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City of Sault Ste. Marie Asset Management Plan Parks & Cemetery

May 2025

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
Draft (V1)	April 5th, 2024	Draft Report – Parks and Cemetery AMP		Christiaan Lombard	Project Manager
Final	August 15th, 2024	Final Report – Parks and Cemetery AMP		Christiaan Lombard	Project Manager
Draft V0	May 30th, 2025	Draft – Park & Cemetery AM Plan Update		Chris Lombard	Project Manager
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List of Abbreviations

Abbreviation	Description
AM	Asset Management
AMP	Asset Management Plan
CCTV	Closed Circuit Television
CIBI	Canadian Infrastructure Benchmarking Initiative
CMMS	Computerized Maintenance Management System
Ea.	Each
ESL	Expected Service Life
FIPPA	Freedom of Information and Protection of Privacy Act
GHG	Green House Gas
GIS	Geographic Information System
Ha	Hectare
KPI	Key Performance Indicator
LoS	Level of Service
m^2	Square Meter
MFIPPA	Municipal Freedom of Information and Protection of Privacy Act
O&M	Operations and Maintenance
O. Reg.	Ontario Regulation
RSL	Remaining Service Life

1 Introduction

AECOM Canada ULC (AECOM) was retained by The City of Sault Ste. Marie (the "City") to update the asset management plan developed in 2022 to comply with the third phase (Phase III) of the Ontario Regulation 588/17 (O. Reg. 588/17) requirements in respect to its core municipal infrastructure assets. The scope of work is outlined in AECOM's proposal dated September 20, 2024, and subsequent project correspondence.

1.1 Background

Sault Ste. Marie is a City located on the St. Mary's River, North of the United States of America, bordering on two of the Great Lakes with an estimated population of 73,368 (2016). The City provides a wide range of public services to their constituents, with the expectation from the public that these services are expected to function efficiently at a certain level. The provision of these services requires the management of the physical assets to meet desired service levels, manage risks, and provide long-term financial sustainability. These assets include, but are not limited to, roads, bridges, sidewalks, wastewater assets, stormwater management assets, landfills, fleets, buildings, and parks.

In accordance with the terms of reference for this assignment, it is understood that the City is proceeding with an asset management plan to comply with the third phase of the regulatory requirements in respect to its core and non-core municipal infrastructure assets, in accordance with O. Reg. 588/17, by July 1, 2025. The non-core assets to be covered in the scope, as defined by the regulation, include the City's protection services, solid waste, parks and cemetery, facilities, fleet, roadway appurtenances, and active transportation.

1.2 Scope and Objectives

In 2015, the City's first Asset Management Plan (AMP) was published. In 2019, by the City Council approval, the Strategic Asset Management (AM) Policy for the City came into effect. In 2022, the City published its core asset AMPs. Following that, the City developed the AMPs for its noncore assets in 2024.

Organizations that implement good AM practices will benefit from improved business and financial performance, effective investment decisions, and better risk management. Stakeholders can expect lower total asset life cycle costs, higher asset performance, and confidence in sustained future performance.

The AMPs capture the City's infrastructure assets and deliver a financial and technical roadmap for the management of the City's assets. The intent of this plan is to provide the means for the City to maximize value from its assets, at the lowest overall expense, while, at the same time, enhancing service levels for its residents.

The objective of Phase III is to update all the core and non-core AMPs to comply with the July 1st, 2025, deadline set by O. Reg. 588/17. Phase III will update the AMP by incorporating the latest asset information, with a focus on:

- Updating the current AMPs to integrate proposed Levels of Service (LoS).
- Defining the lifecycle activities and associated costs required to achieve those LoS.
- Identify the available funding and any funding shortfalls.
- Document the risk(s) of failing to meet the proposed LoS for all asset classes over a 10-year period.

This AMP is an update of the 2024 AMP for the City's parks and cemetery assets, as shown in **Table 1-1**. Other core and non-core AMPs are presented under separate reports.

Table 1-1: In-Scope Parks and Cemetery Assets

Asset Group	Department	Sub-Assets
Parks	Park Land	Active Park Land Undeveloped Park Land
	Recreation	Field Surface, Sports Court, Court Accessories, Pool, Park Amenity
	Park Structure	Park Amenity
	Park Building	Courtside Service Building, Band Shell Building, Comfort Stations, Bay Garage, Green House
	Park Equipment	Lawn & Surface Maintenance, Operation
	Water Treatment	Drinking Water Treatment Facility
Cemetery*	Cemetery Equipment	Lawn & Surface Maintenance, Operation, Crematorium, Information System

*The cemetery facilities are covered in Facility AMP, and the cemetery fleets are covered in Fleet AMP.

The following elements are included within the scope of this AMP:

- Asset hierarchy, a summary of the asset inventory, including the replacement cost of the assets, the average age of the assets, the condition of the assets, and data gaps analysis (**Sections 2**).
- The City's level of service (LoS) objectives, stakeholder identification, current LoS determined in accordance with the qualitative descriptions and technical metrics outlined in O. Reg 588/17, proposed service levels, LoS forecast, and future demand drivers (**Section 3**).
- Asset lifecycle management strategies, lifecycle activities, and funding needs to achieve proposed LoS, risk of not meeting proposed LoS, available funding and funding gap, and alternative (non-financial) strategies to manage funding shortfall (**Section 4** and **Section 5**).

1.3 Asset Management Provincial Requirements

The O. Reg. 588/17 came into effect in 2018 and stipulates specific AM requirements to be in place within Ontario municipalities by certain key dates (**Table 1-2**). The development of this AMP is one of the steps to guide the City towards meeting the July 1st, 2025, deadline.

Table 1-2: O. Reg. 588/17: AM Planning for Municipal Infrastructure

Deadline Date	Regulatory Requirement
July 1st, 2019	All municipalities are required to prepare their first Strategic AM Policy.
July 1st, 2022	All municipalities are required to have an AM Plan for its entire core municipal infrastructure (i.e., water, wastewater, stormwater, roads, and bridges & culverts).
July 1st, 2024	All municipalities are required to have an AM Plan for infrastructure assets not included under their core assets.
July 1st, 2025	All AM Plans must include information about the LoS that the municipality proposes to provide, the lifecycle activities and associated costs needed to achieve those LoS, available funding, any funding shortfalls, and the risk of failing to meet the proposed LoS.

2 State of Infrastructure

Parks and cemetery assets are managed by the City's Public Work - Park Division, who is responsible for the maintenance of grounds and assets at municipal parks, sports complexes, and various other facilities, including park structures, recreation facilities, park buildings, parklands, park equipment, drinking water treatment facilities. Cemetery Assets, including cemetery equipment, are managed by the Community Services Department. The cemetery offices, columbaria and mausoleums are covered in the Facility AMP. Currently, the Park Division manages 83 parks, including the Strathclair, Queen Elizabeth and Elliott Park outdoor sports complex, and the assets range significantly in both complexity and value. The types of service work that the Park division carries out include grass cutting, fielding lining, floral bed, playground maintenance, tree management, refuse collection, and dock and building maintenance.

The inventory of the parks and cemetery is a comprehensive catalogue detailing the quantity, condition, and specifications of these components within the City. By analyzing the inventory and assessing the data gaps, this section facilitates informed decision-making and strategic resource allocation, providing essential insights into the maintenance needs and financial requirements.

2.1 Asset Hierarchy

To fulfill the requirements of O. Reg. 588/17 and to pave the way for robust long-range asset management planning, the City requires a logically segmented asset breakdown structure (hierarchy) under the scope of this AMP. Achieving this requires a sufficiently granular classification of parks and cemetery assets, enabling the identification of individual assets due for renewal. Striking the right balance is also crucial, as there is a fine trade-off between ensuring adequate granularity to provide essential information and avoiding excessive granularity that could make the effort to collect and manage information more burdensome than the usefulness derived from it.

The City has a wide range of parks and cemetery assets organized hierarchically. This breakdown of the infrastructure is derived from the way that assets are presented within the data sources, which indicates the program area's responsibilities and parent-child relationships within each asset type. In **Figure 2-1**, the hierarchy of parks and cemetery is illustrated, showcasing four main categories: park structure, recreation, parkland, park equipment, park buildings water treatment, and cemetery equipment. The parks and cemetery buildings are covered in the Facility AMP, and the parks and cemetery fleets are covered in the Fleet AMP. Each category is further broken down into subcategories. This asset hierarchy establishes a logical indexing of the City's parks and cemetery assets, categorizing them into primary (parent) and secondary (child and grandchild) assets. Such a structure forms the foundational framework for subsequent discussions and analysis, enabling the drill-down to a specific asset within the hierarchy to support maintenance planning or track costs at the asset level or higher levels.

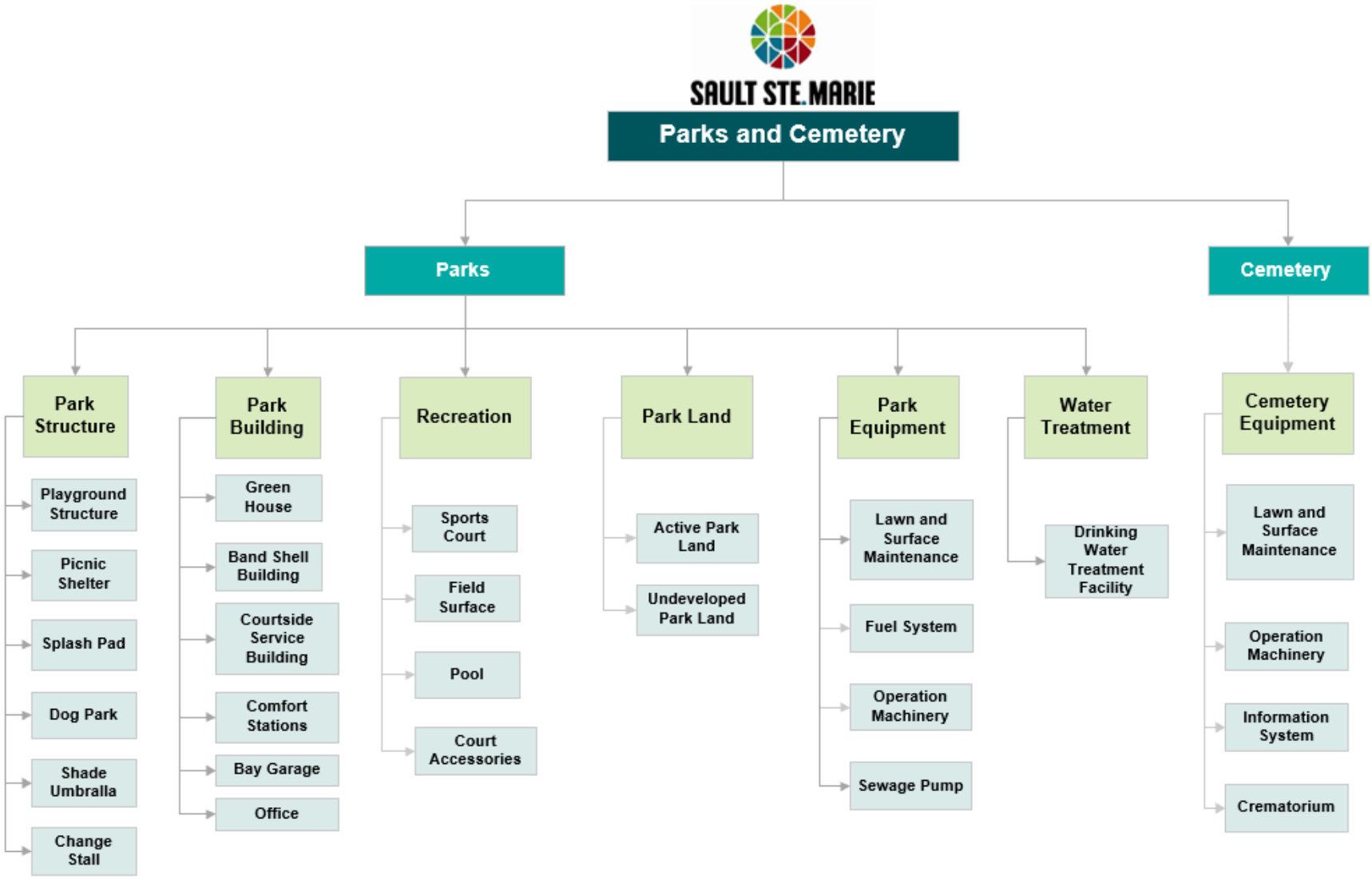

Figure 2-1: City of Sault Ste. Marie Park & Cemetery Asset Hierarchy

2.2 Current State of Assets

2.2.1 Asset Inventory

A completed parks and cemetery asset inventory is compiled based on the raw data provided by the City at the initial stage of the project, which was obtained from the following sources:

- Recreation and Culture Assets Phase 2
- Copy of Equipment Cemetery 2022
- Cemetery Fleet & Assets, Feb 16, 2023
- Active Capital Assets 2021
- FINAL 2023 UPDATE SSM Public Works Replacement Plan Workbook updated 20230309
- 2022 Biennial Structure Inspections
- Phase 3 AMP Inventory Updates

Table 2-1 presents the summary of the City's parks and cemetery asset inventory, with their corresponding quantities.

Table 2-1: Park & Cemetery Asset Inventory Summary

Asset Group	Asset Class	Asset Categories	Quantity	Unit	Inventory Details
Parks	Park Structure	Park Amenities	78	Ea.	68 Playgrounds 1 Dog park 5 Picnic Shelters 2 Splash pads 2 Change Stall 1 Shad Umbrella
	Recreation	Sports Courts	39	Ea.	8 Basketball courts 3 Bocce courts 2 Disc golf courses 5 Outdoor rinks 8 Pickleball courts 2 Skate parks 10 Tennis courts 1 Track
		Field Surface	43	Ea.	1 Cricket pitch 2 Football fields 4 Intermediate Soccer Fields 7 Junior Soccer Fields 9 Mini Soccer Fields 6 Senior Soccer Fields 13 Slow-Pitch Fields 1 Ultimate Frisbee Field
		Pools	660	m^2	2 Outdoor swimming pools
		Court Accessories	104	Ea.	11 Bleachers 5 Field Irrigation System 31 Small Bleachers 39 Track and field lights 10 Baseball dugouts 18 Soccer Shelters
	Park Building	Green House	787	m^2	1 Bellevue Park green house

Asset Group	Asset Class	Asset Categories	Quantity	Unit	Inventory Details
		Office	460	m^2	1 Pointe De Chenes Park offices 1 Bellevue Park staff operation building
		Band Shell Building	444	m^2	1 Bellevue Park band shell building
		Courtside Service Building	1,193	m^2	1 Strathclair Park slow-pitch courtside service buildings 1 Strathclair Park soccer courtside service buildings 1 Elliott Sport Complex courtside service buildings 1 North Street courtside service buildings 1 Esposito Park courtside buildings
		Comfort Stations	450	m^2	1 Pointe De Chenes Park comfort stations
		Bay Garage	369	m^2	1 Pointe De Chenes Park bay garages
	Park Land	Active Park Land	377	Ha	147 Active park land
		Undeveloped Park Land	N/A	N/A	17 Undeveloped park land
	Park Equipment	Lawn & Surface Maintenance	25	Ea.	25 Equipment include sweepers, weeder eaters, tillers, brooms, riding mowers, sander spreaders and seeders
		Operation Machinery	1	Ea.	1 Post driver
	Water Treatment	Drinking Water Treatment Facility	2	Ea.	1 Water treatment plant 1 Secondary water treatment plant
Cemetery*	Cemetery Equipment	Lawn & Surface Maintenance	46	Ea.	40 Equipment include sweepers, weeder eaters, tillers, brooms, riding mowers, sander spreaders and seeders
		Operation Machinery	15	Ea.	15 Equipment include air compressors, generators, lift, hammers, wackers, welders, lowering devices, etc.
		Crematorium	2	Ea.	1 Cremator 1 Emission monitoring system
		Information System	1	Ea.	1 Server

*The cemetery facilities are covered in Facility AMP, and the cemetery fleets are covered in Fleet AMP.

2.2.2 Current Asset Replacement Value

The asset replacement value is the estimated cost that would be incurred to replace an existing asset with a new one of similar functionality, at current market prices. This value represents the monetary amount required to reproduce or procure an asset equivalent to the one being assessed. Examining the distribution of asset replacement values allows the City to comprehend which asset categories hold the highest value for both the City and the public.

The finalized asset replacement values were determined with the largest numbers of the following:

- Escalating the original asset purchase costs to 2025 dollars, by the average inflation rate of the past 10 years (2014-2024) at 2.11%.[1]
- Current replacement cost from the AECOM cost library.

Table 2-2 presents the unit replacement cost and the total replacement value for parks and cemetery asset categories within the City. The final asset replacement values were applied with 15% engineering (Design & Contract Administration) markup and 30% contingencies. In this AMP, park lands with designated active park names are classified as active parkland, while those without such names are categorized as undeveloped parkland. Additionally, based on its asset characteristics, park land is not considered a capital asset requiring replacement, therefore there are no asset replacement values assigned to the park lands. Lands for cemeteries and active parks by their nature are treated as a consumable asset and therefore the condition and remaining ESL should be tied directly to the forecast remaining capacity and life expectancy.

