



Corporation of the  
Township of Chapleau

# Updated Municipal Asset Management Plan

August 24<sup>th</sup>, 2018





# Asset Management Planning for the Township of Chapleau

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## Asset Management Planning for the Township of Chapleau

### Glossary of Terms

<i>Asset management planning</i>	Asset management planning is the process of making the best possible decisions regarding the acquisition, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective of an asset management plan is to maximize benefits, manage risk and provide satisfactory levels of service to the public in a sustainable manner.
<i>Historical cost</i>	Historical cost represents the actual cost incurred by the municipality at the date of acquisition. Given the timeframe between the date of acquisition and the current date, historical cost is not reflective of the replacement cost of the asset.
<i>Replacement cost</i>	Replacement cost reflects the cost that would be incurred in the event that the municipality was required to replace the asset at the present time in new condition.
<i>Condition assessments</i>	Condition assessment are a means of expressing the current state of the municipality's infrastructure based on three possible ratings – good, fair and poor. The determination of the ratings will vary based on the type of infrastructure involved.
<i>Immediate infrastructure requirements</i>	For the purposes of the asset management, immediate infrastructure requirements are capital investments that are recommended to be made within the next 10 years, based on the condition assessment of the infrastructure and the recommended life cycle activities. The immediate infrastructure requirement identified for the municipality is intended to address those assets that are currently rated as poor or expected to be rated as poor during the next ten years (due to deterioration caused by usage, weather, etc.).
<i>Sustaining life cycle requirements</i>	The sustainable life cycle requirement of an asset is the total of its life cycle costs divided by its estimated useful life. The sustainable life cycle requirement represents the amount of funding that should be committed to the municipality's infrastructure on an annual basis in order to fully fund the recommended life cycle activities.
<i>Ontario Municipal Partnership Fund</i>	The Ontario Municipal Property Fund (OMPF) is the primary Provincial mechanism for the flowing of operational grants to municipalities. OMPF funding is intended to assist municipalities that have limited property assessment, increased operating costs as a result of being northern or rural municipalities and/or are facing challenging fiscal circumstances.
<i>Municipal Infrastructure Investment Initiative</i>	The Municipal Infrastructure Investment Initiative (MIII) is a Provincial program designed to assist municipalities with critical road, bridge water and wastewater projects, with funding targeted to municipalities that would be unable to undertake priority projects without provincial support. While funding is available under MIII, the asset management plan does not consider any senior government grants other than those that have been secured as at the date of the asset management plan.



## Asset Management Planning for the Township of Chapleau

### Glossary of Terms

<i>Anticipated asset life cycle</i>	The anticipated asset life cycle is the estimated productive useful life of an asset or infrastructure component. At the end of the anticipated asset life cycle, the municipality will be required to replace the asset in question, either through acquisition or reconstruction.
<i>Integration opportunities</i>	Integration opportunities represent potential groupings of different assets into a single project. For example, roads capital projects are often integrated with water, wastewater and storm sewer replacements given that these systems are underneath (and accessed through) municipal roads.
<i>Rehabilitation and replacement criteria</i>	Rehabilitation and replacement criteria are the factors considered by the municipality when consider when to undertake certain asset management activities.
<i>Rehabilitation and replacement strategies</i>	Rehabilitation and replacement strategies represent activities that are intended to maintain the condition and performance of the municipality's infrastructure. Rehabilitation and replacement strategies are synonymous with asset management activities.
<i>Life cycle consequences</i>	Life cycle consequences represent the expected outcomes in the event that the municipality does not undertake the recommended asset management activities during the recommended timeframes. Life cycle consequences can included but are not limited to deterioration of the physical condition of the asset, a reduction in the outputs and service potential of the assets, increased operating costs, higher costs for subsequent asset management activities than would otherwise have been incurred had the municipality undertaken the recommended asset management activities and/or a reduction in the estimated useful life of the asset.
<i>Integrated asset priorities</i>	Where different assets can be integrated into capital projects, the integrated asset priorities determine the basis for selecting and prioritizing capital projects. For example, a municipality with a water and wastewater system that is in poor condition may prioritize road construction projects based on the condition of the underlying water and wastewater system.



The development of an asset management plan has been identified as a pre-requisite for the receipt of funding from the Province of Ontario (the 'Province') under the Municipal Infrastructure Investment Initiative ('MIII') and as such, represents an important first step in obtaining financing for necessary infrastructure investments. That said, planning for capital reinvestment is essential with or without the incentive provided under MIII, particularly given that a number of municipalities are now approaching end of useful life for significant components of their infrastructure.

This document represents an update of the Municipality's original asset management plan dated December 31, 2013 and is based on financial information up to December 31, 2017.

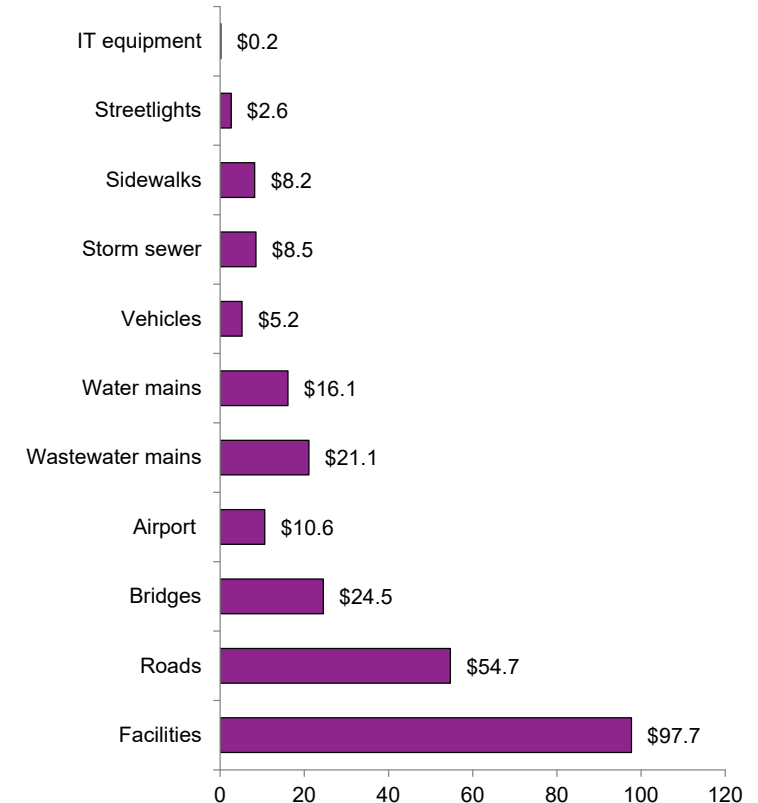
### Current state of infrastructure

Infrastructure represents a major investment on the part of the Township of Chapleau (the 'Municipality'), with the estimated replacement cost of its assets amounting to just under \$250 million.

While the amounts of the Municipality's replacement and life cycle costs are significant, the real pressure from the perspective of its infrastructure comes from its current condition. Condition analysis conducted as part of the asset management planning process indicates that a significant proportion of the Municipality's infrastructure is either in fair or poor condition. Addressing the current state of the Municipality's infrastructure, which will deteriorate further if immediate maintenance isn't performed, is expected to cost approximately \$58.6 million over the next ten years, \$30.6 million of which should be spent immediately.

The high cost of future infrastructure investments reflects the declining state of the Municipality's assets (based primarily on an aged-based approach) with a sizeable portion of assets rated as either poor or fair. Details of the Municipality's infrastructure condition assessment and identified capital investment requirements over the next ten years are provided on the following page.

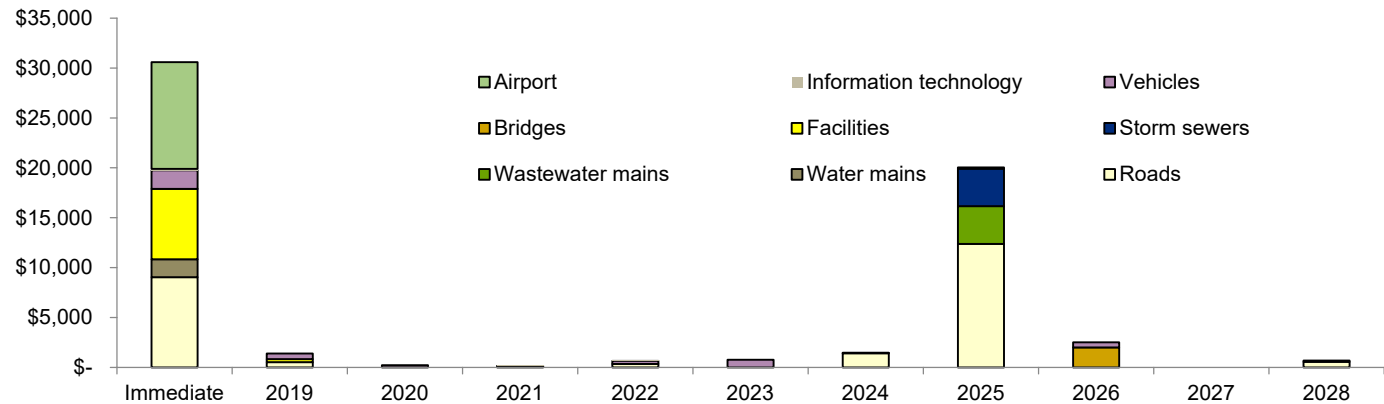
*Replacement value by type of asset (in millions)*



### Condition assessment results by infrastructure component

Infrastructure	Basis of Determination	Condition Assessment		
		Good	Fair	Poor
Roads	Condition Assessment	14.3%	44.2%	41.5%
Water distribution network	Remaining Useful Life	70.3%	1.2%	28.5%
Wastewater collection network	Remaining Useful Life	56.6%	43.4%	
Storm sewer collection network	Remaining Useful Life	19.1%	80.9%	
Bridges and culverts	Condition Assessment	40.0%	60.0%	
Sidewalks	Remaining Useful Life	35.8%	64.2%	
Streetlights	Remaining Useful Life	86.3%	13.7%	
Buildings and facilities	Condition Assessment	87.0%	4.3%	8.7%
Vehicles and equipment	Remaining Useful Life	44.9%	30.6%	24.5%
Airport tarmac	Remaining Useful Life		–	100%
Airport fueling equipment	Remaining Useful Life		–	100%
Information technology	Remaining Useful Life	56.3%	6.3%	37.5%

### Projected future infrastructure investment requirement (in thousands)



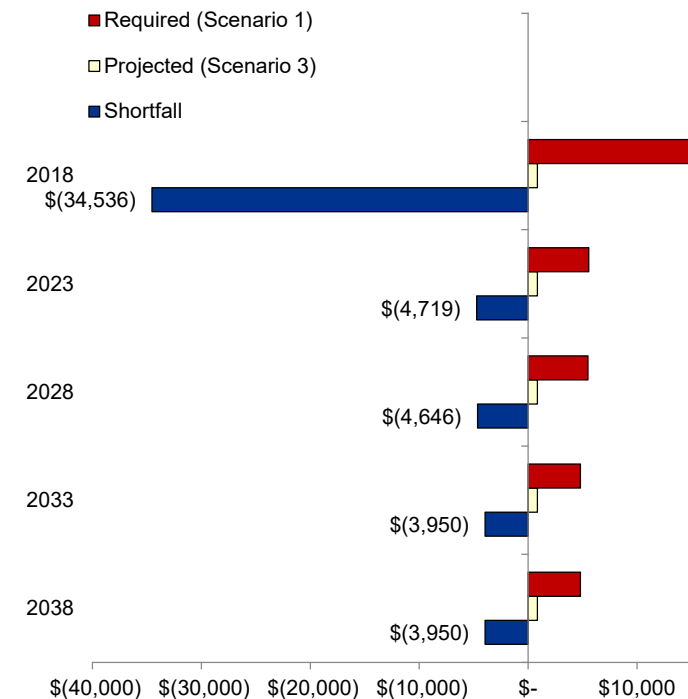
### Asset management strategies

As required under MIII, this report identifies the required asset management strategies for the Municipality based on the types of infrastructure maintained as well as its current condition. As noted earlier, the Municipality would be required to spend an average of \$5.8 million per year over the next ten years in order to address the current issues identified with its infrastructure. While this would allow the Municipality to meet its immediate infrastructure investment needs, it does not allow for ongoing rehabilitation and replacement of its through local sources. Clearly, it is unable to address the full spectre of its infrastructure needs, resulting in ongoing annual infrastructure, the cost of which amounts to an additional \$4.8 million, bringing the Municipality's total infrastructure financing requirement to \$10.6 million per year. In comparison, the Municipality generates approximately \$850,000 for capital expenditures funded infrastructure deficits.

In light of the significant gap between its infrastructure financing requirement and its capacity to raise revenues for capital purposes, the Municipality will be required to prioritize its investments. For the purposes of the asset management plan, three different categories have been identified:

- **Priority 1** – consists of infrastructure investments required within the next five years, investments that qualify for grants and immediate investment needs stemming from new legislation or regulation, public health or safety concerns or other issues. The estimated cost of Priority 1 investment requirements over the next ten years is \$41.8 million.
- **Priority 2** – includes infrastructure investments required within six to ten years and other lower priority infrastructure. The estimated cost of Priority 2 investment requirements over the next ten years is \$17.0 million.
- **Priority 3** – representing the lowest class of investment priority, this category includes infrastructure with no investment requirement identified within the next ten years, discontinued infrastructure and other lower priority infrastructure. Priority 3 investment requirements represent the remaining portion of the Municipality's replacement cost (\$191.2 million).

*Calculated annual infrastructure funding shortfalls (in thousands)*



### Financing strategy

While the Municipality is unable to unilaterally address its infrastructure-related financial requirement, it recognizes the need to begin to address the challenge. The Municipality has been investing in engineering activities to both assess the condition of its infrastructure, prioritize infrastructure investments and develop up-to-date cost estimates for priority capital projects. As part of its financing strategy, the Municipality has also adopted the following measures to increase funding for capital requirements:

- Permanently protecting the current level of capital expenditures so as to provide a consistent stream of funding into the future;
- The Municipality has introduced annual capital rate increases to its water and wastewater rates (7%) in order to increase the level of funding available for infrastructure investments.
- Exploring the continued use of debt as a means of funding infrastructure requirements, including the adoption of a program whereby a fixed percentage of capital expenditures are financed through debt, recognizing that the Municipality's ability to accommodate more debt may be limited; and
- Upon the repayment of existing indebtedness, redirecting debt servicing costs to capital expenditures, capital reserves or new debt for capital projects so as to preserve existing funding for capital purposes; and
- Continuing to pursue grant programs provided by senior levels of government.

The Municipality recognizes that its ability to fund capital requirements needs to recognize the limited ability of the Municipality to finance its capital needs due to issues surrounding affordability. In addition to the affordability considerations developed by the Province under the revised OMPF model, it is also important to remember that:

- The Municipality's population has decreased at a significantly faster rate than other communities and the Province as a whole. While the Province's total population increased by 25% between 1996 and 2016, the Municipality's population fell by 33% over the same period. The consequence of this trend is clear – fewer people in the community translates into fewer people able to fund municipal operations.
- The Municipality's residents have a higher degree of reliance on government transfers, pension income and other fixed source so income as opposed to other communities. Overall, 68% of total reported personal income in the Municipality is derived from employment, as opposed to the Provincial average of 73%. The reliance on fixed sources of income is also demonstrated by the average age of the Municipality's residents, with is three years above the Provincial average.

The issue of affordability, both for user fees and taxation levels, is considered annually through the Municipality's budgeting process.

As a means of balancing capital reinvestment with affordability, the Municipality will not automatically replace or rehabilitate assets at the end of their useful lives. Rather, the Municipality is willing to consider different service levels (impacted by asset conditions), with its investment activities focused on priority investments, as determined based on the consideration of potential risks and impacts. In order to identify priorities, the associated risks and impacts and more detailed cost estimates, the Municipality continues to invest in engineering studies and analysis.



## Asset Management Planning for the Township of Chapleau Executive Summary

### About this plan

The Municipality's asset management plan has been developed based on the guidance provided by the Province in *Building Together – Guide for Municipal Asset Management Plans*, which has been tailored to reflect the small size of the Municipality and the nature of its operations and infrastructure. Preparation of the plan involved Municipal staff as well as external financial and engineering advisors.

In completing the asset management plan for the Municipality:

- Accepted industry best practices were used for the development of the plan components, including the condition assessments, identification of life cycle requirements and estimated costs;
- The asset management plan was reviewed by Municipal council prior to adoption;
- The asset management plan was compared to the requirements under MIII to ensure compliance; and
- Expressions of interest submitted to date have been based on the priorities identified in the asset management plan.

We would like to acknowledge the cooperation of Municipal staff in the preparation of this report.



Asset Management Planning  
for the Township of Chapleau

# Chapter I Introduction





### Asset management planning defined

Asset management planning is the process of making the best possible decisions regarding the acquisition, operating, maintaining, renewing, replacing and disposing of infrastructure assets. The objective of an asset management plan is to maximize benefits, manage risk and provide satisfactory levels of service to the public in a sustainable manner. In order to be effective, an asset management plan needs to be based on a thorough understanding of the characteristics and condition of infrastructure assets, as well as the service levels expected from them. Recognizing that funding for infrastructure acquisition and maintenance is often limited, a key element of an asset management plan is the setting of strategic priorities to optimize decision-making as to when and how to proceed with investments. The ultimate success or failure of an asset management plan is dependent on the associated financing strategy, which will identify and secure the funds necessary for asset management activities and allow the Municipality to move from planning to execution.

