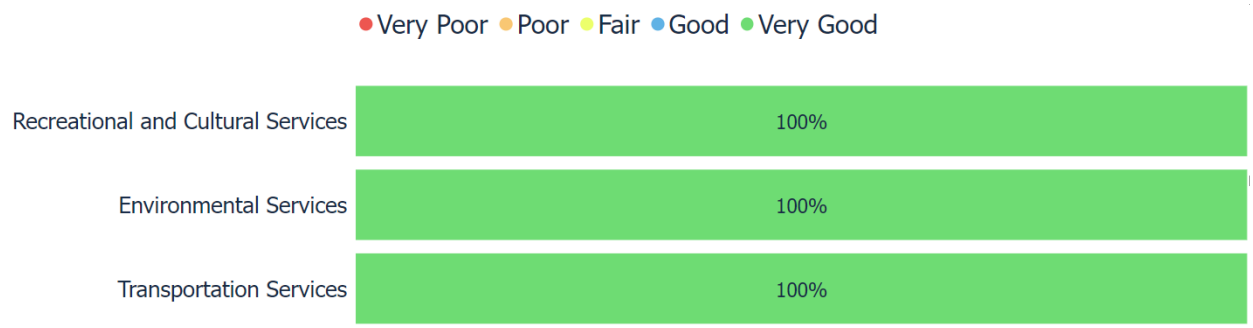
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Recreational & Cultural Services	1	Historical Cost Inflation	$309,253
Environmental Services	2	Historical Cost Inflation	$100,908
Transportation Services	2	Historical Cost Inflation	$26,265
			$436,426



4.1.43 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Recreational & Cultural Services	88%	Very Good	Age-based
Environmental Services	98%	Very Good	Age-based
Transportation Services	92%	Very Good	Age-based
	95%	**Very Good**	



To ensure that the Township's Land Improvements continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Land Improvements.

Current Approach to Condition Assessment

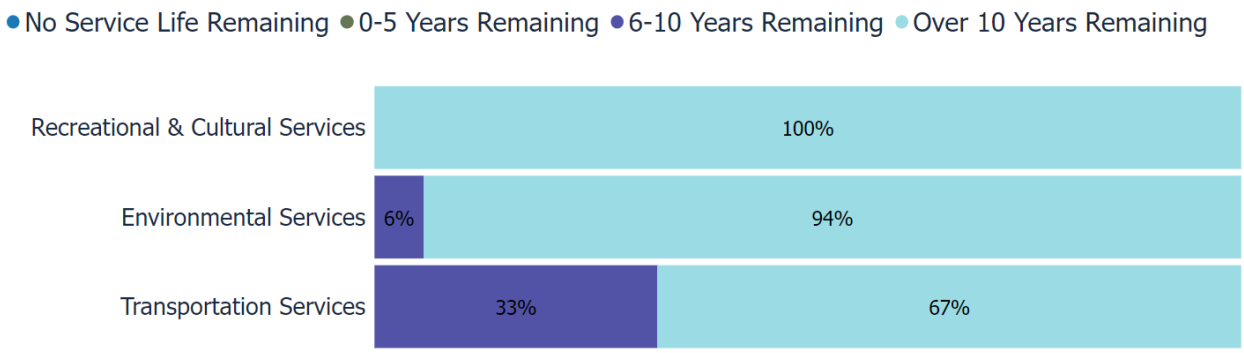
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Staff complete regular visual inspections of land improvements assets to ensure they are in state of adequate repair
- There are no formal condition assessment programs in place for land improvements assets

4.1.44 Estimated Useful Life & Average Age

The Estimated Useful Life for Land Improvements assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Recreational & Cultural Services	20 Years	4.0	15.9
Environmental Services	20 - 40 Years	15.3	14.8
Transportation Services	20 - 25 Years	8.8	13.8
		10.4	**14.6**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.45 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

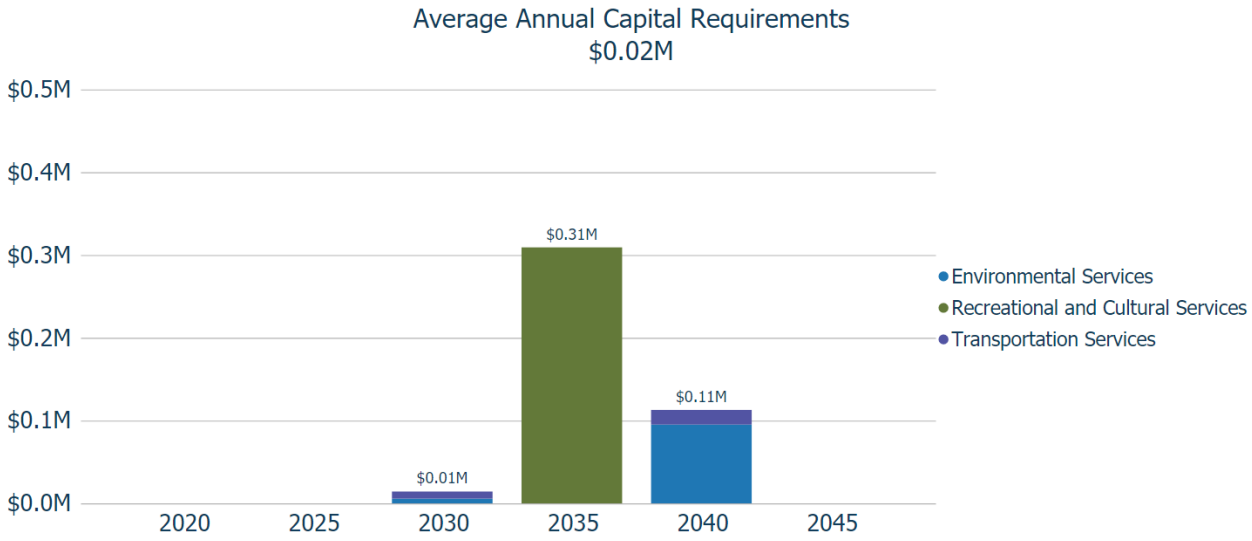
The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenanace, Rehabilitation & Replacement	The Land Improvements asset category includes several unique asset types and lifecycle requirements are dealt with on a case-by-case basis

Forecasted Capital Requirements

Based on the current fleet inventory, and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the land improvements category.

The graph below provides a 25-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.46 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Asset Data Confidence

The current inventory for land improvements is incomplete, resulting in a basic level of data maturity. This is a limiting factor in allowing for accurate and reliable projections, and Staff have indicated that the current inventory is incomplete.

4.1.47 Levels of Service

The following tables identify the Township's current level of service for Land Improvement assets. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Land Improvement assets.

Service Attribute	Qualitative Description	Current LOS (2021)
Accesible & Reliable	Description, which may include maps, of municipal parks, trails, and recreational areas and their proximity to the surrounding community	Municipal Trails are not maintained on a structured schedule and do not meet accessibility requirments.
Safe & Regulatory	Description of the park inspection process and timelines for inspections	Parks are inspected on receipt of a complaint. There is an annual inspection, and garbage pickup two or three times per week during summer that provides cursory inspections.
Affordable	Description of the lifecycle activities (maintenance, rehabilitation and replacement) performed on parks and recreation assets	As required, no regular schedule, upgrades are usually funding based.
Sustainable	Description of the current condition of parks and the plans that are in place to maintain or improve the provided level of service	Fair Condition Walking bridge replacement in 2022 (pending funding)

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by Land Improvement assets.

Service Attribute	Qualitative Description	Current LOS (2021)
Accesible & Reliable	Square metres of park area per resident	56.87 m^2
	% park area in the Township	0.02%
Affordable	O&M cost for recreational assets	$1,000
	Annual capital reinvestment rate	4.35%
Sustainable	% of parks and recreation assets that are in good or very good condition	100%
	% of parks and recreation assets that are in poor or very poor condition	0%

4.1.48 Recommendations

Asset Inventory

- Staff have indicated that the current land improvements asset inventory is incomplete and there are assets that have not been included. The Township should conduct an inventory review, collect and consolidate asset data to ensure all relevant assets are accounted for.

Replacement Costs

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk assets.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in in this AMP and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

Machinery & Equipment

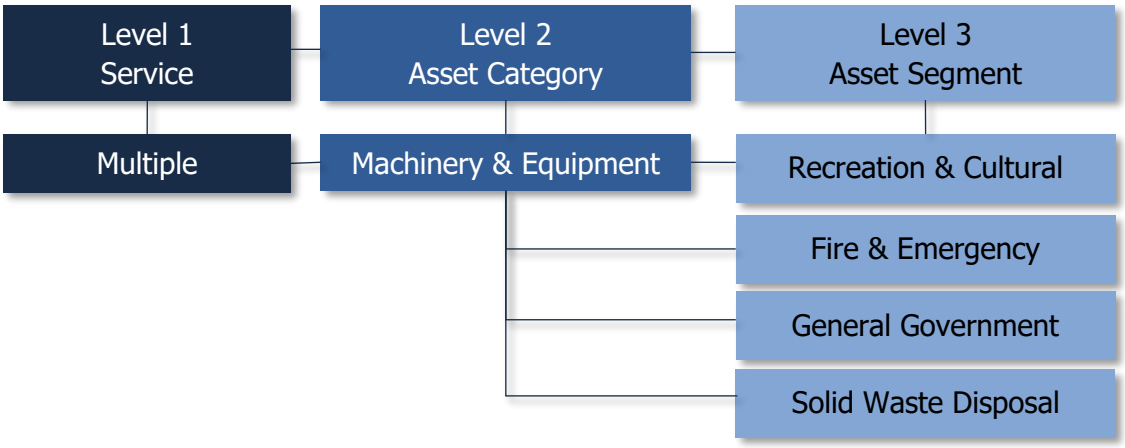
The Township's Machinery & Equipment inventory is managed in CityWide™ and comprises of 12 unique assets. In order to maintain the high quality of public infrastructure and support the delivery of core and non-core services, Municipal Staff own and employ machinery and equipment assets which include:

- custodial equipment to maintain facilities,
- emergency services equipment to support first responders,
- furniture and fixtures for facilities, offices and buildings, and
- recreation equipment for parks and sports facilities.

Keeping machinery & equipment in an adequate state of repair is important to maintain a high level of service.

4.1.49 Asset Hierarchy & Segmentation

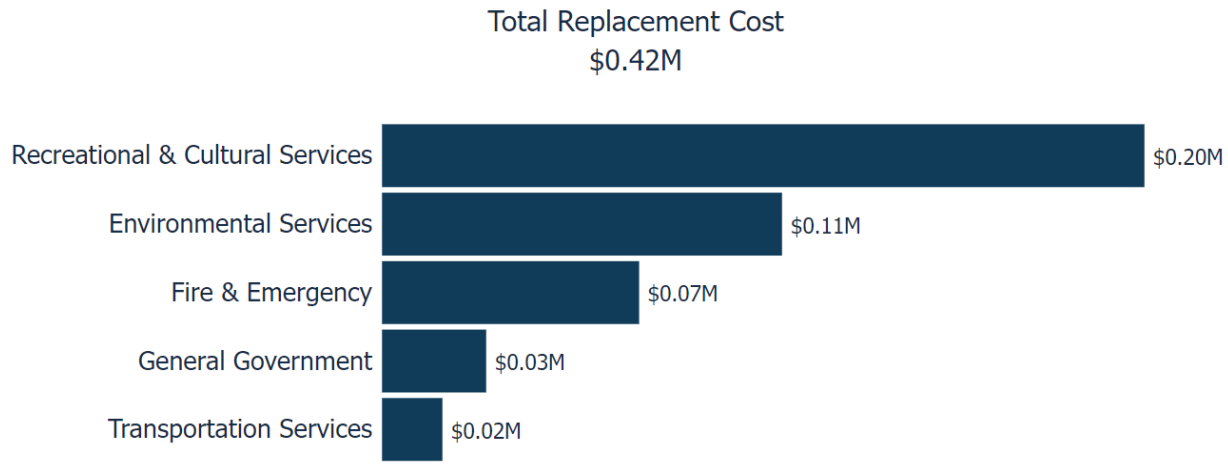
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



4.1.50 Asset Inventory & Replacement Cost

The following table includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Machinery & Equipment inventory.

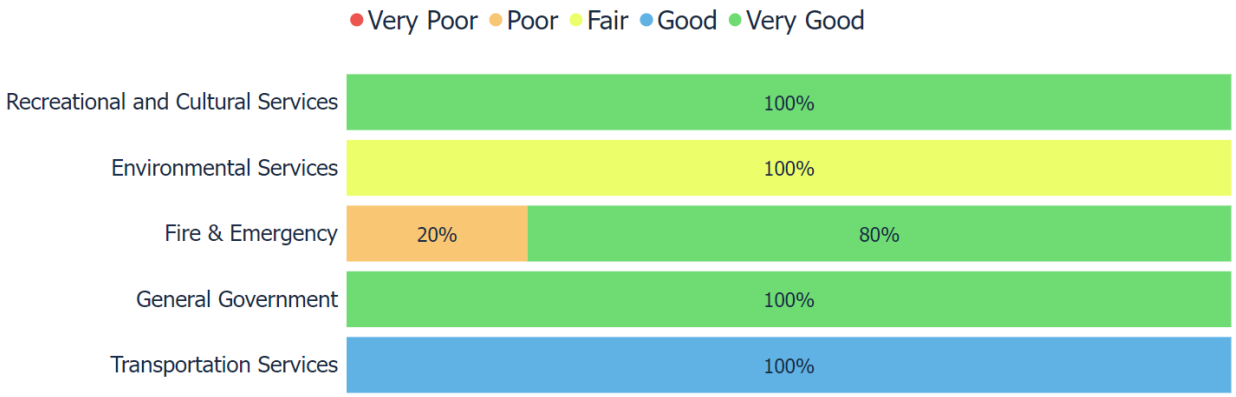
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Recreation & Cultural Services	3	Historical Cost Inflation	$203,756
Environmental Services	1	Historical Cost Inflation	$106,900
Fire & Emergency	6	Historical Cost Inflation	$68,714
General Government	1	Historical Cost Inflation	$27,835
Transportation Services	1	Historical Cost Inflation	$16,136
			$423,341



4.1.51 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Recreation & Cultural Services	87%	Very Good	Age-based
Environmental Services	44%	Fair	Age-based
Fire & Emergency	74%	Good	Age-based
General Government	87%	Very Good	Age-based
Transportation Services	76%	Good	Age-based
	73%	**Good**	



To ensure that the Township's Machinery & Equipment continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Machinery & Equipment.