Notably, the recreation constitutes the most significant portion, accounting for a replacement value of approximately $39 million, followed by the park structure at $22 million, the park buildings at $6.6 million, cemetery equipment at $2.3 million, water treatment at $0.85 million, and park equipment at $0.42 million. The combined replacement value for all these categories amounts to approximately $71.6 million. Note that all total replacement values are rounded to the nearest thousand.

[1]Statistics Canada (Non-residential Building Construction Price Index), Altus Group Construction Cost Guide

Table 2-2: Park & Cemetery Current Replacement Value

Asset Group	Asset Class	Asset Categories	Replacement Cost Range	Total Replacement Value (2025 Dollars) With Markup
Parks	Park Structure	Park Amenity	$19,900-$977,800	$22,383,000
	Subtotal			**$22,383,000**
	Recreation	Sports Court	$68,700-$2,316,400	$9,485,000
		Field Surface	$42,800-$2,581,600	$15,533,000
		Pool	$870,000-$1,044,000	$2,048,000
		Court Accessories	$12,700-$373,500	$12,080,000
	Subtotal			**$39,119,000**
	Park Buildings	Green House	$53,000-$230,700	$519,000
		Office	$45,500-$262,400	$1,256,000
		Band Shell Building	$92,600-$411,100	$1,112,000
		Courtside Service Building	$18,000-$230,500	$2,271,000
		Comfort Stations	$77,000-$286,600	$857,000
		Bay Garage	$39,100-$273,400	$591,000
	Subtotal			**$6,606,000**
	Park Land	Active Park Land	N/A	N/A
		Undeveloped Park Land	N/A	N/A
	Park Equipment	Lawn & Surface Maintenance	$9,200-$121,200	$411,000
		Operation Machinery	$10,200	$12,000
	Subtotal			**$423,000**
	Water Treatment	Drinking Water Treatment Facility	$797,800	$854,000
	Subtotal			**$854,000**
Cemetery*	Cemetery Equipment	Lawn & Surface Maintenance	$600-$195,000	$929,000
		Operation Machinery	$2,100-$131,300	$816,000
		Crematorium	$227,500	$487,000
		Information System	$18,300	$20,000
	Subtotal			**$2,252,000**
Total Parks				**$69,385,000**
Total Cemetery				**$2,252,000**
Total Parks and Cemetery				**$71,637,000**

*The cemetery facilities are covered in Facility AMP, and the cemetery fleets are covered in Fleet AMP.

It is noted that the replacement costs are estimated based on the Class 4[2] cost estimation approach. These estimates are typically prepared with limited information, resulting in wide accuracy ranges. Class 4 estimates serve various purposes, including project screening, feasibility assessment, concept evaluation, and preliminary budget approval. They are utilized for detailed strategic planning, business development, project screening at more advanced stages, alternative scheme analysis, confirmation of economic and technical feasibility, and approval to proceed to the next stage. Typically, depending on the construction complexity of the project, relevant reference information, and other associated risks, the accuracy ranges for Class 4 estimates fall within the following bounds (could exceed based on various criteria):

- On the lower side, -10% to -20%
- On the higher side, +20% to +30%

It is also worth noting that the total replacement values are presented in inflated dollars and have been marked up by 45%, including the contingency and engineering service.

2.2.3 Age and Remaining Service Life

In practice, various assets will deteriorate at different rates and not necessarily linearly over time. However, it is pivotal to keep in mind the level of effort required to predict failure compared with the asset value. More sophisticated deterioration modelling may be warranted for very high-value assets, whilst the cost of deterioration modelling for low-value assets may very well exceed the replacement cost of the asset. The actual service life can vary significantly from the estimated service life (ESL). The latter is defined as the period over which an asset is available for use and able to provide the required LoS at an acceptable risk and serviceability (i.e., without unforeseen costs of disruption for maintenance and repair). In some instances, a variation in expected vs. actual service life is evident due to the following factors:

- **Operating conditions and demands**: Some assets are operated intermittently or even infrequently or are being operated at a lower demand than their designed capacity. Thus, the actual operating “age” of the asset is reduced.
- **Environment**: Some assets are exposed to very aggressive environmental conditions (e.g., corrosive chemicals), while other assets are in relatively benign conditions; thus, the deterioration of assets is affected differently.
- **Maintenance**: Assets are maintained through the refurbishment or replacement of components, which prolongs the service life of the asset.
- **Technological Obsolescence**: Some assets can theoretically be maintained indefinitely, although considerations such as cost to maintain the asset, its energy efficiency, and the cost to upgrade to an updated technology that would result in cost savings are likely to render this approach uneconomical.

Initially, the average age was calculated based on the purchase and installation year of each individual asset. Then, based on the age of the asset and the ESL (collected from a State of Infrastructure Workshop with the City, and additional information provided by the City), the remaining service life (RSL) was calculated. It should be noted that in the case where age was higher compared to ESL, RSL was considered as zero.

Table 2-3 and **Figure 2-2** present the weighted average age, weighted average ESL, and remaining service life for various asset sub-categories within the City’s parks and cemetery assets. The average age of the asset’s ranges from 3 to 47 years, with average ESLs that vary from 7 to 150 years. It should be noted that recreation, cemetery equipment, and park equipment are the oldest in comparison with other assets, with less than 30% of the assets’ ESL remaining. Overall, the park assets have surpassed 50% of their ESL life (with the exception of active park lands), while the cemetery assets have exceeded 70% of their ESL.

[2] Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R-97. Cost Estimate Classification System - As Applied In Engineering, Procurement, and Construction for the Building and General Construction Industries, 2020, Retrieved in February 2024

Table 2-3: Parks & Cemetery Asset Average Age, ESL, and Remaining Service Life

Asset Group	Asset Class	Asset Categories	Weighted Average Age	Weighted Average ESL	Remaining Service Life
Parks	Park Structure	Park Amenity	18	27	9
	Recreation	Sports Court	14	19	5
		Field Surface	20	20	0
		Pool	43	45	2
		Court Accessories	3	25	22
	Park Buildings	Green House	11	30	19
		Office	35	50	15
		Band Shell Building	28	50	22
		Courtside Service Building	26	47	21
		Comfort Stations	27	47	20
		Bay Garage	27	54	27
	Park Land	Active Park Land	47	150	103
		Undeveloped Park Land		N/A	
	Park Equipment	Lawn & Surface Maintenance	9	12	3
		Operation Machinery	8	10	2
	Water Treatment	Drinking Water Treatment Facility	27	60	33
Cemetery*	Cemetery Equipment	Lawn & Surface Maintenance	9	14	5
		Operation Machinery	14	17	3
		Crematorium	22	25	3
		Information System	4	7	3

*The cemetery facilities are covered in Facility AMP, and the cemetery fleets are covered in Fleet AMP.

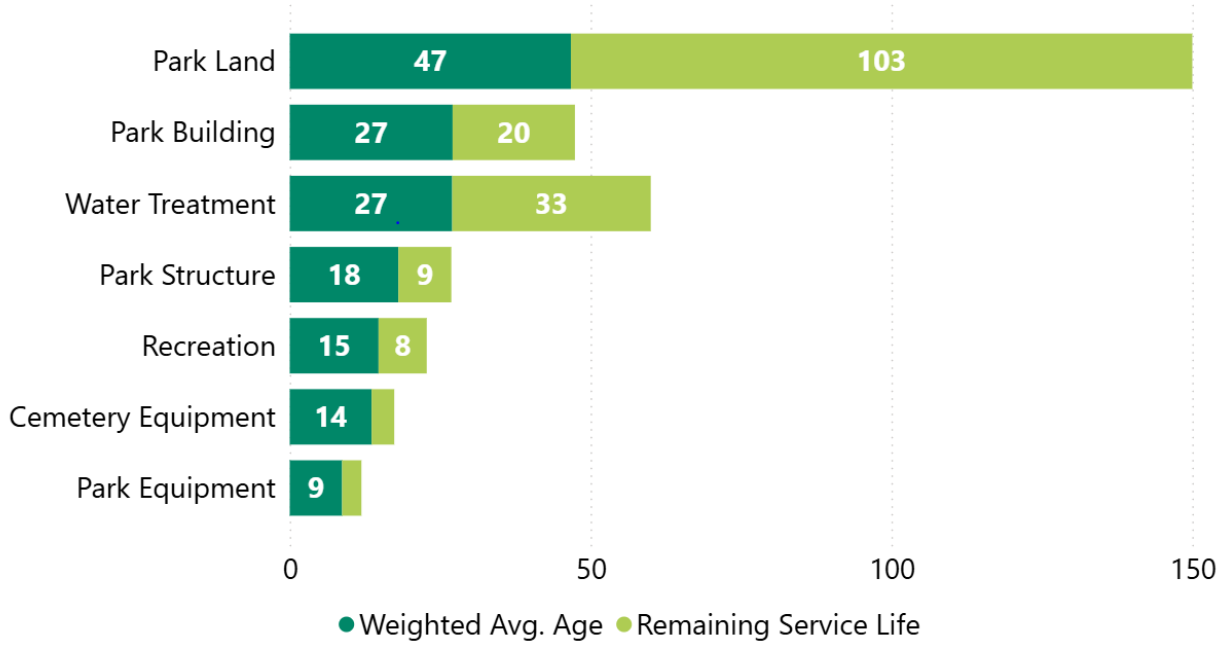

Figure 2-2: Parks & Cemetery Asset Weighted Average Age and Remaining Service Life

Figure 2-3 shows the installation profile of the City's parks assets (excluding the park lands) according to asset classes. The City's parks assets demonstrate a significant wave of development during the past two decades. Minimal investment occurred before 1990, with cumulative replacement values remaining under $3 million. Starting from the 1990s, investments became more diversified and substantial. The period from 2000–2009 stands out with the highest replacement value at $40.4 million, driven predominantly by recreation ($22M) and park structure assets ($17M), indicating a major development phase focused on recreation and amenities. The 2010–2019 and 2020–2029 periods continued this trend, with combined investments of $6.7 million and $14.4 million, respectively. These recent installations show a shift towards modern recreational infrastructure, alongside steady investment in park buildings and equipment, reflecting evolving park functionality and support infrastructure needs.

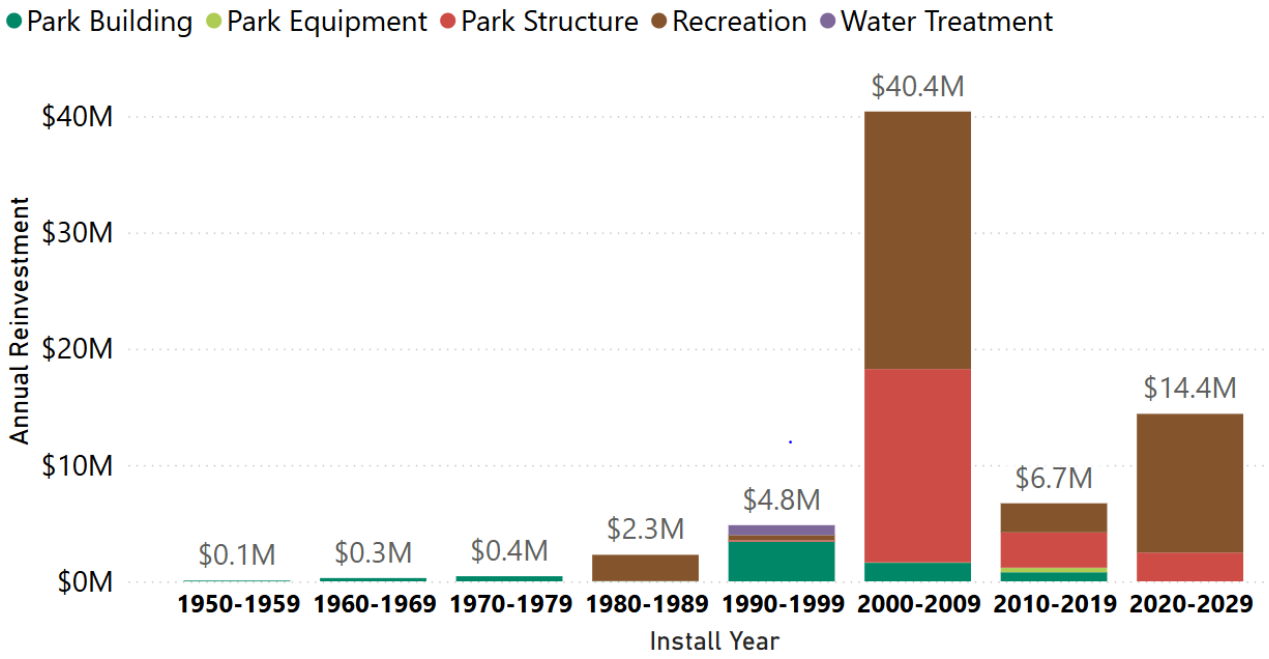

Figure 2-3: Park Assets Installation Profile

Figure 2-4 shows the installation profile of the City's cemetery assets according to asset sub-classes. The 2000–2009 period saw a total replacement value of $0.9 million, largely split between crematorium assets and operation machinery. This was followed by a peak investment phase in 2010–2019, with a total value of $1.3 million, predominantly driven by lawn & surface maintenance and equipment upgrades. The most recent period (2020–2029) shows minimal additions, totaling only $0.1 million, focused mainly on lawn maintenance and a small share of information systems. This trend suggests a deceleration in new capital investment, possibly reflecting asset maturity or shifting operational strategies for cemetery services.

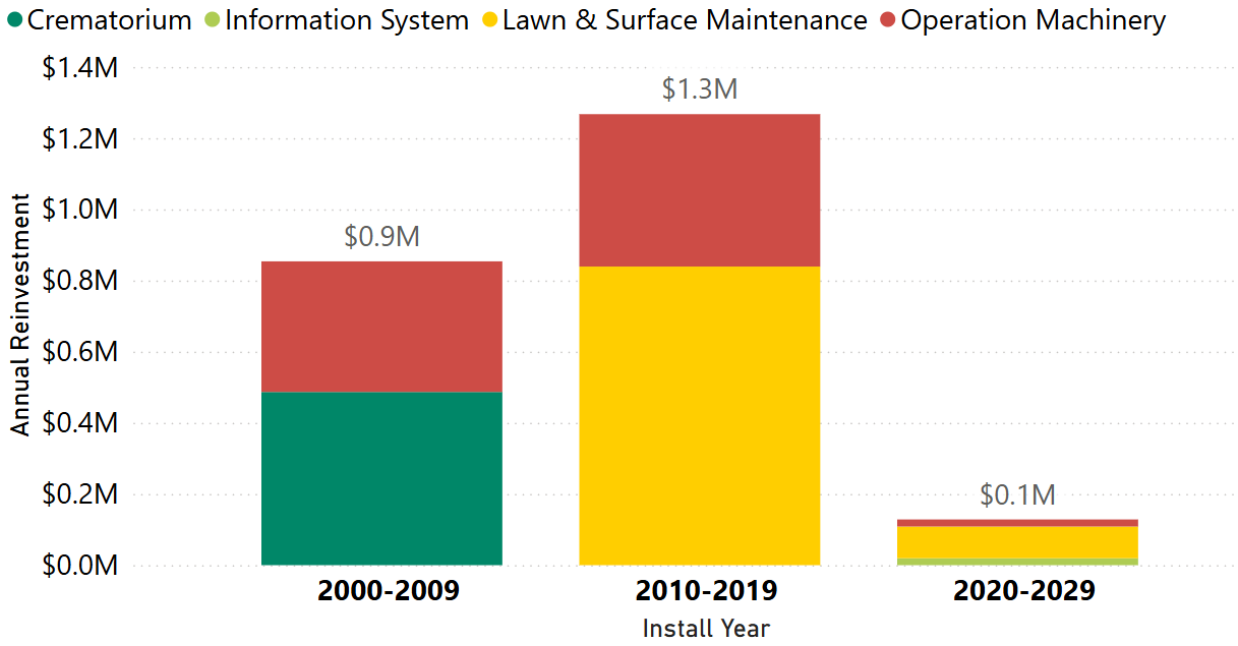

Figure 2-4: Cemetery Assets Installation Profile

2.2.4 Asset Condition

Regular condition assessments for parks and cemetery assets are recommended to monitor the condition and support the asset management decision. For other asset categories that do not have condition assessment results, the two-parameter Weibull distribution function was used to assess the current condition and to project the future condition of the City's parks and cemetery assets. The Weibull distribution has been used extensively in reliability studies and lifetime prediction models in industries ranging from automotive to oil & gas and provides a suitable distribution for this type of analysis.

The underlying premise of the Weibull-shaped deterioration is that while some assets fail prematurely due to severe conditions or improper installation, other assets are very long-lived and function well beyond their theoretical ESL. In order to perform a high-order network-level analysis, it was assumed that assets would fail (and require replacement) within a deterioration envelope/curve approximated by a Weibull probability distribution. The two-parameter Weibull cumulative distribution has two parameters for scale and shape, as set out in Equation [1]: The underlying premise of the Weibull-shaped deterioration is that while some assets fail prematurely due to severe conditions or improper installation, other assets are very long-lived and function well beyond their theoretical ESL. To perform a high-order network-level analysis, it was assumed that assets would fail (and require replacement) within a deterioration envelope/curve approximated by a Weibull probability distribution. The two-parameter Weibull cumulative distribution has two parameters for scale and shape, as set out in Equation [1]:

$$f(x;\alpha,\beta) = e^{-\left(\frac{x}{\beta}\right)^{\alpha}} \quad [1]$$

Where: x = Age
α = Shape parameter (or slope)
β = Scale parameter

A set of Weibull cumulative distribution functions were leveraged to simulate a set of deterioration curves for assets with different ESLs as shown in **Figure 2-5**.

