2024 CORPORATE ASSET MANAGEMENT PLAN

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Definitions

Asset

An item, thing or entity that has potential or actual value to an organization. The value can be tangible or intangible, financial or non-financial, and includes consideration of risks and liabilities.

Asset Hierarchy

A classification system that is used to group assets with similar characteristics or functions. In this AMP, it is used to organize asset data/information using a common framework (or “language”) to assist in understanding, communicating and visualizing groups of assets. The City’s asset hierarchy featured in this AMP is a service-centric hierarchy that has the primary objective of describing the relationship between services provided by the City and the infrastructure assets that support those services.

Asset Management (AM)

Planned actions and coordinated activities of an organization to optimally and sustainably manage its assets that will enable the assets to provide the desired level of service in a sustainable way, while managing the risk at the lowest life-cycle cost. It encompasses all asset types, tangible or intangible, individual components or complex systems, and all activities involved in the asset’s lifecycle from acquisition/creation, through maintenance to renewal or disposal.

Asset Management Plan (AMP)

A strategic document that states how a group of assets is to be managed over a period of time. The AMP describes the characteristics and condition of infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financial strategies to implement the planned actions. Some of the specific content included in an AMP for Ontario municipalities is prescribed by Ontario Regulation 588/17.

Asset Management System

A management system that includes a series of interrelated processes and documentation that directs and delivers the discipline of asset management within an organization.

Asset Management Policy

Mandated requirements, overall intentions/principles and framework for control of asset management. An Asset Management Policy guides the overall direction of the asset management system, providing direction to the appropriate focus and level of asset management practice expected. It shall establish key principles, overall vision for the program, and align other municipal plans. Some of the specific requirements of an Asset Management Policy for Ontario municipalities are prescribed by Ontario Regulation 588/17.

Customer Levels of Service (LOS)

Customer Levels of Service are measures that monitor how the community (or customers) experience the services that are provided through assets. They are typically expressed in non-technical terms. Ontario Regulation 588/17 describes them as “qualitative descriptions”. Customer LOS measures are commonly related to the service that is provided by the overall system supporting the service delivery, rather than the specific assets.

Core Municipal Infrastructure Asset

A term used to describe a specific group of assets as defined in Ontario Regulation 588/17. As per the regulation, a “core municipal infrastructure asset” means any municipal infrastructure asset that is a,

a. water asset that relates to the collection, production, treatment, storage, supply or distribution of water;

b. wastewater asset that relates to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater;

c. stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater;

d. road; or

e. bridge or culvert[1].

The following asset hierarchy figures illustrate the service areas and corresponding asset classes that are reported within this AMP.

Current Replacement Value

The amount that an entity would have to pay to replace an asset at the present time, according to its current worth.

Deterioration

A mathematical representation of the change in condition of an asset over time. Deterioration models are used to understand future asset needs to assist in forecasting.

Estimated Service Life (ESL)

For new assets, this is the estimated expected life (usually in years) that an asset will remain in service, meeting performance objectives. Typically, ESLs vary for different types of assets.

[1] Ontario Regulation 588/17 (https://www.ontario.ca/laws/regulation/r17588)

Infrastructure

The physical structures and associated facilities that form the foundation of development, and by or through which a public service is provided.

Infrastructure Gap

A spending shortfall in comparison to an established need. This can include the accumulated deficit that results year-over-year due to financial shortfalls.

Level of Service (LOS)

The parameters or combination of parameters that reflect the social, political, economic, and environmental outcomes the organization delivers. Level of service statements describe the outputs or objectives of the organization's activities that are intended to be delivered to the community.

Lifecycle

The useful life of an asset from acquisition to disposal, typically expressed in years.

Lifecycle Activity

Activities undertaken with respect to an infrastructure asset over its service life, including constructing, maintaining, renewing, operating, and decommissioning, and all engineering and design work associated with those activities.

Lifecycle Cost

The total cost of ownership over the life of an asset. This may include but is not limited to capital costs, operating costs, maintenance costs, renewal costs, replacement costs, environmental costs, and user delay.

Lifecycle Management Strategy

The set of planned actions that will enable the assets to provide the desired levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost.

Maintenance

Activities that allow assets to meet their required performance objectives, including regularly scheduled inspection and maintenance activities associated with unexpected or unplanned events.

Ontario Regulation O. Reg. 588/17

Under the Infrastructure for Jobs and Prosperity Act, 2015, principles are set out by the provincial government to regulate asset management planning for municipalities. On December 27, 2017, O. Reg. 588/17 was released which regulates asset management planning for municipal infrastructure.

Preventive Maintenance

Regular, routine or regularly scheduled maintenance activities that are intended to keep assets in good working order and prevent or minimize unplanned failures or downtime.

Public

Residents and businesses in the City of Toronto, stakeholders, or other interested parties.

Remaining Life

Time left on the asset (typically in years) before it is considered failed (or not meeting its performance objectives), usually related to an anticipated failure mode.

State of Good Repair (SOGR)

An asset performance state that is associated with an asset or system operating at a full level of performance.

Technical Levels of Service (LOS)

Technical LOS are technical measures applied against assets and overall systems that define the performance requirements to support Community Levels of Service and are used to determine which criteria will be used to drive business decisions. Technical LOS are often expressed in quantitative or numerical terms.