### The purpose of the asset management plan

The asset management plan outlines the Municipality's planned approach for the acquisition and maintenance of its infrastructure, which in turn allows the Municipality to meet its stated mission and mandate by supporting the delivery of services to its residents. In achieving this objective, the asset management plan:

- Provides elected officials, Municipal staff, funding agencies, community stakeholders and residents with an indication of the Municipality's investment in infrastructure and its current condition;
- Outlines the total financial requirement associated with the management of this infrastructure investment, based on recommended asset management practices that encompass the total life cycle of the assets;
- Prioritizes the Municipality's infrastructure needs, recognizing that the scope of the financial requirement is beyond the capabilities of the Municipality and that some form of prioritization is required; and
- Presents a financial strategy that outlines how the Municipality intends to meet its infrastructure requirements.

It is important to recognize that the asset management plan is just that – a plan. The asset management plan (which has been prepared for the purposes of meeting the requirements of the Municipal Infrastructure Investment Initiative) does not represent a formal, multi-year budget for the Municipality. The approval of operating and capital budgets is undertaken as part of the Municipality's overall annual budget process. Accordingly, the financial performance and priorities outlined in the asset management plan are subject to change based on future decisions of Council with respect to operating and capital costs, taxation levels and changes to regulatory requirements or the condition of the Municipality's infrastructure.



## Introduction

# Scope of the Asset Management Plan

The asset management plan encompasses all of the Municipality's tangible capital assets and as such, meets the current requirements for asset management planning under both the MIII and the Federal Gas Tax program.

For the purposes of developing the asset management plan, a 10-year planning horizon was considered. It is expected that the Municipality will update its asset management plan every four years (to coincide with Council elections) or earlier in the event of a major change in circumstances, which could include:

- New funding programs for infrastructure
- Unforeseen failure of a significant infrastructure component
- Regulatory changes that have a significant impact on infrastructure requirements
- Changes to the Municipality's economic or demographic profile (positive or negative), which would impact on the nature and service level of its infrastructure

The development of the Municipality's asset management plan involved the following major worksteps.

Workstep	Report Section
1. Information concerning the Municipality's tangible capital assets was reviewed and summarized to provide a preliminary inventory of assets, acquisition year, remaining useful life and historical cost.	Chapter II
2. A condition assessment of the Municipality's infrastructure was developed based on a review of previously commissioned assessments, the age and estimated remaining useful life of the infrastructure and engineering inspections of certain components.	Chapter II
3. Asset management strategies for each component of the Municipality's infrastructure were developed to provide an indication as to the recommended course of action for infrastructure procurement, maintenance and replacement/rehabilitation over the estimated useful life of the infrastructure component. As part of the development of the asset management strategies, cost estimates were prepared for the recommended activities.	Chapter IV
4. Based on the asset management strategies (which provide an indication as to the cost of the recommended activities) and the condition assessment (which provides an indication as to the timing of the recommended activities), an unencumbered financial projection was developed that outlined the overall cost of recommended asset management strategies assuming that the Municipality was to undertake all of the recommended activities when required (i.e. assuming sufficient funds were available for all required infrastructure maintenance and replacement). Consistent with the provisions of MIII, no grants were considered in the preparation of the unencumbered financial projection.	Chapter V
5. Recognizing that the overall financial requirement associated with the recommended asset management strategies is unaffordable for the Municipality, the required asset management activities were prioritized based on the potential risk of failure (determined by the condition assessment), the potential impact on residents and other stakeholders and other considerations.	Chapter V
6. A second set of financial projections was developed based on the resources available to the Municipality to support its asset management activities, including funding from taxation and user fees.	Chapter V

The development of the asset management plan involved input from the following parties:

- Municipal staff
- KPMG LLP, financial advisors to the Municipality
- AECOM, engineering advisors to the Municipality





## Introduction

# Restrictions

This report is based on information and documentation that was made available to KPMG at the date of this report. KPMG has not audited nor otherwise attempted to independently verify the information provided unless otherwise indicated. Should additional information be provided to KPMG after the issuance of this report, KPMG reserves the right (but will be under no obligation) to review this information and adjust its comments accordingly.

Pursuant to the terms of our engagement, it is understood and agreed that all decisions in connection with the implementation of advice and recommendations as provided by KPMG during the course of this engagement shall be the responsibility of, and made by, the Township of Chapleau. KPMG has not and will not perform management functions or make management decisions for the Township of Chapleau.

This report includes or makes reference to future oriented financial information. Readers are cautioned that since these financial projections are based on assumptions regarding future events, actual results will vary from the information presented even if the hypotheses occur, and the variations may be material.

Comments in this report are not intended, nor should they be interpreted to be, legal advice or opinion.

KPMG has no present or contemplated interest in the Township of Chapleau nor are we an insider or associate of the Township of Chapleau or its management team. Our fees for this engagement are not contingent upon our findings or any other event. Accordingly, we believe we are independent of the Township of Chapleau and are acting objectively.



Asset Management Planning  
for the Township of Chapleau

## Chapter II State of Local Infrastructure





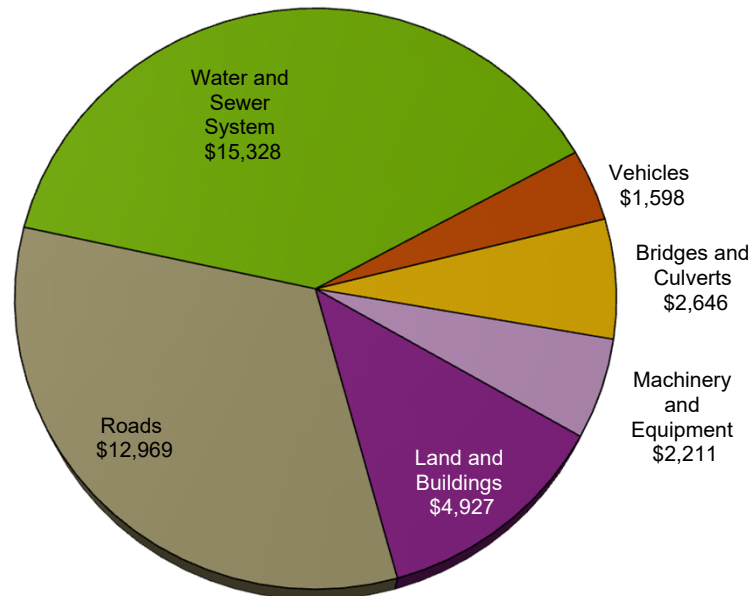
## State of Local Infrastructure Overview of the Municipality's Infrastructure

At December 31, 2016, the Municipality reported a total investment of \$39.7 million in tangible capital assets ('TCA') at historical cost.

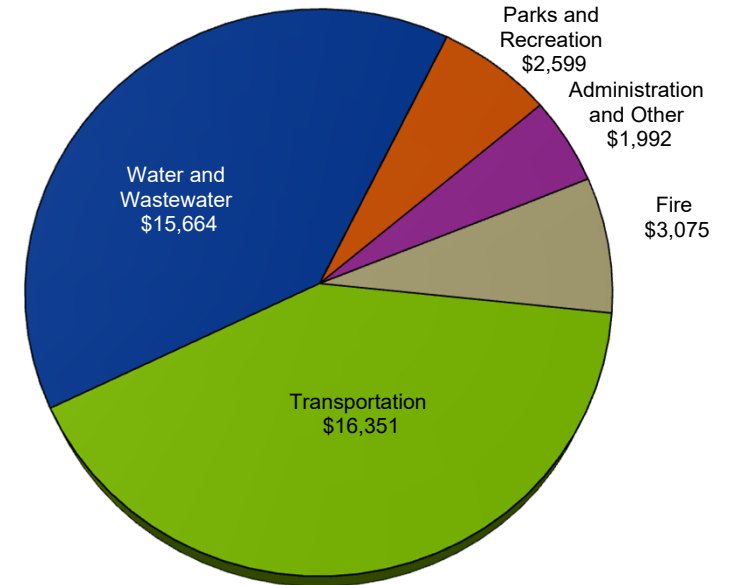
With a historical cost of \$15.3 million, the Municipality's sewer and water network (mains only) represents the single largest type of infrastructure and account for 39% of the Municipality's total infrastructure (at historical cost). Roads (\$12.9 million) and land and buildings (\$4.9 million) represent the next largest asset types by historical cost.

From a functional perspective, the Municipality's transportation network (roads, bridges and airport) and water and wastewater system (including treatment, distribution and collection) represent the largest components of its infrastructure (\$16.4 million and \$15.6 million respectively), accounting for a combined total of 81% of the overall historical cost of the Municipality's infrastructure.

*Tangible capital assets by type (historical cost, in thousands)*



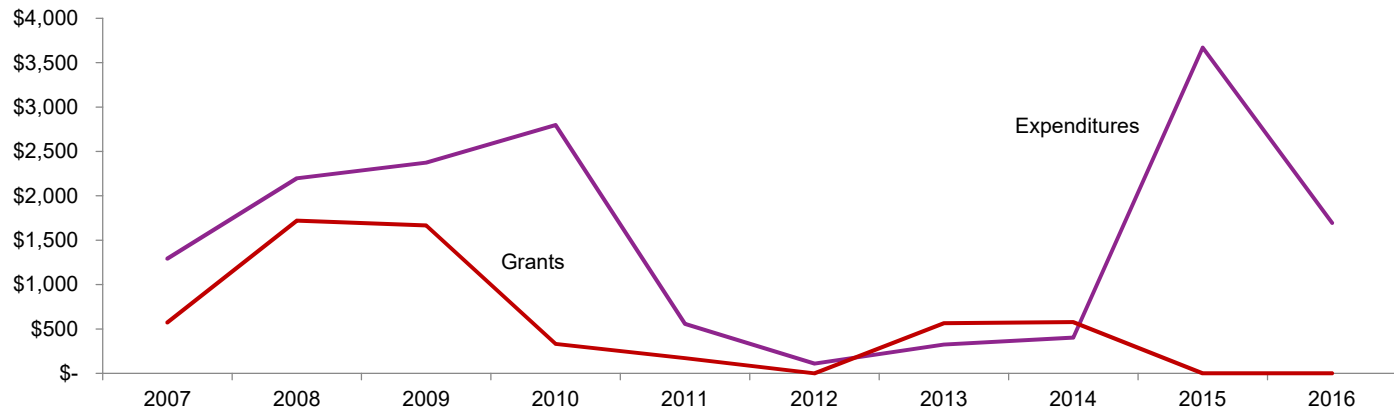
*Tangible capital assets by use (historical cost, in thousands)*



## State of Local Infrastructure Overview of the Municipality's Infrastructure

Over the last 10 years, the Municipality's investment in its infrastructure has totaled \$14.0 million, with Federal and Provincial capital grants amounting to approximately \$5.6 million over the same period. As noted below, the Municipality's investment in infrastructure has traditionally been closely tied to grant revenues, with the exception of 2015 when major capital projects were funded through debt and reserves.

### Capital expenditures and grants (in thousands)



Since 2006, environmental services infrastructure has represented the largest area of investment for the Municipality, amounting to \$7.2 million or 47% of total capital spending. Transportation infrastructure comprised the next largest component of capital expenditures, amounting to \$5.4 million since 2007 or 35% of total spending.

### Capital expenditures by program

(in thousands of dollars)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Transportation	980	310	971	1,318	447	–	159	52	876	328	5,441
Environmental Services	49	1,818	820	1,451	19	65	54	310	2,602	32	7,220
Parks and Recreation	43	57	43	–	52	13	10	35	190	56	499
Fire	207	11	147	–	9	5	7	6	–	–	392
Administration and Other	14	2	392	28	30	27	94	–	1	1,279	1,867
<b>Total</b>	<b>1,293</b>	<b>2,198</b>	<b>2,373</b>	<b>2,797</b>	<b>557</b>	<b>110</b>	<b>324</b>	<b>403</b>	<b>3,669</b>	<b>1,695</b>	<b>15,419</b>



## State of Local Infrastructure Overview of the Municipality's Infrastructure

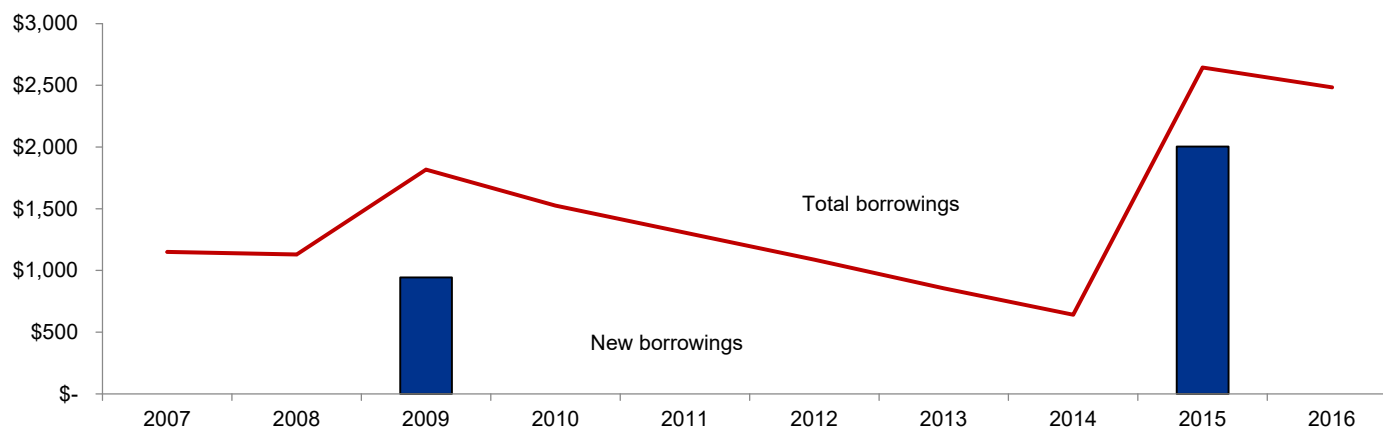
In order to fund its capital investments, the Municipality has relied on a combination of grants, long-term debt, contributions from reserves and reserve funds and taxation and user fee revenues, with grants funding 36% of capital expenditures and long-term debt funding 19% of capital expenditures over the last ten years.

### Capital expenditures and funding

(in thousands of dollars)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Total capital expenditures	1,293	2,198	2,373	2,797	557	110	324	403	3,669	1,695	15,419
Grants received	574	1,719	1,666	332	172	–	565	577	–	–	5,605
Local financing requirement	719	479	707	2,465	385	110	(241)	(174)	3,669	1,695	11,788
Long-term debt issued	–	–	944	–	–	–	–	–	2,004	–	2,948
Taxation, user fee and reserve funding	719	479	(237)	2,465	385	110	(241)	(174)	1,665	1,695	6,836

As at December 31, 2016, the Municipality had a total of \$2.5 million in outstanding long-term debt, the majority of which related to water and wastewater infrastructure.

### Long-term debt issued and year-end outstanding borrowings (in thousands)



For asset management purposes, the historical cost of the Municipality's infrastructure is arguably of limited value in that it reflects the cost at the date that the infrastructure investment was incurred, as opposed to what it would cost the Municipality to replace the infrastructure at the present time. For the purposes of the Municipality's asset management plan, we have provided the replacement cost, based on cost estimates prepared by the Municipality's engineering advisors. For the purposes of the asset management plan, replacement cost is defined as follows:

- Roads – road reconstruction costs at the end of useful life, including necessary curbs, sidewalks, drainage (as appropriate based on the type of road)
- Bridges and culverts – estimated reconstruction cost
- Water, wastewater and storm sewer collection pipes – replacement costs at the end of useful life, including hydrants, valves, road reinstatement and service to the property line
- Sidewalks – estimated reconstruction cost
- Streetlights – estimated material and installation costs
- Vehicles – estimated purchase price
- Buildings – estimated reconstruction cost
- All other assets – estimated reconstruction or purchase price



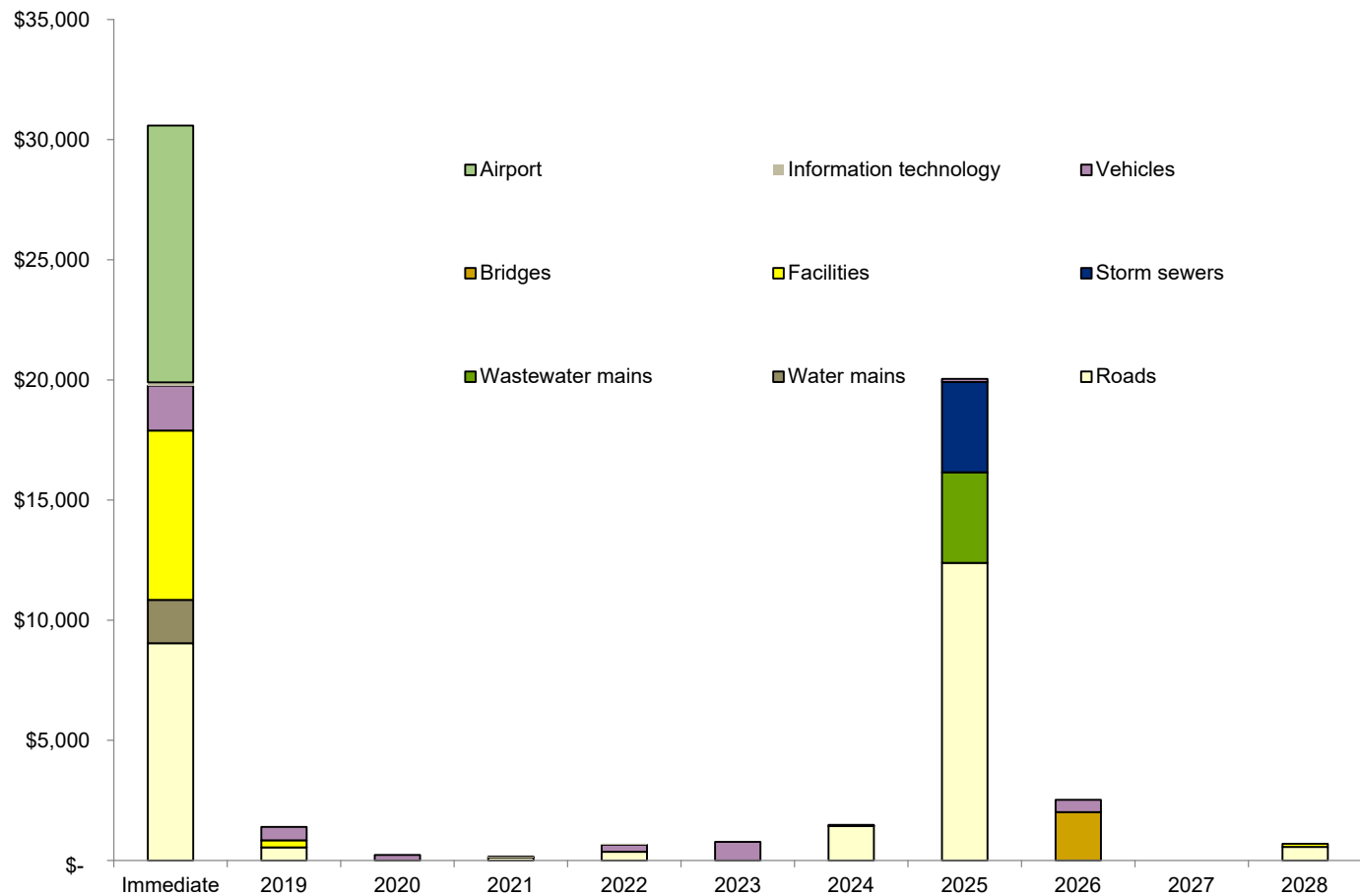






As a result of the high proportion of the Municipality's infrastructure ranked as poor or fair, it faces an immediate infrastructure investment requirement of approximately \$30.6 million, with an additional \$28.0 million of capital investment requirements identified over the next ten years.