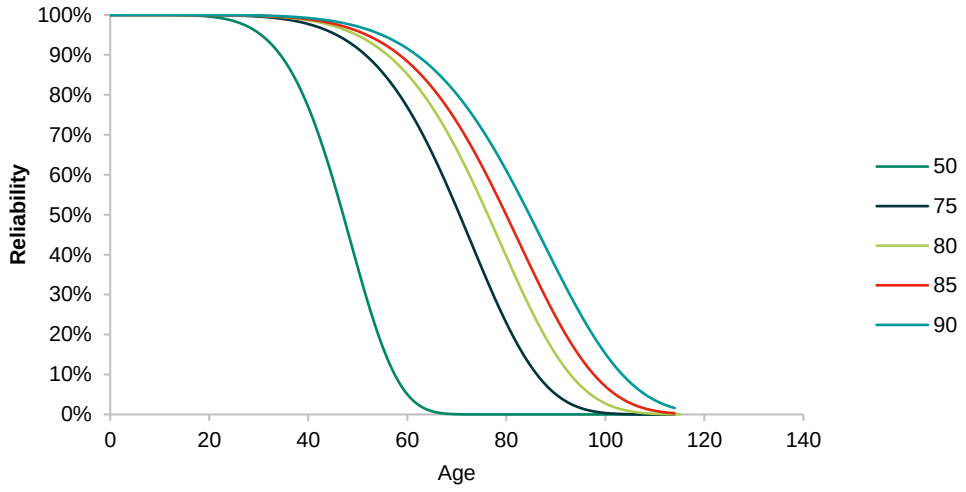

Figure 2-5: Asset Deterioration Curve Samples

The asset condition ratings were based on the five-point condition rating scale presented in **Table 2-4.**

Table 2-4: Condition Assessment Rating Details

Physical Condition Rating	Condition Description
1 - Very Good	The asset is new or in new condition, meets or exceeds all current standards of practice, shows no signs of deterioration, and is fully operable.
2 - Good	The asset has minimal signs of deterioration, generally meets all current standards of practice, and is fully operable.
3 - Fair	The asset may show moderate signs of deterioration, generally meets the current standard of practice, asset performance may decrease and cause service interruptions and is fully operable.
4 - Poor	The asset is approaching its end-of-life expectancy, shows significant signs of deterioration, major components may need to be rebuilt or replaced, may be functioning at an acceptable level is expected to deteriorate further.
5 - Very Poor	The asset is beyond its life expectancy, may no longer meet the current standard of practice, major component may no longer be serviceable, shows significant deterioration, functions at a limited capacity, and may pose a safety hazard if used.

Given the relatively long estimated service life of park land assets (150 years) and the fact that full replacement is unlikely to occur at the end of their service life, these assets have been excluded from the condition analysis. **Table 2-5** and **Figure 2-6** summarize the condition grade of the City's parks and cemetery with associated replacement values. 35% of the assets are in very good condition, with a total replacement value of approximately $25 million, and 16% of the assets are in very poor condition, with a total replacement value of $11.6 million. Good condition accounts for 15% of the existing inventory, having a replacement value of around $10.4 million. Fair and poor condition assets make up 19% and 16%, respectively, with estimated replacement values at $10.3 million and $14 million.

Table 2-5: Park & Cemetery Asset Condition Summary

Rank	Condition Rating	Replacement Value	% of Replacement Value
1	Very Good	$25,415,000	35%
2	Good	$10,436,000	15%
3	Fair	$10,263,000	14%
4	Poor	$13,946,000	19%
5	Very Poor	$11,596,000	16%
Total		**$71,656,000**	**100%**

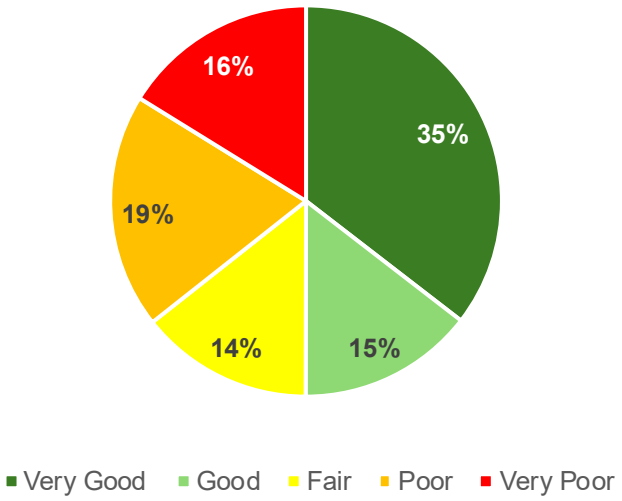

Figure 2-6: Parks and Cemetery Asset Condition Weighted by Replacement Value

Figure 2-7 shows the condition summary breakdown for each asset class, weighted by replacement value. The condition distribution of the City's parks and cemetery assets reveals that recreation assets present the highest portions of assets in a relatively poor state, with approximately $11.9 million in poor and $7.9 million in very poor condition, accounting for 50% of their total replacement value. It is noted that park structure assets with a total replacement value of $5.3 million are currently rated in poor or very poor condition. In contrast, park buildings and cemetery equipment are generally in better condition, with most assets rated good or very good. These findings highlight a pressing need for targeted reinvestment strategies, particularly for recreation and park structure assets, to mitigate service level impacts and manage future asset deterioration.

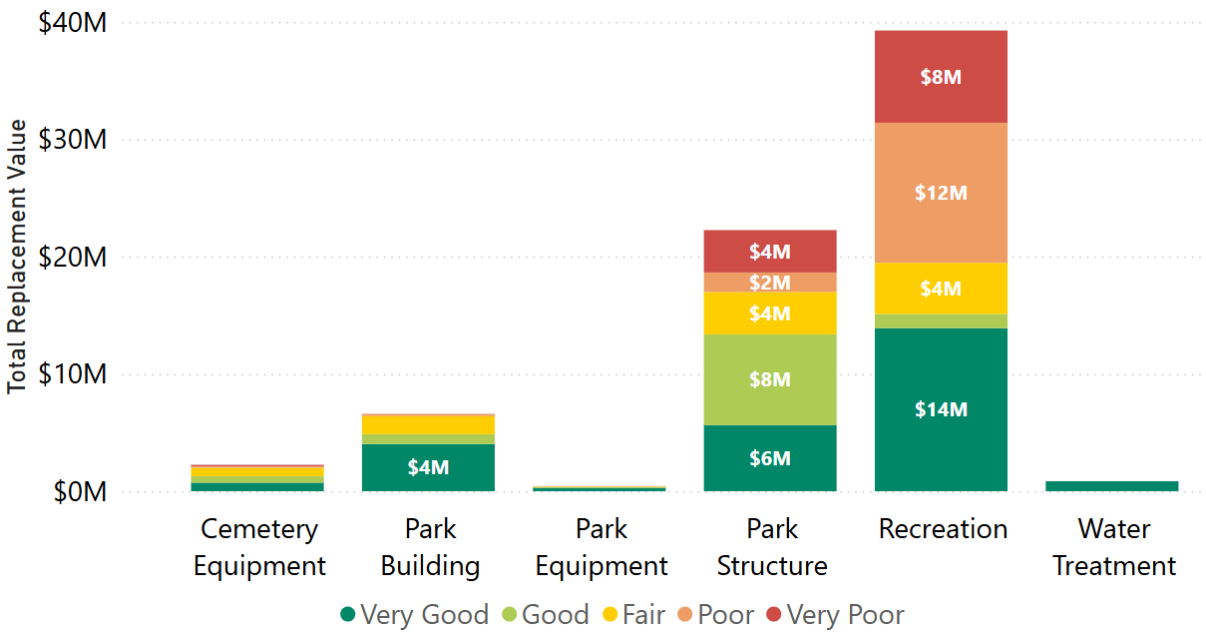

Figure 2-7: Condition Summary for Each Parks and Cemetery Asset Class by Replacement Value

2.3 Asset Data Gap Analysis

This section summarizes the current state of the City's asset data by assessing the quality of the asset inventory. Specifically, this section identifies existing data gaps, determines the overall confidence in the current asset data, and introduces good practices of data management.

2.3.1 Data Gap Observations

The City's parks and cemetery assets were previously stored across multiple spreadsheets. This project has successfully centralized the data into a single inventory. Additionally, it has addressed and filled gaps in key data, such as expected service life and replacement costs, achieving a 100% completeness rate. **Table 2-6** provides a summary of data completeness levels in the compiled parks and cemetery inventory across key data attributes. It is recommended that the City continue to work on filling any remaining gaps, ensuring a comprehensive and up-to-date database.

Table 2-6: Asset Data Completeness

Asset Group	Inventory Completeness (%)					
	Asset ID	Location	Install Date	Condition	Expected Service Life	Replacement Cost
Parks and Cemetery	52%	50%	100%	100%	100%	100%

2.3.2 Data Confidence

The quality of asset data is critical to effective AM, accurate financial forecasts, and informed decision-making. For this reason, it is important to know the reliability of the information is for the State of Infrastructure analysis of the parks and cemetery assets. **Table 2-7** provides a description of the data confidence grades used to classify the reliability of the asset data. This can serve as a reference for the City to assess the quality of their asset data. A brief summary and explanation of the available data can be seen in **Table 2-8**. Overall, the parks and cemetery asset inventory data are comprehensive in terms of the four key parameters required for the AM data analysis.

Table 2-7: Data Confidence Grading Scale

Confidence Grades	Description
A - Highly reliable	Data is based on sound records, procedures, investigations, and analysis, documented properly and agreed upon as the best method of assessment. The dataset is complete and estimated to be accurate ± 2%
B - Reliable	Data is based on sound records, procedures, investigations, and analysis, documented properly, but has minor shortcomings, for example, some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. The dataset is complete and estimated to be accurate ± 10%
C - Uncertain	Data is based on sound records, procedures, investigations, and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. The dataset is substantially complete, but up to 50% data is extrapolated, and the accuracy is estimated ± 25%
D - Very Uncertain	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. The dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E - Unknown	None or very little data held.

Table 2-8: Asset Data Confidence

Asset Group	Inventory Confidence					
	Asset ID	Location	Install Date	Condition	Expected Service Life	Replacement Cost
Parks and Cemetery	C	C	A	A	A	A

2.3.3 Data Management Practice

The asset data lifecycle is a sequence of stages that data goes through from its initial build (i.e., data capture and entry) to its eventual archival and/or deletion at the end of its useful life[3]. A clear definition and understanding of the organization's process for acquiring, storing, utilizing, assessing, improving, archiving, and deleting data (see **Figure 2-8**) will ensure good data management practices and help to sustain levels of data quality required to support AM activities.

Figure 2-8: Asset Information Lifecycle

[3] TechTarget Network (2020): Definition: Data Life Cycle

The seven key stages of the asset data lifecycle are described in more detail below:

- **Acquiring New Data**: The majority of new asset data arises from asset creation, refurbishment, and overhaul activities. New data may also come by way of inheritance or transfers from other business units, organizations, or third parties. As such, it is important to have clearly defined processes in place not only to add or update asset data but also to migrate and merge data from other sources.
    - New parks and cemetery assets should be consistently added to the inventory, and a minimum required data set defined to maintain inventory accuracy and reliability. The required data includes the asset material, size, specification, new equipment make, model, Vehicle Identification Number, fuel type, original purchase price, purchase dates, purchase location, etc.
- **Storing Data**: The way asset data is stored is an important consideration for overall data quality. Having a planned approach to data storage will inevitably reduce the likelihood of duplication and inconsistencies across datasets within the organization. Depending on the needs of the organization, this stage may involve procuring new software to adequately house the data, along with a data backup and recovery plan to ensure that the necessary data protection and privacy standards are met.
    - Assets are typically stored in either the Computerized Maintenance Management System (CMMS) or the maintained asset inventory spreadsheet. For parks and cemetery assets, typical information including park structure specification, sports courts and field surface material and size, parks and cemetery buildings' frame type, story and associated mechanical and electrical equipment need to be captured and maintained to be updated during the daily data management process.
- **Utilizing / Analysing Data**: This aspect of the asset information lifecycle is where users encounter the data to support data-driven activities within the organization. Data can be viewed, processed, edited, and published to allow users to access the data outside the organization. Critical data that has been modified should be fully traceable to maintain the integrity of the data. As such, it is important to communicate to the users why asset data is so important and how it is used to inform decisions within the organization.
    - The City should conduct regular inspections and condition assessments for its playground structure, sports courts and field surfaces, benches, picnic tables, parks and cemetery buildings, swimming pools, and lighting poles to adequately support the associated asset lifecycle activities decision-making including renewal, repair, and replacement.
- **Assessing Data**: Assessing the data quality helps to determine the level of confidence in the information and ensures that decision-makers are making informed decisions based on the quality of data available to them. Moreover, it is important to fully understand the availability and quality of the asset data before issuing information publicly. Some of the results of data degradation, due to improper or lack of assessment, may include:
    - Poor asset performance due to lack of information and understanding of asset behaviour.
    - Non-compliance with statutory regulations or safety requirements.
    - Safety incidents due to risks not being identified or reported.
    - Asset failure due to gaps in maintenance planning.
- **Improving Data**: Improving data quality involves establishing clear targets which are intended to be communicated widely across the organization. It is imperative that the organization understands the costs, benefits, and risks associated with any data improvements since the cost of the improvement may outweigh the overall benefit. It is also important to note that *more* data does not necessarily mean *better* data. It is very possible to collect data that does not add value to the organization. As such, it is critical that the organization aligns its data improvement targets with its AM objectives and considers the data-driven decisions staff need to make at the operational and strategic level, to ensure that the *right* data is being improved upon.
- **Archiving Data**: Archiving data is the process of storing data that is no longer active or required but is able to be retrieved in case it is needed again. Data that is archived is stored in a location where no usage or maintenance occurs. It is recommended that a data archive strategy exists within an organization in order to lay out the data archival requirements, which includes the following factors:

- Consider what data should be archived and articulate the reasons behind the archival decisions.
- Examine any legal obligations pertaining to the retention of data records.
- Determine the appropriate duration for retaining different categories of data records.
- Evaluate the risks associated with the inability to retrieve specific data records.
- Specify the authorized individuals or entities who should have access to archived data records.
- Establish the expected timeframe for retrieving archived data records.
- Communicate these requirements across the organization to ensure staff understand why records are being archived, how they can access archived data records, and for how long archived data records can still be accessed.

- **Deleting Data:** The deletion of data is the final component of the asset information lifecycle. Typically, within organizations, there is resistance to permanently delete data, otherwise known as data "squirrelling", due to the overall capacity of storing data increasing and the cost decreasing. However, within the organization's data archive strategy, a retention period should be specified to indicate when data should be deleted, along with any processes to follow, such as obtaining prior authorization.

2.3.3.1 Current Data Management State

The City's Public Work - Park Division staff are involved in parks and cemetery asset data management. The City's parks and cemetery asset data is currently stored in GIS, Excel spreadsheets, reports, and as-built drawings. Currently, the City updates assets in the GIS post-construction, and there may be a lag in obtaining as-builts and adding/updating data.

The City is following the mandate in records retention procedures for municipalities as per the Freedom of Information and Protection of Privacy Act (FIPPA) and the Municipal Freedom of Information and Protection of Privacy Act (MFIPPA).

2.3.3.2 Future Data Management State

The City will develop and implement a software strategy that helps streamline data management following this AMP. Eventually, the City plans to have a clear and efficient data management process and a comprehensive and robust asset inventory to support their AM decision-making. The implementation plan for data improvement is presented in **Section 6**.

3 Level of Service

3.1 Purpose

Level of Service (LoS) supports every aspect of the overall AM system. The objective of establishing clearly defined service levels is to help the City meet stakeholder values, achieve its strategic goals, make informed decisions, and implement effective asset lifecycle activities.

Documenting LoS is a proven practice that will enable the City to:

- Link corporate strategic objectives to customer expectations and technical operations.
- Balance customer needs and expectations while evaluating the effectiveness of operations and whether the right LoS is being provided at the right cost.
- Transition from an “Asset Stewardship” approach that focuses on making decisions based on maintaining assets in an acceptable condition to a “Serviceability” approach that is geared towards making decisions based on balancing the costs, risks, and goals for the LoS being provided by the City’s assets.
- Communicate the physical nature of infrastructure that the City owns and is financially responsible for, while promoting the use of LoS to enable effective consultation with stakeholders regarding alternative funding options according to desired LoS outcomes.
- Make recommendations on strategies that the City can take now to minimize future renewal costs while ensuring that adequate LoS can be delivered without burdening future generations.
- Assess internal (e.g., program changes) and external (e.g., climate change) factors that have the potential to impact the City’s ability to deliver services and how these factors may impact the LoS being provided.
- Implement a corporate continuous improvement program to further optimize AM across all service areas.

The O. Reg. 588/17 requires that all AMPs include the current and proposed LoS, determined in accordance with the requirements provided (see **Section 1.3**).