List of Abbreviations

Term of Acronym	Description
AM	Asset Management
AMP	Asset Management Plan
BCA	Building Condition Assessment
BCI	Bridge Condition Index
CAM	Corporate Asset Management
DACs	Divisions, Agencies and Corporations
ESL	Estimated Service Life
FCI	Facility Condition Index
GHG	Green House Gases
IT	Information Technology
LOS	Levels of Service
O. Reg. 588/17	Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure
PQI	Pavement Quality Index
SOGR	State of Good Repair
The City	The City of Toronto
TRCA	Toronto and Region Conservation Authority
TTC	Toronto Transit Commission

1.0 Executive Summary

1.1 Introduction

The City of Toronto (City) is Canada's largest city and a world leader in business, finance, technology, entertainment and culture. It's large population of immigrants from all over the globe has also made Toronto one of the most multicultural cities in the world. Toronto's municipal government is responsible for a variety of services, which are supported by or provided through a large and diverse portfolio of infrastructure assets. The City of Toronto's 2024 Corporate Asset Management Plan (AMP) is a strategic document that reports on the City's plan to manage its portfolio of infrastructure assets that provide services and/or support the provision of services to the community.

This 2024 Corporate AMP was developed to comply with the July 1, 2024 milestone of Ontario Regulation (O. Reg.) 588/17 and the City's 2019 Corporate Asset Management Policy. It forms part of the City's Asset Management System which is the interrelated series of processes that delivers the asset management program throughout the City. To align with the requirements of O. Reg. 588/17 (July 1, 2024 milestone), this AMP reports on the City's costs required to **maintain current levels of service**.

This AMP is focused on identifying the renewal need (SOGR) for infrastructure investments and assumes planned budgets for all other lifecycle activities are sufficient to continue providing current levels of service. The analysis conducted helps to form a baseline of the City's state of infrastructure and a forecast of its state of good repair needs, which is separate from the growth and service demand requirements that are identified and considered through the City's budget process and Long-Term Financial Plan. The City may be experiencing investment gaps from the other lifecycle activities and will work towards aligning lifecycle management practices with financial forecasting processes.

A forthcoming version of the Corporate AMP will be developed to align with the final milestone of O. Reg. 588/17 (for July 1, 2025), which reports on the costs required to **provide proposed levels of service**.

The City's 2024 Corporate AMP contains the following major content sections:

- **State of Infrastructure:** reporting on current asset inventories, valuations, performance, age and estimated service life.
- **Levels of Service (LOS):** a series of performance measures and current performances that indicate how the City is providing services to the community.
- **Lifecycle Management Strategy:** the lifecycle activities that the City undertakes to maintain its assets in a state of good repair and meet service level objectives.
- **Climate Change:** some of the City's initiatives towards combating climate change as they relate to asset management.
- **State of Good Repair Performance and Investment Forecasts:** summarizes asset investment needs forecasts related to the state of good repair (i.e. renewal) of assets.
- **Financial Summary:** a description of the costs required to maintain current service levels and a comparison of those costs to current planned budgets for all lifecycle activities, including operating, growth, service improvements and state of good repair (i.e. renewals).
- **Improvement Plan:** initiatives the City can undertake to improve future iterations of its Corporate AMP.

This 2024 Corporate AMP includes all of the City's assets, except those that are identified as "core municipal infrastructure assets" in O. Reg. 588/17. As per the regulation, core municipal infrastructure assets include water, wastewater, stormwater, roads, bridges and culverts assets. These core infrastructure assets were reported in the City's previous 2021 Core Infrastructure AMP.

The scope of this 2024 Corporate AMP pertains to a variety of service areas across the City, as illustrated in Figure ES- 1.

Figure ES-1 Scope of the 2024 Corporate Asset Management Plan (Services and Subservices).

The Asset Management Plan is organized into this main document and eight (8) Service Summary documents, which are provided in the appendices. The main document provides a summary of all information at a higher-level, and the service area summaries provide additional details at a more granular level. Please refer to the appendices for more granular information and additional details that are summarized in this main document.

The following table and figure, provides a summary of some key results of this asset management plan for the City as a whole. The following subsections and report provide additional details.

Table ES-1 Corporate Asset Management Plan Summary of Key Results (for in-scope Assets).

Item	Value
Replacement Value	$72.9 Billion
Cumulative 10-year Cost to Maintain LOS	$40.0 Billion
Cumulative 10-year SOGR Infrastructure Gap	$26.0 Billion
Average Overall Performance	Fair

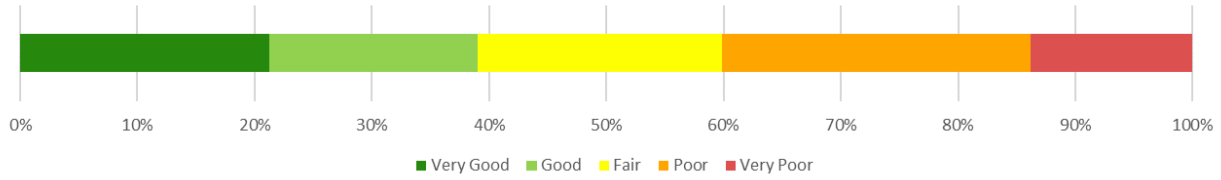


Figure ES-2 City of Toronto Overall Asset Performance Distribution (of in-scope Assets).

1.2 State of Infrastructure

The City's Asset portfolio within the scope of this AMP (i.e. excluding "core municipal infrastructure assets") has a current replacement value of $72.9 billion. The state of the infrastructure section of this AMP documents key information regarding the City's asset portfolio, including the total replacement value, average asset age, average asset estimated service life (ESL) and average asset performance. The following figures summarize this information at the service level. More granular breakdowns of this information are provided in Service Summary documents, located in the appendices of this AMP.