*Projected future infrastructure investment requirements (in thousands)*



On a go-forward basis, the following policies will govern the updating and verification of the condition assessment:

- Condition assessments for bridges will be conducted every two years in accordance with Provincial regulations, with the asset management plan updated accordingly
- Condition assessments for water and wastewater mains will be assessed periodically through the use of camera inspections, with a five year inspection cycle being the long-term target
- Condition assessments for facilities will be assessed through an engineering/architectural inspection of the facilities periodically, with a five year inspection cycle for recreational facilities and a ten year inspection cycle for other facilities being the long-term target
- Condition assessments for other assets will be based on the percentage of remaining useful life in the absence of a third-party assessment of the assets. On an annual basis, the Municipality will review the useful lives and condition assessment criteria (good, fair, poor based on percentage of remaining life) and will adjust the asset management plan accordingly



Asset Management Planning  
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## Chapter III Desired Levels of Service



It is anticipated that the Municipality will monitor its performance annually.

It is also important to recognize that in certain instances, a deviation from the Municipality's targeted service level may be the result of uncontrollable and unforeseen factors and any evaluation of the Municipality's performance should differentiate between controllable and uncontrollable events. For example, the availability of facilities (as a percentage of planned operating hours) could be impacted by weather conditions or power disruptions that may result in the closure of facilities but which are not caused by the Municipality or otherwise controllable. Absent some form of compensating strategy (such as standby power generators), these events may cause the Municipality to deviate from its targeted service levels.



## Desired Levels of Service

# The Impact of New Legislation and Regulation

From time to time, new legislation or regulations will be enacted that change minimum performance requirements for municipal infrastructure and by extension the performance measures outlined in the Municipality's asset management plan. On an annual basis, the Municipality will evaluate the impact of enacted legislation or regulation on its desired levels of service and will adjust its performance measures accordingly.





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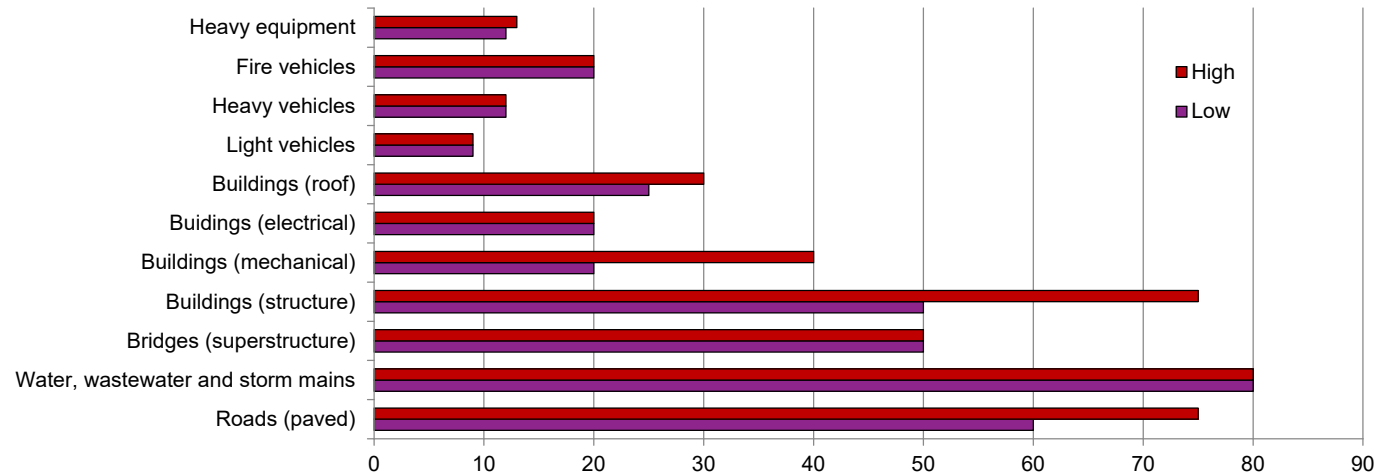
## Chapter IV Asset Management Strategy



For each significant component of the Municipality's infrastructure, asset management strategies have been developed that outline:

1. The expected life cycle period for each asset, which defines the period that the Municipality will be required to maintain its infrastructure and secure the necessary financing for maintenance and replacement activities. As noted below, there is considerable variability in the estimated life cycle periods of the Municipality's infrastructure.

*Life cycles for municipal infrastructure (in years)*



2. The extent to which asset management activities can be integrated with other assets, most commonly the integration of above ground and below ground infrastructure (roads, water, wastewater and storm sewer). The integration of different infrastructure components is a critical element of the Municipality's asset management plan given the staggering of the end of useful life for major assets.
3. Criteria and strategies for the replacement and rehabilitation of the assets.
4. Consequences of not undertaking the necessary asset management activities, particularly the impact on useful lives and overall costs.
5. The determination of priorities when considering integrated assets (e.g. roads and pipes).

Asset management strategies for each component are presented on the following pages.

<p><b>Anticipated asset life cycle</b></p>	<p>The life cycle of newly constructed pavement systems are dependent on several factors including the pavement design, material and construction quality, traffic volume, traffic loading, and environmental conditions. The service life can be approximated by the category of road: 60 years for pavement with curb, 60 years for pavement with open ditch, and 10 years for surface treatments.</p>
<p><b>Integration opportunities</b></p>	<p>Various other elements may be considered as integrated with paved roads. These include buried assets in the corridor: water sewers, storm sewers, hydro, telephone, natural gas, and cable. Other possible affected elements include traffic signals, street lighting, and sidewalks.</p>
<p><b>Rehabilitation and replacement criteria</b></p>	<p>To assess paved roads the Pavement Condition Index (PCI) is used. PCI is a numerical index between 0 and 10 and is based on a visual survey conducted, where 10 represents a new pavement in excellent condition and 0 an impassible pavement. If the PCI ranks at 5, resurfacing should be considered, if PCI ranges from 3 to 5, rehabilitation should be considered. In the case that the PCI falls below 3, reconstruction is a more effective option.</p>
<p><b>Rehabilitation and replacement strategies</b></p>	<p>Several different rehabilitation strategies can be implemented. The selection of the strategy is dependent on the following criteria: PCI index, road classification (arterial, collector, local), urban or rural, ditched or curbed, benefit/cost ratio. These strategies include:</p> <ul style="list-style-type: none"> <li>• Total reconstruction of pavement with 80mm to 120mm of hot mix asphalt (HMA)</li> <li>• Mill and resurface pavement with 50mm to 75mm of HMA</li> <li>• Strip and resurface pavement with 50mm to 75mm of HMA</li> <li>• Pulverize with underlying granular and surface with 50mm to 75mm of HMA</li> <li>• Mill and resurface patches of pavement with 50mm of HMA</li> <li>• Routing and crack sealing pavements</li> </ul>
<p><b>Life cycle consequences</b></p>	<p>Failure to fund timely pavement rehabilitation will result in a reduction in the pavement PCI. Pavement PCI's below 5 result in exponential increases in pavement rehabilitation costs. It also increases significantly road maintenance costs. Pavements identified by a PCI below 3 typically reflect decreases in level of service and increasing associated degrees of risk and liability.</p>
<p><b>Integrated asset priorities</b></p>	<p>The schedule of pavement rehabilitation is often planned in conjunction with underground utility rehabilitation works. Most commonly it is the rehabilitation of pavement systems that prompts the replacement of underground sewer and water services in the infrastructure is also in deteriorating condition and approaching its useful service life. The incorporation of other infrastructure rehabilitation may be done alongside Engineering &amp; Public Works Department internally or with natural gas, hydro, and telephone utilities externally.</p>



## Asset Management Strategy Municipal Granular Road Systems

<p><b><i>Anticipated asset life cycle</i></b></p>	<p>The life cycle of newly placed gravel road systems are dependent on several factors including the material and construction quality, design, traffic volume, traffic loading, and environmental conditions. The service life can be approximated by the category of road: 60 years for earth with open ditch and 75 years for gravel with open ditch. Sufficient maintenance provided during the service life will help preserve conditions using such strategies as machine grading, ditching and brushing, and granular top up.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>Various other elements may be considered as integrated with gravel roads. These include buried assets in the utility corridor: water sewers, storm sewers, hydro, telephone, natural gas, and cable.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>To assess gravel roads the Gravel Condition Index (GCI) is used. GCI is a numerical index between 0 and 100 and is based on a visual survey conducted, where 100 represents a newly constructed road in excellent condition and 0 an impassible roadway. If the GCI ranges from 3 to 5, rehabilitation should be considered. In the case that the GCI falls below 3, reconstruction is a more effective option.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>Several different rehabilitation strategies can be implemented. The selection of the strategy is dependent on the following criteria: GCI index, road classification (collector, local), urban or rural, benefit/cost ratio. In a rehabilitation scenario, the top 50 to 100 mm of gravel type "A" would be replaced. In the case of total reconstruction the work would include the replacement of the granular road base and the granular surface.</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>The effects of gravel road rehabilitation that is insufficiently funded are reflected in the GCI index which as a result will typically fall below 6. The poor quality of the roadway will be reflected in rising reconstruction and maintenance costs. Roads which are identified by a GCI of 3 or lower typically show signs of a poor level of service increasing the associated degrees of risk and liability.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>The schedule of road rehabilitation is often planned in conjunction with underground utility rehabilitation works. Most commonly it is the rehabilitation of gravel roads that prompts the replacement of underground utilities and sewer and water services if those services are deteriorating and approaching their useful service life.</p>

<p><b><i>Anticipated asset life cycle</i></b></p>	<p>The life cycle ranges from 30 to 100 years. Examining individual elements, the expected service life of a water plant or pump station varies from 30 to 50 years. Valve replacement typically occurs every 30 to 50 years. Similarly, the hydrant life cycle is predicted as 40 years and chambers as 50 years. For watermains the life cycle can be approximated between 50 and 100 years and 75 years for water storage. These values hold true under the assumption that the elements are properly maintained throughout their service lives.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>The replacement of these components may either be implemented as part of other construction work or may be conducted as a standalone project. The replacement may be incorporated into resurfacing and road reconstruction work which could include the integration of other utilities (wastewater, telephone, hydro, cable, natural gas, etc). In the case that full road replacement is not intended, standalone replacement of watermains can be carried out using trench cut and repair.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>Several criteria used to evaluate and prioritize the watermain replacement schedules include: age, break history of the pipe, material type, size, surrounding soil conditions, pressure related issues, and hydrant spacing. In addition to these criteria other factors, such as the intent of future road rehabilitation, will modify the priority of the replacement schedule accordingly. Available historical data, which includes but is not limited to pipe failures and pipe break history, is used to aid in the replacement criteria. When a continued increase in maintenance costs reaches an uneconomical value, the replacement of the pipe is justified.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>The rehabilitation strategy is dependent on the current state of the pipe. It is difficult to assess the state of deterioration in buried services, as such, high pressure cleaning and videotaping of watermains may be instituted. Several different rehabilitation approaches can be taken and include full replacement, cleaning and relining, and potential pipe bursting. Cathodic protection, when used in conjunction with these strategies, prolongs the service life. The strategy is chosen based primarily on the available data including the age, size, material type, break history, and hydraulic requirements.</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>The repercussions of unexpected failure will be disastrous. Due to unaccounted circumstances and unpredictable events, it is possible that some pipe materials with an expect service life of 100 years will require replacement earlier than expected, after only 30 years. In contrast, pipe materials with an expected life of 100 years may have the service life extended by an additional 50 years, with timely maintenance and rehabilitation.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>Replacement of deteriorating watermains is carried out based on the associated level of risk. The sequence in which rehabilitation or replacement is carried out is reliant on the priority of the watermain and the impact of disruption to service. High priority watermains include those where fire protection, water quality, and service disruption will results in water loss and collateral damage. Typically the integration of road rehabilitation with watermain replacement will increase the priority of the project. The project may also incorporate utilities such as wastewater, hydro, telephone, cable and gas.</p>

<p><b><i>Anticipated asset life cycle</i></b></p>	<p>The life cycle ranges from 15 to 100 years. Wastewater plants and sewage pump stations vary from 30 to 50 years. Examining individual elements, the expected service life of wastewater plant equipment, pumps, blowers, and SCADA systems ranges from 15 to 50 years. A manhole life cycle is predicted to be between 30 to 75 years and wastewater trunks between 50 to 100 years. These values hold true under the assumption that the elements are properly maintained throughout their service lives.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>The replacement of these components may either be implemented as part of other construction work or may be conducted as a standalone project. The replacement may be incorporated into resurfacing and road reconstruction work which could include the integration of other utilities (wastewater, telephone, hydro, cable, natural gas, etc). In the case that full road replacement is not intended, standalone replacement of sanitary trunk can be carried out using trench cut and repair.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>The assessment of the replacement schedule is determined primarily through conducting a CCTV inspection. The results of the inspection will be evaluated to estimate the degree of deterioration of the infrastructure. Included in the assessment are other criteria such as the material type, visible local collapses, upsizing requirements, and synchronization with roads rehabilitation programs.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>The rehabilitation strategy is dependent on the assessed condition rating of the infrastructure. The optimal rehabilitation method is determined by assigning and examining the condition rating of the pipe. Most commonly the selected strategy is replacement of collapsing and deteriorated pipe. For localized damage, other practices may be instituted which include: spot repair, joint sealing, and Cured in Place Pipe (CIPP).</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>The process of degradation in sanitary sewers is similar to that of storm sewers. The repercussions of failure in sanitary sewers are considerably more substantial. Structural deterioration may lead to infiltration of ground water into the system which results in an increased volume of sewage directed to waste water treatment plants. These plants may not be designed to meet the growing demand result in increase in waste water flow. Infiltration of ground water can also result in the deposition of sediment and debris, significantly reducing the flow capacity for waste water. Continued maintenance and rehabilitation is essential for the performance and reliability of any type of buried infrastructure.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>Replacement of deteriorating sanitary sewers is carried out based on the assessed condition. In the event that replacement is selected as the rehabilitation strategy, the project may expand to include other assets such as sidewalks, road trench cuts, or full pavement. Other utilities may also become included in the scope of work: hydro, telephone, cable, and natural gas. Typically the integration of road rehabilitation will increase the priority of the project.</p>





## Asset Management Strategy Storm Water Collection Systems

<p><b>Anticipated asset life cycle</b></p>	<p>A manhole life cycle is predicted to be between 30 to 75 years and storm sewer trunks to be 50 to 100 years. These values hold true under the assumption that the elements are properly maintained throughout their service lives. A longterm maintenance plan is also necessary for SWM ponds and treatment structures as part of ongoing operational finances, in order to extend the structure replacement to between 30 to 75 years.</p>
<p><b>Integration opportunities</b></p>	<p>The replacement may be incorporated into resurfacing and road reconstruction work which could include the integration of other utilities (wastewater, telephone, hydro, cable, natural gas, etc). In the case that full road replacement is not intended, standalone replacement of sanitary trunk can be carried out using trench cut and repair.</p>
<p><b>Rehabilitation and replacement criteria</b></p>	<p>The development of the replacement schedule is determined primarily through conducting a CCTV inspection. The results of the inspection will be evaluated to estimate the degree of deterioration of the infrastructure. Included in the assessment are other criteria such as the material type, visible local collapses, upsizing requirements, and synchronization with roads rehabilitation programs. This investigation should be carried out every 20 years, rotating through the storm sewer systems, or when required, to examine system problems/failures. Additional stresses have been imposed on storm sewer systems with climate change and the increasing frequency and intensity of storms. Storm sewer systems are also strained and forced to expand with new land development.</p>
<p><b>Rehabilitation and replacement strategies</b></p>	<p>The rehabilitation strategy is dependent on the assessed condition rating of the infrastructure. The optimal rehabilitation method is determined upon assigning and examining the condition rating of the pipe. Most commonly the selected strategy is replacement of collapsing and deteriorated pipe.</p>
<p><b>Life cycle consequences</b></p>	<p>The process of degradation in storm sewers is similar to that of sanitary sewers however the repercussions of failure in storm sewers are considerably less substantial. Structural deterioration may lead to infiltration of ground water resulting in the deposition of sediment and debris, significantly reducing the flow of water. Continued maintenance and rehabilitation is essential for the durability of any type of buried infrastructure.</p>
<p><b>Integrated asset priorities</b></p>	<p>Replacement of deteriorating storm sewers is carried out based on the assessed condition. In the event that replacement is selected as the rehabilitation strategy, the project may expand to include other assets such as sidewalks, curb/gutter, road trench cuts, or full pavement. Other utilities may also become included in the scope of work: hydro, telephone, cable, and natural gas. Typically the integration of road rehabilitation will increase the priority of the project.</p>