3.2 Objectives

Defining LoS objectives is important for drawing a line of sight between the City’s corporate objectives and the tangible asset performance outcomes. To do so, the LoS objectives must take into consideration stakeholder interests to develop asset performance measures that aim to meet the needs and expectations of the community. By doing this, the City will ensure that their assets are striving towards optimal performance, not only operationally, but economically, socially, and sustainably as well. Every stakeholder has certain interests in the service being provided, and in general, the City’s corporate objective is to lift up the community and build pride, and attract people (visitors, employers and employees). The City’s Comprehensive Background Report[4] (2021) for the New Official Plan outlined the overarching themes that reflect the City’s values, as shown in **Table 3-1**. Each overarching theme is also assigned a corporate service objective.

The development of the level of service targets should be aligned with these corporate objectives, which will be addressed in the next iteration of the AMP.

Table 3-1: The City’s Overarching Themes and LoS Objectives

Overarching Themes	LoS Objective
Healthy Community	Supports healthy living, active transportation, access to passive and active recreation, social interaction and the creation of spaces that are comfortable, safe and accessible for all ages and abilities (the “8 to 80 Cities” concept).
Environmental Sustainability	Supports energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions and climate change adaptation.

[4] City of Sault Ste Marie. 2021. Comprehensive Background Report.

Overarching Themes	LoS Objective
Integrated Mobility	Supports accessibility and choice of a diversity of transportation modes.
Sense of Place	Fosters a welcoming place for all that establishes the connection and provides a memorable experience to visitors.
Sustainable Growth	Stimulates reinvigoration of neighbourhoods to provide a complete range of housing, services, employment and recreation.
Economic Resiliency	Supports the growth and diversification of the city's economy.
Social Equity	Contributes to creating a welcoming and inclusive community, focusing on the removal of systemic barriers so that everyone has access to an acceptable standard of living and can fully participate in all aspects of community life.
Cultural Vitality	Celebrates the Sault's history, diverse communities and natural and cultural heritage, with the Downtown as the Sault's core destination for arts and culture.

3.3 Stakeholder Identification

A stakeholder is any person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or an activity. Stakeholder analysis is the process of understanding stakeholder needs, expectations and perceptions relative to the stakeholder's level of interest and level of influence over the organization. The organization typically engages with their stakeholders to:

- Establish which activities or services matter most.
- Understand their risk appetite and risk threshold.
- Understand their willingness to pay for services.

Stakeholders can take many forms and may be internal (i.e., staff, Council) or external (i.e., the public, regulatory agencies, suppliers, neighbouring municipalities, etc.) to the organization. The following groups were identified as key stakeholders for the parks and cemetery service at the LoS workshops. This is not intended to be an exhaustive list; however, the following groups provide a good starting point for the City to move forward to the next stage.

- Residential Customers.
- Industrial, Commercial & institutional (ICI) Customers.
- Visitors.
- Regulatory Agencies.
- Neighbouring Municipalities.
- Developers.
- First Nations.
- Environmental Groups.
- Internal City Departments.
- Council Committees.
- Parks and Recreation Advisory Committee.
- Environmental Sustainability Committee.

3.3.1 Legislated and Regulatory Requirements

Parks and cemetery assets are critical to the City's ability to provide essential services to the community, and for protecting the health and safety of the public. As such, key legislative requirements exist for the City's infrastructure assets, which ensure that minimum requirements are met and standards are in place that promote a high quality of life (i.e., clean drinking water and safe roads, etc.). A sample of key Federal and Provincial legislated requirements is

outlined below in **Table 3-2**. Monitoring and development programs relevant to parks and cemetery assets are also listed.

Table 3-2: Legislated and Regulatory Requirements

Federal	Provincial

• Canadian Environmental Protection Act (CEPA)
• Fisheries Act
	• Environmental Protection Act (EPA)
	  - Ontario Regulation 351 – Marinas
	• Public Parks Act
	• Cemeteries Act
	• Pesticides Act
	• Ontario Drainage Act
	• Accessibilities for Ontarians with Disabilities Act
	• Health Protection and Promotion Act
	  - Ontario Regulation 565 - Public Pools
	• Recreational Water Protocol
	• Bereavement Authority of Ontario
	• Ministry of Environment
	• Conservations Authority Act
	  - Ontario Regulation 97 – Conservation Authorities Regulation

3.4 O. Reg. 588/17 Levels of Service Metrics

Currently, O. Reg. 588/17 identifies LoS metrics for core assets. A number of key LoS performance measures for parks and cemetery assets have been identified in consultation with City staff through workshops, are detailed in **Section 3.5**.

3.5 Proposed Levels of Service

Establishing LoS targets is an important part of continual improvement and performance management. Without performance targets, it is difficult to ascertain whether goals are being met, or the extent of the gap if they are not. Incorporating targets into the City's LoS Framework helps to ensure that targets are reasonable, aligned with customer expectations, and evaluated on an objective basis by considering cost-benefit trade-offs.

One of the key challenges in setting infrastructure performance targets in a municipal environment is that they can often become biased and/or politically motivated. Therefore, it is important to review LoS targets with internal and external stakeholders, especially the customers who will be impacted the most by changes in service delivery. An important aspect of evaluating LoS targets is determining how the user is willing to pay for the service. Regulatory requirements are an exception; however, they only provide the minimum service standard. Cost is still an important parameter to consider when assessing the merits of service improvements. To deal with the financial realities, it is necessary to:

- Calculate how much the service costs based on the current LoS.
- Determine the cost associated with varying the LoS.
- Assess the customers' willingness to pay.

It is important that any targets set be realistic and achievable. Therefore, it is not advisable that the City sets any firm targets until their current performance has been fully assessed.

Table 3-3: LoS Trend Legend

Symbol	Name	Description	Example
	Positively Increasing	The KPI is trending in a good direction, showing continuous improvement over time. This indicates progress toward desired goals and positive performance outcomes.	*The percentage of roads in good condition is increasing.*
	Positively Stable	The KPI is at a strong and desirable level, with no expected increase or decrease. Maintaining this trend ensures consistent performance and long-term stability.	*The number of medical incidents reported is 0 and should be maintained at this level*
	Positively Decreasing	The KPI is trending in a good direction while decreasing over time. A lower value in this case represents an improvement, helping achieve desirable service levels.	*Fuel usage is currently desirable and decreasing with better technology*
	Negatively Increasing	The KPI is trending in a bad direction and worsening over time. This suggests an ongoing issue that may require intervention to prevent further negative impacts.	*The maintenance backlog is increasing into an even larger gap.*
	Negatively Stable	The KPI remains at a poor level, with no expected improvement or further decline. While the situation is not worsening, it also means no progress is being made toward improvement.	*Road conditions are poor, current replacement efforts may prevent the condition from worsening but will not improve the overall condition.*
	Negatively Decreasing	The KPI is trending in a bad direction while decreasing over time. A declining value in this case indicates a worsening condition, requiring attention to mitigate risks and negative consequences.	*The number trained staff members are decreasing.*

A summary of the City's parks and cemetery service level metrics are presented in **Table 3-4.**

Table 3-4: Parks and Cemetery Current and Proposed Levels of Service

LoS #	Service Area	LoS Measure	Unit of Measure	LoS Category	Current Performance	Trend	Lifecycle Activities to Meet Proposed LoS (Positive Trend) / to Mitigate the Impact of the Proposed LoS (Negative Trend)	Financial	Risk of Not Meeting Proposed LoS	Note
1	Cemetery	First treatments	#	Customer	2020: 1 2021: 0 2022: 1 2023: 0 2024: 0	Current: → Target: →	N/A	Budget Impact: Low	Low	N/A
2	Cemetery	Annual natural gas consumption for the cremator	GJ	Technical	2020: 103,192 2021: 103,641 2022: 115,794 2023: 118,542 2024: 101,466	Current: → Target: →	Ensure the burners are operating efficiently and the fuel-air mix is optimized to prevent excessive gas usage. When replacements are due, install modern, energy-efficient burners that consume less gas. Develop a formal maintenance schedule based on manufacturer guidelines to avoid performance degradation.	Budget Impact: Medium Associated Cost: $90,000 every 3-4 years	Increased fuel consumption directly increases operational expenses, putting pressure on the cemetery service budget. Higher fuel use leads to greater CO_2 emissions, conflicting with the City's GHG reduction goals (e.g., Net Zero by 2050).	N/A
3	Cemetery	# of grave repairs	#	Technical	2020: 313 2021: 345 2022: 399 2023: 282 2024: 521	Current: → Target: →	Regular complement of student employees (15) Conduct scheduled inspections to proactively identify early signs of deterioration (e.g., sinking graves, damaged headstones, unstable surrounds) before they require major repairs. Improve soil stabilization to prevent settlement or erosion, which are common causes of grave structure issues. Ensure adequate site drainage to prevent water pooling, which accelerates soil settlement and structural deterioration around graves. Manage roots from nearby trees or shrubs that can disturb grave structures over time.	Budget Impact: Medium Associated Cost: $133,000 in 2024	Delaying or missing necessary repairs can lead to more severe and costly structural failures in gravesites. Unrepaired graves may lead to soil settlement or erosion, impacting adjacent plots and requiring more extensive site remediation. Missed repairs contribute to a faster decline in the overall condition of cemetery infrastructure, increasing future renewal costs.	N/A
4	Cemetery	Asset Condition: Percentage of assets in Fair or Better condition	%	Technical	2024: 89%	Current: → Target: →	Conduct condition assessments at least annually for key assets like pathways, retaining walls, headstones, columbarium structures, fencing, and site furnishings. Replace or rehabilitate assets that have dropped below fair condition, prioritizing based on criticality and safety. Prioritize maintenance and renewal based on asset criticality and likelihood of failure.	Budget Impact: Medium	An increasing number of assets in poor condition can overwhelm the annual maintenance budget. Poorly maintained cemetery assets negatively impact visitor experience and may restrict public access to certain areas for safety reasons. Major asset failures could require temporary closures or restricted access to sections of the cemetery.	N/A
5	Parks	Number of hours of sports fields booked annually	#	Technical	N/A	Current: ↑ Target: ↑	Additional lighting for more play hours, increased maintenance budget, improved infrastructure, more facilities, technology to make activities possible in all seasons (insulation for outdoor rinks), and all climates (irrigation and drainage systems), more supporting facilities like temporary washrooms and changing rooms, and permanent supporting facilities.	Budget Impact: High	Loss of asset from asset closure due to condition. Decreased quality of life and standard living. Customers unable to partake in activities. Customer dissatisfaction and complaints	Demand is increasing due to sport popularity like Pickleball and usage from College/University-level sports. Some sports, like Pickleball, are unable to track hours due to activity type.
6	Parks	Total number of new trees planted annually	#	Technical	N/A	Current: ↑ Target: ↑	Current demand of 150 trees per year can be met. An increase may result in additional procurement of staffing and resources for tree care, labour, and treatment.	Budget Impact: Medium	Decreased quality of life and standard of living. Negative climate impact. Urban heat island effect. Increase complaints.	Annual tree planting program that receives funding and interest from nearby stakeholders like communities, Canada Forestry, and Council.
7	Parks	Percentage of playgrounds inspected monthly	%	Technical	N/A	Current: ↓ Target: ↑	Implementing electronic inspections. Improving the condition of playgrounds so that less time needs to be spent on repair. Identifying methods of precenting vandalism.	Budget Impact: High	Lawsuits against the City. Poor community image. Decreased usage of playgrounds.	The City is unable to meet suggested inspection requirements. Park inspections require trained staff who are certified, limiting staff availability. The City has recently received approval to hire a new employee but cannot predict if inspection requirements will be met.
8	Parks	Asset Condition: Percentage of assets in Good and Very Good condition	%	Technical	2024: 88%	Current: ↓ Target: ↓	Increased funding. Increase qualified staff for operations and maintenance. Reduction in number of assets.	Budget Impact: High	Further deterioration of assets leading to litigation. Loss of assets.	As current resources are insufficient for both capital and maintenance needs, the infrastructure gap continues to grow.

Performance Trend Legend:

↑ Positively Increasing	→ Positively Stable	↓ Positively Decreasing	↑ Negatively Increasing	→ Negatively Stable	↓ Negatively Decreasing

3.6 2025-2034 10-Year Levels of Service Forecast

Considering the City's characteristics, growth projections, and strategic objectives, the proposed performance trend for each LoS metric for the next 10 years is projected and outlined in **Table 3-5**. This table indicates whether each measure is expected to trend upward, downward, or remain stable, taking into account the nature of the measure, data availability, and whether the projected trend impacts positively or negatively on the proposed LoS.

Table 3-5: 2025-2034 10-Year Levels of Service Forecast for Parks and Cemetery

LoS #	Service Area	LoS Measure	Unit of Measure	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Target Trend	Basics for Forecast
1	Cemetery	First treatments	#	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	→	SME (Subject Matter Expert) opinion
2	Cemetery	Annual natural gas consumption for the cremator	GJ	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	→	SME opinion
3	Cemetery	# of grave repairs	#	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	300 - 400	→	SME opinion
4	Cemetery	Asset Condition: Percentage of assets in Good and Very Good condition	%	89%					Positively Maintain					→	• The current 2025 Level of Service (LoS) performance is at 89%, which aligns with the operational requirements of cemetery services. • The goal is to secure adequate funding to sustain this level of service over time.
5	Parks	Number of hours of sport fields booked annually	#						Positively Increasing					↑	SME opinion
6	Parks	Total number of new trees planted annually	%						Positively Increasing					↑	SME opinion
7	Parks	Percentage of playgrounds inspected monthly	%						Positively Increasing					↑	• The number of playground structures inspected each month will be increased to comply with regulatory requirements.
8	Parks	Asset Condition: Percentage of assets in Good and Very Good condition	%	58%					Negatively Decreasing					↓	• The current 2025 Level of Service (LoS) performance stands at 58%, reflecting the aging and deteriorating condition of several park assets. • Given the limited forecasted funding, it is unlikely that this level of service can be maintained or improved without additional investment.

Performance Trend Legend:

↑ Positively Increasing	→ Positively Maintain	↓ Positively Decreasing	↑ Negatively Increasing	→ Negatively Maintain	↓ Negatively Decreasing

3.7 Future Demand Drivers

Demand management is a critical component of managing the desired LoS in a sustainable manner, now and into the future. Understanding demand drivers enables the City to proactively develop effective, long-term strategies that are suitable for the City's unique political, environmental, social, and technological landscape.

A summary of factors identified from the LoS workshop that would impact parks and cemetery service levels includes, but is not limited to, the following:

- Energy and demand management.
- Aging park infrastructure.
- Active living customer demands.
- Funding level.
- Climate change.
- Staffing expertise.
- Cemetery demands.
    - Mausoleum sales.
    - Green burials.

On November 2, 2021, the City's Planning Division released the Comprehensive Background Report for updating the Official Plan. The City's Official Plan guides local decision-making on land use, development, and public infrastructure over the next 20 years. The City's population is expected to reach 80,000 people by 2031, and 83,300 people by 2036. Employment is projected to grow by approximately 6,000 jobs, from 31,000 jobs in 2016 to 36,900 jobs in 2036.

When additional assets to accommodate this population and employment growth are introduced to the City's portfolio, additional human resources, training and funding are required to maintain and operate and renew or replace those assets. O. Reg. 588/17 requires municipalities by July 1, 2025, to estimate capital expenditures and significant operating costs to achieve the proposed LoS and accommodate projected increases in demand caused by population and employment growth. This includes the estimated capital expenditures and significant operating costs related to new construction and/or upgrading existing municipal infrastructure assets. This has been addressed in **Section 5.3**.

4 Asset Management Strategies

4.1 Asset Lifecycle Management Introduction

Asset lifecycle management focuses on the specific activities that should be undertaken during all phases of the asset lifecycle. Considering entire asset lifecycles can ensure that the City makes sound decisions that consider present and future service delivery needs.

The overarching goal of lifecycle management is to maximize the long-term benefits and services that our assets deliver while minimizing the associated costs and risks in the long run. Every asset has a lifecycle cost, which is the total cost of all the activities undertaken throughout its service life. Part of the purpose of the asset management planning process is to fully understand and predict the long-range financial requirements for the City's infrastructure to facilitate planning and resource management in the most cost-effective manner possible. **Figure 4-1** illustrates how costs typically accumulate over an asset's life. It is worth noting that the accumulation of the ongoing operations and maintenance, renewal & replacement and disposal costs is many multiples of the initial acquisition costs. As such, it is important to fully understand the entire lifecycle costs across an asset's entire life before proceeding with asset acquisition.