Current Approach to Condition Assessment

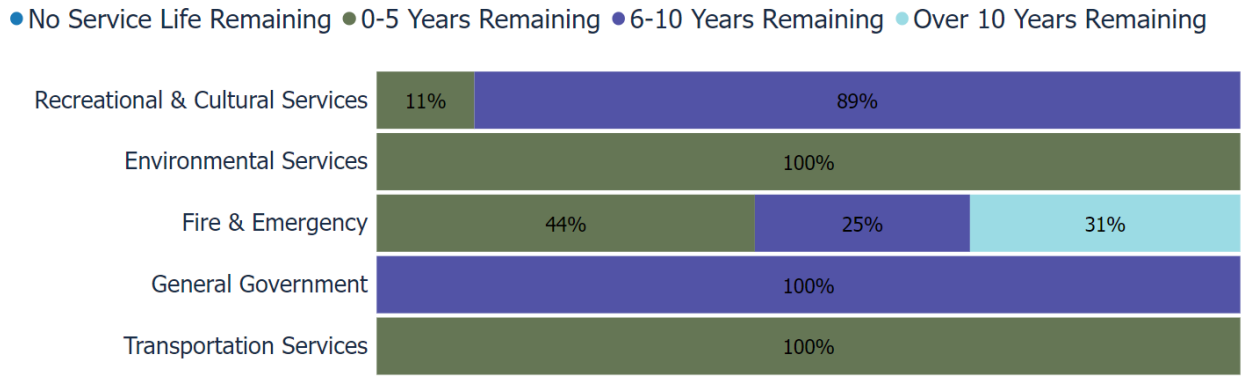
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- Staff complete regular visual inspections of machinery & equipment to ensure they are in state of adequate repair
- Condition assessments are conducted on Fire & Emergency assets in accordance with health and safety regulations including National Fire Protection Association (NFPA) codes and standards for fire service-related assets
- Staff conduct formal inspections of outdoor play space, fixed play structures and surfacing in accordance with CAN/CSA-Z614 and required as per O. Reg. 137/15

4.1.52 Estimated Useful Life & Average Age

The Estimated Useful Life for Machinery & Equipment assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Recreation & Cultural Services	10 - 20 Years	6.8	6.5
Environmental Services	20 Years	18.0	2.0
Fire & Emergency	10 - 20 Years	8.8	7.9
General Government	20 Years	10.0	9.9
Transportation Services	10 Years	6.5	3.5
		9.0	**6.8**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.1.53 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

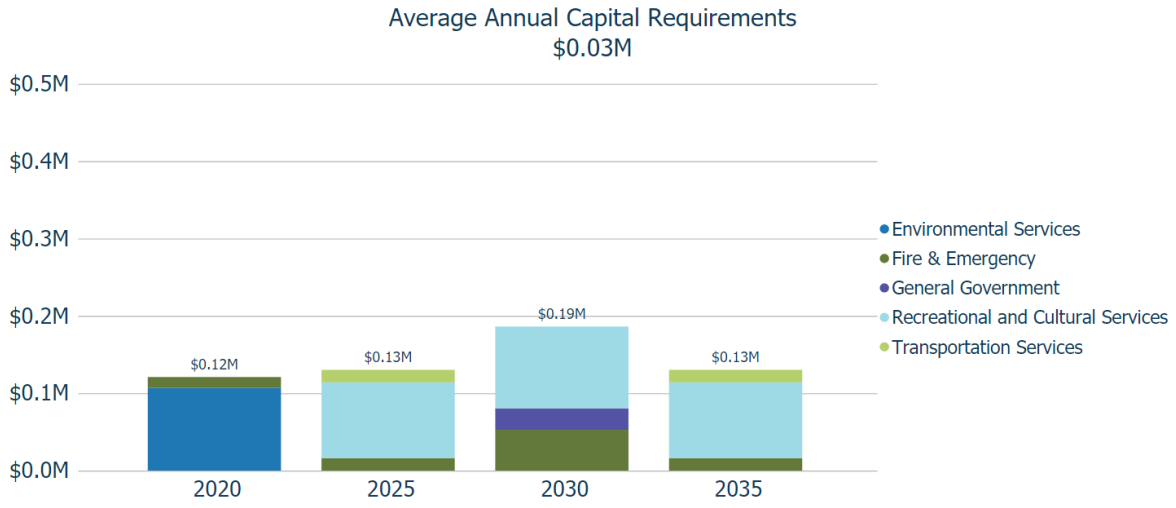
The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance/ Rehabilitation	Maintenance program varies by department
	Fire Protection and Emergency Services equipment is subject to a much more rigorous inspection and maintenance program compared to most other departments
	Machinery & Equipment is maintained according to manufacturer recommended actions and supplemented by the expertise of municipal staff
Replacement	The replacement of machinery & equipment depends on deficiencies identified by operators that may impact their ability to complete required tasks

Forecasted Capital Requirements

Based on the current machinery & equipment inventory, and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the Machinery & Equipment category.

The graph below provides a 15-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.1.54 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Aging Assets

As machinery and equipment assets continue to age, there are several assets that have approached and/or exceeded their original useful life. Staff have recognized this and are developing a decision-making process to determine how to plan and prioritize for assets that will require replacement or disposal.

4.1.55 Levels of Service

The following tables identify the Township's current level of service for Land Improvement assets. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by Machinery & Equipment assets.

Service Attribute	Qualitative Description	Current LOS (2021)
Safe & Reliable	Description of the equipment inspection process and any licensing requirements for operators.	Operators are trained, properly licenced, inspection processes are in place for all machinery and equipment.
Sustainable	Description of the current condition of equipment and the plans that are in place to maintain or improve the provided level of service.	Machinery & Equipment assets are in good to fair condition and the Township is going to maintain the current level of service.

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by Machinery & Equipment assets.

Service Attribute	Qualitative Description	Current LOS (2021)
Safe & Reliable	% of equipment where pre/post inspections are completed	0%
Sustainable	Annual capital reinvestment rate	4.72%
	% of machinery & equipment assets that are in good or very good condition	33%
	% of machinery & equipment assets that are in poor or very poor condition	11%

4.1.56 Recommendations

Asset Inventory

- Staff have indicated that the current asset inventory is incomplete and there are machinery and equipment assets that have not been included. The Township should conduct an inventory review, collect and consolidate asset data to ensure all relevant assets are accounted for.

Replacement Costs

- All replacement costs used in this asset category were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk machinery and equipment assets.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in in this AMP and those metrics that the Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

5 Analysis of Rate-funded Assets

Key Insights

- Rate-funded assets are valued at $17.27 million
- 78% of rate-funded assets are in fair or better condition
- The average annual capital requirement to sustain the current level of service for rate-funded assets is approximately $0.38 million
- To reach sustainability for the water network, water rates need to be increased by 6.3% annually for the next 20 years to eliminate annual deficits

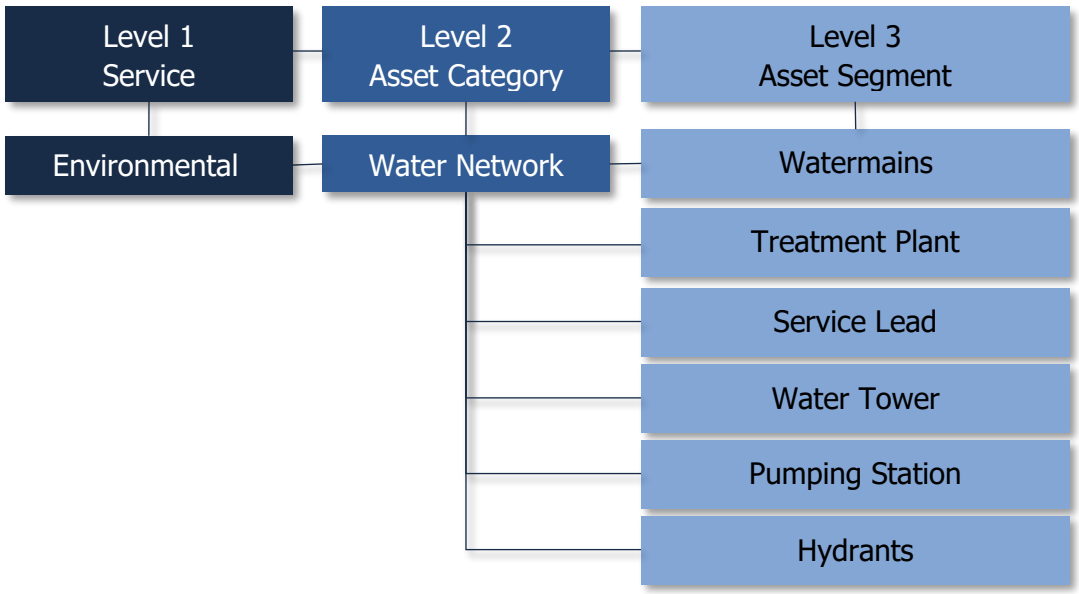
Water Network

The Township's Water Network inventory is managed in CityWide™, and comprises of 497 unique assets, including 12 kilometres of mains, approximately 8 hydrants and 3 kilometres of service leads, as well as several water facilities like the treatment plant, water tower, low lift station and the pumping station.

The Public Works department, along with supporting assets such as facilities, fleet and machinery & equipment, as well as coordination from the Ontario Clean Water Agency (OCWA), is responsible for planning and managing the Water Network.

5.1.1 Asset Hierarchy & Segmentation

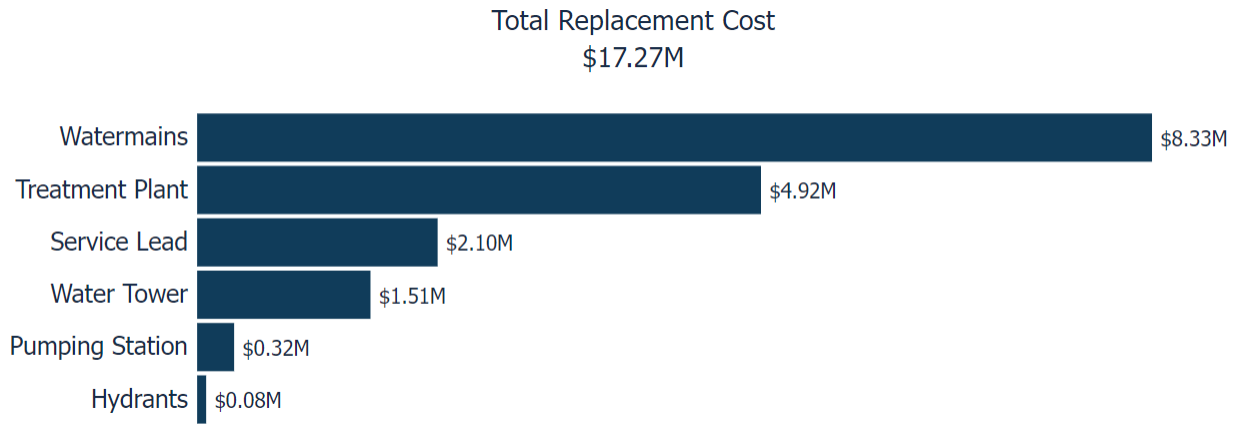
Asset hierarchy explains the relationship between individual assets and their components, and a wider, more expansive network and system. How assets are grouped in a hierarchy structure can impact how data is interpreted. Assets were structured to support meaningful, efficient reporting and analysis. Most reports and analytics presented in this AMP are summarized at the Asset Segment and/or Asset Category Levels.



5.1.2 Asset Inventory & Replacement Cost

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's Water Network inventory.

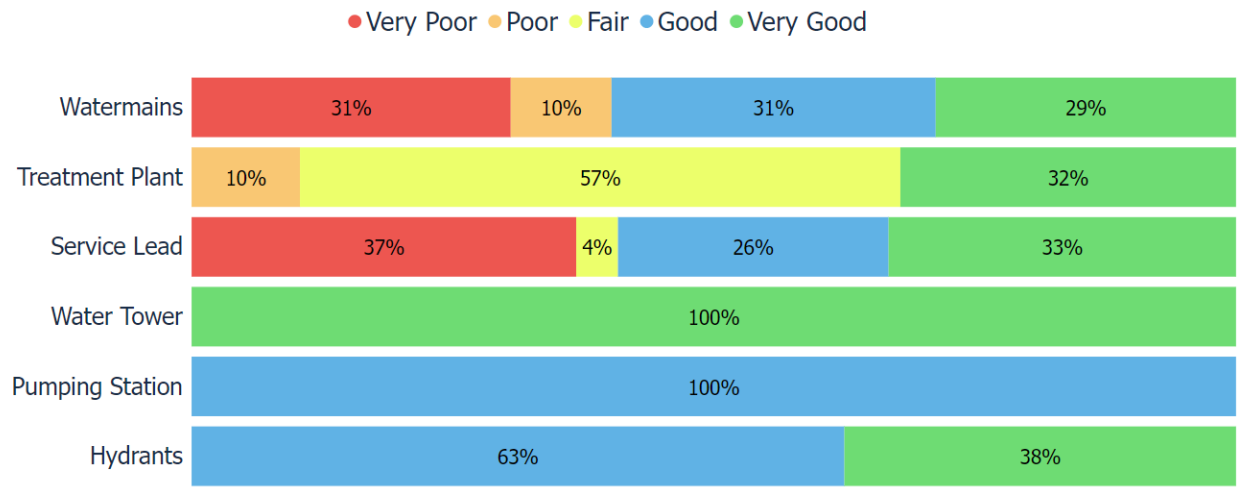
Asset Segment	Quantity	Replacement Cost Method	Total Replacement Cost
Watermains	12 km	Cost per Unit	$8,332,121
Treatment Plant	1	Historical Cost Inflation	$4,920,182
Service Lead	3 km	Cost per Unit	$2,098,654
Water Tower	1	Historical Cost Inflation	$1,512,663
Pumping Station	1	Historical Cost Inflation	$322,894
Hydrants	8	Cost per Unit	$78,800
			$17,265,313



5.1.3 Asset Condition

The table below identifies the current average condition and source of available condition data for each asset segment. The Average Condition (%) is a weighted value based on replacement cost.

Asset Segment	Average Condition (%)	Average Condition Rating	Condition Source
Watermains	57%	Fair	Age-based
Treatment Plant	91%	Very Good	Age-based
Service Lead	58%	Fair	Age-based
Water Tower	94%	Very Good	Age-based
Pumping Station	77%	Good	Age-based
Hydrants	77%	Good	Age-based
	70%	**Good**	



To ensure that the Township's Water Network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the Water Network.