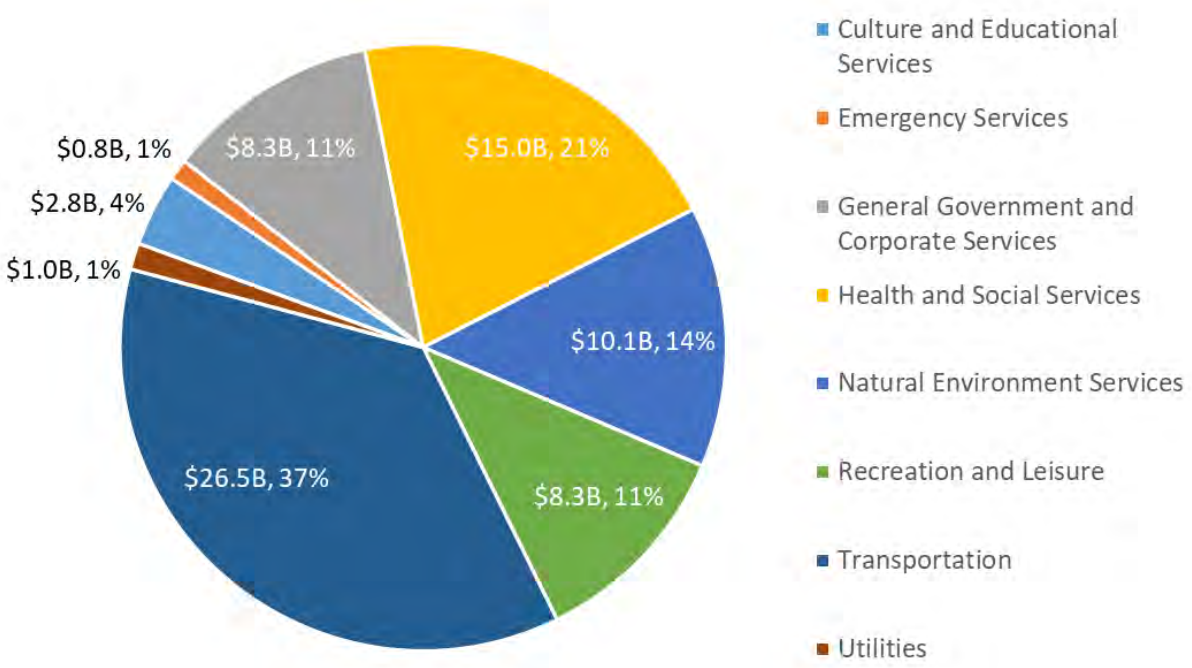


Figure ES-3 Replacement Value Summary ($ billions).

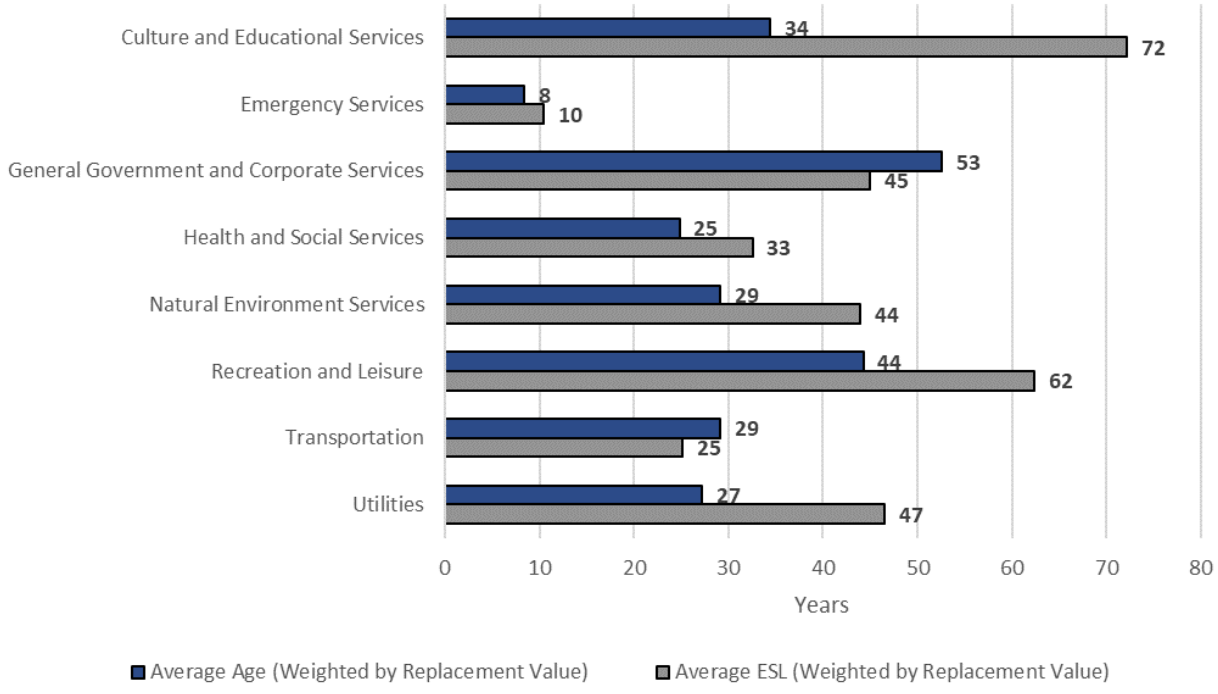


Figure ES-4 Age and Estimated Service Life Summary.