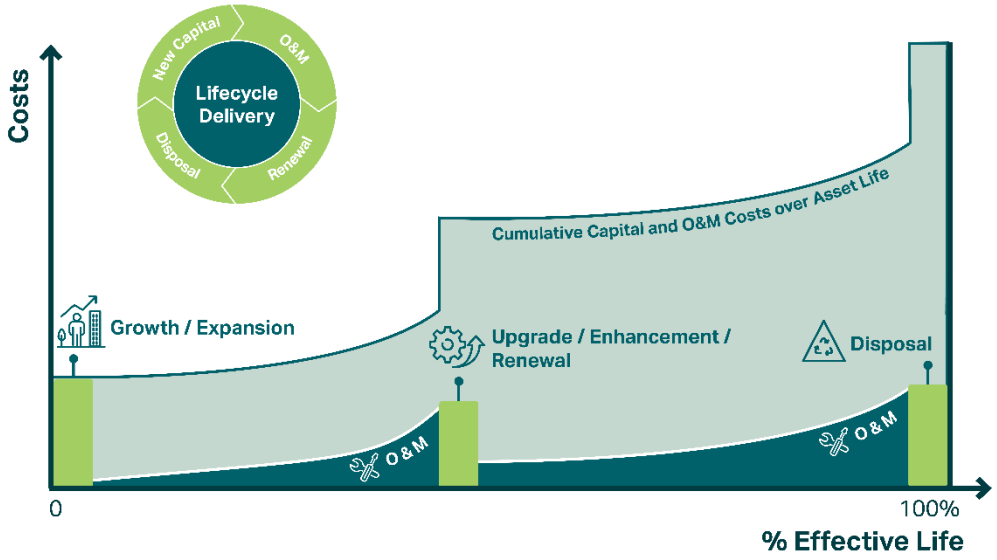

Figure 4-1: Lifecycle Cost Accumulation Over Asset Life

Asset lifecycle management strategies are typically organized into the following categories.

1. **Asset Acquisition / Procurement / Construction**: Acquisition includes expansion activities and upgrading activities to extend services to previously unserved areas or expand services to meet growth demands and to meet functional requirements. When acquiring new assets, the City should evaluate credible alternative design solutions that consider how the asset is to be managed at each of its lifecycle stages. Asset management and full life cycle considerations for the acquisition of new assets include, but are not limited to the following:

   - The asset's operability and maintainability.
   - Supply chain considerations.
   - Availability and management of detours.
   - Staff skill and availability to manage the asset.

- The manner of the asset's eventual disposal.

2. **Asset Operations and Maintenance (O&M)**: As new infrastructure is commissioned, the City accepts the responsibility of operating and maintaining the infrastructure according to O&M standards to ensure that the infrastructure is safe and reliable. Operations staff provide the day-to-day support required to operate the infrastructure. In few cases, operation costs are minor, but for most there are significant increases. For example, underground pipes require almost no operational support while a facility such as a park and cemetery equipment requires full-time staff to operate the facility safely and efficiently. Maintenance expenses include periodic preventive maintenance to ensure that the infrastructure can provide reliable service throughout the life of the asset and corrective maintenance that is required to repair defective assets as and when needed. Inadequate funding for O&M will have an adverse impact on the lifespan of assets. The amount of O&M resources required in any period is a function of the current inventory of infrastructure and total O&M needs required for each asset. As the inventory of infrastructure grows, total O&M requirements will also grow.

3. **Renewal and Replacement:** The third portion of full life cycle costing relates to the renewal and replacement of infrastructure that have deteriorated to the point where it no longer provides the required service. Renewal cost is sometimes incurred during the life of an asset where an investment is made to improve the condition and / or functionality of the asset e.g., repairing of playground structures. Replacement activities that are expected to occur once an asset has reached the end of its useful life and rehabilitation is no longer an option.

4. **Decommissioning and Disposal:** There will inevitably come a point in time when an asset must be removed from service and, depending on the type of asset, there may be significant costs associated with its decommissioning and disposal. Factors that may influence the decision to remove an asset from service include changes to legislation that cause the asset to be in non-compliance, the inability of the asset to cope with increased service levels, technology advances that render the asset obsolete, the cost of retaining the asset is greater than the benefit gained, or the current risk associated with the asset's failure is not tolerable.

   Normally, major costs that may be incurred during disposal and decommissioning derive from the environmental impact of the disposal and, if required, the rehabilitation and decontamination of land. In some cases, there will be residual liabilities and risks to consider if a decision is made to partially abandon the asset as opposed to fully disposing of its components. However, some cost savings may be achieved through the residual value of the asset or by exploring alternative uses for the asset. In all cases, it is important to consider disposal and decommissioning as the strategy employed has the potential to attract significant stakeholder attention. For that reason, the costs and risks associated with disposal and decommissioning should be equally considered in the City's capital investment decision-making process.

4.2 Asset Acquisition Strategies

The City's need for new parks and cemetery assets is propelled by both aging infrastructure and a growing demand for services and additional facilities. The aging infrastructure, characterized by wear and tear over time, poses challenges in maintaining the safety and functionality of existing parks and cemetery assets. Acquiring new assets becomes imperative to ensure that the City continues to deliver safe and well-maintained facilities for residents.

In addition, the City recognizes the diverse recreational needs of the residents. With a strong interest in activities such as cricket, pickleball, skateboarding, and hiking, residents expect the City to add new park amenities. Furthermore, residents emphasize a desire for neighborhood-based play options, reflecting a preference for localized and community-centric recreational opportunities. Essential support amenities, including benches and washrooms, are also vital to enhance residents' experiences. Last but not least, the City acknowledges the growing interest in physical activity among senior residents, with a dedicated effort to ensure accessibility and ease for this demographic.

Table 4-1 summarizes the acquisition activities associated with the City's parks and cemetery assets.

Table 4-1: Acquisition Activities for Parks and Cemetery Assets

Asset Group	Activities Undertaken by the City	Notes
Parks	• Develop more space: - Build neighborhood parks. - Develop sports fields, ball courts, and bike/skate parks. • Add new park structures: - Acquire new senior-friendly facilities and park structures. - Add new signs to raise environmental awareness.	The City's master plan underscores the intention to implement a park revitalization program, which, despite lacking recent support, has been pursued through collaborations with non-profit organizations. The City is currently revitalizing two parks. The City's park density, measured in hectares per 1,000 residents, stands at 5.16, surpassing the City of Toronto's 2.8 and slightly higher than the City of Sudbury's 4.
Cemetery	Purchase and lease new equipment.	The City has established a Mausoleum Strategic Plan for the next decade, allocating $1.5 million to $2 million for new builds.

4.3 Asset Operations and Maintenance Strategies

Effective O&M of assets is crucial for sustainable performance and longevity. Managing O&M costs involves developing comprehensive strategies that optimize resource utilization while ensuring asset reliability. Proactive maintenance schedules and condition monitoring can help identify potential issues before they escalate, reducing unplanned downtime and minimizing repair costs. Implementing energy-efficient technologies and best practices in parks and cemetery AM also contribute to cost-effectiveness over the asset's lifecycle. **Table 4-2** summarizes the O&M activities associated with the City's parks and cemetery assets.

Table 4-2: O&M Activities for Parks and Cemetery Assets

Asset Group	Activities Undertaken by the City
Parks	• Conduct condition assessments every 3-5 years with the following exceptions: - Playground equipment is inspected monthly by certified playground practitioners (City Staff), as regulated by the Canadian Standards Association (CAN/CSA-Z614-14: Children's Play spaces and Equipment). - Bi-annual inspections are conducted for buildings, bridges on hub trails, bleachers, and high mass lighting. - Structural assessments are completed by external engineering consultants alongside the bi-annual bridge inspections. • Conduct safety and condition inspections periodically. • Conduct scheduled repair and maintenance: - Re-coat the structure with peeling paint or corrosion. - Fix or replace the damaged parts. - Conduct court/field surface cleaning and patch repairs. - Conduct parking lot surface cleaning and patch repairs. - Rent mobile washrooms during peak seasons at popular sites. - Conduct routine maintenance, including plant maintenance, lawn trimming, snow removal, utility maintenance, garbage cleaning, and pest and animal control.
Cemetery	• Conduct equipment repair. • Conduct oil and filter changes for cemetery equipment • Maintain bearing structures annually. • Rent equipment during peak seasons and contract out maintenance as needed.

4.4 Renewal and Replacement Strategies

Renewal often involves upgrading or refurbishing existing assets to extend their lifespan, while replacement entails acquiring new assets. The costs associated with these activities include not only the direct expenses of acquisition

but also indirect costs such as downtime during the transition, training for new technologies, and potential disposal or recycling costs.

In line with the acquisition of parks and cemetery assets, the City's choice to renew and replace these assets is prompted by factors such as aging infrastructure and increasing demand. **Table 4-3** summarizes the renewal and replacement activities associated with the City's parks and cemetery assets.

Table 4-3: Renewal and Replacement Activities for Parks and Cemetery Assets

Asset Group	Activities Undertaken by the City
Parks	• Replace the old park structures. • Resurface the old courts/fields. • Re-coat the swimming pools. • Restore and expand visitor amenities, including garbage bins.
Cemetery	• Replace equipment on a regular basis or at the end of its service life.

4.5 Decommissioning and Disposal Strategies

Effective asset decommissioning and disposal are integral components of strategic AM. As the City's parks and cemetery assets approach the end of their lifecycle or become obsolete, a systematic approach to their removal and decommissioning becomes imperative. This process involves careful planning, environmental considerations, and adherence to the City's regulatory requirements.

However, the disposal of assets within the realm of parks and cemetery demands unique consideration due to their special nature. According to the City, parks or cemetery that have been developed and named are highly unlikely to be disposed of. This sentiment is reinforced by strong support from both residents and the Council for safeguarding municipal parks and green spaces, reflecting a shared commitment to preserving these vital community spaces. Therefore, there is a consensus that the bar for the disposal of parkland should be set exceptionally high to ensure careful scrutiny and thoughtful decision-making, thus maintaining the integrity and purpose of these valued public spaces.

4.6 Risk Associated with Lifecyle Activities

In the context of AM, risk is defined as the consequence or impact of uncertainties on AM objectives. These uncertainties span a spectrum of events, including financial market fluctuations, unexpected asset failures, changes in regulatory environments, and other factors capable of influencing the performance or condition of assets. Risk management, developed to handle uncertainties in a systematic and timely manner, is a practical framework that ensures thoughtful decision-making and protects the achievement of goals. The risk management process generally follows a series of steps, as outlined in **Table 4-4**.

Table 4-4: Key Steps in the Risk Management Process

Step	Description
• Establish the context	• Define the scope of the risk management process and the objectives that the City seeks to achieve through effective risk management. • Consider the City's internal and external factors and understand stakeholder expectations.
• Risk identification	• Identify potential risks that could impact the City's AM objectives.
• Risk analysis	• Utilize qualitative or quantitative analysis methods to assess risks.
• Risk evaluation	• Evaluate the likelihood and impact of identified risks. • Prioritize risks based on their criticality.
• Risk treatment	• Develop strategies to reduce the likelihood and impact of identified risks. • Implement preventive measures to address potential issues proactively. • Establish contingency plans for managing risks that cannot be eliminated.

Step	Description
• Monitor and review	• Regularly update risk assessments to reflect evolving circumstances. • Develop KPIs and monitoring tools to track the effectiveness of risk treatment strategies. • Learn from the City's past experiences and continuously improve risk management strategies.

Over the course of an asset's service life, the accelerating rate of deterioration with age poses inherent risks, inevitably leading to a corresponding increase in maintenance costs. **Figure 4-2** illustrates a general asset deterioration curve. This trend becomes particularly pronounced in the final phase of the asset's service life, where the cost of maintenance experiences a rapid escalation, highlighting the financial risks associated with prolonged neglect. This phenomenon underscores the critical importance of preventive maintenance in the early stages of an asset's service life. By addressing risks proactively during these initial periods, the potential financial burden tied to accelerated deterioration in later stages can be effectively mitigated.

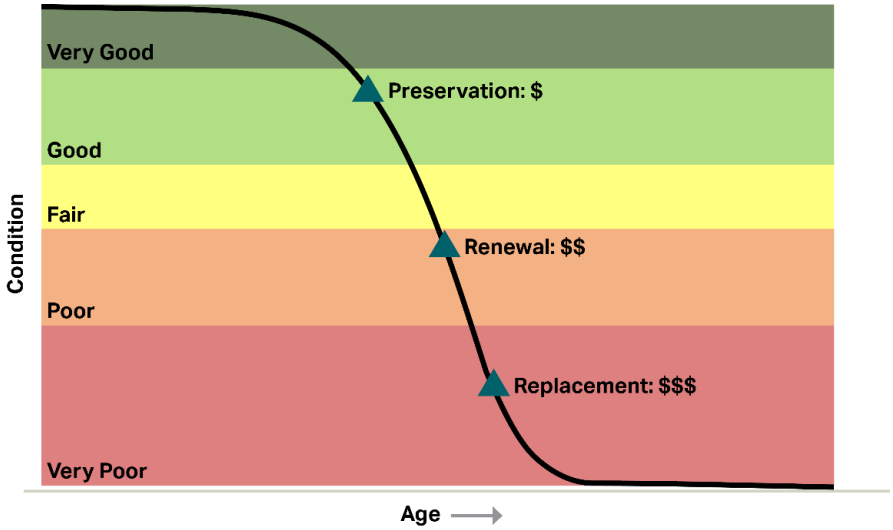

Figure 4-2: Asset Deterioration Curve and Renewal Costs

Beyond the general guidance, the City's approach to risk management should be tailored to their overarching goals, financial resources, and willingness to tolerate uncertainties. It is important to note that failure to meet the proposed LoS also poses several risks, including fines or penalties imposed by government authorities, driver confusion, and increased likelihood of accidents. To help shape the City's risk management process, AECOM recommends taking into account the following key considerations:

1. **Navigating the Challenge of Excess Park Land**

   This situation arises from the necessity of striking a delicate balance between providing ample green spaces for the community and managing these areas efficiently. While parks play a crucial role in enhancing residents' quality of life, an excess may lead to challenges such as increased maintenance costs, potential underutilization, or other financial considerations. The Council's desire to reduce park land reflects the need to align the city's resources with the optimal size and functionality of its park system. This ensures that the available land is used effectively and efficiently to meet the evolving needs of the community."

2. **Growing Accessibility Requirements**

   As the demand for higher levels of service grows, the City faces an increased need to ensure that parks and cemetery assets align with accessibility standards, accommodating the diverse needs of the community. However, the City's aging infrastructure poses an additional risk, as some equipment may not meet evolving standards, potentially resulting in accessibility gaps. To address these challenges, the City should adopt a holistic approach that combines technological innovation, policy adjustments, and systematic infrastructure upgrades.

3. Regulatory Park Structures and Sports Field Surface Inspections

Maintaining park structure and sports fields are crucial for keeping the City's recreational service safe. Not only does neglecting them pose a safety hazard, but it can also lead to costly lawsuits against the City.

4. Increased Maintenance Costs

Regular maintenance of parks and cemetery assets is a cost-effective strategy that prevents the escalation of minor issues into major repairs or replacements (see **Figure 4-2**).

5. Filling the Data Gaps for Parks Asset Inventory

The City's current inventory assessment emphasizes land officially named as parks, thereby excluding areas without this designation or zoning. Notably, instances exist where the City has zoned land for parks that currently lack an official name. In response to this, AECOM recommends that the City conduct a comprehensive review to assess the complete park inventory. Furthermore, AECOM suggests distinguishing between wood lots (non-servicing parks) and officially named parks to enhance the accuracy and nuance of data management.

5 Funding Need Analysis

Financial forecasting and capital planning are a critical element in ensuring the efficient and sustainable management of infrastructure. This involves estimating future financial needs and developing a strategic plan to secure the necessary funding for the maintenance, renewal, or expansion of assets. By accurately forecasting financial requirements and implementing a well-structured capital plan, the City can not only ensure the long-term viability of their infrastructure systems but also effectively manage costs, reduce environmental risks, and protect public health.

The financial projections presented in the subsequent sections provide visualizations of the results from the financial model. The subsequent sections are structured as follows:

Section 5.1 summarizes historical capital and O&M expenditures, along with budget forecasts for the next 10 years (2025–2034).

Section 5.2 outlines the assumptions used in the financial model to guide reinvestment and replacement decisions for each parks and cemetery subcategory and estimates the annual funding requirements over the 10-year period. The projected levels of service over this period are also presented.

Section 5.3 presents the full funding needs for the next 10 years, including capital, O&M, and disposal costs.

Section 5.4 summarizes the risk of funding gaps, and **Section 5.5** explores possible funding sources and alternative strategies to support the parks and cemetery asset management lifecycle activities.

5.1 Capital and Operating Budget

Based on the review of the budget documents provided by the City, including:

- Summary Capital Budget - 2020 to 2024
- Long Term Financial Plan Model - Final Client Version

This section presents the annual average budgets allocated for capital replacement as well as operations and maintenance.

5.1.1 Capital Budget - Historical Expenditure and Future Forecast

The detailed historical capital expenditure for parks and cemetery assets was unavailable during the preparation of this study. Additionally, the Council has not yet approved the Capital Budget forecast for parks and cemetery assets over the next five years. Based on identified asset renewal and replacement funding needs, the City has proposed applying the funding scenarios outlined in **Table 5-1**. Capital budget details for other asset categories and subcategories were not available at the time this AMP was developed.

Table 5-1: Parks and Cemetery Capital Budget Forecast

Asset Class	Sub-Category	5-Year Annual Average
Parks	Park Structure, Park Building, Recreation, Park Land, Park Equipment, water treatment	Restricted funding scenario: $ 0.29 million
Cemetery	Cemetery Equipment	Restricted funding scenario: $ 0.19 million

5.1.2 Operating Budget - Historical Expenditure and Future Forecast

Table 5-2 presents the forecasted 10-year average budgets from the previous AMP (2024). In the previous AMP, operating budget forecasts were developed based on input from the City, the replacement value of assets without installation dates, and their ESLs. As such, this AMP continues to use the forecasted operating budgets from the 2024 AMP, adjusted for inflation to reflect future dollar values.