Current Approach to Condition Assessment

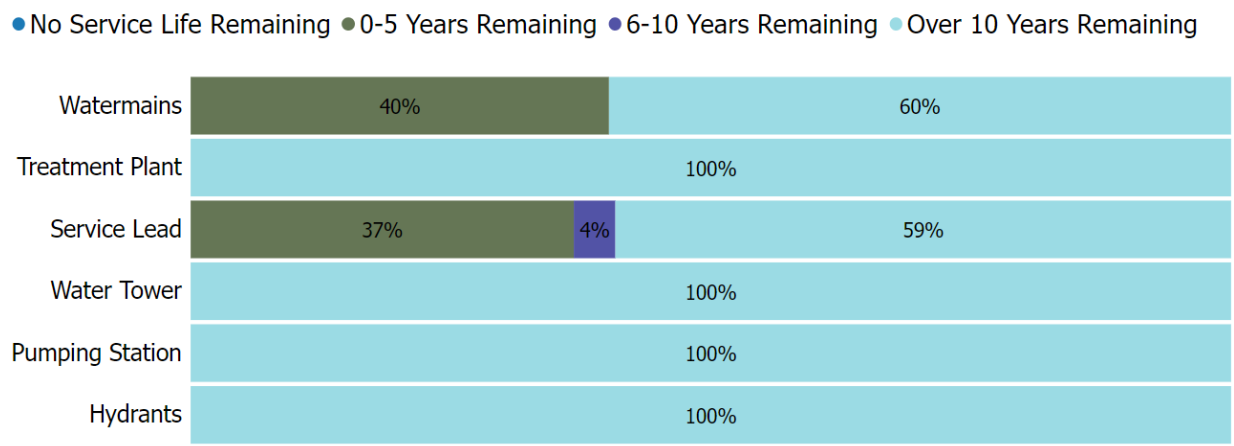
Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the municipality's current approach:

- OCWA provides the Township with multi-year forecasts and inspections as required under O. Reg. 170/3 are conducted
- Staff primarily rely on the age and material of water mains to determine the projected condition of water mains

5.1.4 Estimated Useful Life & Average Age

The Estimated Useful Life for Water Network assets has been assigned according to a combination of established industry standards and staff knowledge. The Average Age of each asset is based on the number of years each asset has been in-service. Finally, the Average Service Life Remaining represents the difference between the Estimated Useful Life and the Average Age, except when an asset has been assigned an assessed condition rating. Assessed condition may increase or decrease the average service life remaining.

Asset Segment	Estimated Useful Life (Years)	Average Age (Years)	Average Service Life Remaining (Years)
Watermains	50 Years	31.5	17.5
Treatment Plant	20 - 40 Years	18.2	19.0
Service Lead	50 Years	38.1	11.9
Water Tower	40 - 80 Years	9.5	50.5
Pumping Station	40 Years	25.5	14.5
Hydrants	50 Years	31.7	18.4
		34.8	**14.6**



Each asset's Estimated Useful Life should be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

5.1.5 Lifecycle Management Strategy

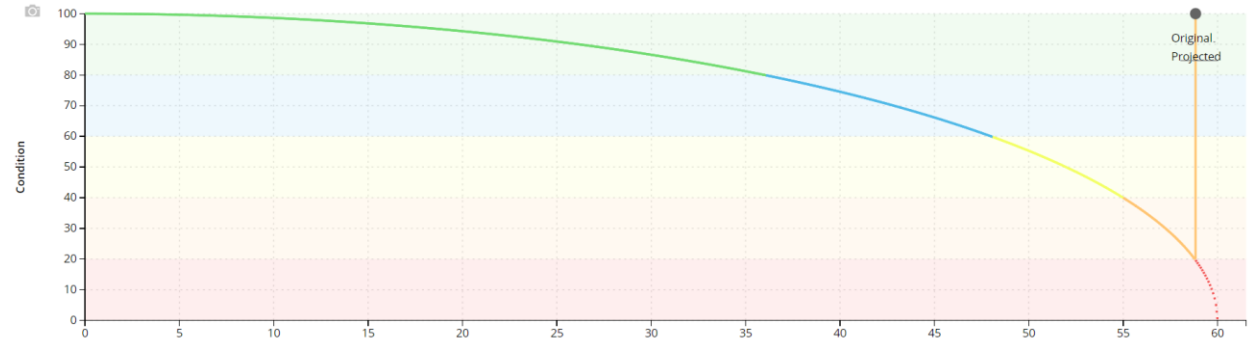
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Valves undergo annual maintenance
	Periodic pressure testing to identify deficiencies and potential leaks
	Mains are flushed annually, and hydrants are flushed biannually
Rehabilitation/ Replacement	In the absence of mid-lifecycle rehabilitative events, most mains are simply maintained with the goal of full replacement once it reaches its end-of-life
	The Water System Financial Plan (2021 - 2027) provides capital projections that include replacement and rehabilitative activities for specific assets and components
	Other replacement activities are identified based on an analysis of the main break rate as well as any issues identified during regular maintenance activities

The following lifecycle strategy has been documented to formalize the current strategy used to manage the lifecycle of water mains.

Water Mains		
Event Name	**Event Class**	**Event Trigger**
Valve Maintenance	Maintenance	Annually
Water Main Flushing	Maintenance	Annually
Hydrant Flushing	Maintenance	Biannually
Full Reconstruction	Replacement	Condition: 20

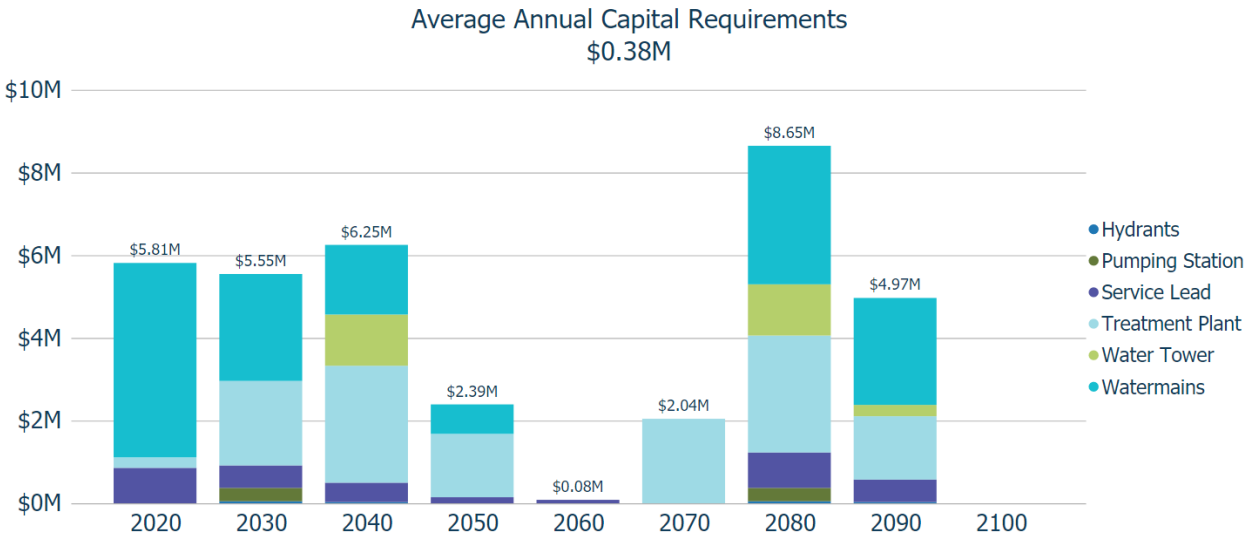


Forecasted Capital Requirements

Based on the specific lifecycle activities identified in the Water System Financial Plan (2021 - 2027), and assuming end-of-life replacement for all assets, the following graph forecasts short- and long-term capital requirements for the Water Network category.

The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs to meet future capital needs.

The graph below provides an 80-year forecast. This projection is used as it ensures that every asset has gone through one full iteration of replacement and does not include assets that may be required for growth.



The specific projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.1.6 Risk & Criticality

Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2020 inventory data. See Appendix C for the criteria used to determine the risk rating of each asset.

Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Asset Data and Information

There is a misalignment in the current inventory data for critical water network assets, particularly water network facilities. Some of the asset data has not been consolidated into the Township's central asset inventory. This poses a risk and will lead to discrepancies when trying to manage assets and planning future work.

Assessed Condition Data

Water Network assets such as mains are difficult to visually inspect, in contrast to storm and sanitary mains which can have CCTV inspections. Water main condition assessments generally rely on age-based estimates of current condition and pipe material to try and predict when mains need to be replaced.

5.1.7 Levels of Service

The following tables identify the Township's current level of service for the Water Network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the Water Network.

Service Attribute	Qualitative Description	Current LOS (2021)
Scope	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system	TBD[7]
	Description, which may include maps, of the user groups or areas of the municipality that have fire flow	There are hydrants within in the Township that can provide fire flow and have fire fighting capacity.
Reliability	Description of boil water advisories and service interruptions	The Township has experienced 2 boil water advisories in 2020 due to marina upgrades.

[7] The Township does not currently have data available to determine this qualitative metric. Staff are working to gather this metric for the next iteration of the AMP that is required in 2025.

Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the Water Network.

Service Attribute	Technical Metric	Current LOS (2021)
Scope	% of properties connected to the municipal water system	13%
	% of properties where fire flow is available	0%
Reliability	# 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	0.11
	# of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	0.083
Performance	Capital re-investment rate	0.38%

5.1.8 Recommendations

Asset Inventory

- Continue to refine and consolidate asset data into the central asset inventory to ensure all relevant assets are accounted for.
- Review and revise replacement costs and critical asset attribute data on a regular basis.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk Water Network assets.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

6 Impacts of Growth

Key Insights

- Understanding the key drivers of growth and demand will allow the Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure

- The population of the Township is expected to grow at a slow rate

- The costs of growth should be considered in long-term funding strategies that are designed to maintain the current level of service

Description of Growth Assumptions

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

6.1.1 District of Manitoulin Official Plan (October 2018)

The District of Manitoulin adopted the Official Plan with modifications in October 2018 and replaces the last provincially approved Official Plan of 1979.

The Official Plan provides the essential tools to direct future growth, development and change within the Planning Area and to create more sustainable communities for its residents. It responds to future uncertainties through clear and resilient principles and policies.

The Plan plays a number of essential roles in the future planning of the District. Specifically, the Plan:

1. Establishes the basic land use framework for all land within the jurisdiction of the District.
2. Sets out a 20-year growth management regime for the District through to 2036.
3. Provides for the coordination of land use planning and infrastructure deployment to ensure that the District can accommodate anticipated population levels over the 20-year planning horizon to 2036.
4. Sets out policies to encourage economic development in the District, including policies for employment-based land uses, with the view to encourage synergies and collaboration between compatible businesses.
5. Guides private investment through land use and development policies to ensure efficient development approvals and administrative processes that strive to achieve the District's goals through a number of objectives.
6. Provides policies to improve the sustainability of the District, to ensure the quality of life and to secure the health, safety, convenience and welfare for the present and future inhabitants of the District.
7. Responds to provincial policies, statements and guidelines that affect the District and appropriately incorporates them in the Official Plan.

The Plan is intended to guide Councils and the Planning Board in the consideration of their responsibilities and provides direction and certainty to the citizens and business of the District of Manitoulin.

The following table outlines the growth projections as indicated in the Plan.

Year	Population	Dwellings	Employment
2011	8,350	3,710	3,370
2016	8,470	3,760	3,350
2021	8,610	3,820	3,290
2026	8,730	3,870	3,220
2031	8,810	3,910	3,050
2036	8,880	3,940	2,950

The Official Plan projects the population of the District to grow at a slow rate and there is an expected decrease of the working population (ages 15 to 69 years) in 2036.

Impact of Growth on Lifecycle Activities

By July 1, 2025, the Township's asset management plan must include a discussion of how the assumptions regarding future changes in population and economic activity informed the preparation of the lifecycle management and financial strategy.

Planning for forecasted population growth may require the expansion of existing infrastructure and services. As growth-related assets are constructed or acquired, they should be integrated into the Township's AMP. While the addition of residential units will add to the existing assessment base and offset some of the costs associated with growth, the Township will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to, at a minimum, maintain the current level of service.

7 Financial Strategy

Key Insights

- The Township is committing approximately $345,000 towards capital projects per year from sustainable revenue sources

- Given the annual capital requirement of $1,935,748 there is currently a funding gap of $1,590,748 annually

- For tax-funded assets, we recommend increasing tax revenues by 3.3% each year for the next 20 years to achieve a sustainable level of funding

- For the Water Network, we recommend increasing rate revenues by 6.3% annually for the next 20 years to achieve a sustainable level of funding

Financial Strategy Overview

For an asset management plan to be effective and meaningful, it must be integrated with financial planning and long-term budgeting. The development of a comprehensive financial plan will allow the Township of Billings to identify the financial resources required for sustainable asset management based on existing asset inventories, desired levels of service, and projected growth requirements.

This report develops such a financial plan by presenting several scenarios for consideration and culminating with final recommendations. As outlined below, the scenarios presented model different combinations of the following components:

1. The financial requirements for:
    a. Existing assets
    b. Existing service levels
    c. Requirements of contemplated changes in service levels (none identified for this plan)
    d. Requirements of anticipated growth (none identified for this plan)
2. Use of traditional sources of municipal funds:
    a. Tax levies
    b. User fees
    c. Reserves
    d. Debt
3. Use of non-traditional sources of municipal funds:
    a. Reallocated budgets
    b. Partnerships
    c. Procurement methods
4. Use of Senior Government Funds:
    a. Gas tax
    b. Annual grants

Note: Periodic grants are normally not included due to Provincial requirements for firm commitments. However, if moving a specific project forward is wholly dependent on receiving a one-time grant, the replacement cost included in the financial strategy is the net of such grant being received.

If the financial plan component results in a funding shortfall, the Province requires the inclusion of a specific plan as to how the impact of the shortfall will be managed. In determining the legitimacy of a funding shortfall, the Province may evaluate a Township's approach to the following:

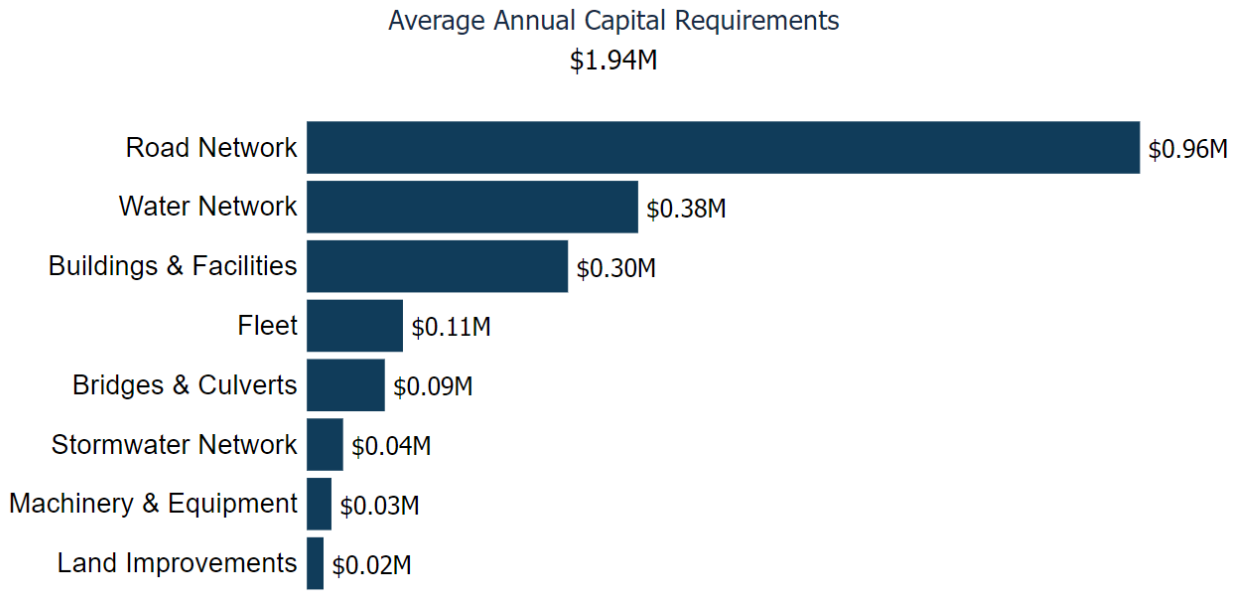
1. In order to reduce financial requirements, consideration has been given to revising service levels downward.