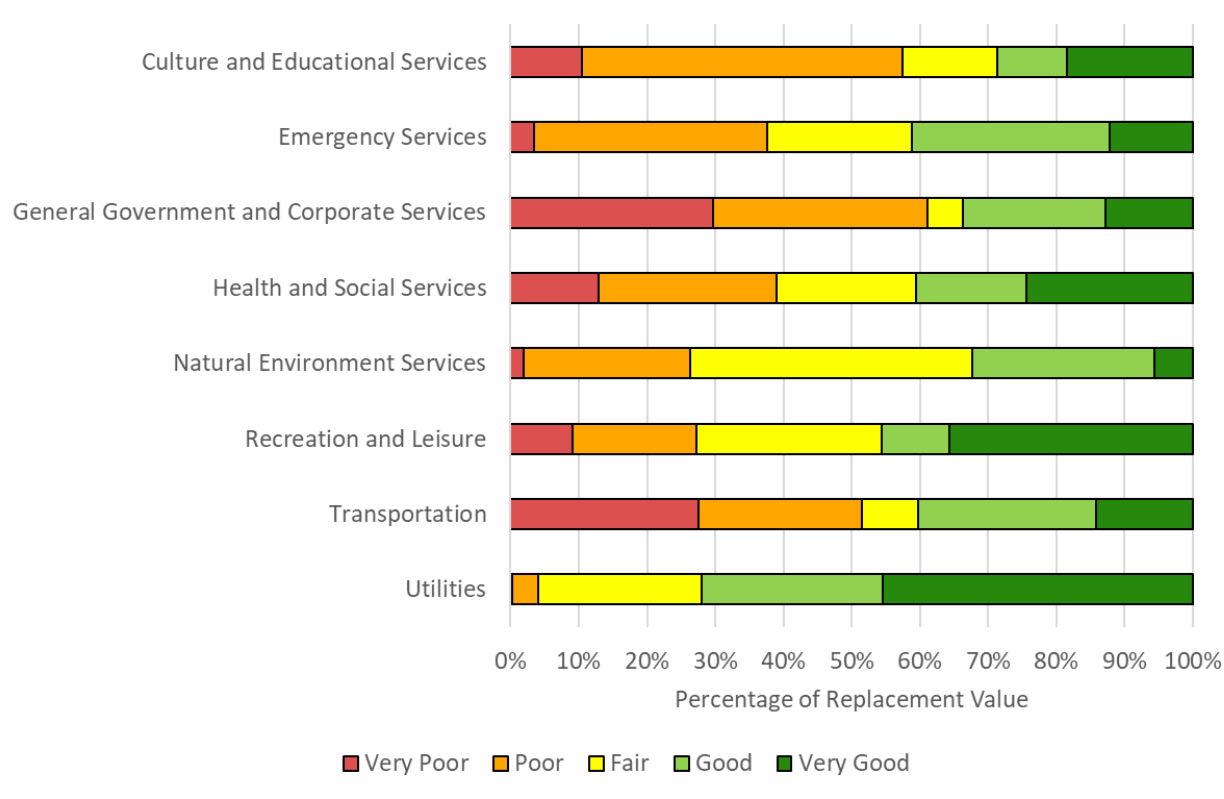


Figure ES-5 Performance Distribution by Replacement Value.

1.3 Levels of Service

Levels of Service (LOS) are a measure of the degree to which an asset meets functional or user requirements. Typically, LOS are measured in terms of parameters that reflect social, political, environmental, and economic outcomes that an organization delivers.

The City's LOS framework begins with a service statement, for each subservice. It is described at the beginning of each subsection in the Service Summary documents. It details the subservice's strategic objectives and vision for service delivery. LOS measures are defined around this Service Statement. The LOS measures are organized by key service attributes that describe the service (i.e. 'reliable', 'quality' or 'safe'). The City has developed LOS measures that are organized by Customer-focused (or community-focused) measures, and Technical-focused measures.

A key technical performance measure developed to be consistent across all subservices. This measure was the percentage of assets in fair or better performance. This measure was used to link asset performance to investment needs forecasts.

Additional Levels of Service and current performance measures are provided in the Subservice Summary documents in the appendices.

CULTURE & EDUCATIONAL SERVICES

Arts, Culture & Heritage Services

Celebrate and preserve cultural richness by curating diverse artistic experiences, preserving heritage sites, and fostering creative expression. Provide timely, accessible and high-quality engaged and collaborative services to all of our clients, partners and communities and residents of Toronto.

Customer and Technical Service Attributes Focus
Accessible, Available, Quality, and Reliable

82% Percentage of Assets in Fair or Better Performance

Library Services

Toronto Public Library (TPL) provides free and equitable access to services that meet the changing needs of Torontonians. The Library preserves and promotes universal access to a broad range of human knowledge, experience, information and ideas in a welcoming and supportive environment.

Customer and Technical Service Attributes Focus
Reliable and Accessible

29% Percentage of Assets in Fair or Better Performance

EMERGENCY SERVICES

Toronto Fire Services

In accordance with the Ontario Fire Protection and Prevention Act (FPPA), Toronto Fire Services (TFS) provides residents and businesses with a comprehensive suite of fire protection services 24 hours per day, 7 days per week.

Customer and Technical Service Attributes Focus
Reliable and Safe

86% Percentage of Assets in Fair or Better Performance

Toronto Paramedic Services

Toronto Paramedic Services provides 24/7 emergency medical care, emergency medical dispatch, and community paramedicine in response to life-threatening medical emergencies to improve the quality of life and protect communities and the well-being of residents.