Table 5-2: Parks and Cemetery Forecasted 10-Year Total and Annual O&M Budget

O&M Category	Annual Average O&M Budget	10-Year Total
Parks	$5,001,000	$50,011,000
Cemetery	$264,000	$2,640,000
Total	**$5,265,000**	**$52,651,000**

5.2 Capital Reinvestment Funding Needs Analysis

This section outlines the capital funding scenarios analysis approach, assumptions, and presents service level trends regarding asset condition under various budget scenarios.

5.2.1 Lifecycle Model Approach and Assumptions

The lifecycle analysis was performed using a Power BI model, integrating key asset attributes such as asset inventory, age, expected service life, replacement values, and condition data to develop theoretical asset replacement cycles. A financial dashboard was developed to effectively visualize and communicate the lifecycle modelling outcomes.

The annual reinvestment needs for the parks and cemetery assets were determined based on their age and ESL in years in inflated dollar values and are based on the following assumptions:

- **Base year**: the base year used is 2025. Any historic asset valuations have been inflated using the experienced inflation rate.
- **Analytical period**: the analysis period for capital reinvestment needs is from 2025 to 2034, and the analysis period for full funding needs is from 2025 to 2034.
- **Cost markup**: for 15% engineering (Design & Contract Administration) markup and 30% contingencies.
- **Backlog Smooth-out**: replace assets that are in Very Poor condition and have already exceeded their ESL, depending on their designated replacement year (Designated Replacement Year = Asset Install Year + Estimated Service Life), The backlog replacements were planned to be allocated within the first four years of the analysis period, determined by applying the following logic:
  - If the designated asset replacement year is between 1975 and 1990, they will be replaced on 2025-06-01.
  - If the designated asset replacement year is between 1991 and 2005, they will be replaced on 2026-01-01.
  - If the designated asset replacement year is between 2006 and 2010, they will be replaced on 2027-01-01.
  - If the designated asset replacement year is between 2011 and 2015, they will be replaced on 2028-01-01.

- If the designated asset replacement year is between 2016 and 2020, they will be replaced on 2029-01-01.

- **Inflation rate**: the inflation rates adopted for the financial model are presented in **Table 5-3**. The inflation for 2025 and later years is determined based on the City's input.

Table 5-3: Inflation Rate [5]

Year	Inflation Rate
2023	7.1%
2024	6%
2025 - 2034	2%

- **Annual reinvestment strategy**: for the reinvestment of large polygon surface areas, such as parkland and soccer/football field surface, and the Pointe De Chenes Park Drinking Water Treatment Plant, the partial repair and replacement are more feasible than the full replacement approach. In this case, the annual reinvestment needs for parklands and soccer/football fields are estimated based on the assumption listed in **Table 5-4**.

Table 5-4: Parks and Cemetery Asset Capital Reinvestment Assumptions

Asset Categories	Annual Reinvestment Rate (2025-2034)	Annual Average Reinvestment Cost (2025-2034)	Assumption
Active Parkland	$200/Ha of parkland	$75,000	$200/Ha of park land annually to cover the patch repair or partial replacement of hard pavement surface and lawn reseeding.
Field Surface	1%	$148,000	1% of the full replacement values annually to cover the patch repair or partial replacement of the field surface, the condition of the assets will be maintained as the current condition.
Track	5%	$118,000	5% of the full replacement values annually to cover the patch repair or partial replacement of the track surface, the condition of the assets will be maintained as the current condition.
Pointe De Chenes Park Drinking Water Treatment Plant	1.5%	$12,200	1.5% of the full replacement values annually to cover the repair or partial replacement as needed, and the condition of the assets will be maintained as the current condition.

- **Capital Expansion and O&M Funding Needs**: The annual new asset acquisition (expansion) funding and O&M funding needs are forecasted by escalating the City's average historical expansion expenditure from 2019 to 2024 with the inflation rate forecast presented in **Table 5-3.**
- **Asset Disposal Funding Needs**: The annual disposal and decommissioning (disposal) funding needs are forecasted by annual capital reinvestment needs multiplied by the disposal rate, which is assumed as 1% in this exercise.
- The costs numbers are rounded to the nearest $1,000.

5.2.2 Budget Scenarios Settings

Table 5-5 outlines the budget scenario settings used in the model for parks and cemetery assets. Scenario 1 (S1) represents a "Do Nothing" approach with zero expenditure. Scenario 2 (S2) reflects an ideal, unconstrained budget scenario, where the City is able to replace assets at the end of their service life as needed. Scenario 3 (S3) is

[5] Past inflation data obtained from NRBCPI using the non-residential; yearly result taken from an average of quarterly results. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810027601

evaluating the City's proposed budgets and considers that the assets in the poorest condition and with the highest replacement values will be prioritized annually for renewal. However, the model is designed to accommodate additional budget scenarios in the future as more budget information is provided.

Table 5-5: Parks and Cemetery Budget Scenarios

Scenario	Description	Budgets
S1 Do Nothing	Spend Nothing	$0
S2 Unlimited Budget	Replace assets at the end of life	Unlimited
S3 Limited Budget	Evaluating the City's proposed budgets and considering that the assets in the poorest condition and with the highest replacement values will be prioritized annually for renewal.	$0.29 million for Parks Assets $0.19 million for Cemetery Assets

5.2.3 Budget Scenarios & 10-Year Service Level Forecast

This section presents the budget scenario results and the 10-year service level forecast for parks and cemetery assets.

5.2.3.1 Park Assets Funding Needs

In the unconstrained budget scenario (S2), the City's park assets require an average annual capital reinvestment of $3.3 million (in inflated dollar values) from 2025 to 2034, as presented in **Figure 5-1**. This is equivalent to a total of approximately $33.2 million over the next 10-year period. A significant portion of this funding is allocated to the replacement of the Park Structure, averaging $1.8 million annually, with peak spending projected in 2029 at $6.7 million. Another key contributor is recreation, requiring approximately $1.1 million per year, also reaching its highest expenditure in 2028 ($3.9 million).

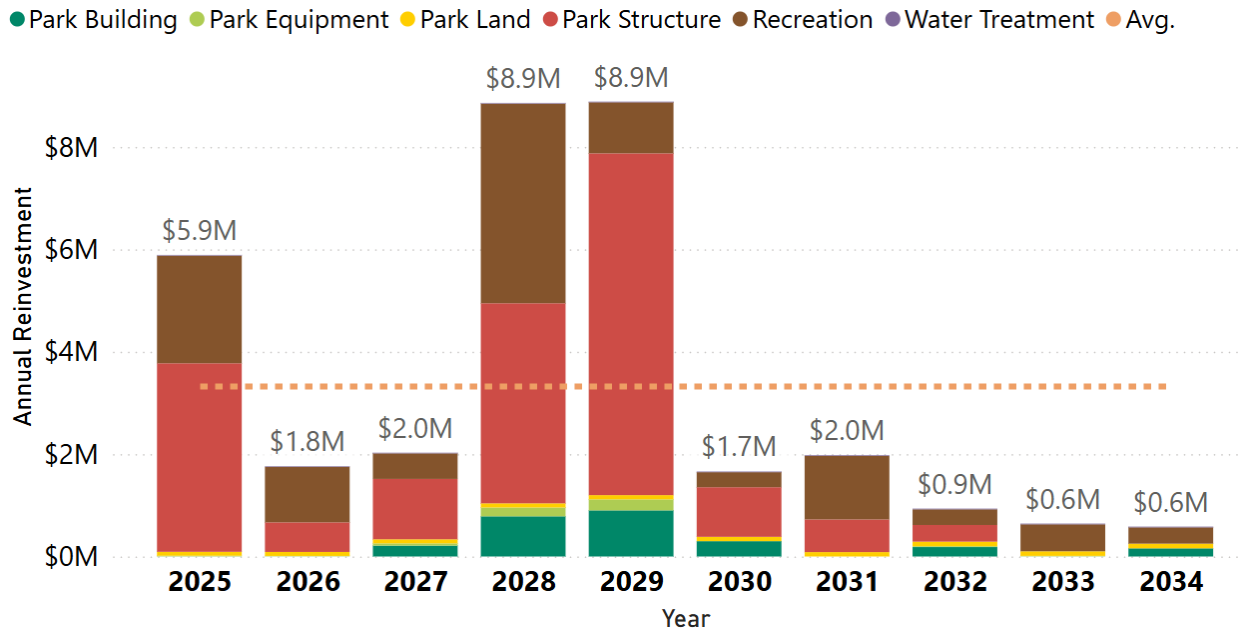

Figure 5-1: 10-Year Capital Reinvestment Funding Needs for Park Assets - Unlimited Budget Scenario

The detailed 10-year reinvestment needs for the parks assets are presented in **Table 5-6** in inflated dollar values.

Table 5-6: Park Assets 10-Year Total and Annual Average Reinvestment Need

Asset Category	Annual Average Need	10-Year Total
Park Building	$255,000	$2,550,000
Park Equipment	$49,000	$490,000
Park Land	$84,000	$840,000
Park Structure	$1,796,000	$17,960,000
Recreation	$1,127,000	$11,270,000
Water Treatment	$14,000	$140,000
Total	**$3,325,000**	**$33,250,000**

5.2.3.2 Park Assets 10-Year LoS Trend Forecast

Figure 5-2 presents the projected condition of park assets under the two funding scenarios over the 10-year analysis period, excluding the park land assets. Currently, 64% of park assets are in fair or better condition.
Under Scenario S1 – Do Nothing, the proportion of assets in fair or better condition declines to just 34% by 2034. In contrast, under Scenario S2 – Unlimited Budget, which equates to an average annual reinvestment of $3.3 million, the percentage of assets in fair or better condition improves to 76%. Under Scenario S3, with a constrained annual budget of $0.29 million over the next 10 years, the proportion of assets in fair or better condition is projected to decline to 37%. Given that the City's proposed future budget of $0.29 million is reasonably insufficient to maintain the current asset condition. The proposed funding level only partially mitigates asset decline and is inadequate to prevent long-term degradation, highlighting the need for increased investment to avoid compounding maintenance backlogs.

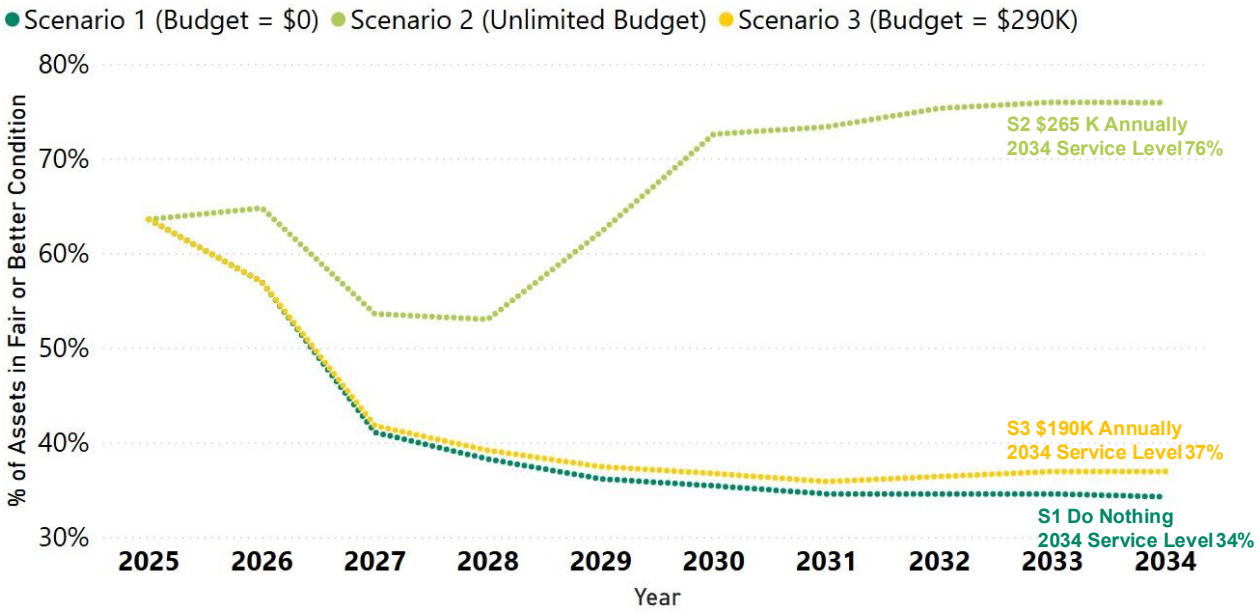

Figure 5-2: Park Assets Levels of Service Trend for All Budget Scenarios

Figure 5-3 illustrates the projected condition distribution of park assets from 2025 to 2034 under the constrained budget scenario (S3), with a $0.29 million annual capital reinvestments budgets. Over the 10-year period, the proportion of assets in good condition declines from 14% to just 2%, reflecting the limited capacity for meaningful asset renewal. Assets in fair condition indicate a similar trend, declines from 16% to 1%. The most critical concern is the substantial and growing percentage of assets in poor and very poor condition, which together rise sharply to 63% by 2034. In particular, assets in very poor condition increase significantly from 17% in 2025 to 62% by the end of the forecast period. This trend clearly indicates that the proposed $0.29 million annual budget is insufficient to maintain existing asset conditions, leading to accelerated deterioration and increasing long-term renewal needs. To avoid further asset failure and costly future interventions, it is imperative that the City strategically increases its capital reinvestment funding for park assets to a more sustainable level.

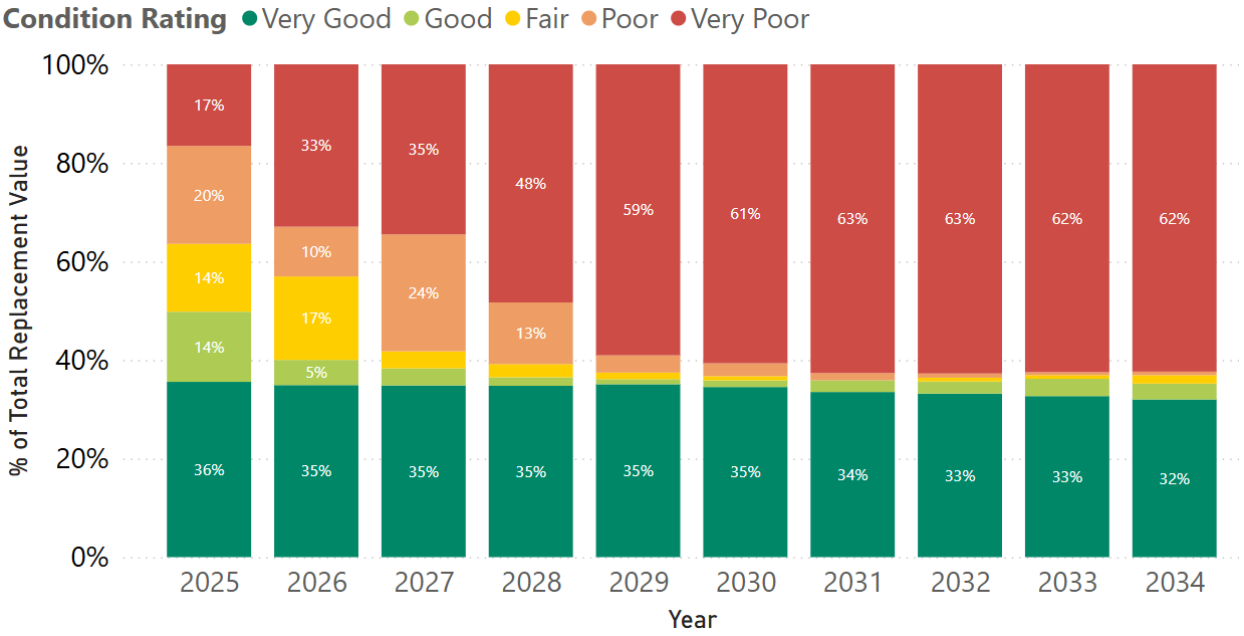

Figure 5-3: Park Assets Condition Projection under Scenario 3 - $0.29 million Annually

5.2.3.3 Cemetery Assets Funding Needs

In the unconstrained budget scenario (S2), the City's cemetery assets require an average annual capital reinvestment of $0.27 million (in inflated dollar values) from 2025 to 2034, as presented in **Figure 5-5**. This is equivalent to a total of approximately $2.7 million over the next 10-year period. A significant portion of this funding is allocated to the replacement of the Lawn & Surface Maintenance equipment, averaging $0.12 million annually, with peak spending projected in 2029 at $0.44 million. Another key contributor is the Operation Machinery, requiring approximately $74 thousand per year, also reaching its highest expenditure in 2028 ($0.25 million).