2. All asset management and financial strategies have been considered. For example:
    a. If a zero-debt policy is in place, is it warranted? If not, the use of debt should be considered.
    b. Do user fees reflect the cost of the applicable service? If not, increased user fees should be considered.

7.1.1 Annual Requirements & Capital Funding

Annual Requirements

The annual requirements represent the amount the Township should allocate annually to each asset category to meet replacement needs as they arise, prevent infrastructure backlogs and achieve long-term sustainability. In total, the Township must allocate approximately $1.94 million annually to address capital requirements for the assets included in this AMP.



For most asset categories the annual requirement has been calculated based on a "replacement only" scenario, in which capital costs are only incurred at the construction and replacement of each asset.

However, for the Road Network, lifecycle management strategies have been developed to identify capital costs that are realized through strategic rehabilitation and renewal of the Township's roads. In addition, capital project forecasts from the Water System Financial Plan 2021-2027, the 2020 Bridge & Culvert Inspection report and the 2018 Building Inspection Report have also been factored in.

The development of these strategies allows for a comparison of potential cost avoidance if the strategies were to be implemented. The following table compares two scenarios for the Road Network and the Water Network:

1. **Replacement Only Scenario**: Based on the assumption that assets deteriorate and – without regularly scheduled maintenance and rehabilitation – are replaced at the end of their service life.
2. **Lifecycle Strategy Scenario**: Based on the assumption that lifecycle activities are performed at strategic intervals to extend the service life of assets until replacement is required.

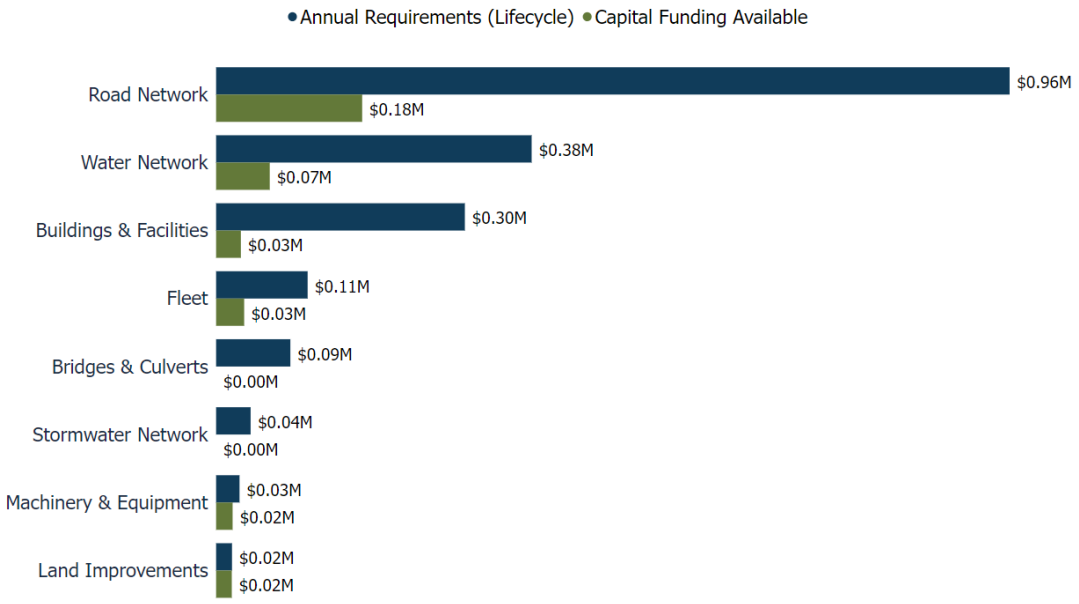
Asset Category	Annual Requirements (Replacement Only)	Annual Requirements (Lifecycle Strategy)	Difference
Road Network	$1,912,000	$962,000	$950,000

The implementation of a proactive lifecycle strategy for roads leads to a potential annual cost avoidance of $950,000 for the Road Network. This represents a reduction of the annual requirements for Road Network by 50%.

As the lifecycle strategy scenario represents the lowest cost option available to the Township, we have used it in the development of the financial strategy.

Annual Funding Available

Based on a historical analysis of sustainable capital funding sources, the Township is committing approximately $345,000 towards capital projects per year. Given the annual capital requirement of $1,935,748 there is currently a funding gap of $1,590,748 annually.



Funding Objective

We have developed a scenario that would enable the Township to achieve full funding within 20 years for the following assets:

1. **Tax Funded Assets:** Road Network, Stormwater Network, Bridges & Culverts, Buildings & Facilities, Machinery & Equipment, Land Improvements, Fleet
2. **Rate-Funded Assets:** Water Network

Note: For the purposes of this AMP, we have excluded gravel roads since they are a perpetual maintenance asset and end of life replacement calculations do not normally apply. If gravel roads are maintained properly, they can theoretically have a limitless service life. For each scenario developed we have included strategies, where applicable, regarding the use of cost containment and funding opportunities.

Financial Profile: Tax Funded Assets

7.1.2 Current Funding Position

The following tables show, by asset category, the Township's average annual asset capital expenditure (CapEx) requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Avg. Annual Requirement	Annual Funding Available				Annual Deficit
		Taxes	Gas Tax	OCIF	Total Available	
Bridges and Culverts	90,000	0	0	0	0	90,000
Buildings & Facilities	302,000	30,000	0	0	30,000	272,000
Fleet	111,000	34,000	0	0	34,000	77,000
Land Improvements	19,000	19,000	0	0	19,000	0
Machinery & Equipment	28,000	20,000	0	0	20,000	8,000
Road Network	962,000	90,000	37,000	50,000	177,000	785,000
Stormwater Network	41,818	0	0	0	0	41,818
	1,553,376	**193,000**	**37,000**	**50,000**	**280,000**	**1,273,376**

The average annual investment requirement for the above categories is $1.55 million. Annual revenue currently allocated to these assets for capital purposes is $0.28 million leaving an annual deficit of $1.27 million. Put differently, these infrastructure categories are currently funded at 18% of their long-term requirements.

7.1.3 Full Funding Requirements

In 2020, the Township of Billings had annual tax revenues of $1.9 million. As illustrated in the following table, without consideration of any other sources of revenue or cost containment strategies, full funding would require the following tax change over time:

Asset Category	Tax Change Required for Full Funding
Bridges and Culverts	4.8%
Buildings & Facilities	14.4%
Fleet	4.1%
Land Improvements	0.0%
Machinery & Equipment	0.4%
Road Network	41.6%
Stormwater Network	2.2%
	67.5%

The following changes in costs and/or revenues over the next number of years should also be considered in the financial strategy:

a) The Township's formula based OCIF grant is scheduled to remain the same at $50,000 from 2019 to 2021.
b) The Township's debt payments for these asset categories will be decreasing by $36,000 next year.

Our recommendations include capturing the above changes and allocating them to the infrastructure deficit outlined above. The table below outlines this concept and presents several options:

	Without Capturing Changes				With Capturing Changes			
	5 Years	**10 Years**	**15 Years**	**20 Years**	**5 Years**	**10 Years**	**15 Years**	**20 Years**
Infrastructure Deficit	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000	1,275,000
Change in Debt Costs	N/A	N/A	N/A	N/A	-18,000	-18,000	-18,000	-18,000
Change in OCIF Grants	N/A	N/A	N/A	N/A	-	-	-	-
Resulting Infrastructure Deficit	1,275,000	1,275,000	1,275,000	1,275,000	1,257,000	1,257,000	1,257,000	1,257,000
Tax Increase Required	67.6%	67.6%	67.6%	67.6%	66.6%	66.6%	66.6%	66.6%
Annually	13.5%	6.8%	4.5%	3.4%	13.3%	6.7%	4.4%	3.3%

7.1.4 Financial Strategy Recommendations

Considering all the above information, we recommend the 20-year option. This involves full CapEx funding being achieved over 20 years by:

a) when realized, reallocating the debt cost reductions to the infrastructure deficit as outlined above.
b) increasing tax revenue by 3.3% each year for the next 20 years solely for the purpose of phasing in full funding to the asset categories covered in this section of the AMP.
c) adjusting tax revenue increases in future year(s) when allocations to CapEx exceed or fail to meet budgeted amounts.
d) allocating the current gas tax and OCIF revenue as outlined previously.
e) allocating the scheduled OCIF grant increases to the infrastructure deficit as they occur.
f) reallocating appropriate revenue from categories in a surplus position to those in a deficit position.
g) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. By Provincial AMP rules, this periodic funding cannot be incorporated into an AMP unless there are firm commitments in place. We have included any applicable OCIF formula-based funding since this funding is a multi-year commitment[8].

2. We realize that raising tax revenues by the amounts recommended above for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.

Although this option achieves full CapEx funding on an annual basis in 20 years and provides financial sustainability over the period modeled, the recommendations do require prioritizing capital projects to fit the resulting annual funding available. Current data shows a pent-up investment demand of $445k for Fleet.

Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

[8] The Township should take advantage of all available grant funding programs and transfers from other levels of government. While OCIF has historically been considered a sustainable source of funding, the program is currently undergoing review by the provincial government. This review may impact its availability.

Financial Profile: Rate Funded Assets

7.1.5 Current Funding Position

The following tables show, by asset category, the Township's average annual CapEx investment requirements, current funding positions, and funding increases required to achieve full funding on assets funded by taxes.

Asset Category	Avg. Annual Requirement	Annual Funding Available			Annual Deficit
		Rates	OCIF	Total Available	
Water Network	382,373	65,000	0	65,000	317,373
	382,373	**65,000**	**0**	**65,000**	**317,373**

The average annual CapEx requirement for the above categories is $382k. Annual revenue currently allocated to these assets for capital purposes is $65k leaving an annual deficit of $317k. Put differently, these infrastructure categories are currently funded at 17% of their long-term requirements.

7.1.6 Full Funding Requirements

In 2020, the Township had annual water revenues of $254k. As illustrated in the table below, without consideration of any other sources of revenue, full funding would require the following changes over time:

Asset Category	Tax Change Required for Full Funding
Water Network	125%
Total	**125%**

In the following tables, we have expanded the above scenario to present multiple options. Due to the significant increases required, we have provided phase-in options of up to 20 years:

Water Network				
	5 Years	10 Years	15 Years	20 Years
Infrastructure Deficit	317,000	317,000	317,000	317,000
Rate Increase Required	124.8%	124.8%	124.8%	124.8%
Annually:	**25.0%**	**12.5%**	**8.3%**	**6.3%**

7.1.7 Financial Strategy Recommendations

Considering the above information, we recommend the 20-year option. This involves full CapEx funding being achieved over 20 years by:

a) increasing rate revenues by 6.3% for the Water Network each year for the next 20 years.
b) these rate revenue increases are solely for the purpose of phasing in full funding to the respective asset categories covered in this AMP.
c) increasing existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase-in.

Notes:

1. As in the past, periodic senior government infrastructure funding will most likely be available during the phase-in period. This periodic funding should not be incorporated into an AMP unless there are firm commitments in place.
2. We realize that raising rate revenues for infrastructure purposes will be very difficult to do. However, considering a longer phase-in window may have even greater consequences in terms of infrastructure failure.
3. Any increase in rates required for operations would be in addition to the above recommendations.

Although this strategy achieves full CapEx funding for rate-funded assets over 20 years, the recommendation does require prioritizing capital projects to fit the annual funding available. Current data shows no pent-up investment demand for the Water Network.

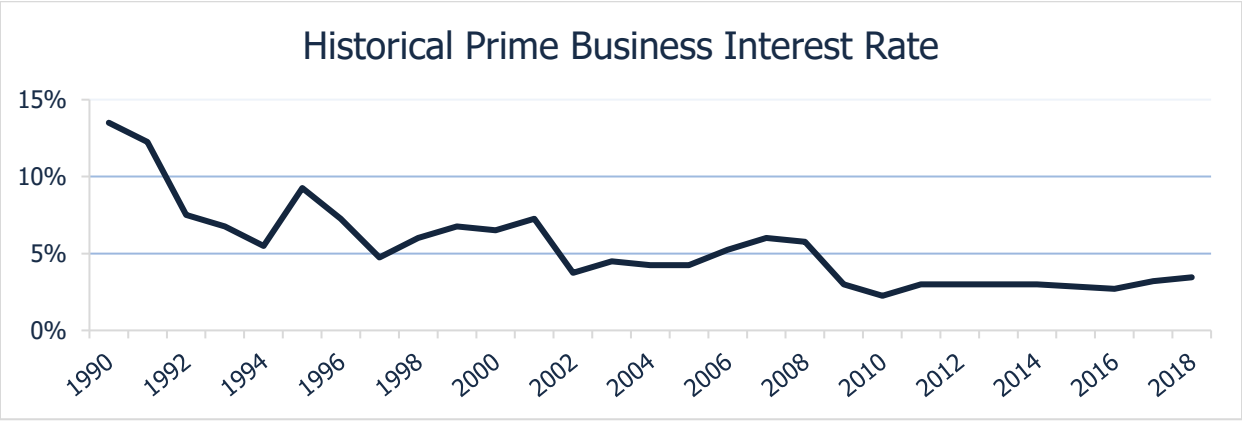
Prioritizing future projects will require the current data to be replaced by condition-based data. Although our recommendations include no further use of debt, the results of the condition-based analysis may require otherwise.

Use of Debt

For reference purposes, the following table outlines the premium paid on a project if financed by debt. For example, a $1M project financed at 3.0%[9] over 15 years would result in a 26% premium or $260,000 of increased costs due to interest payments. For simplicity, the table does not consider the time value of money or the effect of inflation on delayed projects.