Customer and Technical Service Attributes Focus
Reliable and Quality

43% Percentage of Assets in Fair or Better Performance

Toronto Police Services

Toronto Police Service aims to deliver essential public safety services that are sensitive to the needs of the community.

Customer and Technical Service Attributes Focus
Safe, Reliable, and Effective

47% Percentage of Assets in Fair or Better Performance

GENERAL GOVERNMENT & CORPORATE SERVICES

Administrative and Election Services

Build public trust and confidence in local government, ensure that the Toronto municipal government is democratically elected through open, fair and accessible elections; that Elected officials, City officials and the public can participate in a transparent, accessible, and democratic Council decision-making process and the public has timely, reliable, transparent and accurate access to City information, except where protected by privacy laws. Residents, businesses, and visitors have access to real time, accurate, and reliable information on City services.

Customer and Technical Service Attributes Focus
Reliable, Quality, and Accessible

95% Percentage of Assets in Fair or Better Performance

Corporate Real Estate

City staff and the public have access to safe, clean and operational City facilities that are also economically and environmentally sustainable.

Customer and Technical Service Attributes Focus
Reliable, Safe, Accessible, and Environmentally Sustainable

33% Percentage of Assets in Fair or Better Performance

Fleet Services

Fleet Services Division keeps the City moving by enabling City Divisions and Agencies to provide critical services to the community by ensuring the City's fleet is safe, reliable, economical, and environmentally sustainable.

Customer and Technical Service Attributes Focus
Reliable and Environmentally Sustainable

74% Percentage of Assets in Fair or Better Performance

Technology Services

Technology Services provides reliable Information Technology assets to public staff that support service delivery of many services and programs to the public as well as provide residents with access to the public assets that enrich their lives and well-being.

Customer and Technical Service Attributes Focus
Reliable and Available

67% Percentage of Assets in Fair or Better Performance

HEALTH & SOCIAL SERVICES

Children's Services

Providing access to safe and affordable child care and early-years programs that contribute to healthy child development, family and well-being and increased economic activity by enabling them to go to work and school.

Customer and Technical Service Attributes Focus

Accessible, Reliable, Safe, and Available

98% Percentage of Assets in Fair or Better Performance

Community Housing

To provide clean, safe, well-maintained, affordable homes for residents, to connect residents to services and opportunities, and help foster great neighbourhoods where people can thrive.

Customer and Technical Service Attributes Focus

Accessible, Available, Reliable, and Safe

58% Percentage of Assets in Fair or Better Performance

Shelter and Support Services

People experiencing homelessness in Toronto have access to safe, high-quality emergency shelters that offer housing-focused supports.

Customer and Technical Service Attributes Focus

Reliable, Safe, Quality, Available, and Accessible

65% Percentage of Assets in Fair or Better Performance

Public Health

Toronto Public Health's programs, services and policy directions strive to create the optimal conditions to achieve a healthy city for all, meet population public health needs, comply with the Ontario Public Health Standards, and contribute to a broader sustainable health system.

Customer and Technical Service Attributes Focus

Reliable

98% Percentage of Assets in Fair or Better Performance

Senior Services and Long-Term Care

We are committed to ensuring eligible adults and seniors have access to City-operated long-term care homes and community services that are inclusive, available, diverse and resident-focused which contribute to improved health outcomes quality of life.

We want seniors to maintain their independence and stay in their homes as long as possible (i.e. age in place) with support and access to integrated City services that are timely, inclusive and comprehensive.

The City of Toronto aims to deliver these outcomes equitably, efficiently and with excellent customer service to help improve the lives of Torontonians and work to earn their trust and confidence.

Customer and Technical Service Attributes Focus

Reliable, Quality, Regulatory, Accessible, and Available

98% Percentage of Assets in Fair or Better Performance

NATURAL ENVIRONMENT SERVICES

Dock Walls and Breakwaters

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our dock walls and breakwaters to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation.

Customer and Technical Service Attributes Focus

Reliable and Safe

16% Percentage of Assets in Fair or Better Performance

Erosion Controls

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our erosion control structures to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation. Erosion control structures provide protection and preservation across City services through the maintenance of grey and green infrastructure that contribute to the safety, sustainability and viability of the city.

Customer and Technical Service Attributes Focus

Reliable, Safe, and Environmentally Sustainable

86% Percentage of Assets in Fair or Better Performance

Forestry Management and Maintained Parkland

Ensure that city parks, tree-lined streets, trails, forests, meadows, marshes, and ravines are beautiful, safe and accessible, and that they expand and adapt to meet the needs of a growing city.

Customer and Technical Service Attributes Focus

Availability, Environmental Sustainability, Accessibility, Quality, Reliability, and Sustainability

98% Percentage of Assets in Fair or Better Performance

RECREATION & LEISURE

Exhibition Place

Deliver exceptional experiences to our customers, which include attendees and clients, through events and site animation while promoting economic activity and investment in the City of Toronto.

Customer and Technical Service Attributes Focus

Reliable, Safe, Accessible, Available, Quality, and Shine

88% Percentage of Assets in Fair or Better Performance

Parks and Recreation

Provide inclusive, accessible, and vibrant parks, facilities, and programs that enhance the quality of life for all members of our community. With a focus on equity, sustainability, and innovation, we strive to be responsive to the evolving needs and interests of our diverse community, enriching lives and fostering a sense of belonging for all.