## Asset Management Strategy Bridges and Large Culverts

<p><b>Anticipated asset life cycle</b></p>	<p>The life cycle of bridges and culverts is considerably variable and dependent on construction methodology and materials, traffic loading, traffic volume, and environmental exposure conditions (temperatures, chloride concentrations, etc). Bridges and concrete culverts constructed after 2000 have an expected life cycle of 75 years, whereas those constructed pre 2000 have an expected life of 50 years. The approximated service life of steel corrugated culverts is 40 years.</p>
<p><b>Integration opportunities</b></p>	<p>Typically it is not integrated with the other work other than potential road widening or resurfacing projects.</p>
<p><b>Rehabilitation and replacement criteria</b></p>	<p>The ranking of bridge and culvert work is based on several select criteria: safety, level of service, traffic volume and loading, and preservation of infrastructure. To assess the condition of the structures bi-annual visual inspections are conducted and if deemed necessary detailed bridge condition surveys are completed to better evaluate present conditions. In the inspections, bridge components are assessed individually recording the severity and degree of deterioration and the overall condition. Each bridge is assigned a Bridge Condition Index value between 100 and 0 where a value of 100 indicates excellent conditions and a value of 0 indicates poor deteriorating conditions.</p>
<p><b>Rehabilitation and replacement strategies</b></p>	<p>The specification of the bridge or culvert rehabilitation strategy is reliant on the structure's age, data and observations acquired through inspections and condition surveys, and the estimated remaining service life. The following strategies should be implemented at the specified age: at 15 years the asphalt deck should be resurfaced and at 30 years the concrete deck should be patched, waterproofed and the joints replaced; at 50 years replace entire concrete deck.</p>
<p><b>Life cycle consequences</b></p>	<p>The reduction of bridge and culvert service life endangers user safety and results in a decrease of level of service.</p>
<p><b>Integrated asset priorities</b></p>	<p>Typically it is not integrated with the other work other than potential road widening or resurfacing projects.</p>



<p><b><i>Anticipated asset life cycle.</i></b></p>	<p>The Life Cycle ranges from 15 to 50 years. Examining individual elements, the expected service life of the roof system varies from 25 to 30 years. Hot boiler or carpeting replacement typically occurs every 15 years. Similarly, the building superstructure life cycle is predicted as 50 or more years. These values hold true under the assumption that the elements are properly maintained throughout their service lives.</p>
<p><b><i>Integration opportunities</i></b></p>	<p>Assets are appraised separately. The projects however are assembled by asset to make use of the “economics of scale” principle. Special attention is given to ensure that the disruption of asset operations is minimized over its service life.</p>
<p><b><i>Rehabilitation and replacement criteria</i></b></p>	<p>To assess facilities the Facility Condition Index (FCI) is used. FCI is a ratio of total deferred maintenance, costs/ current replacement value of the facility. The index can be used to assess either individual assets or grouped assets. The FCI is currently accepted throughout North America.</p>
<p><b><i>Rehabilitation and replacement strategies</i></b></p>	<p>The replacement schedule will be dictated by the actual asset conditions at the time, the stage in its life cycle, and the FCI asset condition summaries. Replacement may also be undertaken to meet any changes in safety, industry or technological specifications and standards. The facility must also be maintained to meet the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) and upgrade ingress/egress points as necessary. Critical components which should be given special attention with annual inspections include facility roof and HVAC systems. Any scheduled improvements should take into consideration the institution of economical energy efficient systems and equipment.</p>
<p><b><i>Life cycle consequences</i></b></p>	<p>Degradation of the building and its components are noticed, as well as increases in operational costs due to inefficiencies, health and safety concerns, and depreciation of Administration assets.</p>
<p><b><i>Integrated asset priorities</i></b></p>	<p>The schedule of replacement is dependent on the facility’s stage in its life cycle, the actual condition at the time, and the convenience of performing the replacement without disturbing the operations.</p>



## Asset Management Strategy Vehicles and Moveable Equipment

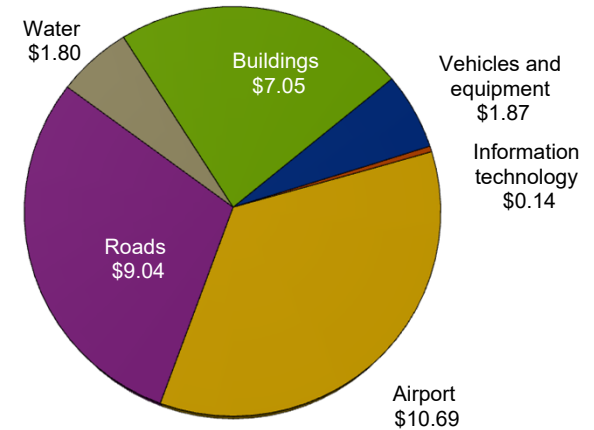
<b><i>Anticipated asset life cycle.</i></b>	Service life is dependent on the type of vehicle/equipment and service area. The expected life cycle of cars and pickup trucks is 8-10 years, 10 years for duty trucks, 12 years for ice resurfacers, 10-15 years for front loaders, backhoes and tractors, 20 years for graders, and 20-25 years for fire vehicles.
<b><i>Integration opportunities</i></b>	Integrated with operation adjustments, modifications in service levels, meeting environmental regulations, technological upgrades and financial plans.
<b><i>Rehabilitation and replacement criteria</i></b>	Replacement of fleet will be dictated by the results of lifecycle cost analysis considering the following variables: repairs, insurance, fuel, depreciation, and downtime costs.
<b><i>Rehabilitation and replacement strategies</i></b>	In the case that vehicular repairs exceed 40% of replacement costs, replacement is the optimal strategy. Other strategies include leasing opportunities, refurbishing, seasonal rentals, or tendering services to a third party.
<b><i>Life cycle consequences</i></b>	Vehicles that are not maintained, or as vehicles reach the end of the service lives the efficiency of vehicles decrease, seeing an increase in cost per km. In the event of service interruption, work force costs are increased due to extended work schedules and overall loss of production.
<b><i>Integrated asset priorities</i></b>	Not applicable.

For the purposes of the asset management plan, the Municipality's capital requirements are divided into two categories.

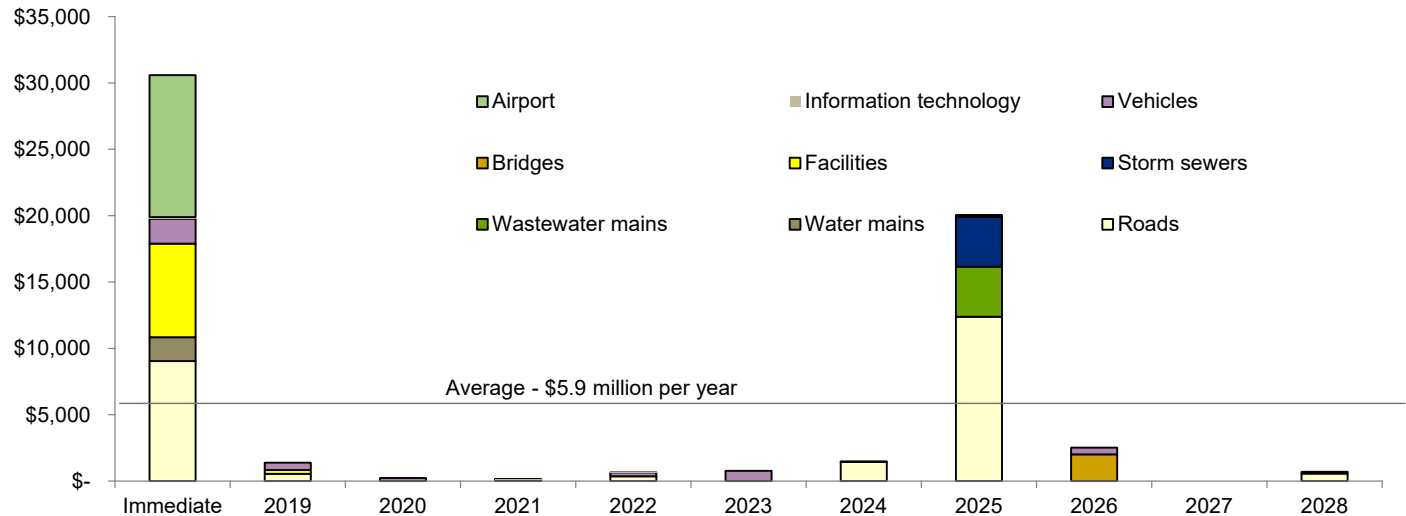
- Immediate reinvestment need.** Based on the results of the condition assessment, an indication as to the types of asset management activities required over the next ten years, and their associated costs, has been developed. Overall, it is estimated that the Municipality would need to invest \$30.6 million in its infrastructure, the largest component of which (\$10.69 million) relates to the Municipality's airport tarmac and fueling systems.

Over the next ten years, the Municipality is forecasted to require \$58.60 million in capital reinvestment for tangible capital assets reaching the end of their useful lives, an average of \$5.9 million per year.

*Immediate infrastructure needs (in millions)*



*Projected future infrastructure investment requirements by year (in thousands)*





The overall infrastructure financing requirement for the Municipality, assuming that all life cycle activities are undertaken at the recommended intervals and that the Municipality funds overall life cycle and replacement costs evenly over the assets lives, is calculated to be in the order of \$10.7 million, as follows:

- Immediate infrastructure investment needs (annual average) \$5.9 million
- Sustainable life cycle requirements (annual average) \$4.8 million

Given the magnitude of the estimated infrastructure financing requirement, it is evident that ***the Municipality is unable to fully meet its ongoing infrastructure requirements without significant levels of support from senior levels of government*** on an ongoing (i.e. annual) basis. As such, the Municipality will be required to prioritize its capital investments and the application of its available funds.

For asset management purposes, the investment requirements associated with the Municipality's infrastructure are divided into three main categories, as follows:

Category	Description	Investment Requirement
<b>Priority 1</b>	<ul style="list-style-type: none"> <li>• Assets with an investment requirement within the next five years, based on condition or useful life</li> <li>• Co-located assets that may not require investment within the next five years but should be replaced as part of the integrated project. For example, sewer and water pipes underneath a road may not be at the end of their useful life but could be replaced as part of a road reconstruction project if they are approaching the end of their useful life before the next road reconstruction.</li> <li>• Assets that may qualify for specific grants, even if an immediate investment requirement has not been identified within the next five years</li> <li>• Infrastructure investments required as a result of changing legislation, public health or safety concerns or strategic purposes (e.g. economic development)</li> </ul>	\$41,597,132
<b>Priority 2</b>	<ul style="list-style-type: none"> <li>• Assets with an investment requirement within the next six to ten years</li> <li>• Assets that would otherwise be classed as Priority 1 but are considered to have reduced importance due to low utilization by the community (e.g. roads with low traffic volumes), compensating strategies in the event of failure (e.g. detours, reduced speed limits or load limits or limited impacts on public health or safety in the event of a failure)</li> </ul>	\$16,965,207
<b>Priority 3</b>	<ul style="list-style-type: none"> <li>• Assets with no investment requirements identified within the next ten years</li> <li>• Assets to be discontinued or abandoned</li> <li>• Assets that would otherwise be classified as Priority 1 or 2 but are considered to have reduced importance</li> </ul>	\$191,153,300

As part of its ongoing asset management activities, the Municipality will review its prioritization criteria and asset rankings and, if considered necessary, make appropriate revisions.



Asset Management Planning  
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## Chapter V Financing Strategy



The development of the Municipality's financing strategy for its asset management plan reflects the guidance outlined by the Province of Ontario in *Building Together – Guide for Municipal Asset Management Plans*. Specifically, the development of the financing strategy (and in particular the extent of the Municipality's financing shortfall) is based on the following parameters:

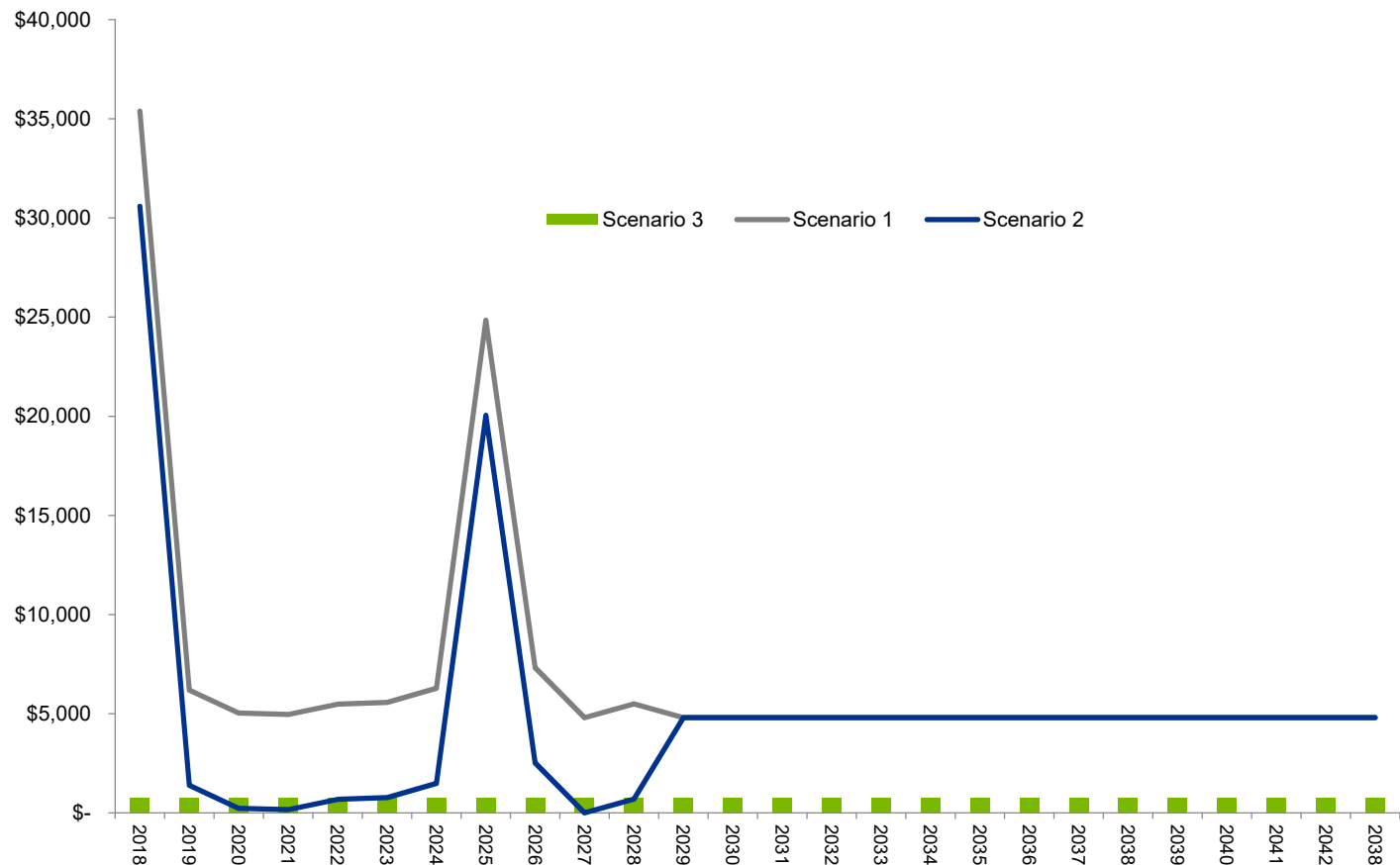
- Presents annual revenues and expenditures for the planning period (25 years), as well as comparative information;
- Does not consider grants from senior governments to be a confirmed source of revenue unless an agreement has been executed. Accordingly, only Federal Gas Tax and the Municipality's allocation for capacity funding under the Municipal Infrastructure Investment Initiative have been included in the projections; and
- Identifies the potential funding shortfall and how it will be managed.

In developing the financial strategy, two alternative scenarios were considered:

- **Scenario 1** – Representing the base case scenario, this scenario reflects the assumption that all identified asset management requirements (immediate and long-term contributions) will be incurred by the Municipality. This represents the worst case scenario as it involves the highest level of capital financing requirement and ultimately is not practical due to the increase in municipal revenues necessary to support the required level of capital investment.
- **Scenario 2** – Under this scenario, the Municipality's capital expenditures are projected to be as follows:
  - During the first 10 years of the planning period, the Municipality will make capital investments based on the identified priority infrastructure investment requirements (i.e. \$5.9 million per year).
  - During the remainder of the planning period, the Municipality will make capital investments equal to the amount of the sustainable life cycle contribution requirements (i.e. \$4.8 million per year).
- **Scenario 3** – Under this scenario, it is assumed that the Municipality will continue to make capital investments based on the average capital capacity of \$850,000 per year.