Interest Rate	Number of Years Financed					
	5	10	15	20	25	30
7.0%	22%	42%	65%	89%	115%	142%
6.5%	20%	39%	60%	82%	105%	130%
6.0%	19%	36%	54%	74%	96%	118%
5.5%	17%	33%	49%	67%	86%	106%
5.0%	15%	30%	45%	60%	77%	95%
4.5%	14%	26%	40%	54%	69%	84%
4.0%	12%	23%	35%	47%	60%	73%
3.5%	11%	20%	30%	41%	52%	63%
3.0%	9%	17%	26%	34%	44%	53%
2.5%	8%	14%	21%	28%	36%	43%
2.0%	6%	11%	17%	22%	28%	34%
1.5%	5%	8%	12%	16%	21%	25%
1.0%	3%	6%	8%	11%	14%	16%
0.5%	2%	3%	4%	5%	7%	8%
0.0%	0%	0%	0%	0%	0%	0%

It should be noted that current interest rates are near all-time lows. Sustainable funding models that include debt need to incorporate the risk of rising interest rates. The following graph shows where historical lending rates have been:



[9] Current municipal Infrastructure Ontario rates for 15-year money is 3.2%.

A change in 15-year rates from 3% to 6% would change the premium from 26% to 54%. Such a change would have a significant impact on a financial plan.

The following tables outline how the Township has historically used debt for investing in the asset categories as listed. There is currently $35,000 of debt outstanding for the assets covered by this AMP with corresponding principal and interest payments of $18,000, well within its provincially prescribed maximum of $611,307.

Asset Category	Current Debt Outstanding	Use of Debt in the Last Five Years				
		2016	2017	2018	2019	2020
Bridges and Culverts	0	0	0	0	0	0
Buildings & Facilities	0	0	0	0	0	0
Fleet	0	0	0	0	0	0
Land Improvements	0	0	0	0	0	0
Machinery & Equipment	35,000	0	0	0	0	0
Road Network	0	0	0	0	0	0
Stormwater Network	0	0	0	0	0	0
Total Tax Funded:	**35,000**	**0**	**0**	**0**	**0**	**0**
Water Network	0	0	0	0	0	0
Total Rate Funded:	**0**	**0**	**0**	**0**	**0**	**0**

Asset Category	Principal & Interest Payments in the Next Ten Years						
	2020	2021	2022	2023	2024	2025	2030
Bridges and Culverts	0	0	0	0	0	0	0
Buildings & Facilities	0	0	0	0	0	0	0
Fleet	0	0	0	0	0	0	0
Land Improvements	0	0	0	0	0	0	0
Machinery & Equipment	18,000	36,000	0	0	0	0	0
Road Network	0	0	0	0	0	0	0
Stormwater Network	0	0	0	0	0	0	0
Total Tax Funded:	**18,000**	**36,000**	**0**	**0**	**0**	**0**	**0**
Water Network	0	0	0	0	0	0	0
Total Rate Funded:	**0**	**0**	**0**	**0**	**0**	**0**	**0**

The revenue options outlined in this plan allow The Township to fully fund its long-term infrastructure requirements without further use of debt.

Use of Reserves

7.1.8 Available Reserves

Reserves play a critical role in long-term financial planning. The benefits of having reserves available for infrastructure planning include:

a) the ability to stabilize tax rates when dealing with variable and sometimes uncontrollable factors
b) financing one-time or short-term investments
c) accumulating the funding for significant future infrastructure investments
d) managing the use of debt
e) normalizing infrastructure funding requirement

By asset category, the table below outlines the details of the reserves currently available to the Township.

Asset Category	Balance on December 31, 2020
Bridges and Culverts	0
Buildings & Facilities	1,093,000
Fleet	0
Land Improvements	0
Machinery & Equipment	445,000
Road Network	445,000
Stormwater Network	0
Total Tax Funded:	**1,983,000**
Water Network	340,000
Total Rate Funded:	**340,000**

There is considerable debate in the municipal sector as to the appropriate level of reserves that a Township should have on hand. There is no clear guideline that has gained wide acceptance. Factors that municipalities should take into account when determining their capital reserve requirements include:

a) breadth of services provided
b) age and condition of infrastructure
c) use and level of debt
d) economic conditions and outlook
e) internal reserve and debt policies.

These reserves are available for use by applicable asset categories during the phase-in period to full funding. This coupled with The Township's judicious use of debt in the past, allows the

scenarios to assume that, if required, available reserves and debt capacity can be used for high priority and emergency infrastructure investments in the short- to medium-term.

7.1.9 Recommendation

In 2025, Ontario Regulation 588/17 will require the Township of Billings to integrate proposed levels of service for all asset categories in its asset management plan update. We recommend that future planning should reflect adjustments to service levels and their impacts on reserve balances.

8 Appendices

Key Insights

- Appendix A includes a one-page report card with an overview of key data from each asset category
- Appendix B identifies projected 10-year capital requirements for each asset category
- Appendix C identifies the criteria used to calculate risk for each asset category
- Appendix D provides a tailored list of next steps to advance the Township's asset management program
- Appendix E provides an O. Reg. 588/17 compliance snapshot
- Appendix F provides additional guidance on the development of a condition assessment program
- Appendix G provides a glossary of terms

Appendix A: Infrastructure Report Card

Asset Category	Replacement Cost (millions)	Asset Condition	Financial Capacity	
Road Network	$42.4	**Fair**	Annual Requirement:	$961,573
			Funding Available:	$177,000
			Annual Deficit:	**$784,573**
Buildings & Facilities	$11.03	**Very Poor**	Annual Requirement:	$301,441
			Funding Available:	$30,000
			Annual Deficit:	**$271,441**
Bridges & Culverts	$2.70	**Poor**	Annual Requirement:	$89,991
			Funding Available:	$0
			Annual Deficit:	**$0**
Fleet	$1.80	**Fair**	Annual Requirement:	$110,909
			Funding Available:	$34,000
			Annual Deficit:	**$76,909**
Stormwater Network	$1.58	**Fair**	Annual Requirement:	$41,818
			Funding Available:	$0
			Annual Deficit:	**$41,818**
Land Improvements	$0.44	**Very Good**	Annual Requirement:	$19,265
			Funding Available:	$19,000
			Annual Deficit:	**$265**
Machinery & Equipment	$0.42	**Good**	Annual Requirement:	$28,379
			Funding Available:	$20,000
			Annual Deficit:	**$8,379**
Water Network	$17.27	**Good**	Annual Requirement:	$382,373
			Funding Available:	$65,000
			Annual Deficit:	**$317,373**
Overall	$77.64	**Fair**	Annual Requirement:	$1,935,748
			Funding Available:	$345,000
			Annual Deficit:	**$1,590,748**

Appendix B: 10-Year Capital Requirements

The following tables identify the capital cost requirements for each of the next 10 years in order to meet projected capital requirements and maintain the current level of service.

Road Network

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Gravel Roads	$0	$1,470,000	$11,424	$130,000	$2,780,500	$87,500	$144,231	$830,707	$50,000	$946,000	$0
Paved Roads	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Streetlights	$0	$0	$0	$2,200	$0	$0	$0	$2,200	$0	$0	$0
Surface Treated Roads	$0	$143,556	$81,072	$74,000	$25,000	$100,000	$45,538	$79,415	$797,000	$0	$0
	$0	**$1,613,556**	**$92,496**	**$206,200**	**$2,805,500**	**$187,500**	**$189,769**	**$912,322**	**$847,000**	**$946,000**	**$0**

Buildings & Facilities

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Fire & Emergency	$0	$0	$884,425	$0	$0	$0	$0	$0	$0	$0	$0
General Government	$0	$5,412	$17,665	$11,262	$0	$1,172	$0	$0	$12,434	$489,558	$0
Recreational and Cultural Services	$75,345	$69,276	$115,929	$22,524	$4,595	$580,374	$16,284	$127,486	$589,543	$254,627	$31,046
Transportation Services	$12,734	$0	$14,905	$0	$0	$1,172	$0	$0	$0	$0	$0
	$88,079	**$74,688**	**$1,032,924**	**$33,786**	**$4,595**	**$582,718**	**$16,284**	**$127,486**	**$601,977**	**$744,185**	**$31,046**

Bridges & Culverts

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Bridges	$0	$0	$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$2,895
Structural Culverts	$0	$1,000	$0	$0	$0	$45,000	$0	$0	$0	$0	$0
	$0	**$1,000**	**$1,000,000**	**$1,000,000**	**$0**	**$45,000**	**$0**	**$0**	**$0**	**$0**	**$2,895**

Fleet

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Environmental Services	$0	$0	$0	$0	$12,511	$0	$0	$0	$0	$0	$0
Fire & Emergency	$176,540	$0	$0	$0	$0	$40,039	$0	$276,641	$0	$0	$0
Transportation Services	$291,497	$103,820	$0	$0	$0	$0	$0	$0	$0	$457,092	$353,304
	$468,037	**$103,820**	**$0**	**$0**	**$12,511**	**$40,039**	**$0**	**$276,641**	**$0**	**$457,092**	**$353,304**

Stormwater Network

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Catchbasin Lead	$0	$0	$0	$0	$0	$0	$35,000	$0	$0	$0	$0
Storm Catchbasins	$0	$0	$0	$0	$0	$0	$26,600	$0	$0	$0	$0
Storm Culverts	$111,304	$0	$0	$0	$0	$0	$1,000,000	$0	$0	$0	$0
Storm Lines	$0	$0	$0	$0	$0	$0	$50,616	$0	$0	$0	$0
	$111,304	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,112,216**	**$0**	**$0**	**$0**	**$0**

Land Improvements

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Environmental Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,716
Recreational and Cultural Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transportation Services	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,574
	$0	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$14,290**

Machinery & Equipment

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Environmental Services	$0	$0	$0	$0	$106,900	$0	$0	$0	$0	$0	$0
Fire & Emergency	$0	$0	$14,042	$0	$0	$0	$16,047	$0	$0	$0	$17,117
General Government	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Recreational and Cultural Services	$0	$0	$0	$0	$0	$0	$23,046	$0	$74,974	$0	$0
Transportation Services	$0	$0	$0	$0	$0	$16,136	$0	$0	$0	$0	$0
	$0	**$0**	**$14,042**	**$0**	**$106,900**	**$16,136**	**$39,093**	**$0**	**$74,974**	**$0**	**$17,117**

Water Network

Asset Segment	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Hydrants	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pumping Station	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Service Lead	$0	$0	$772,857	$0	$0	$0	$0	$0	$0	$83,922	$0
Treatment Plant	$11,143	$9,742	$2,208	$0	$42,501	$21,000	$0	$100,000	$67,460	$0	$0
Water Tower	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Watermains	$0	$1,144,335	$2,753,832	$0	$803,958	$0	$0	$0	$0	$0	$0
	$11,143	**$1,154,077**	**$3,528,897**	**$0**	**$846,459**	**$21,000**	**$0**	**$100,000**	**$67,460**	**$83,922**	**$0**

Asset Portfolio

Asset Category	Backlog	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Road Network	$0	$1,615,756	$94,696	$204,000	$2,805,500	$187,500	$189,769	$910,122	$847,000	$946,000	$0
Buildings and Facilities	$88,079	$74,688	$1,032,924	$33,786	$4,595	$582,718	$16,284	$127,486	$601,977	$744,185	$31,046
Fleet	$468,037	$103,820	$0	$0	$12,511	$40,039	$0	$276,641	$0	$457,092	$353,304
Bridges & Culverts	$0	$1,000	$1,000,000	$1,000,000	$0	$45,000	$0	$0	$0	$0	$2,895
Stormwater Network	$111,304	$0	$0	$0	$0	$0	$1,112,216	$0	$0	$0	$0
Machinery & Equipment	$0	$0	$14,042	$0	$106,900	$16,136	$39,093	$0	$74,974	$0	$17,117
Land Improvements	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,290
Water Network	$11,143	$1,154,077	$3,528,897	$0	$846,459	$21,000	$0	$100,000	$67,460	$83,922	$0
	$678,563	**$2,949,341**	**$5,670,559**	**$1,237,786**	**$3,775,965**	**$892,393**	**$1,357,362**	**$1,414,249**	**$1,591,411**	**$2,231,199**	**$418,652**

Appendix C: Risk Rating Criteria

Probability of Failure

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Road Network (Roads)	Condition	60%	85-100	1
			70-84	2
			55-69	3
			40-54	4
			0-39	5
	Service Life Remaining (%)	40%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
Bridges & Culverts	Condition	75%	80-100	1
			70-79	2
			60-69	3
			50-59	4
			0-49	5
	Service Life Remaining %	25%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
Buildings & Facilities Machinery & Equipment Fleet Parks & Land Improvements	Condition	75%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining %	25%	80-100	1
			60-79	2

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
			40-59	3
			20-39	4
			0-19	5
Road Network (Other) Stormwater Network (Other) Water Network (Other)	Condition	75%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining %	25%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
Water Network (Mains)	Condition	50%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining %	40%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Pipe Material	10%	HDPE	2
			PVC	2
			CU	3
			CI	3
			P	4

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Stormwater Network (Mains)	Condition	50%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Service Life Remaining (%)	40%	80-100	1
			60-79	2
			40-59	3
			20-39	4
			0-19	5
	Pipe Material	10%	Concrete	4
			Ductile Iron	3
			PVC	2

Consequence of Failure

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Road Network (Roads)	Economic (35%)	Replacement Cost (100%)	$0-$50,000	1
			$50,000-$150,000	2
			$150,000-$300,000	3
			$300,000-$500,000	4
			$500,000+	5
	Socio-Political (15%)	AADT (50%)	0-50	1
			51-250	2
			250-450	3
			450-650	4
			650-1050	5
		Road Class (50%)	Arterial	5
			Collector	4
			Collector Commerical	3
			Collector Industrial	3
			Local	2
			Local Commercial	3
			Local Industrial	3
	Operational (20%)	Surface Material (100%)	Gravel	2
			LCB	3
			HCB	4
	Economic (25%)	Roadside Environment (100%)	Rural	2
			Semi-Urban	3
			Semi-Urban/Urban	4
			Urban	5
Bridges & Culverts	Economic (75%)	Replacement Cost (100%)	$0-$100,000	1
			$100,000-$250,000	2
			$250,000-$500,000	3
			$500,000-$1,000,000	4
			$1,000,000+	5
	Social	AADT	0-150	1

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
	(20%)	(100%)	151-300	2
			301-450	3
			451-600	4
			601-1000	5
	Socio-Political (5%)	Detour Distance (100%)	2-5	2
			6-8	3
			9-10	4
			11-20	5
Buildings & Facilities Machinery & Equipment Fleet Parks & Land Improvements	Economic (80%)	Replacement Cost (100%)	$0-$50,000	1
			$50,000-$350,000	2
			$350,000-$1,000,000	3
			$1,000,000-$2,000,000	4
			$2,000,000+	5
	Strategic (20%)	Department (100%)	Recreation & Cultural Services	2
			General Government	2
			Transportation Services	3
			Public Works	3
			Environmental Services	4
			Health Services	5
			Protection Services	5
Road Network (Other) Stormwater Network (Other) Water Network (Other)	Economic (100%)	Replacement Cost (100%)	$0-$50,000	1
			$50,000-$150,000	2
			$150,000-$250,000	3
			$250,000-$500,000	4
			$500,000+	5
Water Network (Mains)	Economic (80%)	Replacement Cost (100%)	$0-$50,000	1
			$50,000-$100,000	2
			$100,000-$150,000	3
			$150,000-$250,000	4
			$250,000+	5
	Operational (20%)	Pipe Diameter (100%)	0-50	1
			51-150	2

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
			151-250	3
			251-450	4
			451-1000	5
			Severe	5
Stormwater Network (Mains)	Economic (80%)	Replacement Cost (100%)	$0-$50,000	1
			$50,000-$100,000	2
			$100,000-$150,000	3
			$150,000-$250,000	4
			$250,000+	5
	Operational (20%)	Pipe Diameter (100%)	0-50	1
			51-150	2
			151-250	3
			251-450	4
			451-1000	5
			451-1000	5

Appendix D: Next Steps

A workplan has been provided to the Township to advance its Asset Management Program. These steps are ranked based on their overall asset management value to the Township. Value considers the priority and impact of a recommendation relative to its cost.