Customer and Technical Service Attributes Focus

Availability, Environmental Sustainability, Accessibility, Quality, and Sustainability

67% Percentage of Assets in Fair or Better Performance

Toronto Zoo

The Toronto Zoo strives to be an iconic guest destination that provides incredible guest experiences and connects people, animals, and conservation science to fight extinction. We base our objectives around four (4) cares:

1. We care about our animals.
2. We care about our team.
3. We care about our guests.
4. We care about our community.

Customer and Technical Service Attributes Focus

Reliable, Safe, Accessible, and Environmentally Sustainable

86% Percentage of Assets in Fair or Better Performance

TRANSPORTATION

Road Network

Transportation Services strives to build and maintain Toronto's transportation networks so that:

- People and businesses are connected to a resilient and reliable transportation network where they can access opportunities and places that they value.
- People have access to streets in their communities that are complete, safe, equitable and vibrant.

Customer and Technical Service Attributes Focus

Accessible, Reliable, Resilient, Safe, Quality, and Sustainability

48% Percentage of Assets in Fair or Better Performance

Transit Services

To be a transit system that makes Toronto proud. To provide a reliable, efficient, accessible and integrated bus, streetcar, and subway network that draw its high standards of customer care from our rich traditions of safety, service and courtesy.

The TTC developed their own tactical AMP in response to the July 1, 2024 requirement that was approved by their Board on April 11th, 2024. Please refer to TTC's AMP for levels of service details.

UTILITIES

Water, Wastewater, and Stormwater Centralized Services

Centralized Services support the delivery of water, wastewater, and stormwater services to ensure that they can be provided to the community in a safe, reliable, and environmentally sustainable manner.

Customer and Technical Service Attributes Focus

Reliable, Safe, and Environmentally Sustainable

82% Percentage of Assets in Fair or Better Performance

Solid Waste Management

Provide a safe, efficient, and reliable waste management program that supports city beautification and environmental sustainability, while developing staff and creating a culture of service excellence, planning for the future and advocating for the best interests of Toronto.

Customer and Technical Service Attributes Focus

Reliable, Environmentally Sustainable, and Community Stewardship

97% Percentage of Assets in Fair or Better Performance

1.4 Lifecycle Management Strategy

The City's Lifecycle Strategy is the set of planned actions performed on assets to provide levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost. Lifecycle activities detail the actions that are executed as part of the strategy. They document the activities that the City is undertaking to provide services through assets to the community. The City's lifecycle activities are organized into six (6) categories, the definitions of which can be found in Subsection 8.1 (Table 8-1) of this AMP.

The following table documents general lifecycle activities that apply to most, if not all assets throughout the City. To supplement these general lifecycle activities, each Service Summary document (in the appendices) provides information on subservice or asset-specific lifecycle activities at a more granular level, that may be unique to individual service areas and asset classes.

Table ES-2 City's General Lifecycle Activities

Lifecycle Activity	Description
Non-Infrastructure	• Planning and studies (Master Plans, financial plans, capacity studies, tactical AMPs, etc.). • Community Engagement to identify community needs.
Operations and Maintenance	• Scheduled inspections and condition assessments of assets. • Preventive maintenance programs. • Reactive maintenance as required.
Renewals (Rehabilitation/Replacement)	• Rehabilitation based on inspections to extend service life where opportunities exist. • Replacement of assets at end of life.
Disposal	• Asset disposal coordinated with replacement.
Growth	• Construction/procurement of new assets to meet increased demand and population growth, based on planning and studies.
Service Improvement	• Upgrades or procurement of new assets as required to meet regulatory requirements or community needs/requests.

The City's lifecycle activities are supplemented using a series of lifecycle models, which provide a mathematical representation of the City's lifecycle activities that was used to that forecast asset needs and planned actions into the future. This forecasting is important to understanding how the City's lifecycle strategy will evolve over time to address asset needs.

1.5 State of Good Repair and Full Lifecycle Investment Forecasts

A primary objective of the Corporate AMP and the July 1, 2024 milestone of O. Reg. 588/17 is to understand the costs required to manage the City's lifecycle activities and maintain current service levels for the next 10-years. To understand these costs, a forecasting analysis of asset lifecycle needs was undertaken.

Two (2) forecast scenarios were analyzed, which provided insight on the City's current state of good repair renewal status, and the LOS that the City would achieve under budgetary or performance-based targets. The following describes these two (2) scenarios:

- **Scenario 1: Current Planned Budget** – This scenario demonstrates the asset performance achieved under the current 10-year capital budget the City has available to allocate towards a given asset grouping. The current capital budget forecast is based on the City's 2024-2033 Capital Budget and Plan. The results of this scenario analysis illustrate the change in LOS under anticipated conditions. This is also used as a baseline scenario, which can be used to assess the other scenarios analyzed.
- **Scenario 2: Cost to Maintain LOS** – This scenario determines the cost required to maintain LOS at current levels over a 10-year forecast period. It utilizes the performance (condition) based LOS measure to set a target LOS and understand the funding required to maintain that level. For example, the percentage of assets in fair or better performance is assumed to be maintained over the 10-year forecast period, to understand the required funding to achieve this state.

The following table summarizes the state of good repair performance and investment needs for each subservice.