Financial projections developed in support of the asset management plan demonstrate both the magnitude and immediacy of the Municipality's identified capital requirements, with the required level of capital expenditures under Scenarios 1 and 2 significantly higher than the current level. At the same time, the average residential taxes per household is expected to increase accordingly if taxpayers are solely responsible for funding the capital requirements.

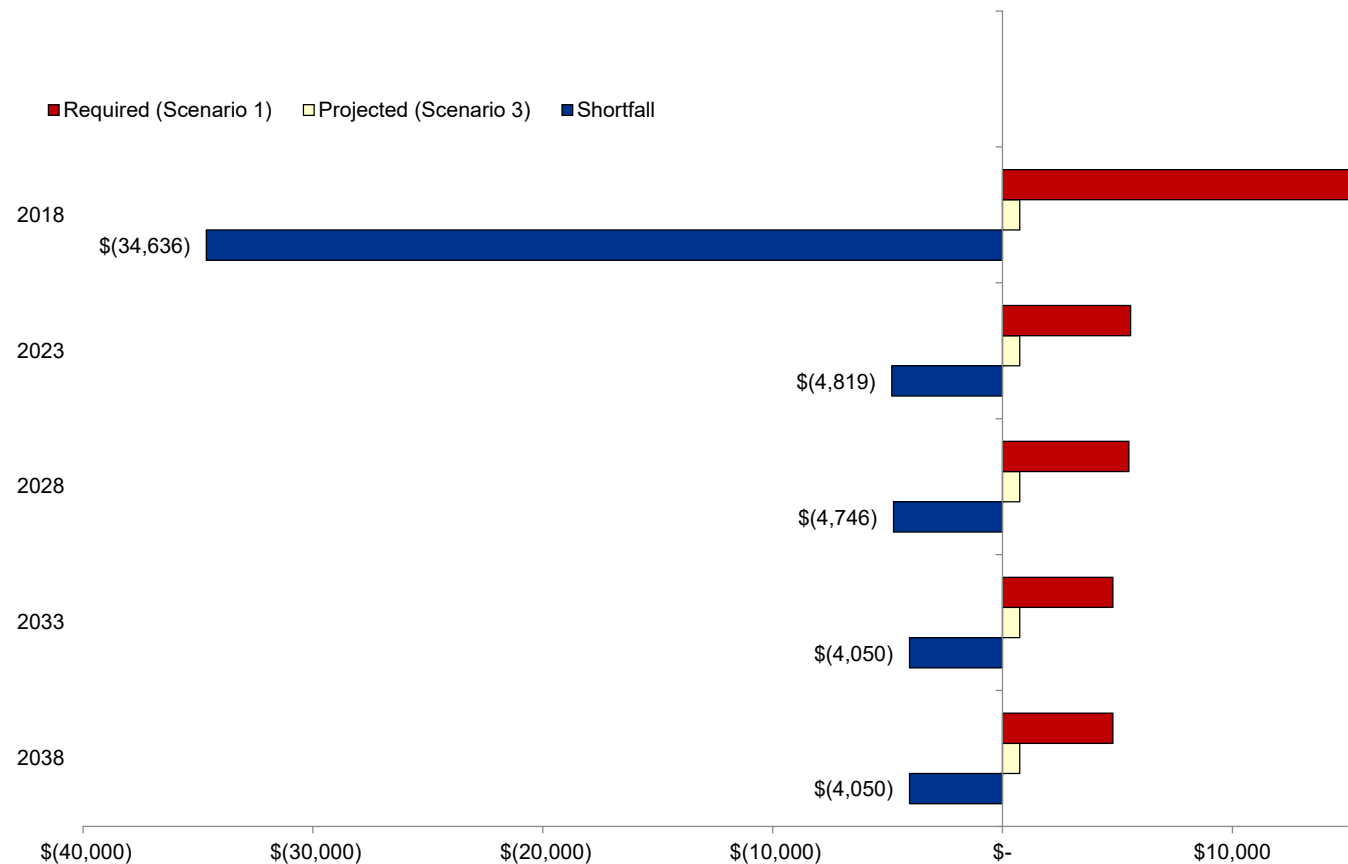
*Projected capital expenditures (in thousands)*





At the current level of capital expenditures, the Municipality is expected to continue its existing annual infrastructure deficit as its level of capital expenditures will be insufficient to maintain its infrastructure in its present state, let alone address immediate and short-term infrastructure requirements. As noted below, the Municipality's current annual funding shortfall is expected to be in the order of \$4 million on an ongoing basis and assuming that its present infrastructure deficit of \$15 million is resolved.

*Calculated annual infrastructure funding shortfalls (in thousands)*



In order to address the future capital funding requirements, the Municipality anticipates using a combination of debt, senior government grants and local revenue sources (taxation and user fees) to fund its capital needs. In the past, the Municipality has implemented annual capital rate increases in water and wastewater rates in order to fund required capital expenditures. However, given the limited ability of the Municipality to introduce future increases in either user fees or taxation levels due to affordability concerns (see next page), it will also continue to defer required capital expenditures.

As time proceeds, the potential exists for aspects of the Municipality's sustaining capital reinvestment requirement will evolve into immediate infrastructure requirements as the Municipality's infrastructure continues to decline through usage, weather conditions and other considerations. In the absence of new funding sources (taxes, grants or loan proceeds), the Municipality will be required to defer capital projects, accepting increased operating costs and/or lower levels of service as a consequence, including:

- A reduction in the quality of ride conditions resulting from the deterioration of PCI for municipal roads;
- The replacement of road surfaces with lower cost alternatives (e.g. replacement of paved roads with surface treated or gravel roads, replacement of surface treated roads with gravel roads);
- Load restrictions for municipal roads and bridges (one bridge is already subject to load restrictions);
- Increased maintenance costs and downtime for municipal vehicles and moveable equipment
- Increased maintenance costs, functional obsolescence and space limitations with respect to municipal facilities.

In determining where to focus capital expenditures where funding shortfalls occur, the Municipality may wish to consider investing in projects that:

- *Provide the greatest impact to residents.* For example, roads with higher daily traffic volumes will generally represent a priority over more rural roads with lower traffic volumes.
- *Address the greatest risks.* With the potential to impact on public health and safety, investments in fire and winter roads maintenance vehicles may be viewed as a priority over roads, where poor infrastructure conditions can be managed through load restrictions, speed limit reductions and other means.
- *Have the greatest probability of failure.* Infrastructure in poor condition has a greater risk of failure than infrastructure in good condition and as such, represents a higher priority from a reinvestment perspective.

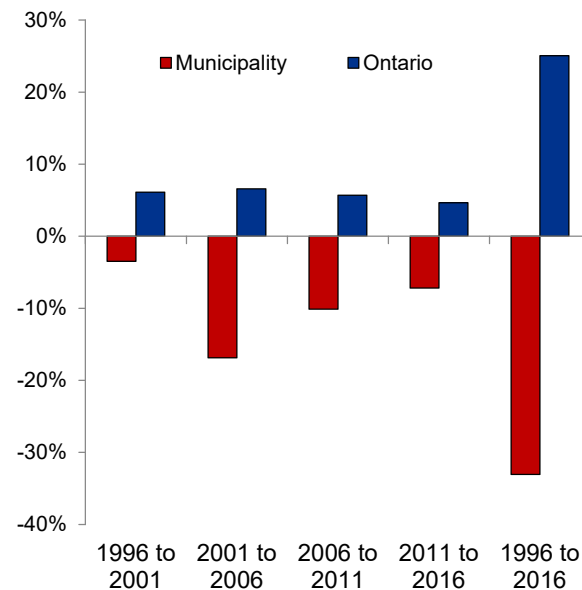
The Municipality continues to invest in engineering studies and analysis to identify its priority infrastructure requirements, as well as develop more detailed cost estimates.

Despite the past ability of the Municipality to increase the level of financing for infrastructure investments and other asset management activities, the magnitude of the financial requirement associated with its infrastructure precludes the Municipality from addressing its needs without some form of grants. In the absence of capital grants, the Municipality will be required to defer capital expenditures until such time as sufficient funding is available.

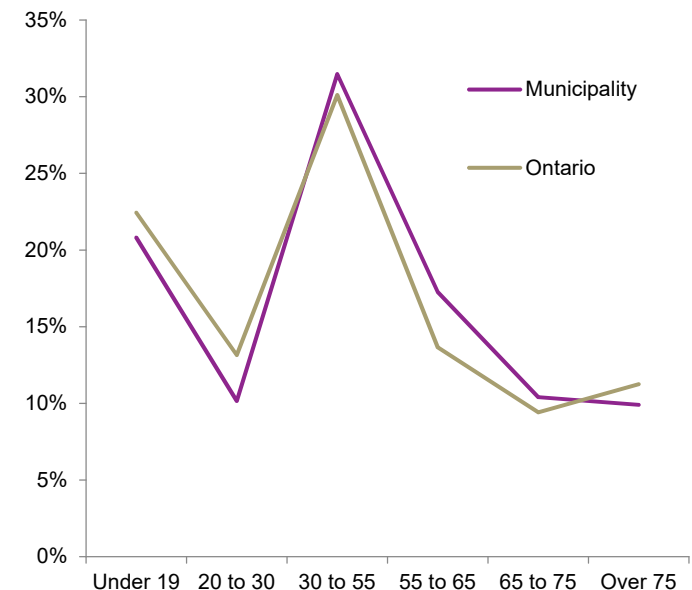
While it is expected that most, if not all, Ontario municipalities will be challenged to meet their financial requirements associated with infrastructure, the Province should give particular attention to the Municipality's limited ability to fund capital investments in comparison to other municipalities, based on the following:

- From 1996 to 2016, **the Municipality's total population has decreased by 33%**, compared to a 25% increase in the Province's population over the same period.
- At the same time, **the Municipality's population has aged faster than the Provincial average**, with the average age of the Municipality's residents amounting to 44.0 years compared to the Provincial average age of 41.0 years.

Population changes – 1996 to 2016

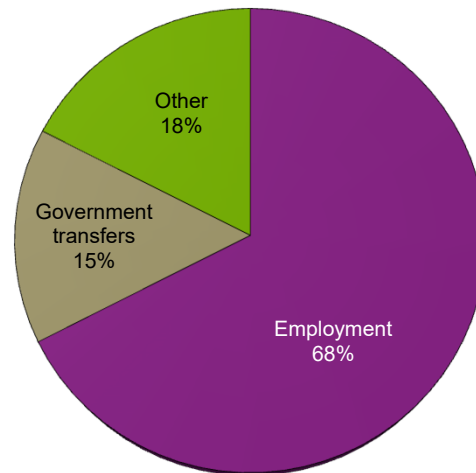


Population distribution by age group (2016)

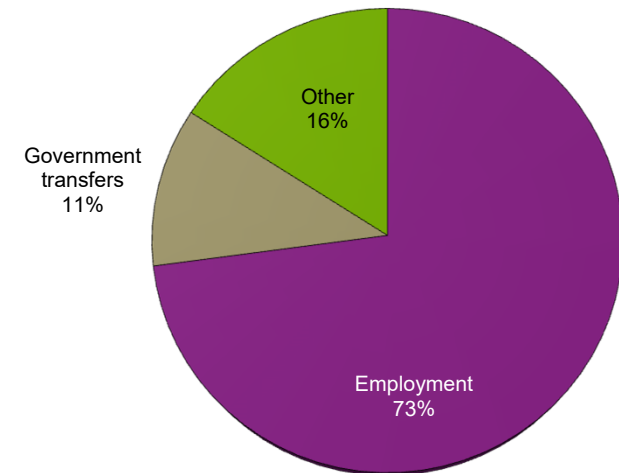


- Residents of the Municipality are more reliant on pensions, government transfers and other fixed income sources** than the remainder of the Province, limiting their ability to afford ongoing property tax increases. As noted below, employment income in the Municipality accounts for 68% of total reported income, compared to 73% for the Province. In comparison, government transfers are 4% higher in the Municipality than the Province.

*Reported personal income by source – Municipality residents (2016)*



*Reported personal income by source – Provincial residents (2009)*





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## Appendix A Infrastructure Summary



**CORPORATION OF THE TOWNSHIP OF CHAPLEAU**

**Asset Management Plan Summary**

Asset Category	Worksheet Reference	Replacement Value	Average Useful Life	Annual Requirement	Projected Replacement Requirement												Priority 1	Priority 2	Priority 3
					Immediately	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total			
<b>Roads:</b>																			
Wearing surface	100	15,518,121	25	620,724.84															
Other components	100	39,189,915	75	522,532.20															
		54,708,036		1,143,257	9,041,260	541,122	-	139,641	359,065	-	1,432,100	12,384,409	-	-	563,432	24,461,030	17,864,191	6,596,839	30,247,005
Bridges	110	24,538,828	80	306,735.35	-	-	-	-	-	-	-	2,013,827	-	-	-	2,013,827	-	2,013,827	22,525,001
Sidewalks	120	8,230,299	60	137,171.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8,230,299
Streetlights	130	2,601,008	60	43,350.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,601,008
Airport tarmac		9,936,080	75	132,481.07	9,936,080	-	-	-	-	-	-	-	-	-	-	9,936,080	9,936,080	-	-
Airport fueling systems		752,000	25	30,080.00	752,000	-	-	-	-	-	-	-	-	-	-	752,000	752,000	-	-
Storm sewers	160	8,545,148	80	106,814.36	-	-	-	-	-	-	3,758,907	-	-	-	-	3,758,907	-	3,758,907	4,786,242
Sanitary sewers	180	18,904,952	80	236,311.90	-	-	-	-	-	-	3,615,460	-	-	-	-	3,615,460	-	3,615,460	15,289,492
Force mains	190	2,248,447	80	28,105.58	-	-	-	-	-	-	155,485	-	-	-	-	155,485	-	155,485	2,092,962
Water mains	210	16,098,382	80	201,229.78	1,803,109	-	-	-	-	-	-	-	-	-	-	1,803,109	1,803,109	-	14,295,273
Fleet	300	5,272,860	12	439,404.97	1,868,293	554,129	228,455	9,198	295,773	769,259	45,966	132,692	507,733	-	-	4,411,498	3,725,107	686,391	861,362
Information technology	310	172,093	7	24,584.71	138,657	-	-	10,095	23,340	-	-	-	-	-	-	172,093	172,093	-	-
<b>Facilities:</b>																			
Civic Centre building	400	9,209,813	50	184,196.26	565,016	-	-	-	-	-	-	-	-	-	-	565,016	565,016	-	8,644,797
Roads building	410	3,473,905	50	69,478.09	47,667	-	-	-	-	-	-	-	-	-	-	47,667	47,667	-	3,426,238
Animal shelter	420	1,152,903	50	23,059.07	8,456	-	-	-	-	-	-	-	-	-	-	8,456	8,456	-	1,144,447
Airport terminal	430	599,825	50	11,996.49	50,343	-	-	-	-	-	-	-	-	-	-	50,343	50,343	-	549,481
Airport storage building	440	694,084	50	13,881.68	76,849	-	-	-	-	-	-	-	-	-	-	76,849	76,849	-	617,235
Sports complex	450	17,573,764	50	351,475.27	1,985,612	-	-	-	-	-	-	-	-	-	84,898	2,070,510	1,985,612	84,898	15,503,253
Pavilion	460	220,502	50	4,410.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220,502
Water treatment plant	470	22,739,111	50	454,782.22	2,793,248	9,814	-	-	-	-	-	-	-	-	28,478	2,831,539	2,803,061	28,478	19,907,572
Pumphouse buildings	480	466,726	50	9,304.52	466,726	-	-	-	-	-	-	-	-	-	-	466,726	466,726	-	-
Dufferin Street pumping station	490	2,836,120	50	56,722.40	274,221	-	-	-	-	-	-	-	-	-	-	274,221	274,221	-	2,561,899
Lisgar Street pumping station	500	2,597,775	50	51,955.49	-	287,569	-	-	-	-	-	-	-	-	-	287,569	287,569	-	2,310,205
Riverside Drive pumping station	510	4,462,293	50	89,245.85	547,459	-	-	-	-	-	-	-	-	-	-	547,459	547,459	-	3,914,834
Lagoon	520	16,578,420	50	331,568.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,578,420
Lagoon building	530	681,201	50	13,624.02	97,672	-	-	-	-	-	-	-	-	-	-	-	-	-	583,529
Landfill cells	535	18,157	50	363.14	-	-	-	-	-	-	-	-	-	-	19,916	117,588	97,672	19,916	18,157
Landfill custodian building	540	34,437	50	688.74	-	377	-	-	-	-	-	-	-	-	-	377	377	-	34,060
Landfill storage building	550	158,483	50	3,169.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	158,483
Landfill garage building	560	730,840	50	14,616.79	-	-	-	-	-	5,006	-	-	-	-	-	5,006	-	5,006	725,834
Playground equipment	580	451,376	50	9,027.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	451,376
Museum building	590	1,518,299	50	30,365.97	37,495	-	-	-	-	-	-	-	-	-	-	37,495	37,495	-	1,480,803
Cemetery vault	600	217,217	50	4,344.33	-	-	-	-	-	-	7,247	-	-	-	-	7,247	7,247	-	209,970
Cemetery chapel	610	88,759	50	1,775.17	88,759	-	-	-	-	-	-	-	-	-	-	88,759	88,759	-	-
Industrial site	620	6,529,759	50	130,595.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,529,759
Waterfront park	630	4,673,739	50	93,474.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,673,739
		97,707,505		1,954,150	7,046,791	297,760	-	-	-	-	5,006	-	-	-	133,293	7,482,849	7,344,551	138,299	90,224,656
		249,715,638		4,783,677	30,596,191	1,393,011	228,455	158,934	678,179	769,259	1,483,072	20,046,953	2,521,560	-	696,725	58,562,338	41,597,132	16,965,207	191,153,300