Next Steps
Conduct a TCA data review to identify missing and/or incomplete assets in the CityWide™ asset inventory.
Componentize the inventory for buildings & facilities and obtain component based assessed condition scores.
Review and confirm that all assets have been accounted for within the asset inventory, particularly for non-core assets.
Regularly review & update replacement costs for all asset classes, incorporating industry standard costing references and local market pricing.
Continue to integrate data from various studies, reports, and staff journals within CityWide™ to ensure a centralized, comprehensive, and current asset inventory.
Implement a data governance strategy and framework to maintain the level of data maturity
Develop detailed LOS frameworks for all assets and identify proposed LOS
Educate and train key personnel on broader asset management best practices including database management and the optimal use of CityWide™
Review, consider, and as appropriate, account for growth and demand changes to infrastructure management.
Provide opportunities for staff and elected officials to attend webinars, educational conferences, and workshops to expand their technical knowledge of asset management principles and practices
Develop a medium- to long-term external communication strategy to engage public on asset management and obtain feedback to inform development of proposed LOS
An asset management strategy enforces the asset management policy and aligns it to the asset management plan. Consider developing a formalized, documented asset management strategy.

Appendix E: O. Reg. 588/ 17 - Compliance Snapshot

O. Reg. Requirement	2022 Compliance		2024 Compliance		2025 Compliance
	Core	Non-Core	Core	Non-Core	Core & Non-Core
1.0 Asset Inventory					
1.1 Asset Summary	Yes	N/A	Yes	Yes	No
1.2 Replacement Cost	Yes		Yes	Yes	No
1.3 Average Age	Yes		Yes	Yes	No
1.4 Condition	Yes		Yes	Yes	No
1.5 Condition Assessment Approach	Yes		Yes	Yes	No
2.0 Lifecycle Activities					
2.1 Identify Full Asset Lifecycle	Yes	N/A	Yes	Yes	No
2.2 Document Lifecycle Activities	Yes		Yes	Yes	No
2.3 Quantify Asset Risk	Yes		Yes	Yes	No
2.4 Lifecycle Cost Analysis	Yes		Yes	Yes	No
3.0 Growth					
3.1 Population & Economic assumptions	Yes	N/A	Yes	Yes	No
3.2 Document impact of growth on capital planning	N/A		Yes	Yes	No
4.0 Current Level of Service					
4.1 Define and document current LOS metrics	Yes	Yes	Yes	Yes	No
5.0 Proposed Level of Service					
5.1 Define Proposed LOS	N/A		N/A		No
5.2 Difference b/w Current & Proposed LOS					No
5.3 Required Lifecycle Activities and associated Risk					No
5.4 Achievability of Proposed LOS					No
5.5 Affordability of Proposed LOS					No
5.6 Lifecycle activities and risk associated with potential funding shortfall					No

Appendix F: Condition Assessment Guidelines

The foundation of good asset management practice is accurate and reliable data on the current condition of infrastructure. Assessing the condition of an asset at a single point in time allows staff to have a better understanding of the probability of asset failure due to deteriorating condition.

Condition data is vital to the development of data-driven asset management strategies. Without accurate and reliable asset data, there may be little confidence in asset management decision-making which can lead to premature asset failure, service disruption and suboptimal investment strategies. To prevent these outcomes, the Township's condition assessment strategy should outline several key considerations, including:

- The role of asset condition data in decision-making
- Guidelines for the collection of asset condition data
- A schedule for how regularly asset condition data should be collected

Role of Asset Condition Data

The goal of collecting asset condition data is to ensure that data is available to inform maintenance and renewal programs required to meet the desired level of service. Accurate and reliable condition data allows municipal staff to determine the remaining service life of assets, and identify the most cost-effective approach to deterioration, whether it involves extending the life of the asset through remedial efforts or determining that replacement is required to avoid asset failure.

In addition to the optimization of lifecycle management strategies, asset condition data also impacts the Township's risk management and financial strategies. Assessed condition is a key variable in the determination of an asset's probability of failure. With a strong understanding of the probability of failure across the entire asset portfolio, the Township can develop strategies to mitigate both the probability and consequences of asset failure and service disruption. Furthermore, with condition-based determinations of future capital expenditures, the Township can develop long-term financial strategies with higher accuracy and reliability.

Guidelines for Condition Assessment

Whether completed by external consultants or internal staff, condition assessments should be completed in a structured and repeatable fashion, according to consistent and objective assessment criteria. Without proper guidelines for the completion of condition assessments there can be little confidence in the validity of condition data and asset management strategies based on this data.

Condition assessments must include a quantitative or qualitative assessment of the current condition of the asset, collected according to specified condition rating criteria, in a format that can be used for asset management decision-making. As a result, it is important that staff adequately define the condition rating criteria that should be used and the assets that require a discrete condition rating. When engaging with external consultants to complete condition assessments, it is critical that these details are communicated as part of the contractual terms of the project.

There are many options available to the Township to complete condition assessments. In some cases, external consultants may need to be engaged to complete detailed technical assessments of infrastructure. In other cases, internal staff may have sufficient expertise or training to complete condition assessments.

Developing a Condition Assessment Schedule

Condition assessments and general data collection can be both time-consuming and resource-intensive. It is not necessarily an effective strategy to collect assessed condition data across the entire asset inventory. Instead, the Township should prioritize the collection of assessed condition data based on the anticipated value of this data in decision-making. The International Infrastructure Management Manual (IIMM) identifies four key criteria to consider when making this determination:

1. **Relevance**: every data item must have a direct influence on the output that is required
2. **Appropriateness**: the volume of data and the frequency of updating should align with the stage in the assets life and the service being provided
3. **Reliability**: the data should be sufficiently accurate, have sufficient spatial coverage and be appropriately complete and current
4. **Affordability**: the data should be affordable to collect and maintain

Appendix G: Glossary of Terms

Term	Term Description
Asset	An item, thing or entity that has potential or actual value to a Township. (Such as plant, machinery, buildings, etc.)
Asset Inventory/Asset Register	A record of asset information, typically held in spreadsheets, databases, or software systems, including asset attribute data such as quantity, type, and construction cost.
Asset Management (AM)	The systematic and coordinated activities and practices of an organization to deliver on its objectives optimally and sustainably through cost-effective lifecycle management of assets. ISO 55000 definition: coordinated activity of an organization to realize value from assets.
Asset Management Plan (AMP)	Long-term plans (usually 10-20 years or more for infrastructure assets) that outline the asset activities and programs for each asset class to provide a defined level of service in the most cost-effective way.
Asset Management Policy	A high-level statement of an organization's principles and approach to asset management.
Capital Expenditure (CAPEX)	Expenditure used to create new assets, renew assets, or upgrade assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of the asset stock.
CCTV	Closed Circuit Television Video
Condition	The physical state of the asset.
Condition Assessment	The inspection, assessment, measurement, and interpretation of the resultant data, to indicate the condition of a specific component to determine the need for some preventive or remedial action.
Consequence of Failure	The effect of asset failure on organizational objectives.

Critical Assets	Assets that have a higher probability of failure and consequence of failure (in terms of financial, environment, social and any other financial or non-financial impacts).
EUL	Estimated Useful Life. The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service.
Facility	A complex structure comprising of many assets (e.g., a hospital, water treatment plant, recreation complex, etc.) that represents a single management unit for financial, operational, maintenance or other purposes.
GIS	Geographic Information System
Federal Gas Tax Fund (GTF)	A permanent source of funding provided up front, twice-a-year, to provinces and territories, who in turn flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank, and borrow against this funding, providing significant financial flexibility.
Paved Roads	Hot mix asphalt pavement that is typically placed as a surface for rural, semi-urban and urban roads with higher traffic volumes, and is placed at thicknesses ranging from 50mm (2 inches) to 200mm (8 inches).
IAM	Institute of Asset Management
Infrastructure Assets	Stationary systems forming a network or a portfolio of assets serving whole communities, where the system is intended to be maintained indefinitely at a particular level of service potential by continuing replacement and refurbishment of its components.
Key Performance Indicator (KPI)	A performance measure that is important to the Township.
Surface Treated	A thin protective wearing surface applied to existing pavement or gravel surface that acts as a seal from water and fills in cracks and uneven surfaces. Surface treatments are typically placed on rural roads with low traffic volumes and consists of asphalt emulsion and aggregate.
Level of Service (LOS)	The parameters or combination of parameters that reflect social, political, economic, and environmental outcomes that the Township delivers.

Maintenance	All actions necessary for retaining an asset as near as practicable to its original condition but excluding rehabilitation or renewal. Maintenance does not necessarily increase the service potential of the asset or keep it in its original condition, it slows down deterioration and delays when rehabilitation or replacement is necessary.
OCWA	Ontario Clean Water Agency
OSIM	Ontario Structure Inspection Manual
Probability of Failure	The probability or likelihood of asset failure at a given time.
Rehabilitation	Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate modification. Generally, involves repairing the asset to deliver its original level of service without resorting to significant upgrading or renewal, using available techniques and standards.
Replacement	The complete replacement of an asset that has reached the end of its life, so as to provide a similar, or agreed alternative, level of service.
Replacement Cost	The cost the municipality would incur to acquire the asset on the reporting year.
Rural	Refers to predominant characteristics of the adjacent land use; rural being agricultural, light commercial and vacant/undeveloped properties.
Semi-Urban	Refers to the predominant characteristics of the adjacent land use; semi-urban being settlement clusters with low-density residential and light commercial/industrial properties.
Service Life Remaining	The asset's remaining service life with the most recent condition assessment value taken into consideration.
Uniformat II	A standard for classifying building specifications, cost estimating and cost analysis in Canada and the U.S. The elements are major components common to most buildings.

Tiana Mills

From: Tiana Mills
Sent: January 26, 2022 10:28 AM
To: Tiana Mills
Subject: RE: EDC report

From: Sharon Alkenbrack <salkenbrack@billingstwp.ca>
Sent: January 26, 2022 10:22 AM
To: Tiana Mills <tmills@billingstwp.ca>
Subject: EDC report

Date of Report: Jan 18/22
Committee EDC
Report by: S.Alkenbrack

Highlights:

Winter Promotions: to send out information on our fb page and in our newsletter showing that we are open for people to visit during the winter, the information gives info about our natural areas of the township such as the falls, winter activities, the ice rink, the beauty of the area. This promotion to support the businesses that are open during winter months and hope to entice people to visit.

Marine Fishing: EDC requests that there be made available a budget for purchase of fishing equipment such as lures, lines, nets and other necessary equipment to support the fishing on our docks and asked that those purchases be made by a fisherman or our Marina manager as apparently it is more complicated than we thought.
Discussion of the return of the Art/Poetry boxes
A question to EDC committee was for each memberto give 2 aspects of our township that brings people to our community in an effort to encourage people and promote those parts of the community. They are:
The Community"s rich history
Environmnet
Summer markets
Small community
The ability to walk on sidewalks
Kagawong is the centre of the North Shore/ Marine accessible to the Benjamins
Green spaces
Quirkiness of the Village

TOWNSHIP OF BILLINGS
COUNCIL COMMITTEE REPORT

Report to:	Council	Date of meeting:	January 24, 2022
Report by:	Sharon Jackson, Chair	Committee:	Parks, Rec & Wellness

Highlights/Matters of Interest:

Outdoor rink – To date $17,030.55 has been collected in donations/advertising.

18 advertisements have been purchased for the boards. The most recent donation of a snowblower was made by Deborah Flaxman. It was purchased from Berry Boats who offered a $500.00 discount as a donation to the Township.

Public Works built benches and they have been installed. Thank you!

Santa Meet n Greet – kids were able to talk to Santa, receive a treat bag and give their letter to a volunteer. We had positive feedback from parents.

Island Wide Events – Assiginack Township has taken the lead on this project.

Next meeting – Monday, February 28, 2022 or call of the Chair

Recommendations to Council:

MOTION by Andrew Preyde, seconded by Catherine Joyce – THAT we request a budget of $300.00 from Council for the Committee to host a Family Day Community Skate and Slide at the Park Centre. The funds to be used for purchase of hot chocolate, coffee, creamer etc. Carried.

COMMITTEE REPORT

COMMUNITY POLICE ADVISORY COMMITTEE

12 January 2022 7:00 pm.

VIRTUAL (ZOOM)

Meeting was called to order by the chair at 7:03 pm. with a quorum present.

PRESENT: Insp. Moriarity (OPP), Al Boyd-NEMI, John Turner-Gordon-Barrie Island, Bryan Barker Billings, Dave McDowell-Assiginack, Steve Shaffer- Central Manitoulin, Rick Gordon-Tehkummah, Jack Clark-Gore Bay, Wayne Bailley-Burpee Mills

REGRETS: Jack Clark – Gore Bay

OLD BUSINESS

Introductions – Constable Tessa KASCH Community Services Officer Manitoulin OPP

Project Life Saver - Constable KASCH introduced a new OPP program called Project Lifesaver which involves a tracking system where a person that is registered with the program wears a wrist band device that emits a FM radio frequency should someone go wandering off suffering from Alzheimer's or some type of dementia.

A PowerPoint presentation was shown explaining the program and what a benefit it is to search and rescue teams with the OPP. The OPP is looking for an organization to administer the program and the coasts are from $14000.00 to $16000.00 and a cost of $600.00 per wrist band.