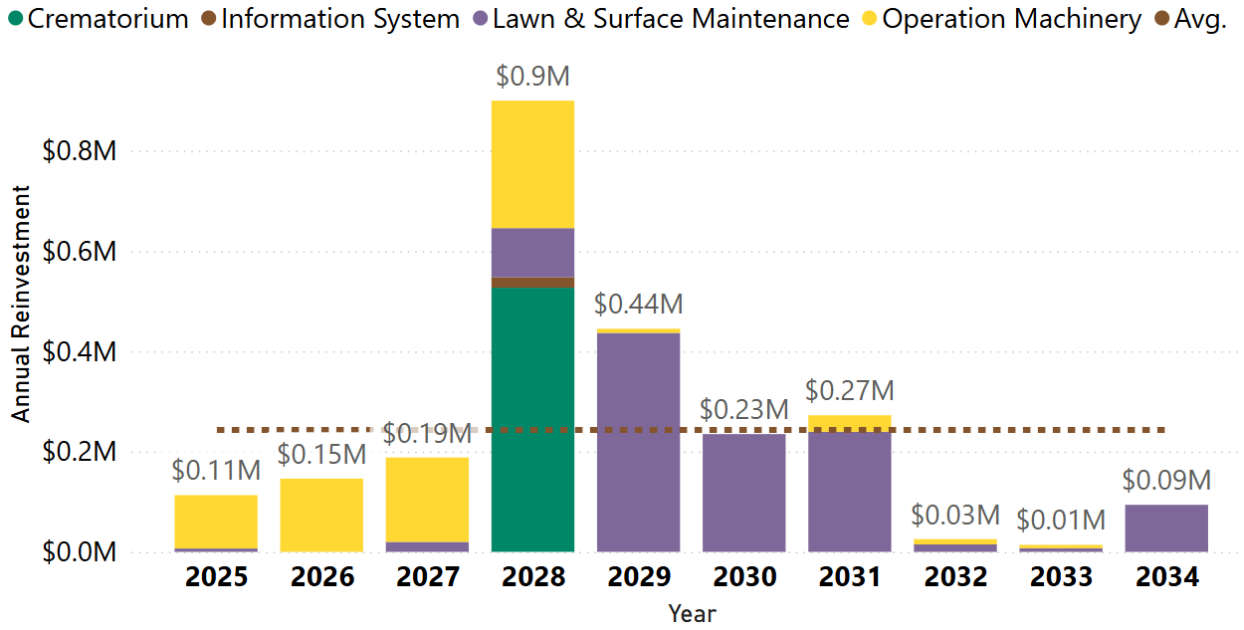

Figure 5-4: 10-Year Capital Reinvestment Funding Needs for Cemetery Assets - Unlimited Budget Scenario

The detailed 10-year reinvestment needs for the cemetery assets are presented in **Table 5-7** in inflated dollar values.

Table 5-7: Cemetery Assets 10-Year Total and Annual Average Reinvestment Need

Asset Category	Annual Average Need	10-Year Total
Crematorium	$53,000	$530,000
Information System	$22,000	$220,000
Lawn & Surface Maintenance	$116,000	$1,160,000
Operation Machinery	$74,000	$740,000
Total	**$265,000**	**$2,650,000**

5.2.3.4 Cemetery Assets 10-Year LoS Trend Forecast

Figure 5-2 presents the projected condition of parks and cemetery assets under the two funding scenarios over the 10-year analysis period, excluding the park land assets. Currently, 89% of cemetery assets are in fair or better condition.

Under Scenario S1 – Do Nothing, the proportion of assets in fair or better condition declines to just 0% by 2034. In contrast, under Scenario S2 – Unlimited Budget, which equates to an average annual reinvestment of $0.27 million, the percentage of assets in fair or better condition improves to 90%. Under Scenario S3, with a constrained annual budget of $0.19 million over the next 10 years, the proportion of assets in fair or better condition is projected to decline to 72%. The City's proposed future budget of $0.19 million, while not sufficient to maintain the current asset condition level (89% in fair or better condition), is considered a practical and viable investment to support long-term service level sustainability. This funding level is expected to mitigate the severe asset deterioration projected under the "Do Nothing" scenario and provides a balanced approach to maintaining acceptable performance within constrained fiscal parameters.

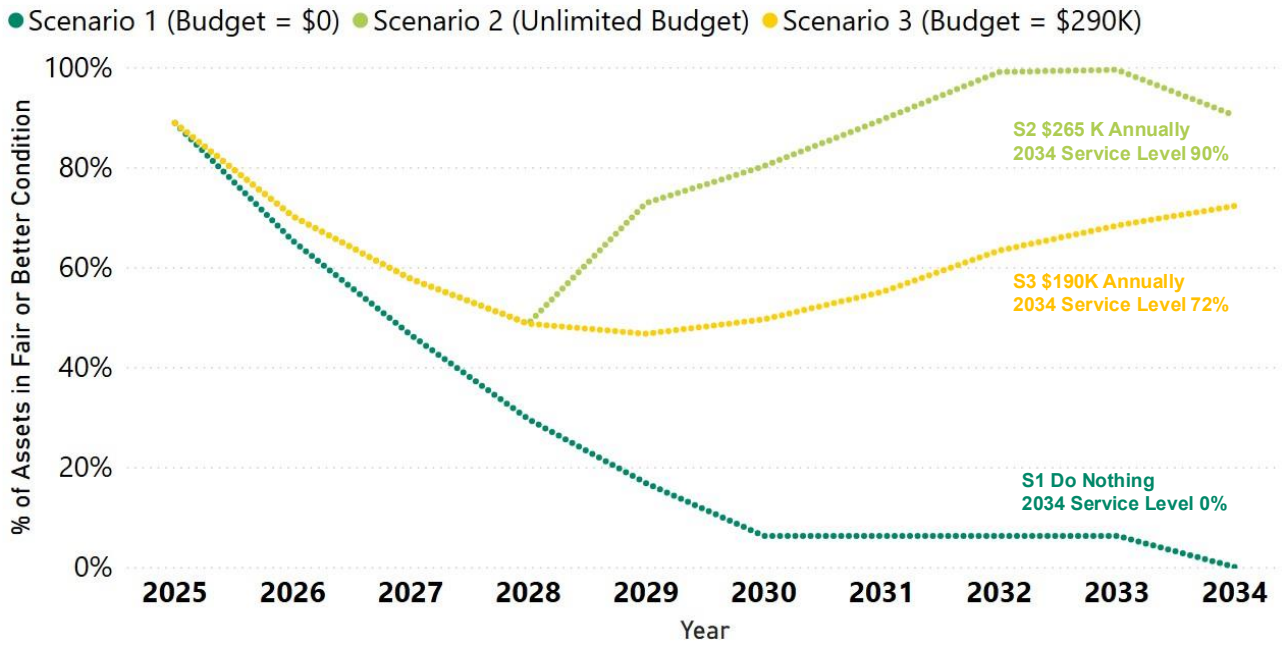

Figure 5-5 Cemetery Assets Levels of Service Trend for All Budget Scenarios

Figure 5-6 illustrates the projected condition distribution of cemetery assets from 2025 to 2034 under the constrained budget scenario (S3), with a $0.19 million annual capital reinvestment budget. Over the 10-year period, the proportion of assets in very good condition improves steadily from 32% to 66%, indicating some renewal efforts despite limited funding. Assets in good condition decline from 25% to 4%, while fair condition assets decrease significantly from 32% to 6%, reflecting a shift in asset condition distribution over time. However, the most critical concern is the persistently high percentage of assets in poor and very poor condition during the early years, peaking at 45% in 2031 before gradually improving. Notably, by 2034, very poor assets still account for 21% of the portfolio. This trend indicates that although the $0.19 million annual budget supports gradual improvement in asset conditions, it is not adequate to fully eliminate the existing renewal backlog or prevent a significant portion of assets from deteriorating into critical condition. It is imperative that the City strategically increase its capital reinvestment funding for cemetery assets to a more sustainable level.

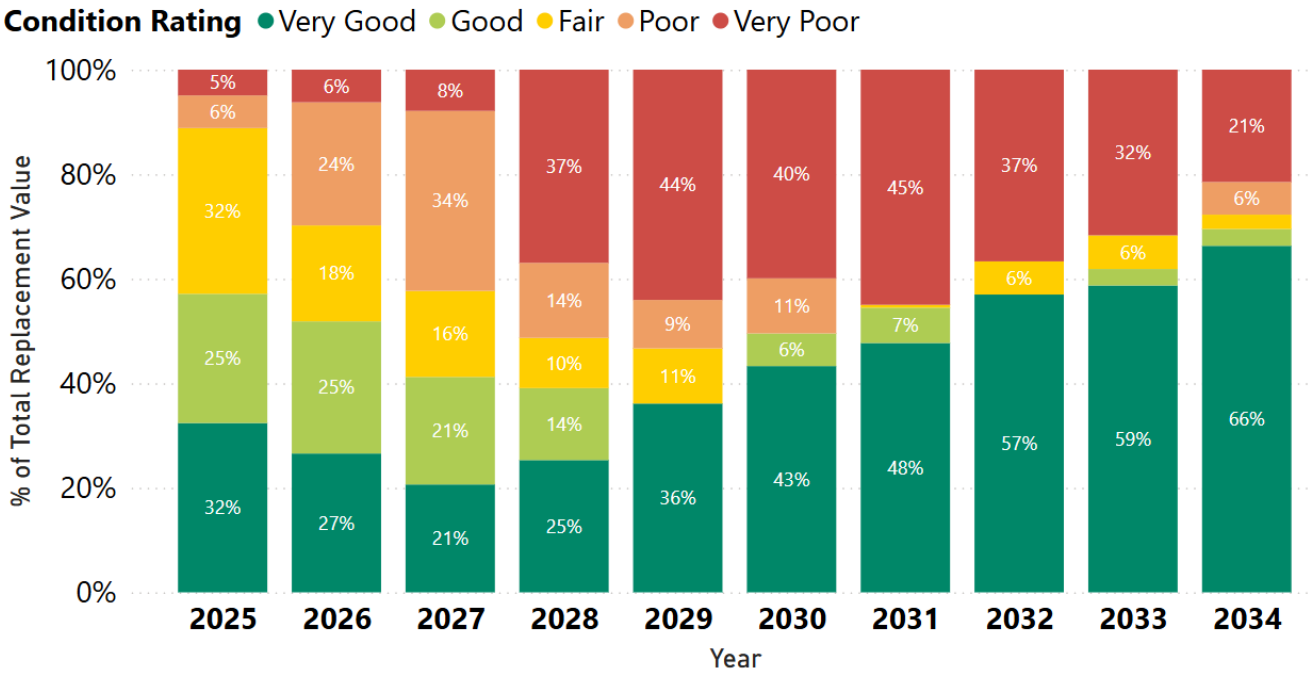

Figure 5-6: Cemetery Assets Condition Projection under Scenario 3 - $0.19 million Annually

5.3 Full Funding Need Profile

The total annual full funding needs for parks and cemetery assets were combined with the following:

- Capital reinvestment needs (**Section 5.2**)
- Projected parks and cemetery O&M cost (**Section 5.1.2**).
- One percent of the annual replacement cost was added to account for the asset disposal cost. Note that PS 3280 Asset Retirement Obligations is a new accounting standard covering asset retirement obligations that applies to all Canadian public sector entities that prepare their financial statements under PSAB.

5.3.1 Park Assets Full Funding Needs

Figure 5-7 shows a full picture of the City's park assets funding forecast for the next 10 years. This graph provides the City with a clear understanding of the full funding requirements, essential for effective financial planning activities. Specifically, the reinvestment needs for park assets are categorized as "Replace" (refer to **Table 5-6**). These reinvestment needs are presented alongside the City's projected park O&M costs (refer to **Table 5-2** for details). Additionally, one percent of the annual replacement cost was added to account for the asset disposal cost. With these additions, the City's park assets' full funding requirement increases to approximately $83.6 million over the next 10 years, averaging $8.4 million per year in inflated dollar value.

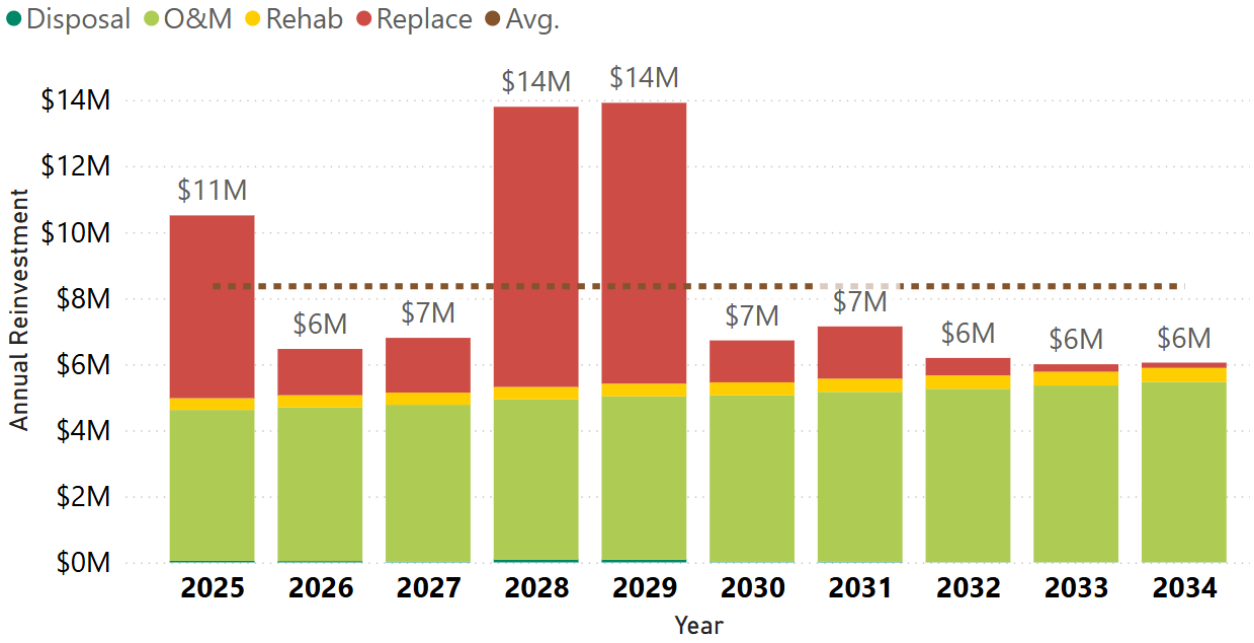

Figure 5-7: Park assets Full Funding Need Profile

5.3.2 Cemetery Assets Full Funding Needs

Figure 5-8 shows a full picture of the City's cemetery assets funding forecast for the next 10 years. This graph provides the City with a clear understanding of the full funding requirements, essential for effective financial planning activities. Specifically, the reinvestment needs for cemetery assets are categorized as "Replace" (refer to **Table 5-7**). These reinvestment needs are presented alongside the City's projected cemetery O&M costs (refer to **Table 5-2** for details). Additionally, one percent of the annual replacement cost was added to account for the asset disposal cost. With these additions, the City's cemetery assets' full funding requirement increases to approximately $52.2 million over the next 10 years, averaging $5.3 million per year in inflated dollar value.

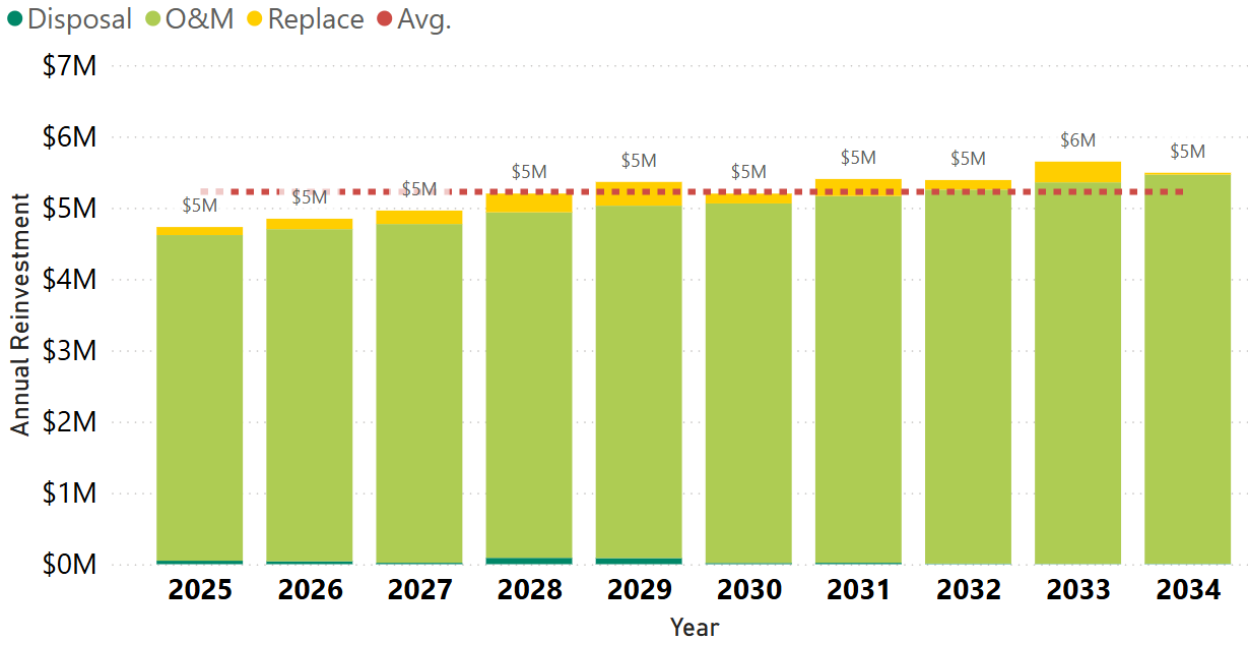

Figure 5-8: Cemetery Assets Full Funding Need Profile

5.4 Capital Reinvestment Funding Gaps & Risk

The City intends to continue to invest in the growth and renewal of the parks and cemetery assets over the next 10 years. **Table 5-8** compares the City's planned capital reinvestment budget against the capital reinvestment funding needs. The shortfall between the City's planned capital reinvestment budget against the capital reinvestment funding needs is referred to as the "funding gap".