Table ES-3 State of Good Repair Investment Needs Analysis Summary

Subservice	Average Annual SOGR Planned Budget ($M)	Average Annual SOGR Budget Required to Maintain LOS ($M)	LOS Trend Under Current Budget
Arts, Culture and Heritage Services	$18.454	$19.694	Decreasing
Library Services	$23.663	$26.227	Decreasing
Toronto Fire Services	$28.783	$28.422	Maintaining
Toronto Paramedic Services	$22.473	$8.475	Increasing
Toronto Police Services	$52.219	$32.999	Increasing
Administrative and Election Services	$2.695	$2.402	Maintaining
Corporate Real Estate	$55.626	$133.758	Decreasing
Fleet Services	$87.698	$78.246	Increasing
Technology Services	$26.888	$10.068	Increasing
Children's Services	$2.410	$1.980	Increasing
Community Housing	$160.000	$334.114	Decreasing
Shelter and Support Services	$7.224	$4.596	Increasing

Subservice	Average Annual SOGR Planned Budget ($M)	Average Annual SOGR Budget Required to Maintain LOS ($M)	LOS Trend Under Current Budget
Public Health	$0.633	$0.487	Maintaining
Senior Services and Long-Term Care	$7.700	$31.405	Decreasing
Dock Walls and Breakwaters	$1.520	$2.353	Decreasing
Erosion Controls	$21.960	$0.000	Increasing
Forestry Management & Maintained Parkland	$3.300	$7.800	Decreasing
Exhibition Place	$16.424	$25.414	Decreasing
Parks and Recreation	$85.700	$112.700	Decreasing
Toronto Zoo	$18.476	$7.424	Increasing
Road Network	$12.247	$23.202	Decreasing
Transit	$720.176	$3,084.023	Decreasing
Solid Waste Management	$27.873	$25.205	Increasing
Water, Wastewater, and Stormwater Centralized Services	$1.049	$0.940	Maintaining
Total	**$1,405.191**	**$4,001.933**	**Decreasing**

1.6 Financial Summary

The Corporate AMP focuses on identifying SOGR (renewal) needs and assumes planned budgets for all other lifecycle activities are sufficient to continue providing current levels of service. The results of the SOGR (renewal) forecasts are compared against the budget forecast, which is obtained from the City's 2024 Operating Budget and 2024-2033 Capital Budget and Plan and reflected in a summary table and figure. The summary table lists the planned expenditures for a series of various lifecycle activities, including operating, growth, service improvements and state of good repair (i.e. renewals). It uses the information from the budget notes and integrates the results of the two analyzed scenarios into these values. The difference between the two scenarios is identified as an "infrastructure gap", which is calculated as difference in the total expenditures between the "Current Planned Budget" scenario and the "Cost to Maintain LOS" scenario. Note that the gap shown below in service improvement activities relates to improvements and upgrades identified for Parks, Forestry and Recreation through their tactical AMP, which will be further analyzed through the 2025 requirement. The following table and figure illustrate this tabular summary as well as a graphical representation of this analysis. Note that summary tables and corresponding figures, broken down by subservice areas, are also provided in the Service Summary documents in the appendices.

Table ES- 4 Total City Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$216.7	$216.7
State of Good Repair	$1,405.2	$4,001.9
Service Improvement	$736.5	$768.1
Growth Related	$331.9	$331.9
Operating	$10,841.8	$10,841.8
Total Expenditures	**$13,532.1**	**$16,160.5**
Infrastructure Gap	**-**	**$2,628.4**
SOGR Infrastructure Gap	**-**	**$2,596.7**

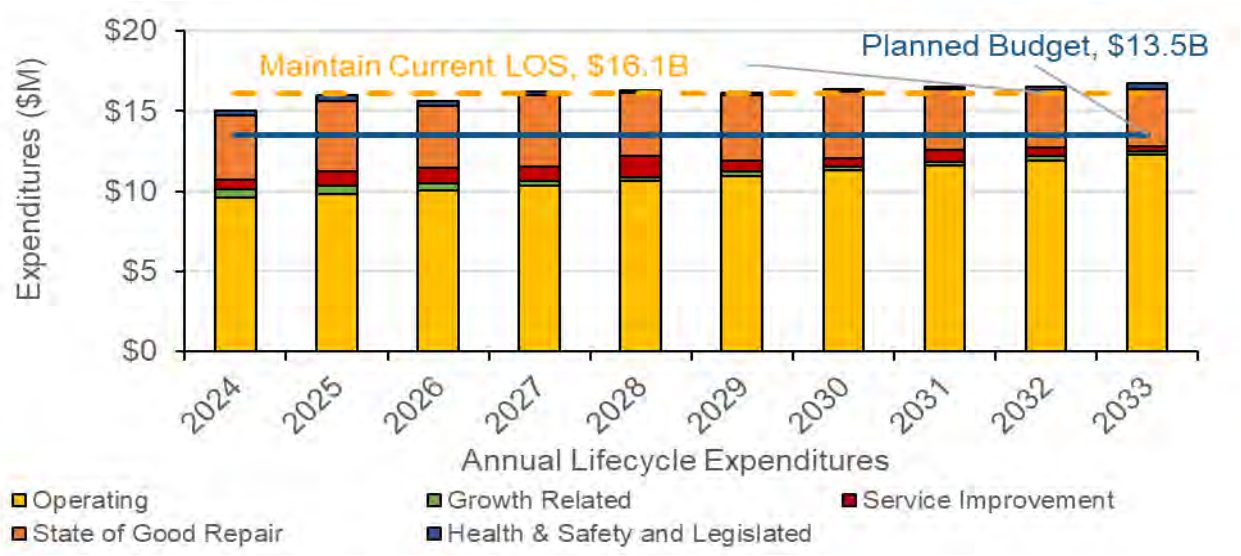


Figure ES-6 Total City Scenario Comparison.

1.7 Improvement Plan

A best practice of asset management is to adopt a culture of continual improvement. Keeping in line with this concept, the City has identified several initiatives to continue to improve its asset management system and increase the maturity of future iterations of its Corporate AMP.