Suggestions made to contact Victim Services or service clubs like Lion's, Rotary, VON or Kiwanis etc.

Transition from CPAC to Police Services Board – No new information as to time frame. ROMA conference being held on the week 23rd January 2022. May be information arising from that conference.

NEW BUSINESS

OPP detachment commander advised:

The Inspector introduced Manitoulin E - Ticketing Analysist report both in PDF format and Excel. This report is done with all e-ticketing interactions offenses with officers. When an officer makes contact and stops a motorist the driver's licence is obtained it is scanned information recorded if

an e-ticket is issues it is printed off in the police vehicle. The GPS coordinated are recorded and details of the stop. A report will be available every 6 months

The Inspector advised that those 2 new recruits have arrived one for Manitoulin and one for Espanola area. Five new recruits are now attending the OPC. Training will be completed May, June 2022. Two recruits assigned to Manitoulin and three for Espanola/North shore.

ROUND TABLE

Central Manitoulin – No report

Gordon/Barrie Island – No report.

Assiginack – No report.

Billings – No report.

Burpee/Mills – Few incidents of gas thefts. Issues with youth. Incidents at dogs running at large which was dealt with by the MNRF CO.

Tehkummah – No report.

NEMI – No report.

Meeting Adjourned at 8:15pm.

Next meeting **09 March 2022**

Submitted by

Councillor Bryan Barker


INTERNATIONAL
PROJECT
LIFESAVER
"BRINGING LOVED ONES HOME"

WHAT IS PROJECT LIFESAVER?

- Founded in 1999
- Radio frequency based tracking system
- System is for people of all ages who are high risk vulnerable persons
  - Must have a tendency to wander
  - Diagnosed with Alzheimer's or other dementias, Autism, Down Syndrome or other form of cognitive delay
- Clients wear a personalized wristband that emits a unique tracking signal
- The wristband is a one ounce, battery-operated wrist transmitter emitting a unique FM radio frequency-based signal that will emit a signal every second, 24 hours a day

WHAT IS PROJECT LIFESAVER?

- Signal can be tracked on the ground for approximately 2.5 km or in the air from helicopter for approximately 8-10 km
- Each wristband has a unique radio frequency allowing officers to positively locate and identify the person who has wandered away from home using portable directional antennae to locate the signal
- Two different types of antenna
  - One is secured to the roof of responding OPP vehicles (less range but does allow for the transmitted signal to be received from any direction)
  - Once signal is detected- officers switch to the second one that allows us to make use of maximum range of the bracelets and have the advantage of being directional

BENEFITS

- Most who wander are found a few km's from home
  - Search times when using Project Lifesaver have been reduced from hours and days to minutes.
  - Recovery times for Project Lifesaver clients average 30 minutes – 95% less time than standard operations
- Manitoulin OPP will be in charge of the search and the Emergency Response Team (ERT), Canine Unit, Helicopter are still deployed

COST/ADMINISTRATOR

- Administrator is in charge of signing up clients and monthly battery changes
  - OPP will house the equipment
- Approximate cost is between $14,000- $16,000
- Each bracelet is approximately $600
  - Battery changes approximately $10-$20 every two months

QUESTIONS?

COMMITTEE REPORT

LAKE KAGAWONG RESOURCE COMMITTEE

20 January 2022 7:00 pm.

VIRTUAL (ZOOM)

Meeting was called to order by the chair at 7:00 pm. with a quorum present.

PRESENT: Bryan Barker (Chair), Sharon Jackson (Councillor), Ian Anderson (Mayor), Bob Clifford, John Hoekstra, Stan Pierce, Steve Weber, Kathy MacDonald (CAO/Clerk, staff liaison)

REGRETS: Brian Foreshew

OLD BUSINESS

I. **Report on Water Levels –** No report

II. **Report on OEC Website –** Stan Pierce reported that the OEC website was not up to date, as OEC was transitioning over to 2022 spread sheet. However, there was a written email received 19 January 2022 reporting the following levels.

Sun Jan 2: 212.98
Thu Jan 6: 212.97
Sun Jan 9: 212.97
Thu Jan 13: 212.94
Sun Jan 16: 212.91

NEW BUSINESS

I. **OEC – Discussion Regarding Extension of OEC Contract**

The LKRC was updated regarding the lease extension with OEC. The LKRC was advised that council had agreed to extend the lease. Discussion regarding the LKRC working in parallel with the extension agreement and identifying possible concerns, in the present lease and making recommendations to council for possible amendments. In line with staff's recommendations, made to council, that the lease extension be current understandable and that most importantly that it protects the township.

The following points arose from that discussion:

- That legal council do a search for outstanding work orders. A past stop work order had been issued to the township regarding safety issues. Ministry of Labour determined the township is responsible.
- Identify potential exposure and risks to the township
- Risk in relation to the canal
- Higher profile and accountability for the township and the need to understand the information contained in the lease.
- Clearer defined roles and responsibilities for both parties. By way of an operating procedure or a set of SOG.

II. **Stewardship Role –** Committee discussed the possibility of expanding its role to stewardship committee. Check with staff to see if possible and steps that need to be taken. Committee unanimously support the idea.

NEXT MEETING

03 February, 7:00 pm (virtual)

MEETING ADJOURNED

8:40 pm.

Submitted by

Councillor Bryan Barker (Chair LKRC)

Township of Billings

Council Committee Report

Report To:

Date of Meeting: JAN 18th 2022

Report By: Michael Hunt

Committee: Library Board

Highlights/Matters of Interest:

Patron Count for Dec 2021 was	78
Computer / Internet use	3
Overdrive (visits)	117
Circulation	112
Renewals	7
Inter library loans	8
Overdrive (items)	190
Total Circulation	317
Desk Cash Photo Copies	$1.50
Donations (Silent Auction)	$130.
How it all Began book sales	$60.
Total	$191.50

People are using the new laminator for their Vacine cards.

No volunteers for snow Shoveling at the front of Library. Jill has been doing this.

A little library for books will be offered at the Marina or at the bottom of the stairs at library.

The Corporation of the
Township of Billings

By-Law 2022-04

Being a By-Law to enter into a funding agreement with the Ontario Trillium Foundation

WHEREAS, the Township of Billings applied for funding from the Ontario Trillium Foundation, application number CC117684, to build a new pedestrian bridge and realigning the river trail system to allow full access to the trails on both sides of the Kagawong River.

AND WHEREAS, the Township of Billings has been approved for funding under the Community Building Fund Capital Stream.

NOW THEREFORE BE IT RESOLVED that The Township of Billings will enter into an agreement with Ontario Trillium Foundation

1. That the terms of the agreement shall be written in the attached agreement, which shall be Schedule 1 to this By-Law and,
2. That the CAO/Clerk shall be the signatory to this agreement

READ A FIRST, SECOND AND THIRD TIME AND ENACTED, THIS 1ST DAY OF FEBRUARY, 2022.

_____ _____

Ian Anderson, Mayor Kathy McDonald, CAO/Clerk

The Corporation of the
Township of Billings

By-Law 2022-05

Being a By-Law to enter into a Funding Agreement with a Government Organization

WHEREAS, many contribution agreements received by the Township, from other government organizations, come with a requirement to sign and submit the contribution agreement immediately

AND WHEREAS, these agreements usually come with the condition that these agreements not be made public.

NOW THEREFORE, Council gives direction to the CAO and/or Mayor to sign these contributions and enter into the agreement without presentation to Council until the funding parties announce the funding.

READ A FIRST, SECOND AND THIRD TIME AND ENACTED, THIS 1ST DAY OF FEBRUARY, 2022.

_____ _____

Ian Anderson, Mayor Kathy McDonald, CAO/Clerk

The Corporation of The
Township Of Billings

By-Law 2022-06

Being a By-Law to establish the Signing Officers who have authority to sign on municipal accounts

WHEREAS, the Council of the Corporation of the Township of Billings requires updating its signing authorities:

NOW THEREFORE The Council of the Corporation of the Township of Billings ENACTS AS FOLLOWS:

1. That all cheques signed on behalf of the Corporation of the Township of Billings shall be completed as follows:
   A signature from any two of the following:
   Mayor Ian Anderson, Deputy Mayor Bryan Barker, CAO/Clerk Kathy McDonald or Treasurer Cheryl McCulligh

2. That this By-law shall come into force and take effect upon the third and final reading thereof;

3. That any By-law contrary or inconsistent with this by-law is hereby repealed.

READ a first, second and third time and enacted in Open Council this 1st day of February, 2022.

_____ _____

Ian Anderson, Mayor Kathy McDonald, CAO/Clerk

THE CORPORATION OF THE TOWNSHIP OF BILLINGS

BY-LAW 2022-07

Being a By-Law to change the mandate and to amend the Terms of Reference of the Climate Action Committee

WHEREAS Council of the Corporation of the Township Billings established a committee of council for the purpose of advising council on the creation of a Community Energy Emissions Plan (CEEP) by By-law 2020-06;

AND WHEREAS the CEEP has been completed and the committee's role will now be to advise Council on CEEP implementation.

NOW THEREFORE BE IT RESOLVED that Council of the Corporation of the Township of Billings hereby enacts as follows:

1. That the Climate Action Committee mandate be adjusted as outlined in the Terms of Reference attached hereto as Schedule "A"; and,
2. That By-Law 2020-06 is repealed.

Read a first, second and third time and enacted, this 1st day of February, 2022.

_____ _____

Ian Anderson, Mayor Kathy McDonald, CAO/Clerk

THE CORPORATION OF THE TOWNSHIP OF BILLINGS

BY-LAW 2022-07

SCHEDULE A

(Revised) TERMS OF REFERENCE

CLIMATE ACTION COMMITTEE

Table of Contents

1. CONTEXT

(1) With sustainability as a strategic priority, the Township of Billings has developed a Community Energy and Emissions Plan (CEEP) with the assistance of a hired Climate Change Coordinator. The plan was designed to help reduce greenhouse gas emissions on both a corporate and community level. The municipality will be hiring a Climate Change Implementation Coordinator (CCIC), in conjunction with the Municipality of Central Manitoulin, to assist both municipalities in implementing actions under the CEEP.

2. ROLE OF THE COMMITTEE

(1) Working with the Climate Change Implementation Coordinator, and other staff as appropriate, the CAC will:

i. Review and provide recommendations for Council consideration regarding climate change mitigation and adaptation actions, initiatives, and programs, as outlined in the Township of Billings Community Energy and Emissions Plan (The CEEP)
ii. Identify and advise on ways to grow community climate action awareness.
iii. Provide forums for dialogue and information sharing (for example, public events or workshops) related to the CEEP, climate action, and related environmental initiatives.
iv. At Council's request, provide recommendations on additional matters related to climate change mitigation and adaptation.

(2) In providing advice to Council, the Committee shall have regard for the Township's relevant plans, (including strategic and operational) policies, and procedures.

3. COMMITTEE STRUCTURE

(1) The Climate Action Committee is hereby established as a standing committee, remaining in effect at the discretion of Council. The Committee is comprised of the following members as appointed by Council:

i. one (1) member of Council, sitting as Chair;
ii. up to four (4) members of the general public;
iii. up to one (1) high school student, as a non-voting member;
iv. Mayor sitting *ex officio*, with voting privileges when present;
v. The Climate Change Implementation Coordinator, to lead relevant portions of discussion, assist in Committee administration, keep minutes, and act as a resource person/liaison (non-voting).

4. APPOINTMENT OF MEMBERS

(1) All Committee appointments shall be made by Council, following an advertised application process.
(2) Council shall make all Committee appointments by resolution, whether appointing Council members or public members.
(3) A Council member shall sit as Chair for all standing advisory and statutory Committees of Council.
(4) The Mayor shall be an *ex officio* member of the Committee, with voting privileges when present.

(5) Any eligible elector in the Township of Billings is entitled to apply for appointment to a Board or Committee and such appointment, subject to any statutory limitations, and/or removal, is at the sole discretion of Council.
(6) Where possible, appointments to this Committee made by Council shall be for the term of Council.
(7) When selecting Committee members, Council will seek individuals who:
    i. have good knowledge of the community and are committed to finding solutions that work well for everyone;
    ii. are deeply interested in ambitious local climate action and are committed to seeing implementation through;
    iii. are eager to engage with both Council and the public, in a manner respectful of the due process by which all municipal actions must abide;
    iv. represent, as much as possible, the diversity in Billings' population, taking age, ethnic/cultural background, and gender into account.

5. CODE OF CONDUCT FOR MEMBERS AND OTHER APPLICABLE POLICIES

(1) At the beginning of their term, Committee members shall be required to review the following Acts and policies and confirm such review by submitting a signed acknowledgement to the Clerk within 30 days of appointment:
- the Code of Conduct for Members of Council and Local Boards of the Township of Billings
- the *Municipal Conflict of Interest Act*
- the Township of Billings Procedural By-law
- the Township of Billings Workplace Harassment, Discrimination and Violence in the Workplace Policy
- the Township of Billings Council-Staff Relations Policy
- the Township of Billings Accountability and Transparency Policy
- The Township of Billings Procurement Policy
- the Township of Billings Health and Safety Policy

(2) All Committee members shall comply with the provisions of the *Code of Conduct for Members of Council and Local Boards of the Township of Billings* at all times for the duration of their appointment to the Committee and thereafter for any ongoing obligations in relation to confidentiality or otherwise.
(3) All Committee members shall comply with the provisions of all other applicable Acts and policies, including but not limited to:
- the *Municipal Act*
- the *Municipal Freedom of Information and Protection of Privacy Act*
- the *Occupational Health and Safety Act*

(4) Members shall disclose any pecuniary interest to the chair, and shall absent herself/himself from meetings for the duration of the discussion and voting (if any) with respect to that matter.
(5) No individual member nor the Committee as a whole, has the authority to make direct representations of the township to Federal or Provincial governments.

6. AGENDAS AND MINUTES

(1) The Committee shall prepare agendas generally in accordance with the format and notice requirements for Council agendas, as set out in the Township's Procedure By-law.
(2) Agendas shall be prepared by the Chair with the assistance of the Climate Change Implementation Coordinator, or other staff person assigned to the Committee.
(3) The Committee minutes shall be prepared by the Climate Change Implementation Coordinator, or other staff person assigned to the Committee, in a form approved by the Clerk.
(4) Committee meeting minutes shall be submitted to the Clerk for inclusion in the next regular Council meeting agenda package for receipt.
(5) Committee agendas and minutes will be posted on the township website by the Clerk or other staff person as designated by the Clerk.

7. COMMITTEE REPORTING AND FINANCE

(1) Recommendations made by the Committee, to Council, shall be in writing, and supported by committee resolution. This includes recommendations for further research, by the Committee, on CEEP related topics, before this work takes place.
(2) The Committee will prepare an annual work plan and budget request to submit to the Treasurer in accordance with the annual budget timetable.
(3) Any expenditures by the Committee will be approved by Council during the annual budget process or otherwise in accordance with the township's Procurement By-law.