Asset Management Planning  
for the Township of Chapleau

## Appendix B Roads Summary











Asset Management Planning  
for the Township of Chapleau

## Appendix C Water Summary









**Township of Chapleau Asset Management Plan**  
**Environmental Services - Water Distribution System**  
*Watermains, Fire Hydrants, Watervalves*

Reference Number	Street	From	To	Existing Pipe Diameter	Proposed Pipe Diameter	Length (m)	Year Installed	Material	Year of Expected Replacement	Estimated FV Replacement Cost to Subgrade	Investment Priority Classification	Projected Replacement Requirement										
												Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1620	Pine Street	Grey Street	Connaught Street	100mm	150mm	97.0	1910	Cast Iron	2018	\$45,805	Priority 1	\$ 45,805	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1630	Pine Street	Connaught Street	Devonshire Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1640	Pine Street	Devonshire Street	Minto Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1650	Pine Street	Minto Street	Strathcona Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1660	Pineland Road	Hwy. 129	Dead End								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1670	Planer Road	Martel Road	Cul De Sac North of Tracks								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1680	Planer Road	Cul De Sac North of Poplar Road									Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1690	Planer Road	Poplar Road	Brown Road								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1700	Planer Road	Brown Road	West Limit at Waterfront Home								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1710	Poplar Road	Planer Road	Martel Road								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1720	Queen Street	Maple Street	Dead End North (North)	150mm	150mm	114.9	1910	Cast Iron	2018	\$50,685	Priority 1	\$ 50,685	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1730	Queen Street	Dead End North (North)	Dead End South (South)	150mm	150mm	65.0	2015	PVC	2090	\$101,379	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1740	Queen Street	Dead End South (South)	Elm Street	150mm	150mm	30.0	2015	PVC	2090	\$54,399	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1750	Queen Street	Elm Street	Dead End North (North)	150mm	150mm	105.0	2015	PVC	2090	\$203,077	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1760	Queen Street	Dead End North (North)	Ash Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1770	Queen Street	Ash Street	Teak Street	100mm	150mm	105.1	1910	Cast Iron	2018	\$48,841	Priority 1	\$ 48,841	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1780	Queen Street	Teak Street	Waterplant Road	150mm	150mm	94.8	1974	Cast Iron	2059	\$105,422	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1790	Rate Road	Bucciarelli	Dead End Cul De Sac								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1800	Richard Street	Golf Road	Derek Street	150mm	150mm	108.0	1980	Cast Iron	2065	\$107,310	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1810	Richard Street	Derek Street	Sean Street	150mm	150mm	128.0	1980	Cast Iron	2065	\$145,647	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1820	Richard Street	Sean Court	Lynne Court	150mm	150mm	94.0	1980	Cast Iron	2065	\$94,000	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1830	Richard Street	Lynne Court	Adele Street	150mm	150mm	81.7	1980	Cast Iron	2065	\$82,307	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1840	Richard Street	Adele Street	Demers Street	150mm	150mm	78.0	1980	Cast Iron	2065	\$102,751	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1850	Riverside Drive	Grey Street	Connaught Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1860	Riverside Drive	Connaught Street	Devonshire Street	200mm	200mm	110.0	1976	Cast Iron	2061	\$110,650	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1870	Riverside Drive	Devonshire Street	Minto Street	200mm	200mm	105.9	1976	Cast Iron	2061	\$120,253	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1880	Riverside Drive	Minto Street	Strathcona Street	150mm	150mm	109.3	1910	Cast Iron	2018	\$50,415	Priority 1	\$ 50,415	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1890	Riverside Drive	Strathcona Street	Start of HCB (East of Strathcona)								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1900	Riverside Drive	Start of HCB (East of Strathcona)	Sewage Plant								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1910	Rolly Street	Martel Road	Derek Street	150mm	150mm	45.0	1980	Cast Iron	2065	\$42,780	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1920	Sean Court	Richard Street	West Limit	50/150mm	150mm	123.9	1980	Cast Iron	2065	\$141,749	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1930	Spruce Street	Monk Street	Dufferin Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1940	Strathcona Street	Riverside Drive	Dead End (House)								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1950	Strathcona Street	Dead End (House)	Pine Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1960	Strathcona Street	Pine Street	North Limit								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1970	Teak Street	150m West of King Street	King Street	150mm	150mm	162.9	1910	Cast Iron	2018	\$72,334	Priority 1	\$ 72,334	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1980	Teak Street	King Street	Queen Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1990	Teak Street	Queen Street	Monk Street	150mm	150mm	99.8	1910	Cast Iron	2018	\$39,235	Priority 1	\$ 39,235	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2000	Walnut Street	Lorne Street	Landsdowne Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2010	Waterplant Road	Monk Street	Queen Street	150mm	150mm	24.0	1910	Cast Iron	2018	\$8,996	Priority 1	\$ 8,996	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020	Waterplant Road	Queen Street	King Street	150mm	150mm	114.9	1910	Cast Iron	2018	\$44,895	Priority 1	\$ 44,895	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2010A	Waterplant Road	Monk Street	Queen Street	300mm	300mm	30.0	1973	Cast Iron	2058	\$32,721	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020A	Waterplant Road	Queen Street	King Street	300mm	300mm	21.1	1973	Cast Iron	2058	\$27,051	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Waterplant Road	King Street	WTP	300mm	300mm	106.0	1975	Cast Iron	2060	\$141,989	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	WTP Intake	WTP	North Limit	450mm	450mm	181.8	1975	PE	2050	\$211,145	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2030	Young Street	Laneway No. 11	Birch Street								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2040	Young Street	Birch Street	Beech Street	200mm	200mm	99.0	1973	Cast Iron	2058	\$98,282	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2050	Young Street	Beech Street	Pine Street	150mm	150mm	92.2	1973	Cast Iron	2058	\$97,166	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2060	Young Street	Pine Street	North Limit								Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
				<b>Total:</b>		<b>15286.3</b>	<b>#N/A</b>	<b>#N/A</b>	<b>#N/A</b>	<b>\$ 16,098,382</b>	<b>\$ -</b>	<b>\$ 1,803,109</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 1,803,109  
- Priority 2 \$ -  
- Priority 3 \$ 14,295,273



Asset Management Planning  
for the Township of Chapleau

## Appendix D Wastewater Summary









**Township of Chapleau Asset Management Plan  
Environmental Services - Sanitary Sewer System**

**Gravity Sewers and Other Waste Water Linear Assets**

Reference Number	Street	From	To	Existing Pipe Diameter	Proposed Pipe Diameter	Length (m)	Year Installed	Material	Year of Expected Replacement	Estimated FV Replacement Cost to Subgrade	Investment Priority	Projected Replacement Requirement										
												Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1490	Monk Street	Elm Street	Maple Street	250mm	250mm	204.8	2010	PVC	2085	\$ 482,643.15	Priority 3	-	-	-	-	-	-	-	-	-	-	
1420	Monk Street	Birch Street	Beech Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1440	Monk Street	Lisgar Street	Pine Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1450	Monk Street	Pine Street	Waterplant Road								Priority 3	-	-	-	-	-	-	-	-	-	-	
1460	Monk Street	Waterplant Road	Teak Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1470	Monk Street	Teak Street	Ash Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1520	Monk Street	Larch Street	Spruce Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1540	Oak Street	Landsdowne Street	Aberdeen Street	250mm	250mm	50.5	2002	UNKN	2077	\$ 84,170.98	Priority 3	-	-	-	-	-	-	-	-	-	-	
1530	Oak Street	Lorne Street	Landsdowne Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1550	Parliament Road	Hwy. 129	Dead End Cul De Sac								Priority 3	-	-	-	-	-	-	-	-	-	-	
1560	Pine Street	Lisgar Street	Monk Street	300mm	300mm	45.9	1950	UNKN	2025	\$ 37,199.31	Priority 2	-	-	-	-	-	-	-	-	37,199	-	
1570	Pine Street	Monk Street	Young Street	300mm	300mm	165.3	1950	UNKN	2025	\$ 120,512.85	Priority 2	-	-	-	-	-	-	-	-	120,513	-	
1580	Pine Street	Young Street	Lorne Street	300mm	300mm	77.1	1950	UNKN	2025	\$ 56,774.33	Priority 2	-	-	-	-	-	-	-	-	56,774	-	
1580A	Pine Street	Young Street	Lorne Street	450mm	450mm	89.4	1950	UNKN	2025	\$ 71,689.34	Priority 2	-	-	-	-	-	-	-	-	71,689	-	
1590	Pine Street	Lorne Street	Landsdowne Street	450mm	450mm	96.9	1950	UNKN	2025	\$ 68,597.28	Priority 2	-	-	-	-	-	-	-	-	68,597	-	
1620	Pine Street	Grey Street	Connaught Street	200mm	200mm	46.9	1950	UNKN	2025	\$ 34,797.39	Priority 2	-	-	-	-	-	-	-	-	34,797	-	
1600	Pine Street	Landsdowne Street	Aberdeen Street	450mm	450mm	93.1	1999	PVC	2074	\$ 218,256.36	Priority 3	-	-	-	-	-	-	-	-	-	-	
1610	Pine Street	Aberdeen Street	Grey Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1630	Pine Street	Connaught Street	Devonshire Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1640	Pine Street	Devonshire Street	Minto Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1650	Pine Street	Minto Street	Strathcona Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1660	Pineland Road	Hwy. 129	Dead End								Priority 3	-	-	-	-	-	-	-	-	-	-	
1670	Planer Road	Martel Road	Cul De Sac North of Tracks								Priority 3	-	-	-	-	-	-	-	-	-	-	
1680	Planer Road	Cul De Sac North of	Poplar Road								Priority 3	-	-	-	-	-	-	-	-	-	-	
1690	Planer Road	Poplar Road	Brown Road								Priority 3	-	-	-	-	-	-	-	-	-	-	
1700	Planer Road	Brown Road	West Limit at Waterfront Home								Priority 3	-	-	-	-	-	-	-	-	-	-	
1710	Poplar Road	Martel Road	Poplar Road								Priority 3	-	-	-	-	-	-	-	-	-	-	
1750A	Queen Street	Elm Street	Dead End North (North	250mm	250mm	38.0	1950	UNKN	2025	\$ 31,035.08	Priority 2	-	-	-	-	-	-	-	-	-	31,035	
1770	Queen Street	Ash Street	Teak Street	200mm	200mm	110.4	1950	UNKN	2025	\$ 78,947.23	Priority 2	-	-	-	-	-	-	-	-	78,947	-	
1780	Queen Street	Teak Street	Waterplant Road	250mm	250mm	27.7	1950	UNKN	2025	\$ 33,294.67	Priority 2	-	-	-	-	-	-	-	-	33,295	-	
1780A	Queen Street	Teak Street	Waterplant Road	150mm	200mm	33.1	1950	UNKN	2025	\$ 18,659.29	Priority 2	-	-	-	-	-	-	-	-	18,659	-	
1720	Queen Street	Maple Street	Dead End North (North	250mm	250mm	105.4	1990	UNKN	2065	\$ 194,150.24	Priority 3	-	-	-	-	-	-	-	-	-	-	
1750	Queen Street	Elm Street	Dead End North (North	200mm	200mm	111.0	2015	PVC	2090	\$ 256,814.09	Priority 3	-	-	-	-	-	-	-	-	-	-	
1730	Queen Street	Dead End North (North	Dead End South (South of Elm)								Priority 3	-	-	-	-	-	-	-	-	-	-	
1740	Queen Street	Dead End South (South	Elm Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1760	Queen Street	Dead End North (North	Ash Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1790	Rate Road	Bucciarelli Road	Dead End Cul De Sac								Priority 3	-	-	-	-	-	-	-	-	-	-	
1800	Richard Street	Golf Road	Derek Street	250mm	250mm	104.8	1999	PVC	2074	\$ 186,770.59	Priority 3	-	-	-	-	-	-	-	-	-	-	
1810	Richard Street	Derek Street	Sean Court	200mm	200mm	116.4	1999	PVC	2074	\$ 195,097.57	Priority 3	-	-	-	-	-	-	-	-	-	-	
1820	Richard Street	Sean Court	Lynn Court	200mm	200mm	98.3	1999	PVC	2074	\$ 190,377.45	Priority 3	-	-	-	-	-	-	-	-	-	-	
1830	Richard Street	Lynn Court	Adele Street	200mm	200mm	45.5	1999	PVC	2074	\$ 111,936.00	Priority 3	-	-	-	-	-	-	-	-	-	-	
1840	Richard Street	Adele Street	Demers Street	200mm	200mm	92.4	1999	PVC	2074	\$ 159,442.37	Priority 3	-	-	-	-	-	-	-	-	-	-	
1860	Riverside Drive	Connaught Street	Devonshire Street	250mm	250mm	63.5	1950	UNKN	2025	\$ 54,598.03	Priority 2	-	-	-	-	-	-	-	-	54,598	-	
1860A	Riverside Drive	Connaught Street	Devonshire Street	450mm	450mm	41.2	1985	UNKN	2060	\$ 58,394.37	Priority 3	-	-	-	-	-	-	-	-	-	-	
1860B	Riverside Drive	Connaught Street	Devonshire Street	450mm	450mm	34.9	1985	UNKN	2060	\$ 49,441.12	Priority 3	-	-	-	-	-	-	-	-	-	-	
1870	Riverside Drive	Devonshire Street	Minto Street	200mm	200mm	100.2	1985	UNKN	2060	\$ 129,619.60	Priority 3	-	-	-	-	-	-	-	-	-	-	
1880	Riverside Drive	Minto Street	Strathcona Street	200mm	200mm	88.7	1985	UNKN	2060	\$ 116,671.47	Priority 3	-	-	-	-	-	-	-	-	-	-	
1850	Riverside Drive	Grey Street	Connaught Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1890	Riverside Drive	Strathcona Street	Start of HCB (East of Strathcona)								Priority 3	-	-	-	-	-	-	-	-	-	-	
1900	Riverside Drive	Start of HCB (East of	Sewage Plant								Priority 3	-	-	-	-	-	-	-	-	-	-	
1910	Rolly Street	Martel Road	Derek Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1920	Sean Court	Richard Street	West Limit	200mm	200mm	80.6	1999	PVC	2074	\$ 141,911.89	Priority 3	-	-	-	-	-	-	-	-	-	-	
1930	Spruce Street	Monk Street	Dufferin Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1940	Strathcona Street	Riverside Drive	Dead End (House)								Priority 3	-	-	-	-	-	-	-	-	-	-	
1950	Strathcona Street	Dead End (House)	Pine Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1960	Strathcona Street	Pine Street	North Limit								Priority 3	-	-	-	-	-	-	-	-	-	-	
1990	Teak Street	Queen Street	Monk Street	200mm	200mm	99.1	1950	UNKN	2025	\$ 72,611.30	Priority 2	-	-	-	-	-	-	-	-	72,611	-	
	Teak Street	West Limit	150m West of King	250mm	250mm	42.8	1967	UNKN	2042	\$ 47,464.53	Priority 3	-	-	-	-	-	-	-	-	-	-	
1970	Teak Street	150m West of King	King Street	200mm	200mm	141.7	1967	UNKN	2042	\$ 146,969.66	Priority 3	-	-	-	-	-	-	-	-	-	-	
1980	Teak Street	King Street	Queen Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
2000	Walnut Street	Lorne Street	Landsdowne Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
2010	Waterplant Road	Monk Street	Queen Street	200mm	200mm	22.6	1950	UNKN	2025	\$ 12,723.65	Priority 2	-	-	-	-	-	-	-	-	12,724	-	
2020	Waterplant Road	Queen Street	King Street	200mm	200mm	102.4	1950	UNKN	2025	\$ 66,051.96	Priority 2	-	-	-	-	-	-	-	-	66,052	-	
	Waterplant Road	King Street	WTP	200mm	200mm	119.5	1974	UNKN	2049	\$ 148,751.57	Priority 3	-	-	-	-	-	-	-	-	-	-	
2040	Young Street	Birch Street	Beech Street	250mm	250mm	96.4	1994	PVC	2069	\$ 137,134.49	Priority 3	-	-	-	-	-	-	-	-	-	-	
2050	Young Street	Beech Street	Pine Street	250mm	250mm	97.5	1994	PVC	2069	\$ 138,699.30	Priority 3	-	-	-	-	-	-	-	-	-	-	
2030	Young Street	Laneway No. 11	Birch Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
2060	Young Street	Pine Street	North Limit								Priority 3	-	-	-	-	-	-	-	-	-	-	
<b>Totals:</b>						<b>13,414.15</b>				<b>\$ 18,904,952</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 3,615,460</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ 3,615,460  
- Priority 3 \$ 15,289,492