Table 5-8: Parks & Cemetery Funding Gap – Capital Reinvestment Funding Needs vs. Planned Budget

Asset Class	10-Year Need Total	10-Year City Budget Total	10-Year Gap Total
Parks	$33.3 million	$2.9 million	$30.4 million
Cemetery	$2.65 million	$1.9 million	$0.75 million

As described in **Section 3.5**, risks are identified for each service level performance measure. **Table 5-9** provides a high-level overview of the key risks associated with funding gaps, as well as the potential consequences and impacts of not meeting the proposed service levels.

Table 5-9: Risk of Delayed Intervention for Parks and Cemetery Assets

Key Risk	Potential Consequences/Impacts	Affected Asset Categories
Operational Reliability and Service Delivery Risks	• **Increased Equipment Downtime** Aging, unreplaced assets are more prone to failures, reducing asset availability and disrupting critical municipal services (e.g., playground, recreational service, etc.) • **Unreliable Service Levels** Declining assets' reliability impairs the City's ability to meet expected LoS, especially during peak demand.	• Park Equipment • Park Amenities • Sports Courts • Pool • Court Accessories • Courtside Service Buildings • Cemetery Equipment

Key Risk	Potential Consequences/Impacts	Affected Asset Categories
Escalating Maintenance and Lifecycle Costs	• **Higher Repair Costs per Asset** Older assets require more frequent and costly maintenance, diverting operational funds that could be used for proactive asset renewal or efficiency upgrades. • **Inefficient Use of Resources** Maintaining poor-condition assets yields diminishing returns and increases the total cost of ownership.	• Park Equipment • Park Amenities • Sports Courts • Court Accessories • Courtside Service Buildings • Cemetery Equipment
Safety and Compliance Risks	• **Increased Safety Incidents** Operating beyond service life raises the risk of asset failures that could endanger staff and the public, especially the failure of amenity and recreational facilities will raise the chance of safety hazard. • **Regulatory Non-Compliance** Assets may fail to meet provincial safety and inspection requirements, leading to legal liabilities or forced decommissioning.	• Park Amenities • Sports Courts • Field Surface • Pool • Court Accessories
Financial and Strategic Planning Risks	• **Capital Replacement Backlog** Deferring replacements creates a "bow wave" of aging assets that will eventually require large, simultaneous capital investments, overwhelming future budgets. • **Loss of Funding Opportunities** The City may become ineligible for federal or provincial grants that require timely asset renewal or minimum condition thresholds.	• All parks and cemetery asset categories
Reputational and Public Trust Risks	• **Public Perception of Mismanagement** Frequent breakdowns, unreliable services, and visibly aging assets can erode public confidence in the City's asset management practices. • **Reduced Support for Future Investment** Stakeholders and the Council may be less inclined to approve future budgets if current assets are poorly maintained and underperforming.	• All parks and cemetery asset categories

5.5 Funding Strategies

The City secures funding for its park assets primarily through the property tax levy. As for the cemetery, the City is working towards achieving full funding for both capital and operating expenditures through user fees. Furthermore, the City actively ensures support for park infrastructure by engaging in grant applications and collaborative initiatives with community partners, agencies, and organizations. Impressively, the City has established a successful track record, garnering support from various groups and demonstrating a history of effective collaboration in its grant endeavours. Moreover, the City strategically engages with Federal grant sources, including the Canada Healthy Communities Initiative and Infrastructure Canada. In some instances, the City also secures multi-level funding for notable projects such as the downtown plaza and the Old Stone House.

In addition to the City's current funding sources, AECOM also suggests the following options that could be considered, acknowledging that the City's eligibility for these funds is subject to certain criteria:

- Canada Community-Building Fund (CCBF)
- Ontario Community Infrastructure Fund (OCIF)
- Green Municipal Fund (GMF)
- Municipal Asset Management Program (MAMP)
- Enabling Accessibility Fund (EAF)
- Northern Ontario Heritage Fund Corporation (NOHFC)

5.5.1 Canada Community-Building Fund (CCBF)

The CCBF, previously known as the Federal Gas Tax Fund, is a permanent source of upfront funding distributed twice a year to territories and provinces. The delivery of the CCBF to municipalities varies by province or territory, with allocation following a per-capita basis for provinces, territories, and First Nations[6].

The CCBF is administered in Ontario through a bilateral agreement with the Government of Ontario, the Association of Municipalities of Ontario (AMO), and municipalities. This program allocates approximately $816 million annually to 641 communities in Ontario, with an additional top-up of $816.5 million provided in 2020 to expedite communities' recovery from the COVID-19 pandemic. Notably, as of 2022, the City has received over $9 million through the CCBF, granting the City flexibility to strategically invest across 19 distinct project categories[7].

5.5.2 Ontario Community Infrastructure Fund (OCIF)

The OCIF is a program designed to support municipalities with small populations (less than 100,000), along with those situated in northern and rural areas. Its primary objective is to aid communities in overcoming challenges related to infrastructure maintenance and improvement while facilitating the development and updating of their asset management plans. Eligible communities receive annual allocations and have the option to accumulate these grants for up to five years to address substantial infrastructure projects. The fund is an essential component of the provincial government's commitment to fostering strong, resilient, and well-equipped communities across Ontario[8].

5.5.3 Green Municipal Fund (GMF)

The GMF is a financial initiative in Canada dedicated to supporting sustainability and environmental projects at the municipal level. Managed by the Federation of Canadian Municipalities (FCM), the GMF provides funding and

[6] The Canada Community-Building Fund. (2022). Infrastructure Canada. Infrastructure Canada - The Canada Community-Building Fund. Retrieved on February 15th, 2024.

[7] Ontario's 2021–22 federal Canada Community-Building Fund allocations and top-up amounts. (2021). Infrastructure Canada. Backgrounder: Ontario's 2021–22 federal Canada Community-Building Fund allocations and top-up amounts - Canada.ca. Retrieved on February 15th, 2024.
[8] Ontario Community Infrastructure Fund. (2023). Ministry of Infrastructure, Ontario. Ontario Community Infrastructure Fund | ontario.ca. Retrieved on February 15th, 2024.

resources to assist municipalities across the country in undertaking projects that contribute to environmental sustainability, energy efficiency, and the reduction of greenhouse gas (GHG) emissions[9].

In the context of parks and cemetery, the GMF allocates funds for feasibility studies and capital projects that allow local recreational and cultural facilities to achieve 50% GHG reductions within 10 years and 80% GHG reductions within the next 20 years. Some of the available funding opportunities are as follows:

- Study: GHG reduction pathway feasibility.
- Capital project: GHG impact retrofit.
- Capital project: GHG reduction pathway retrofit.

5.5.4 Municipal Asset Management Program (MAMP)

The MAMP is aimed at improving AM practices within municipalities. Designed to assist municipalities in gaining a better understanding, planning, and efficient and sustainable management of their infrastructure assets, the program may offer funding to support the development or improvement of AM plans. This financial support is intended to incentivize municipalities to adopt and implement sustainable AM practices[10].

5.5.5 Enabling Accessibility Fund (EAF)

The EAF is a Federal government program aimed at supporting projects that enhance accessibility for individuals with disabilities. The fund provides financial assistance to eligible organizations for initiatives such as infrastructure improvements, renovations, and retrofitting to create more accessible spaces. Its goal is to contribute to a barrier-free and inclusive society by addressing physical barriers and promoting equal access in community spaces[11].

5.5.6 Northern Ontario Heritage Fund Corporation (NOHFC)

The NOHFC is an organization that provides financial support and promotes economic development in the northern regions of Ontario. Established to stimulate growth and sustainability, NOHFC offers funding for various projects, such as business expansion, job creation, infrastructure development, and community initiatives. Within the NOHFC, the Community Enhancement Program is an initiative aimed at supporting community-driven projects[12]. This program provides financial assistance for local initiatives that enhance community infrastructure, amenities, and services. Eligible projects may include the development or improvement of recreational facilities, community spaces, and essential services.

5.5.7 Alternative Strategies

Recognizing the constrains of internal funding and limitations and uncertainties associated with external funding, it becomes increasingly important to explore complementary approaches that do not depend solely on financial sources. In this context, alternative strategies play a critical role in enhancing the City's ability to manage service levels and asset performance within existing fiscal constraints. **Table 5-10** highlights some non-financial strategies that could help the City address the potential funding gaps for parks and cemetery assets.

[9] Funding opportunities. (n.d.). Green Municipal Fund. Funding opportunities | Green Municipal Fund. Retrieved on February 14th, 2024.
[10] Municipal Asset Management Program. (n.d.). Federation of Canadian Municipalities. Municipal Asset Management Program | FCM. Retrieved on February 14th, 2024.
[11] About Enabling Accessibility Fund. (2023). Government of Canada. Enabling Accessibility Fund - Canada.ca. Retrieved on February 14th, 2024.
[12] Community Enhancement Program. (2024). Northern Ontario Heritage Fund Corporation. Community Enhancement Program | NOHFC. Retrieved on February 14th, 2024.

Table 5-10: Non-Financial Strategies to Address Potential Funding Gaps for Parks and Cemetery Assets

Strategy	Description / Actions
Condition-Based Maintenance	Shift from time-based to condition-base maintenance where possible. Using condition assessments (e.g., visual inspections or performance metrics) helps extend asset life by targeting maintenance where it's most needed.
Preventive Maintenance Programs	Develop and implement preventive maintenance schedules to address minor defects before they lead to larger failures. Preventive measures often cost less than emergency repairs and can delay the need for full replacement.
Training and Knowledge Sharing	Provide training to O&M staff on best practices for maintaining different asset types. Encourage internal knowledge sharing to improve consistency and efficiency in asset care.
Community and Interdepartmental Engagement	Continuously collaborate with other City departments and the public to identify issues early and gather feedback on service levels. This can help align asset strategies with user needs and expectations.

6 Implementation Plan and Continuous Improvement

Continuous improvement is an important component of any AM program and is achieved through the implementation of recommended improvement initiatives which support sustainable service delivery. AECOM has identified a set of activities that represents the next stage of AM planning and implementation within the City, as shown in **Table 6-1**.

Table 6-1: Recommended AM Improvement Initiatives

Index	Improvement Initiative	Description
1.	Refine the asset hierarchy and inventory	Continue to refine the asset inventory and close existing data gaps to have a more accurate representation of the current state of the parks and cemetery assets; and, ultimately, to make more informed and defensible decisions. − AECOM recommends the City to continue maintaining the parks and cemetery asset inventory, keep updating the inventory as assets are acquired or disposed. − Continue collecting the installation date information of parks and cemetery assets to better estimate their remaining service life. Once the gap is closed, the City will be able to conduct more accurate lifecycle analyses, forecast reinvestment needs with greater confidence, and enhance long-term asset management planning. − Develop and implement unique identifiers for all parks and cemetery assets. It will enable more efficient asset tracking, condition monitoring, and lifecycle management.
2.	Establish and implement a data information management strategy	• Asset data will be centralized, digitized and accessible to all staff. • Annual updates for the state of infrastructure data attributes such as the asset inventory, including the age and condition of the assets. • Staff will have the ability to collect and update asset data in the field and in real time. • Workflows will be documented and digitized.
3.	Develop a formalized parks and cemetery assets condition assessment process and use consistent condition grading schemes for these assets	• Currently, the condition of the parks and cemetery asset is not tracked with a well-developed asset condition rating grading system specialized for parks and cemetery assets. • The grading system should include a description directly tied to each condition grade, along with details about the asset's performance and the necessary level of corrective and preventive maintenance required for assets falling within a certain condition rating category. This process will enable the City to keep track of and better forecast asset renewal needs. • Perform condition assessments on the most critical assets first, such as park structures and sport courts. This ensures that assets are assessed using the same methodology and prioritized based on their criticality. It facilitates a more defensible business case when addressing issues of asset degradation.
4.	Refine the LoS Framework	This AMP represents the City's LoS in alignment with the requirements of O. Reg. 588/17 July 1, 2025, deadline. The City should continue its efforts to: • Regularly record LoS performance measures to monitor changes over time and identify emerging trends. • Review and update performance measures as needed to ensure they remain relevant and effective. • Periodically assess proposed LoS to confirm alignment with shifting community expectations, regulatory changes, City priorities, available resources, and observed performance trends—supporting adaptive and responsive service delivery. • Continuously enhance demand management by routinely evaluating future demand drivers that influence service delivery and asset use, integrating these insights into long-term capital planning to ensure LoS remains responsive to changing needs.
5.	Incorporate risk assessment for future iterations of the AM plan, and use the risk assessment results to drive	• Conduct a comprehensive criticality and risk assessment of assets to inform work prioritization.

Index	Improvement Initiative	Description
	future condition assessments and financial needs forecasting	• Review risk attribute values periodically to ensure alignment with business objectives and risk appetite. • Overlay the risk model with the current state of the assets (i.e., condition) and the financial forecast. Using this approach, the City could focus its monitoring, maintenance, and renewal and replacement budget and activities on high-risk assets. Medium-risk infrastructure could be addressed through the mitigation of failure via regular monitoring, while low-risk assets could be accepted with caution.
6.	Establish a sustainable parks and cemetery funding model that fits the needs of the community	• Establish and maintain detailed funding and budget information for parks and cemetery assets to support effective asset management planning. Once this information is in place, it is recommended that the City re-run the financial model to assess funding gaps, update condition projections, and refine reinvestment strategies based on realistic budget scenarios. • In light of the annual funding need outlined in **Figure 5-1** and **Figure 5-4,** it is recommended that the City allocate an average of **$3.3 million** per year over the next 10 years for capital reinvestment in park assets, and **$0.27 million** per year over the next 10 years for capital reinvestment in cemetery assets. Additionally, a total of **$5.3 million** should be budgeted annually for O&M expenditures during the same period. • Review financial modeling assumptions on reinvestment rate and replacement values and update the financial model with new information as it becomes available. The financial model is based on several key assumptions that could have a significant impact on the outcomes of the model. • Explore funding resources and non-financial strategies that the City may take into consideration while performing strategic lifecycle and financial strategies.
7.	Continue to find ways to improve AM initiatives across the City by maintaining a high level of AM awareness through training, communication, and knowledge sharing.	• Conduct an AM Software Assessment to identify future system requirements, which may involve enhancing existing software, adding new features, or replacing the current system. • Develop a Knowledge Retention Strategy and Internal Communications Plan to document staff AM knowledge and experience for reporting and succession planning purposes. Communicate AM improvement initiatives and enhance AM awareness internally through internal communication.
8.	Grant and funding application program	• The City should initiate an internal program for developing grant applications tailored to organizational objectives and align to the criteria of various funding programs. (refer to **Section 5.5** for available grant options). • Guidance includes: - Aligning with grant-specific criteria: prepare the grant application align with the requirements, and place emphasis on the key aspects relevant to the grant objectives. - Developing a grant application proposal: the application will be a project proposal that resonates with the grant agencies' goals, which should articulate clear objectives and expected outcome. - Budget planning: the financial plans must resonate with the grant's objectives, presenting transparency in fund utilization and emphasizing the project's viability and long-term financial sustainability. - Demonstrating feasibility and organization capacity: presenting a realistic project timeline, clear milestones, and a well-thought-out implementation plan. - Compliance, Reporting, and Effective Project Management: a robust project management strategy should be devised, illustrating the City's capacity to effectively manage, oversee, and report on the project's progress, in accordance with the grant's stipulations. - Preparing and Organizing Supporting Documents: these documents will be organized and presented in a manner that lucidly supports and enhances the application. • Final Review and Submission Process: prior to submission, each application should undergo a thorough review to ensure it meets the specific criteria and guidelines of the respective grant program.
10	Organize public and Council engagement activities	• Establish a structured approach to public and Council engagement to ensure the AMP aligns with community expectations, supports informed decision-making, and enhances transparency, the City is committed to establishing a structured approach to public and Council engagement. While several engagement activities have already been undertaken, these efforts lay the foundation for a more consistent and strategic approach moving forward.

Index	Improvement Initiative	Description
		• For Council engagement, the City has shared updates through presentations and media events. To further support elected officials, it is recommended that the City develop Councillor Tool Kits. These kits would provide clear, consistent messaging—covering topics such as infrastructure planning, investment priorities, asset management, service levels, and climate impacts—to help Councillors effectively respond to public inquiries. • On the public side, communication can be enhanced by creating a dedicated project webpage to centralize information such as FAQs, timelines, and contact details, while enabling two-way engagement. A targeted social media strategy, including sponsored posts on platforms like Facebook and Instagram, is also recommended to increase visibility and encourage community involvement.

Appendix A – Parks and Cemetery Asset Inventory

The City's Parks and Cemetery asset inventory is presented as a separate MS Excel file.

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