8. MEETING TIMES AND PROCEDURES

(1) The Committee shall meet monthly at the Kagawong Park Centre, or virtually, at a consistent day and time to be established by the Committee.
(2) The Committee shall establish a meeting schedule for the year during their first meeting of the year.
(3) Meetings may be cancelled and/or rescheduled, if necessary, as determined and announced by the Chair.
(4) Meetings shall follow the provisions of the Township's Procedural By-law, including notice and agenda requirements.
(5) Committee members will respect the requirements of the *Municipal Act* and the Township's Procedural By-law.

9. ATTENDANCE

(1) No Committee member shall miss three (3) or more consecutive meetings without prior approval from the Chair and Council.
(2) All requests for permission to be absent from three (3) or more consecutive meetings will be submitted to the Chair and Council in writing.

10. RESIGNATION AND TERMINATION

(1) A Committee member shall be deemed to have resigned where:

i. The member delivers written notice of resignation to the Chair and Council; or,
ii. The member is absent from three (3) consecutive meetings without prior approval from the Chair and Council.

(2) Council will provide notice of termination in writing.
(3) Council may terminate any Committee appointment for just cause.
(4) Without limiting the generality of the foregoing, Council may terminate the appointment of a committee member where:
   i. The member has been absent from three (3) or more consecutive Committee meetings without obtaining prior approval from the Chair and Council;
   ii. The member has been found by Council to have engaged in conduct in breach of the Code of Conduct for Members of Council and Local Boards of the Township of Billings; or,
   iii. The member has been found by Council to have engaged in conduct that Council considers inappropriate.

11. REVISIONS TO TERMS OF REFERENCE

(1) Council may, at its discretion, revise the Terms of Reference (TOR) for this Committee at any time by by-law.
(2) Any suggested revisions to these TOR shall be presented to Council through an appropriate report.
(3) The Committee may be dissolved by a resolution of Council.

Ontario Provincial Police

Police provinciale de l'Ontario

Manitoulin Detachment
Manitoulin Détachement
(Little Current, Espanola, Gore Bay)

54 Boosneck Road, PO Box 638
Little Current, ON P0P 1K0

Tel: 705-368-2200
Fax 705-368-2666

Tél. : 705-368-2200
Téléc. : 705-368-2666

File Reference:

January 25, 2022
Town Council – Billings Township
15 Old Mill Road
Kagawong, ON
P0P 1J0

Dear Mayor Anderson and Town Council,

On Wednesday January 12, 2022 I presented to CPAC the opportunity to bring Project Lifesaver to Manitoulin Island. Representatives from across Manitoulin were excited and eager to hear about this program that can be provided to your residents.

Project Lifesaver is a radio frequency-based tracking system. The system is for high-risk vulnerable people of all ages. They must have a tendency to wander and be diagnosed with the following: Alzheimer's, other dementias, autism, Down Syndrome or any other form of cognitive delay. Clients will wear a personalized wristband that emits a unique tracking signal. The signal can be tracked both on the ground and in the air. This will enable the Project Lifesaver team to positively locate and identify the person who has wandered, using portable directional antennae to locate the signal.

Without effective procedures and equipment, searches potentially involve multiple agencies, hundreds of officers, countless man hours and thousands of dollars. Most people who wander are found within a few kilometers from home and search times, when using Project Lifesaver, have been reduced from hours and days to just minutes. Search times for Project Lifesaver clients average 30 minutes. This is a 95% reduction in search times than that of standard operations.

The cost to purchase the equipment for this program is approximately $16,000. Clients will be required to purchase the bracelet for approximately $600 and are responsible for the cost of battery replacement that occurs every 60 days at a cost $20. Included in the start-up funding is the cost for additional bracelets for those who are unable to purchase their own.

The OPP is looking for support from the Townships to bring this program to Manitoulin. Project Lifesaver's mission is to provide timely response to save lives and reduce potential injury for adults and children who wander.

If you have any questions or wish to learn more about the program please contact me. I would be happy to provide you with more information.

Sincerely,

P/C Tessa Kasch\ #14962
E-mail: tessa.kasch@opp.ca
Cell: 705-863-1419

The Township of Billings
Lake Kagawong Resource Committee
January 20, 2022

PRESENT (electronically): Bryan Barker (Chair), Bob Clifford, Brian Foreshew, Sharon Jackson, John Hoekstra, Kathy McDonald (staff), Stan Pierce and Steve Webber, Mayor Anderson
Regrets: Brian Foreshew

1. **Opening**
   Motion by Stan Pierce, seconded by John Hoekstra
   That this meeting of Lake Kagawong Resource Committee be Opened at 7:00 p.m. with Chair Bryan Barker presiding.
   Carried

2. **Additions to the Agenda**
   None

3. **Approval of the Agenda**
   Motion by Bob Clifford, seconded by Stan Pierce
   That the agenda for the January 20, 2022 meeting be accepted as presented.
   Carried

4. **Disclosure of Pecuniary Interest**
   None

5. **Adoption of the Minutes – November 25, 2021**
   Motion by John Hoekstra, seconded by Sharon Jackson
   That the minutes of the November 25, 2021, meeting be accepted as presented.
   Carried

6. **Delegations**
   None

7. **Old Business**
   a) **Report on Water Levels at the dam**
      The water level today was at 212.89
   b) **Report on the status of OEC Website – Stan Pierce**
      Stan reported that the website is not up to date, but OEC is working to update the graph and tables to 2022. This may not be completed until the end of this month.

8. **New Business**
   a) **OEC-Update regarding extension of OEC Contract**
      Chair Barker advised the committee that Council had voted to agree to extend the lease with OEC and send it to the lawyer for review. The members of the committee recognize that this is a good deal.
      Comments regarding township accountability and responsibility.

Committee members shared ideas as to issues needing to be addressed. Decision to have the committee members put suggestions together a give to Bryan. Committee to put together a list of suggestions to take to Council.

b) Stewardship Roll

Lake Mindemoya has a community-based group of private citizens that covers some of the same issues as we have.

Discussion regarding taking on a stewardship role. One suggestion was that the committee should expand to take in Central Manitoulin and Gordon/Barrie Island. The committee agreed that they should take on this role.

9. Correspondence

None

10. Information

None

11. Closed Session

None

12. Recommendations to Council

None

13. Next Meeting

February 3, 2022

14. Adjournment

Motion by Stan Pierce, seconded by Bob Clifford

That the meeting be adjourned at 8:13.

Carried

TOWNSHIP OF BILLINGS
Parks, Recreation & Wellness Committee
Minutes

January 24, 2022 ZOOM

Present: Sharon Jackson (Chair), Tiana Mills (staff), Andrew Preyde, Shannon Smith and Catherine Joyce
Regrets: Sharon Alkenbrack

1. Opening
   Motion by Andrew Preyde, seconded by Catherine Joyce
   THAT the meeting be called to order at 7:01 p.m. with Chair Jackson presiding.
   Carried

2. Approval of Agenda
   Motion by Andrew Preyde, seconded by Shannon Smith
   THAT the agenda be accepted as presented.
   Carried

3. Disclosure of Pecuniary Interest
   None

4. Adoption of Minutes
   Motion by Andrew Preyde, seconded by Catherine Joyce
   THAT the minutes of the November 29th, 2021 meeting be accepted as presented.
   Carried

5. Delegation
   None

6. Council Update
   Sharon Jackson provided the committee with a Council update.

7. Financial Report
   Discussed under Old Business – outdoor rink updates.
   Tiana asked the committee to think about the committee budget for 2022 as it will be an item on the next Committee Agenda in February.

8. Old Business
   a) Outdoor Rink Updates
      a. Fundraising
      To date $17,030.55 has been collected in donations/advertising for the rink and a new snow blower.

      b. Advertising
      18 advertisements have been purchased.
      All designs have been submitted to Island Promotions.

Island Promotions has started to install advertisements on the boards.
There are still more advertisements to be installed (weather pending).

c. Next Steps
List: Netting, bench layout, move change room shed, shelving in snow blower shed, combination lock for shed, central location for volunteer paperwork (inspection paperwork), emergency contact sign to be installed (with Andrew's cell number listed)

b) Santa Meet and Greet Update
Friday December 3rd, 2021 from 5:00-6:30pm
Treat bags were handed out to 20 children.
Letters were mailed to the children by committee members.

9. New Business
a) Island Wide Events
A series of events will be planned over the next few months to promote overall wellness throughout the residents of Manitoulin Island.
The event underway right now is a Snow Sculpture Event where you can submit a photo of your snow sculpture to win one of three prizes.
All of the Municipalities on Manitoulin Island are taking part.

b) Prioritize Goals and Objectives for 2022
Sharon Jackson led the discussion.
Discussion on upcoming Family Day Event

Motion by Andrew Preyde, seconded by Catherine Joyce
THAT Council approve $300 for a Family Day Skate and Slide Event.

Family Day Skate and Slide at the Park Centre/Outdoor Rink
- A thank you to all the volunteers and everyone involved in the new and improved outdoor rink.
- Hot Chocolate and Coffee available.
- Park Centre open as a warming station/washrooms
- The Fire Department to be on site with a Fire Truck

10. Correspondence
None.

11. Information
None.

12. Notices of Motion
None.

13. Closed Session
None.

14. Next Meeting – **February 28th, 2022**

15. Adjournment

Motion by Andrew Preyde, seconded by Catherine Joyce.

That the Parks, Recreation and Wellness Committee meeting be adjourned at 8:05 p.m.

Carried

Ministry of Community Safety and Correctional Services

Public Safety Division

25 Grosvenor St.
12th Floor
Toronto ON M7A 2H3

Telephone: (416) 314-3377
Facsimile: (416) 314-4037

Ministère de la Sécurité communautaire et des Services correctionnels

Division de la sécurité publique

25 rue Grosvenor
12e étage
Toronto ON M7A 2H3

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Ontario

MEMORANDUM TO: All Chiefs of Police and
Commissioner Thomas W.B. Carrique
Chairs, Police Services Boards

FROM: Richard Stubbings
Assistant Deputy Minister
Public Safety Division

SUBJECT: **2022/23 – 2023/24**
Safer and Vital Communities (SVC) Grant
Call for Applications

DATE OF ISSUE:	**January 20, 2022**
CLASSIFICATION:	**General Information**
RETENTION:	**Indefinite**
INDEX NO.:	**21-0008**
PRIORITY:	**Medium**

I am pleased to advise you that the Ministry of the Solicitor General (Ministry) is now accepting applications from community-based, not-for-profit, incorporated organizations and First Nations Chiefs and Councils for the 2022/23 – 2023/24 Safer and Vital Community (SVC) Grant. The theme for the 2022/23 – 2023/24 SVC Grant is **"Preventing Cybercrime through Community Collaboration" – with priority areas in Hate Crimes, Human Trafficking, and Fraud**.

Although police services are not eligible for this grant, your support is integral, as applicants are required to provide a police letter of support for their application. Please direct community organizations that meet the eligibility criteria to apply.

The SVC Grant encourages the development and implementation of local projects that enhance community safety and well-being. The Ministry is requesting proposals that focus on bringing together different sectors to address cybercrime through collaboration and partnership. In addition to demonstrating police involvement in their projects, applicants are encouraged to partner with at least one organization in a sector different from their own. **Applicants should consider aligning their projects with local community safety and well-being planning efforts.**

…/2

All applications must be submitted through Transfer Payment Ontario (TPON) as well as via email to Natalie.Brull@ontario.ca and Poonam.Sharma@Ontario.ca **no later than 4:00pm EST on March 04, 2022**. Submissions that are late, incomplete or not accompanied by the required documents requested by the Ministry will not be considered for funding. No exceptions will be permitted. More details on the application process, including accessing the application and applying through TPON, are outlined in the attached Grant Application Guidelines and Instructions documents.

Grant funding is subject to the Ministry receiving the necessary appropriation from the Ontario Legislature.

Please direct any questions regarding the SVC Grant to Community Safety Analysts, Program Development Section, Natalie or Poonam at Natalie.Brull@ontario.ca or Poonam.Sharma@Ontario.ca.

Richard Stubbings
Assistant Deputy Minister
Public Safety Division

Attachments

Township of Billings
ACCOUNTS FOR PAYMENT from Jan 13, 2022 to Jan 28, 2022

Cheque No.	Cheque Date	Payee	Amount
7112	Jan 19, 2022	Canada Post Corporation	177.41
7113	Jan 19, 2022	Canada Post Corporation	519.80
7115	Jan 28, 2022	Allens Auto Parts	303.85
7116	Jan 28, 2022	Brendan Addison Mobile Mechanical	569.94
7117	Jan 28, 2022	Bridal Veil Variety	644.18
7118	Jan 28, 2022	Briscoe, Lawrence	50.00
7119	Jan 28, 2022	Cambrian Truck Centre	395.75
7120	Jan 28, 2022	Connell, Martin	88.38
7121	Jan 28, 2022	EXP Services Inc.	1,663.21
7122	Jan 28, 2022	Grand & Toy Ltd.	201.95
7123	Jan 28, 2022	Henderson Electric Manitoulin Inc	9,463.86
7124	Jan 28, 2022	Hughes Supply Company	260.18
7125	Jan 28, 2022	Laurentian Business Product	98.57
7126	Jan 28, 2022	Lisa / Darren Hayden	630.00
7127	Jan 28, 2022	Local Authority Services	310.75
7128	Jan 28, 2022	Manitoulin Municipal Association	148.67
7129	Jan 28, 2022	McDougall Energy Inc.	1,548.89
7130	Jan 28, 2022	Municipality of Central Manitoulin	3,308.08
7131	Jan 28, 2022	Ontario Clean Water Agency	2,125.13
7132	Jan 28, 2022	Public Health Sudbury & Districts	2,308.00
7133	Jan 28, 2022	Rush Truck Centres of Canada Limited	133.91
7134	Jan 28, 2022	Sutton Inspection Services	3,838.61
7135	Jan 28, 2022	Tulloch Engineering Inc.	7,542.75
		Total	36,331.87
PREAUTHORIZED PAYMENTS			
DS	Jan 14, 2022	Payroll Remittance	14,174.16
DS	Jan 18, 2022	Canada Life - RSP	1,398.92
DS	Jan 18, 2022	Rogers	288.15
DS	Jan 19, 2022	GFL Enviromental	7,416.65
DS	Jan 20, 2022	OCWA - Contract	9,904.00
DS	Jan 24, 2022	Bell Canada	573.47
DS	Jan 24, 2022	Eastlink	148.81
DS	Jan 26, 2022	Hydro One	5,767.06
DS	Jan 14, 2022	LBPC Leasing	175.00
		Total	39,846.22
		Total Accounts Payable	**76,178.09**