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
**Wastewater Force mains**

Reference Number	Street	From	To	Existing Pipe Diameter	Proposed Pipe Diameter	Length (m)	Year Installed	Age	Material	Year of Expected Replacement	Estimated FV Replacement Cost to Subgrade	Investment Priority Classification	Projected Replacement Requirement										
													Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Dufferin Street	Elm Street	Maple Street	150mm	150mm	148.7	1950	67	UNKN	2025	\$ 64,057	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 64,057	\$ -	\$ -	\$ -
	Elgin Street	South of Teak Street	Ash Street	150mm	150mm	78.0	1950	67	UNKN	2025	\$ 33,591	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 33,591	\$ -	\$ -	\$ -
	Elgin Street	Ash Street	Elm Street	150mm	150mm	134.3	1950	67	UNKN	2025	\$ 57,837	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,837	\$ -	\$ -	\$ -
500	Elm Street	Elgin Street	Monk Street	150mm	150mm	90.0	2015	2	PVC	2090	\$ 140,404	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
510	Elm Street	Monk Street	Dufferin Street	150mm	150mm	57.0	2015	2	PVC	2090	\$ 88,923	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1160	Lisgar Street	Pine Street	Overpass	250mm	250mm	100.0	1999	18	PVC	2074	\$ 136,162	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1170	Lisgar Street	Overpass	Golf Road	250mm	250mm	360.0	1999	18	PVC	2074	\$ 490,183	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1860	Riverside Drive	Connaught Street	Devonshire Street	350mm	350mm	70.0	1985	32	UNKN	2060	\$ 100,639	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1870	Riverside Drive	Devonshire Street	Minto Street	350mm	350mm	86.0	1985	32	UNKN	2060	\$ 123,643	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1880	Riverside Drive	Minto Street	Strathcona Street	350mm	350mm	80.0	1985	32	UNKN	2060	\$ 115,016	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1890	Riverside Drive	Strathcona Street	Start of HCB (East of St	350mm	350mm	150.0	1985	32	UNKN	2060	\$ 215,656	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1900	Riverside Drive	Start of HCB (East of St	Sewage Plant	350mm	350mm	474.6	1985	32	UNKN	2060	\$ 682,335	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>Totals:</b>					<b>\$ 2,248,447</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 155,485</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ 155,485  
- Priority 3 \$ 2,092,962



Asset Management Planning  
for the Township of Chapleau

## Appendix E Storm Sewer Summary









**Township of Chapleau Asset Management Plan**  
**Environmental Services - Storm Sewer System**  
*Gravity Sewers and Other Stormwater Linear Assets*

Reference Number	Street	From	To	Existing Pipe Diameter	Proposed Pipe Diameter	Length (m)	Year Installed	Material	Year of Expected Replacement	Estimated FV Replacement Cost to Subgrade	Investment Priority Classification	Projected Replacement Requirement										
												Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1950	Strathcona Street	Dead End (House)	Pine Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1960	Strathcona Street	Pine Street	North Limit								Priority 3	-	-	-	-	-	-	-	-	-	-	
1970	Teak Street	150m West of King	King Street	300mm	300mm	87.1	1950	UNKN	2025	37,674	Priority 2	-	-	-	-	-	-	-	37,674	-	-	
1980	Teak Street	King Street	Queen Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1990	Teak Street	Queen Street	Monk Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
1970A	Teak Street	150m West of King	King Street	825mm	900mm	67.4	1950	UNKN	2025	82,887	Priority 2	-	-	-	-	-	-	-	-	82,887	-	
2000	Walnut Street	Lorne Street	Landsdowne Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
2010	Waterplant Road	Monk Street	Queen Street	450mm	450mm	13.9	1950	UNKN	2025	12,746	Priority 2	-	-	-	-	-	-	-	-	12,746	-	
2020	Waterplant Road	Queen Street	King Street	450mm	450mm	125.4	1950	UNKN	2025	78,334	Priority 2	-	-	-	-	-	-	-	-	78,334	-	
	Waterplant Road	King Street	West Limit	900mm	900mm	38.0	1950	UNKN	2025	37,197	Priority 2	-	-	-	-	-	-	-	-	37,197	-	
2030	Young Street	Laneway No. 11	Birch Street								Priority 3	-	-	-	-	-	-	-	-	-	-	
2040	Young Street	Birch Street	Beech Street	250mm	250mm		1950	PVC	2025	14,118	Priority 2	-	-	-	-	-	-	-	-	14,118	-	
2050	Young Street	Beech Street	Pine Street	250mm	250mm		1994	PVC	2069	17,117	Priority 3	-	-	-	-	-	-	-	-	-	-	
2060	Young Street	Pine Street	North Limit	250mm	250mm	93.5	1950	UNKN	2025	37,438	Priority 2	-	-	-	-	-	-	-	-	37,438	-	
2040A	Young Street	Birch Street	Beech Street	375mm	375mm	40.1	1950	PVC	2025	22,418	Priority 2	-	-	-	-	-	-	-	-	22,418	-	
2040A	Young Street	Birch Street	Beech Street	450mm	450mm	40.3	1950	PVC	2025	23,468	Priority 2	-	-	-	-	-	-	-	-	23,468	-	
2050A	Young Street	Beech Street	Pine Street	450mm	450mm	97.2	1994	PVC	2069	132,545	Priority 3	-	-	-	-	-	-	-	-	-	-	
				<b>Totals:</b>		<b>7505.3</b>				<b>\$ 8,545,148</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 3,758,907</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ 3,758,907  
- Priority 3 \$ 4,786,242





Asset Management Planning  
for the Township of Chapleau

## Appendix F Bridges and Culverts Summary





**Township of Chapeau Asset Management Plan**  
**Transportation Services - Roadways**  
**Bridges**

Structure No.	Description	Year	Type	Largest Span (m)	Age	Service Life (yrs)	Year of Expected Replacement	Estimated FV Replacement Cost	Investment Priority Classification	Projected Replacement Requirement											
										Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
1	Monk St. Bridge	1973	Precast Girder	25.9	44	80	2053	10,559,018	Priority 3	-	-	-	-	-	-	-	-	-	-	-	
2	Lisgar St. Bridge	1983	Precast Girder	24.7	34	80	2063	4,442,737	Priority 3	-	-	-	-	-	-	-	-	-	-	-	
3	Cedar St. Bridge	1981	Timber Beam	8.9	36	45	2026	2,013,827	Priority 2	-	-	-	-	-	-	-	-	2,013,827	-	-	
4	Pedestrian Bridge	1973	Precast Girder	30.6	44	80	2053	6,715,069	Priority 3	-	-	-	-	-	-	-	-	-	-	-	
5	Bucciarelli Beach Culvert	2010	CSP	12	7	45	2055	106,499	Priority 3	-	-	-	-	-	-	-	-	-	-	-	
	Monk Street Expansion Joints	2016			1	40	2056	701,677	Priority 3	-	-	-	-	-	-	-	-	-	-	-	
								<b>\$ 24,538,828</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,013,827</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ 2,013,827  
- Priority 3 \$ 22,525,001



Asset Management Planning  
for the Township of Chapleau

## Appendix G Sidewalk Summary







Asset Management Planning  
for the Township of Chapleau

## Appendix H Streetlights Summary









Asset Management Planning  
for the Township of Chapleau

# Appendix I Buildings and Facilities Summary



**Township of Chapleau Asset Management Plan**  
**General Government - Corporate Management**  
*General Government - Building (Civic Center/Fire Hall)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	78%	1977	40	2057	\$ 8,027,265	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	10%	1977	40	2018	\$ 475,408	Priority 1	\$ 475,408	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1977	40	2018	\$ 89,608	Priority 1	\$ 89,608	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	10%	1997	20	2027	\$ 568,156	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Heating system controls	LS	1	2010	7	2030	\$ 40,572	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fire Alarm Panel (replacement)	LS	1	2017	0	2042	\$ 8,803	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 9,209,813</b>		<b>\$ 565,016</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:

- Priority 1 \$ 565,016  
- Priority 2 \$ -  
- Priority 3 \$ 8,644,797

\$ -  
\$ -  
\$ -

**Township of Chapleau Asset Management Plan**  
**Transportation Services - Roadways**  
*Road Maintenance - Building*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	87%	1980	37	2060	\$ 3,176,916	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	10%	2005	12	2035	\$ 222,578	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1980	37	2018	\$ 31,791	Priority 1	\$ 31,791	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	1%	1980	37	2018	\$ 15,896	Priority 1	\$ 15,896	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Radiant Tude Heaters	LS	1	2014	3	2034	\$ 26,723	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 3,473,905</b>		<b>\$ 47,687</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 47,687  
- Priority 2 \$ -  
- Priority 3 \$ 3,426,218



**Township of Chapleau Asset Management Plan**  
**General Government - Corporate Management**  
*General Government Building (Animal Shelter)*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	87%	1993	24	2073	\$ 1,093,099	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	10%	1993	24	2023	\$ 46,680	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1993	24	2018	\$ 8,456	Priority 1	\$ 8,456	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	1%	1993	24	2023	\$ 4,668	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 1,152,903		\$ 8,456	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
- Priority 1 \$ 8,456  
- Priority 2 \$ -  
- Priority 3 \$ 1,144,447

**Township of Chapleau Asset Management Plan**  
**Transportation Services - Air Transportation**  
*Airport - Building (Terminal)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement												
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Building Structure	%	75%	1973	44	2053	\$ 503,407	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	10%	2004	13	2034	\$ 46,074	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1973	44	2018	\$ 6,712	Priority 1	\$ 6,712	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	13%	1973	44	2018	\$ 43,631	Priority 1	\$ 43,631	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 599,825		\$ 50,343	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
- Priority 1 \$ 50,343  
- Priority 2 \$ -  
- Priority 3 \$ 549,481

**Township of Chapleau Asset Management Plan**  
**Transportation Services - Air Transportation**  
*Airport - Building (Garage)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	76%	1985	32	2065	\$ 617,235	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	20%	1985	32	2018	\$ 64,041	Priority 1	\$ 64,041	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	3%	1985	32	2018	\$ 9,606	Priority 1	\$ 9,606	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	1%	1985	32	2018	\$ 3,202	Priority 1	\$ 3,202	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 694,084</b>		<b>\$ 76,849</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 76,849  
- Priority 2 \$ -  
- Priority 3 \$ 617,235

**Township of Chapleau Asset Management Plan**  
**Recreation and Cultural Services - Recreational Facilities**  
**Arena - Building**

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	74.7%	1978	39	2058	\$ 14,896,351	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	15%	1987	30	2018	\$ 1,305,577	Priority 1	\$ 1,305,577	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	10%	1978	39	2018	\$ 680,035	Priority 1	\$ 680,035	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.3%	1978	39	2018	\$ (0)	Priority 1	\$ (0)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Refrigeration equipment			2008	9	2028	\$ 84,898	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 84,898
Refrigeration equipment			2009	8	2029	\$ 63,821	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Three exit doors			2014	3	2044	\$ 12,373	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dehumidifier No. 1			2015	2	2030	\$ 37,163	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Superheater			2015	2	2030	\$ 24,387	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Oil Separator			2015	2	2030	\$ 9,452	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Brick veneer at entrance			2015	2	2095	\$ 247,368	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Front entrance siteworks			2015	2	2045	\$ 50,540	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Front entrance windows and doors			2015	2	2045	\$ 89,684	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LED dimmable Light Fixtures			2016	1	2041	\$ 16,180	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dehumidifier No.2			2016	1	2031	\$ 45,742	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Zamboni Room Hot Water Tank			2017	0	2032	\$ 10,192	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 17,573,764</b>		<b>\$ 1,985,612</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 84,898</b>

Total future replacement requirement:  
- Priority 1 \$ 1,985,612  
- Priority 2 \$ 84,898  
- Priority 3 \$ 15,503,253.39

**Township of Chapleau Asset Management Plan**  
**Recreation and Cultural Services - Recreational Facilities**  
*Pavillion - Building*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	80%	1996	21	2076	\$ 191,840	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	15%	1996	21	2056	\$ 24,207	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	5%	1996	21	2026	\$ 4,455	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		<b>100%</b>				<b>\$ 220,502</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 220,502

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Water Distribution System**  
*Water Treatment Plant - Building and Process Equipment*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Immediate
Building Structure	%	69.0%	1976	41	2056	\$ 17,850,786	Priority 3	
Building Envelope	%	5.0%	1976	41	2018	\$ 455,886	Priority 1	\$ 455,886
Building Mechanical	%	25.0%	1980	37	2018	\$ 2,215,463	Priority 1	\$ 2,215,463
Siteworks	%	1.0%	1976	41	2018	\$ 121,899	Priority 1	\$ 121,899
Pump	LS	1	2008	9	2028	\$ 28,478	Priority 2	\$ -
Reusable Bags	LS	1	2009	8	2019	\$ 9,814	Priority 1	\$ -
Diesel Generator	LS	1	2010	7	2040	\$ 594,893	Priority 3	\$ -
Control Panel	LS	1	2010	7	2040	\$ 71,025	Priority 3	\$ -
Soda Ash System	LS	1	2010	7	2040	\$ 58,615	Priority 3	\$ -
DBS Gearbox	LS	1	2011	6	2041	\$ 15,457	Priority 3	\$ -
Waste Pit Pump	LS	1	2012	5	2032	\$ 10,142	Priority 3	\$ -
Automated Valves	LS	1	2012	5	2042	\$ 28,529	Priority 3	\$ -
Post pH Soda Ash System	LS	1	2012	5	2042	\$ 76,077	Priority 3	\$ -
Overhead Door	LS	1	2013	4	2043	\$ 33,516	Priority 3	\$ -
Chlorine Analyzer	LS	1	2013	4	2033	\$ 7,398	Priority 3	\$ -
PH Analyzer	LS	1	2013	4	2033	\$ 3,959	Priority 3	\$ -
Six Hatch Covers	LS	1	2014	3	2034	\$ 15,715	Priority 3	\$ -
Clarifier Sludge Level Indicators	LS	1	2015	2	2035	\$ 28,255	Priority 3	\$ -
High lift pumps, piping and valves	LS	1	2015	2	2040	\$ 393,639	Priority 3	\$ -
VFD's and electrical modifications	LS	1	2015	2	2040	\$ 341,805	Priority 3	\$ -
Windows and doors	LS	1	2015	2	2045	\$ 227,327	Priority 3	\$ -
Lighting	LS	1	2015	2	2040	\$ 107,754	Priority 3	\$ -
Ceiling fans	LS	1	2015	2	2045	\$ 20,895	Priority 3	\$ -
CL2 Booster Pump	LS	1	2017	0	2037	\$ 5,040	Priority 3	\$ -
Waste Pit Pumps(2)	LS	1	2017	0	2037	\$ 16,745	Priority 3	\$ -
						<b>\$ 22,739,111</b>		<b>\$ 2,793,248</b>

**Township of Chapleau Asset Management Plan**  
**Recreation and Cultural Services - Recreational Facilities**  
*Pump House - Building*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	89%	1910	107	2018	\$ 415,386	Priority 1	\$ 415,386	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	8%	1910	107	2018	\$ 37,338	Priority 1	\$ 37,338	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1910	107	2018	\$ 9,335	Priority 1	\$ 9,335	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	1%	1910	107	2018	\$ 4,667	Priority 1	\$ 4,667	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 466,726</b>		<b>\$ 466,726</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 466,726  
- Priority 2 \$ -  
- Priority 3 \$ -

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
*Wastewater Pumping Stations - Building and Process Equipment (Dufferin Street)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	68.8%	1985	32	2065	\$ 2,339,866	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	1%	1985	32	2018	\$ 13,409	Priority 1	\$ 13,409	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	30%	1985	32	2018	\$ 258,131	Priority 1	\$ 258,131	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.2%	1985	32	2018	\$ 2,682	Priority 1	\$ 2,682	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mitronics Controls	LS	1	2011	6	2031	\$ 7,752	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Diesel Fuel Tank	LS	1	2015	2	2045	\$ 7,557	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pumps (2), piping and valves	LS	1	2015	2	2040	\$ 206,724	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$2,836,120</b>		<b>\$274,221</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Total future replacement requirement:  
- Priority 1 \$ 274,221  
- Priority 2 \$ -  
- Priority 3 \$ 2,561,899



**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
*Wastewater Pumping Stations - Building and Process Equipment (Lisgar Street)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	66.7%	1999	18	2079	\$ 2,247,608	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	2%	1999	18	2029	\$ 25,039	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	28%	1999	18	2019	\$ 287,569	Priority 1	\$ -	\$ 287,569	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	3.0%	1999	18	2029	\$ 37,558	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 2,597,775</b>		<b>\$ -</b>	<b>\$ 287,569</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 287,569  
- Priority 2 \$ -  
- Priority 3 \$ 2,310,205

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
*Wastewater Pumping Stations - Building and Process Equipment (Riverside Drive)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	65.8%	1984	33	2064	\$ 3,590,112	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	1%	1984	33	2018	\$ 21,942	Priority 1	\$ 21,942	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	33%	1984	33	2018	\$ 521,129	Priority 1	\$ 521,129	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.2%	1984	33	2018	\$ 4,388	Priority 1	\$ 4,388	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miltronics Controls	LS	1	2011	6	2031	\$ 7,752	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bypass Chamber Valve Replacement	LS	1	2013	4	2033	\$ 32,210	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Diesel Fuel Tank	LS	1	2015	2	2045	\$ 7,557	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pump, Piping and Valves	LS	1	2015	2	2040	\$ 260,655	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewage Auto Sampler			2016	1	2036	\$ 16,547	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 4,462,293</b>		<b>\$ 547,459</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 547,459  
- Priority 2 \$ -  
- Priority 3 \$ 3,914,834

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
**Wastewater Treatment Plant - Lagoon (two cell aerated facultative lagoon)**

Item	Unit	Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement									
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Yard Piping</b>																	
100mm Piping	m	75.0 m	1985	32	2060	\$ 56,707	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
300mm Piping	m	153.0 m	1985	32	2060	\$ 137,104	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
350mm Piping	m	45.0 m	1985	32	2060	\$ 44,105	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
450mm Piping	m	493.0 m	1985	32	2060	\$ 524,613	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pipe Culverts	m	70.0 m	1985	32	2060	\$ 58,807	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Lagoon Components</b>																	
3 Channel Grit Removal System w/bar rack	ea	1	1991	26	2051	\$ 234,319	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Valve Chamber	ea	1	1985	32	2045	\$ 24,968	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Inlet Chamber	ea	2	1985	32	2045	\$ 29,130	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Inter-cell Chamber w/baffles (3mx3m)	ea	1	1985	32	2045	\$ 41,614	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Drain Chamber (2.3mx2.3m)	ea	1	1985	32	2045	\$ 31,210	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2 Compartment Outlet Chamber w/baffles(3mx3m)	ea	1	1985	32	2045	\$ 52,017	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Chlorine Contact Chamber (6.8mx3m + 1.3mx3m)	ea	1	1985	32	2045	\$ 104,034	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Aeration System (header and feeder tubes)	ea	1	2003	14	2033	\$ 349,677	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manholes	ea	3	1985	32	2045	\$ 43,694	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fencing	m	180.0 m	1985	32	2045	\$ 11,236	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lagoon Cells	LS	1	1985	32	2185	\$ 5,325,377	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lagoon Cells HDPE geomembrane	LS	1	1985	32	2045	\$ 332,910	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Miscellaneous	LS	1	1985	32	2045	\$ 127,086	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sludge laydown cell	LS	1	2015	2	2215	\$ 9,049,812	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 16,578,420		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 16,578,420

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Sanitary Sewer System**  
*Waste Water Treatment Plant - Building and Process Equipment*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	61%	1985	32	2065	\$ 518,648	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	7%	1985	32	2018	\$ 16,458	Priority 1	\$ 16,458	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	25%	1985	32	2018	\$ 57,749	Priority 1	\$ 57,749	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	7%	1985	32	2018	\$ 23,466	Priority 1	\$ 23,466	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Blowers			2008	9	2028	\$ 19,916	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,916
Replaced Roofing	LS	1%	2013	4	2043	\$ 11,497	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Genset Transfer Switch			2016	1	2046	\$ 16,921	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewage Auto Sampler			2016	1	2036	\$ 16,547	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 681,201</b>		<b>\$ 97,672</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 19,916</b>

Total future replacement requirement:  
- Priority 1 \$ 97,672  
- Priority 2 \$ 19,916  
- Priority 3 \$ 563,613

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Waste Disposal**  
*Landfill Site - Cell Development*

Item	Unit	Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement												
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Cell 6 and 8	m3	17000	2014	3	NA	\$ -	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Landfill Fencing	LS	1	2017	0	2067	\$ 18,157	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 18,157		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
 - Priority 1 \$ -  
 - Priority 2 \$ -  
 - Priority 3 \$ 18,157

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Waste Disposal**  
*Landfill Site - Building (Attendant Shelter)*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement												
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Building Structure	%	74%	1999	18	2079	\$ 30,534	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	20%	1999	18	2029	\$ 3,066	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	3%	1999	18	2019	\$ 377	Priority 1	\$ -	\$ 377	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	3%	1999	18	2029	\$ 460	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 34,437		\$ -	\$ 377	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
- Priority 1 \$ 377  
- Priority 2 \$ -  
- Priority 3 \$ 34,060

**Township of Chapleau Asset Management Plan**  
**Environmental Services - Waste Disposal**  
*Landfill Site - Building (Storage)*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement												
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Building Structure	%	81%	1999	18	2079	\$ 145,778	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	17%	1999	18	2029	\$ 11,367	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	2%	1999	18	2029	\$ 1,337	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		<b>100%</b>				<b>\$ 158,483</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 158,483



**Township of Chapleau Asset Management Plan**  
**Environmental Services - Waste Disposal**  
*Landfill Site - Building (Garage)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement												
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028		
Building Structure	%	82.7%	2004	13	2084	\$ 679,152	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	15%	2004	13	2034	\$ 45,786	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	2004	13	2024	\$ 5,006	Priority 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,006	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.3%	2004	13	2034	\$ 915	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 730,840</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,006</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ 5,006  
- Priority 3 \$ 725,834

**Township of Chapleau Asset Management Plan**  
**General Government - Corporate Management**  
*General Government - Building (Innovation Centre)*

**SOLD in 2011 - deleted entires**

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	0.0%					Priority 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	0%					Priority 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	0%					Priority 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.0%					Priority 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:

\*Priority 1 #REF!  
 \*Priority 2 #REF!  
 \*Priority 3 #REF!

**Township of Chapleau Asset Management Plan**  
**Recreation and Cultural Services - Recreational Facilities**  
*Playground Equipment*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Playground Equipment #1 incl's site work	%	30%	2001	16	2061	\$ 128,535	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Playground Equipment #2 incl's site work	%	30%	2001	16	2061	\$ 128,535	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ball field	%	40%	1978	39	2038	\$ 108,682	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Park Fixtures (benches/tables)			2013	4	2063	\$ 85,624	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 451,376</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 451,376

**Township of Chapeau Asset Management Plan**  
**Recreation and Cultural Services - Cultural Services**  
**Museum - Building**

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	82%	1967	50	2047	\$ 546,005	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	8%	2006	11	2036	\$ 42,842	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1967	50	2018	\$ 7,499	Priority 1	\$ 7,499	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	8%	1967	50	2018	\$ 29,996	Priority 1	\$ 29,996	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HVAC Unit	1	LS	2016	1	2036	\$ 626,343	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ducts and slab for HVAC	1	LS	2016	1	2096	\$ 116,389	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Concrete walkway/accessibility ramp	1	LS	2017	0	2067	\$ 137,036	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Door operator (accessibility)	1	LS	2017	0	2047	\$ 12,185	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						\$ 1,518,299		\$ 37,495	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Total future replacement requirement:  
- Priority 1 \$ 37,495  
- Priority 2 \$ -  
- Priority 3 \$ 1,480,803

**Township of Chapleau Asset Management Plan**  
**Health Services - Cemeteries**  
*Cemeteries - Building (Vault)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	91.5%	1988	29	2068	\$ 209,970	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	8%	1988	29	2018	\$ 6,821	Priority 1	\$ 6,821	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.5%	1988	29	2018	\$ 426	Priority 1	\$ 426	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		<b>100%</b>				<b>\$ 217,217</b>		<b>\$ 7,247</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 7,247  
- Priority 2 \$ -  
- Priority 3 \$ 209,970

**Township of Chapleau Asset Management Plan**  
**Health Services - Cemeteries**  
*Cemeteries - Building (Chapel)*

Item	Unit	Percentage of Total or Quantity	Year Installed	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Building Structure	%	85%	1936	81	2018	\$ 75,445	Priority 1	\$ 75,445	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	12%	1936	81	2018	\$ 10,651	Priority 1	\$ 10,651	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	2%	1936	81	2018	\$ 1,775	Priority 1	\$ 1,775	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks (parking, landscaping, servi	%	1%	1936	81	2018	\$ 888	Priority 1	\$ 888	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 88,759</b>		<b>\$ 88,759</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ 88,759  
- Priority 2 \$ -  
- Priority 3 \$ -

**Township of Chapleau Asset Management Plan**  
**General Government - Corporate Management**  
*Industrial Site - Building*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement										
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Building Structure	%	74.7%	2009	8	2089	\$ 5,846,340	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Envelope	%	15%	2009	8	2039	\$ 436,160	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Building Mechanical	%	10%	2009	8	2029	\$ 238,536	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Siteworks	%	0.3%	2009	8	2039	\$ 8,723	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 6,529,759</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 6,529,759

**Township of Chapleau Asset Management Plan**  
**Recreation and Cultural Services - Recreational Facilities**  
*Waterfront Park (New Asset in 2017)*

Item	Unit	Percentage of Total or Quantity	Year Installed*	Age	Replacement Year	Estimated Future Value of Replacement	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Site Works	LS	1	2017	0	2077	\$ 2,561,584	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Site Furniture and Signs	LS	1	2017	0	2047	\$ 152,517	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Play Equipment	LS	1	2017	0	2047	\$ 202,932	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Play Equipment and Docks	LS	1	2017	0	2042	\$ 601,181	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Site Servicing	LS	1	2017	0	2092	\$ 874,508	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mechanical / Electrical	LS	1	2017	0	2047	\$ 281,016	Priority 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
						<b>\$ 4,673,739</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

Total future replacement requirement:  
- Priority 1 \$ -  
- Priority 2 \$ -  
- Priority 3 \$ 4,673,739





Asset Management Planning  
for the Township of Chapleau

## Appendix J Vehicles and Equipment Summary



**Township of Chapleau Asset Management Plan**

**Protection Services - Fire, Transportation Services - Roadways, Winter Control and Air Transportation,  
Environmental Services - Waste Collection and Waste Disposal, Recreation and Culture Services - Recreational Facilities**

*Fire - vehicles, Fire - Truck Equipment, Fire - Personal Equipment and Attire, Road Maintenance - Vehicles, Road Maintenance - Equipment,  
Winter Control - Vehicles, Winter Control - Equipment, Airport - Vehicles, Garbage Collection Vehicles, Landfill Site - Vehicles, Parks and Recreation Vehicles*

Year	Make	Model	Age	Service Life (yrs)	Year of Expected Replacement	Estimated FV Replacement Cost	Investment Priority Classification	Projected Replacement Requirement											
								Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
2005	Dodge	1/2 Ton Pick Up	12	12	2018	\$32,678	Priority 1	\$ 32,678	0	0	0	0	0	0	0	0	0	0	0
2006	Chevrolet	1/2 Ton Pick Up	11	12	2018	\$26,409	Priority 1	\$26,409	0	0	0	0	0	0	0	0	0	0	0
1999	Ford	F350 c/w Dump & Hoist	18	15	2018	\$67,045	Priority 1	\$67,045	0	0	0	0	0	0	0	0	0	0	0
1974		20 Ton Float Trailer	43	35	2018	\$54,855	Priority 1	\$54,855	0	0	0	0	0	0	0	0	0	0	0
1991	Champion	740 Road Grader w/acc.	26	20	2018	\$302,162	Priority 1	\$302,162	0	0	0	0	0	0	0	0	0	0	0
1993	Johnston	Street Sweeper	24	20	2018	\$126,163	Priority 1	\$126,163	0	0	0	0	0	0	0	0	0	0	0
1988	Yazoo	Mower 41-PTOB-S	29	20	2018	\$12,190	Priority 1	\$12,190	0	0	0	0	0	0	0	0	0	0	0
1995	GMC	5-ton Fuel Truck / Tank	22	15	2018	\$142,096	Priority 1	\$142,096	0	0	0	0	0	0	0	0	0	0	0
1998	John Deere	644G Loader w/blower,bucket,forks&wing	19	20	2018	\$382,182	Priority 1	\$382,182	0	0	0	0	0	0	0	0	0	0	0
1994	Thompson	Steamer	23	20	2018	\$13,409	Priority 1	\$13,409	0	0	0	0	0	0	0	0	0	0	0
2004	Freightliner	FL80 refuse truck	13	12	2018	\$221,720	Priority 1	\$221,720	0	0	0	0	0	0	0	0	0	0	0
1992	Ford	Converted Ambulance	25	20	2018	\$97,520	Priority 1	\$97,520	0	0	0	0	0	0	0	0	0	0	0
1982	GMC	Cube Van	35	20	2018	\$48,760	Priority 1	\$48,760	0	0	0	0	0	0	0	0	0	0	0
1977	Ford	Pumper Truck	40	25	2018	\$243,799	Priority 1	\$243,799	0	0	0	0	0	0	0	0	0	0	0
1989	Ford	Van	28	20	2018	\$42,665	Priority 1	\$42,665	0	0	0	0	0	0	0	0	0	0	0
2002		Breathing apparatus (12 sets)	15	15	2018	\$54,643	Priority 1	\$54,643	0	0	0	0	0	0	0	0	0	0	0
1999	CAT	950G Loader w/acc.	18	20	2019	\$392,042	Priority 1	0	\$392,042	0	0	0	0	0	0	0	0	0	0
1994	DBH	Thawing Unit / Generator	23	25	2019	\$147,297	Priority 1	0	\$147,297	0	0	0	0	0	0	0	0	0	0
2004		Infra Red Camera	13	15	2019	\$14,790	Priority 1	0	\$14,790	0	0	0	0	0	0	0	0	0	0
2000	CAT	416C Backhoe	17	20	2020	\$137,695	Priority 1	0	0	\$137,695	0	0	0	0	0	0	0	0	0
2008	Chevrolet	1/2 Ton Pick Up	9	12	2020	\$26,671	Priority 1	0	0	\$26,671	0	0	0	0	0	0	0	0	0
2005		Turnout gear/PPE (32 sets)	12	15	2020	\$64,090	Priority 1	0	0	\$64,090	0	0	0	0	0	0	0	0	0
2006		Manifold	11	15	2021	\$9,198	Priority 1	0	0	0	\$9,198	0	0	0	0	0	0	0	0
2010	GMC	Sierra W/T 15	7	12	2022	\$26,714	Priority 1	0	0	0	\$26,714	0	0	0	0	0	0	0	0
1997	Ford	F800 Pumper	20	25	2022	\$269,059	Priority 1	0	0	0	\$269,059	0	0	0	0	0	0	0	0
1998		8x12 Utility Trailer	19	25	2023	\$5,383	Priority 1	0	0	0	0	\$5,383	0	0	0	0	0	0	0
2011		Electric Pressure Washer	6	12	2023	\$8,517	Priority 1	0	0	0	0	\$8,517	0	0	0	0	0	0	0
2011	International	Plow Truck w/wing and sander	6	12	2023	\$211,557	Priority 1	0	0	0	0	\$211,557	0	0	0	0	0	0	0
2003	Bomag	BC572 RB Compactor	14	20	2023	\$543,802	Priority 1	0	0	0	0	\$543,802	0	0	0	0	0	0	0
2012	Ford	Pickup Truck	5	12	2024	\$28,774	Priority 2	0	0	0	0	0	\$28,774	0	0	0	0	0	0
2009		Safety Equipment	8	15	2024	\$17,192	Priority 2	0	0	0	0	0	\$17,192	0	0	0	0	0	0
2013		Transit Bus	4	12	2025	\$106,865	Priority 2	0	0	0	0	0	0	\$106,865	0	0	0	0	0
2010		Radios/Pagers (38 units)	7	15	2025	\$25,827	Priority 2	0	0	0	0	0	0	\$25,827	0	0	0	0	0
2014	Ford	1/2 Ton Pick Up	3	12	2026	\$27,194	Priority 2	0	0	0	0	0	0	0	\$27,194	0	0	0	0
2014	Peterbilt	Refuse truck	3	12	2026	\$348,527	Priority 2	0	0	0	0	0	0	0	\$348,527	0	0	0	0
2014	Ford	1/2 Ton Pick Up (4wd)	3	12	2026	\$33,962	Priority 2	0	0	0	0	0	0	0	\$33,962	0	0	0	0
2014	Ford	1/2 Ton Pick Up	3	12	2026	\$27,194	Priority 2	0	0	0	0	0	0	0	\$27,194	0	0	0	0
2001	Zamboni	Ice Resurfacers	16	25	2026	\$70,857	Priority 2	0	0	0	0	0	0	0	\$70,857	0	0	0	0
2014		Sewer Camera	3	15	2029	\$17,077	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2009		Blower	8	20	2029	\$171,329	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2009		Extraction equipment	8	20	2029	\$16,329	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2014		Rescur Airbag	3	15	2029	\$8,210	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2005	Cargo Mate	Trailer	12	25	2030	\$13,085	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2011	Toro	Zero turn mower	6	20	2031	\$10,469	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2007	Feightliner	Pumper Truck MS 106	10	25	2032	\$340,048	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2013		Sidewalk Machine	4	20	2033	\$213,985	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2015		Sludge Disposal Trailer	2	25	2040	\$12,136	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2016		Bear bins	1	25	2041	\$28,967	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
2008		One Way Plow	9	35	2043	\$29,726	Priority 3	0	0	0	0	0	0	0	0	0	0	0	0
						\$5,272,860		\$1,868,293	\$554,129	\$228,455	\$9,198	\$295,773	\$769,259	\$45,966	\$132,692	\$507,733	\$0	\$0	\$0

Total future replacement requirement:  
 - Priority 1 \$3,725,107  
 - Priority 2 \$686,391  
 - Priority 3 \$861,361.92



Asset Management Planning  
for the Township of Chapleau

## Appendix K Information Technology Summary



**Township of Chapleau Asset Management Plan**  
**General Government - Corporate Management**  
**General Government - Information and Communications Systems**

Description	Estimated Quantity	Average Year	Amount Paid	Year of Expected Replacement	Estimated FV Replacement Cost	Investment Priority Classification	Projected Replacement Requirement											
							Immediate	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Computer Servers	1	1999	\$ 10,000.00	2018	\$14,568	Priority 1	\$ 14,568	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dell Poweredge Server	1	2012	\$ 8,006.16	2018	\$9,016	Priority 1	\$ 9,016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Computer Workstations	2	2006	\$ 7,594.56	2018	\$3,211	Priority 1	\$ 3,211	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Security Camera	1	1995	\$ 9,115.50	2018	\$14,374	Priority 1	\$ 14,374	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Emergency Communications	1	2001	\$ 23,407.48	2018	\$32,776	Priority 1	\$ 32,776	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Solomon Software	1	2000	\$ 38,040.20	2018	\$54,331	Priority 1	\$ 54,331	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vadim Software	1	2012	\$ 19,147.30	2022	\$23,340	Priority 1	\$ -	\$ -	\$ -	\$ -	\$ 23,340	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Telephone System	1	2011	\$ 8,281.61	2021	\$10,095	Priority 1	\$ -	\$ -	\$ -	\$ 10,095	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
HP Work Stations	4	2013	\$ 3,007.01	2018	\$3,320	Priority 1	\$ 3,320	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fire Dept. Computer and software	1	2013	\$ 4,384.33	2018	\$4,841	Priority 1	\$ 4,841	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
JCP Work Stations	2	2013	\$ 2,011.29	2018	\$2,221	Priority 1	\$ 2,221	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
					<b>\$172,093</b>		<b>\$138,657</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,095</b>	<b>\$23,340</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Total future replacement requirement:  
- Priority 1 \$ 172,093  
- Priority 2 \$ -  
- Priority 3 \$ -