The following table summarizes the improvement initiatives identified by the City.

Table ES- 5 AMP Improvement Initiatives

Category	Initiative
Asset Management Program	Complete a formalized and detailed maturity assessment of AM practices across the City. While the City recognizes that this improvement plan provides commentary on asset management maturity and initiatives to increase that maturity, the content herein was developed by City staff and the authors of this AMP. The City can benefit from a formalized and independent maturity assessment.
Asset Management Program	Develop a Corporate Asset Management Strategy, including a Governance Framework and Roadmap, to provide strategic direction to the advancement of the City's Corporate Asset Management program.
Asset Information and Data	Develop data standards that inform the requirements for data collection that provides the foundation for this AMP.
Asset Information and Data	Develop a data collection policy and plan, which articulates how and when data will be collected for the various subservices and asset classes.
Asset Information and Data	Work towards increasing the City's AM data maturity, by collecting additional data to fill in gaps, and by adopting a process to update data and improve its confidence/accuracy.
Asset Management Strategies	Develop a Levels of Service Framework (to supplement/complement the LOS measures developed for this AMP). Adopt a process to update LOS annually as part of Asset Management planning processes.
Asset Management Strategies	Adopt a process to establish proposed levels of service to accommodate the 2025 Milestone of O. Reg. 588/17, as well as future iterations of this Corporate AMP.
Asset Management Strategies	Develop a lifecycle strategy framework and enhance the lifecycle models used for this AMP analysis to better align them with the behaviours of various asset types.
Asset Management Strategies	Develop a risk management strategy and framework to articulate risk across all subservices and asset classes.
Financial Strategy	Complete a detailed budget analysis to align specific projects from the budget with asset management strategies. This will aid in correlating financial needs to budgetary allocations.
Financial Strategy	Integrate the AMP process with the annual budgeting process, providing an AM lens to budgetary decisions that incorporates levels of service and risk.
Financial Strategy	Support the development of a City-wide capital optimization and prioritization framework.
Climate Change	Collaborate with the Environment & Climate Division to identify the information, training and resources needed by City staff to improve understanding of climate change considerations in asset management and the value of embedding climate change into AM planning.
Climate Change	Develop a Framework to identify costs associated with climate change and integrate them into the AM planning processes.

2.0 Introduction

The City of Toronto (City) is Canada's largest city and a world leader in business, finance, technology, entertainment and culture. It's large population of immigrants from all over the globe has also made Toronto one of the most multicultural cities in the world. Toronto's municipal government is responsible for a variety of services, which are supported by or provided through a large and diverse portfolio of infrastructure assets. The City is organized into several City Divisions, Agencies and Corporations (DACs) that provide these services to the community and manage its infrastructure assets.

The City's newly formed Corporate Asset Management (CAM) group is part of Finance and Treasury Services. Its primary responsibilities are to develop standardization and centralization for asset management practices across the City and to support the various divisions, agencies and corporations in their asset management journeys. The benefits of creating a 'whole-of-government approach' to asset management will allow for greater integration and enhanced collaboration on projects that involve infrastructure assets. The CAM group is also responsible for the development of this Corporate Asset Management Plan (AMP) to comply with the requirements of Ontario Regulation (O. Reg.) 588/17.

2.1 Objectives

This AMP was developed in compliance with O. Reg. 588/17 and the City's 2019 Corporate Asset Management Policy. It forms a part of the City's Asset Management System, which represents the interrelated series of processes that delivers the asset management program throughout the City.

The primary objective of the City's asset management program – and by extension, this AMP – is to enable the City to realize value from its assets. The Corporate AMP achieves that by providing an understanding of the current state and condition of these assets, the current levels of service being provided through the assets, and the required funding to maintain those levels of service over a 10-year forecast horizon.

This provides the City with the information to make better-informed decisions to provide the best possible service to the community, while minimizing risk, for the lowest possible cost.

The Corporate AMP is aligned with several strategic initiatives and documents at the City, which are summarized in more detail in Section 3.0.

2.2 Purpose

The purpose of this AMP is to:

- Ensure that the City responds to and complies with current Asset Management regulatory requirements of O. Reg. 588/17.
- Support the line-of-sight between Council approved plans and initiatives and asset investment needs.
- Report on the current state of the City's infrastructure assets, including their replacement costs, condition and other pertinent information.
- Articulate the current levels of service (LOS) being provided to the community, as well as the lifecycle activities required to maintain those levels of service.
- Forecast expenditures required to maintain current LOS over the next 10-years.
- Detail the City's financial outlook to sustain service levels through the management of its assets over the next 10-years.
- Quantify the gap (if any) between planned spending and forecasted expenditures.
- Provide recommendations to continually improve the City's AM practices, and the development of future AMPs.

2.3 Scope

The City's 2024 Corporate AMP reports on most of the City's assets, throughout a variety of service areas. The assets included within the scope of this AMP include all City-owned assets except for those that are identified as "core municipal infrastructure assets" as per the definition provided in O. Reg. 588/17. These assets were reported in the City's previous 2021 Core Infrastructure AMP. As per the regulation, a "core municipal infrastructure asset" means any municipal infrastructure asset that is a,

a. water asset that relates to the collection, production, treatment, storage, supply or distribution of water;

b. wastewater asset that relates to the collection, transmission, treatment or disposal of wastewater, including any wastewater asset that from time to time manages stormwater;

c. stormwater management asset that relates to the collection, transmission, treatment, retention, infiltration, control or disposal of stormwater;

d. road; or

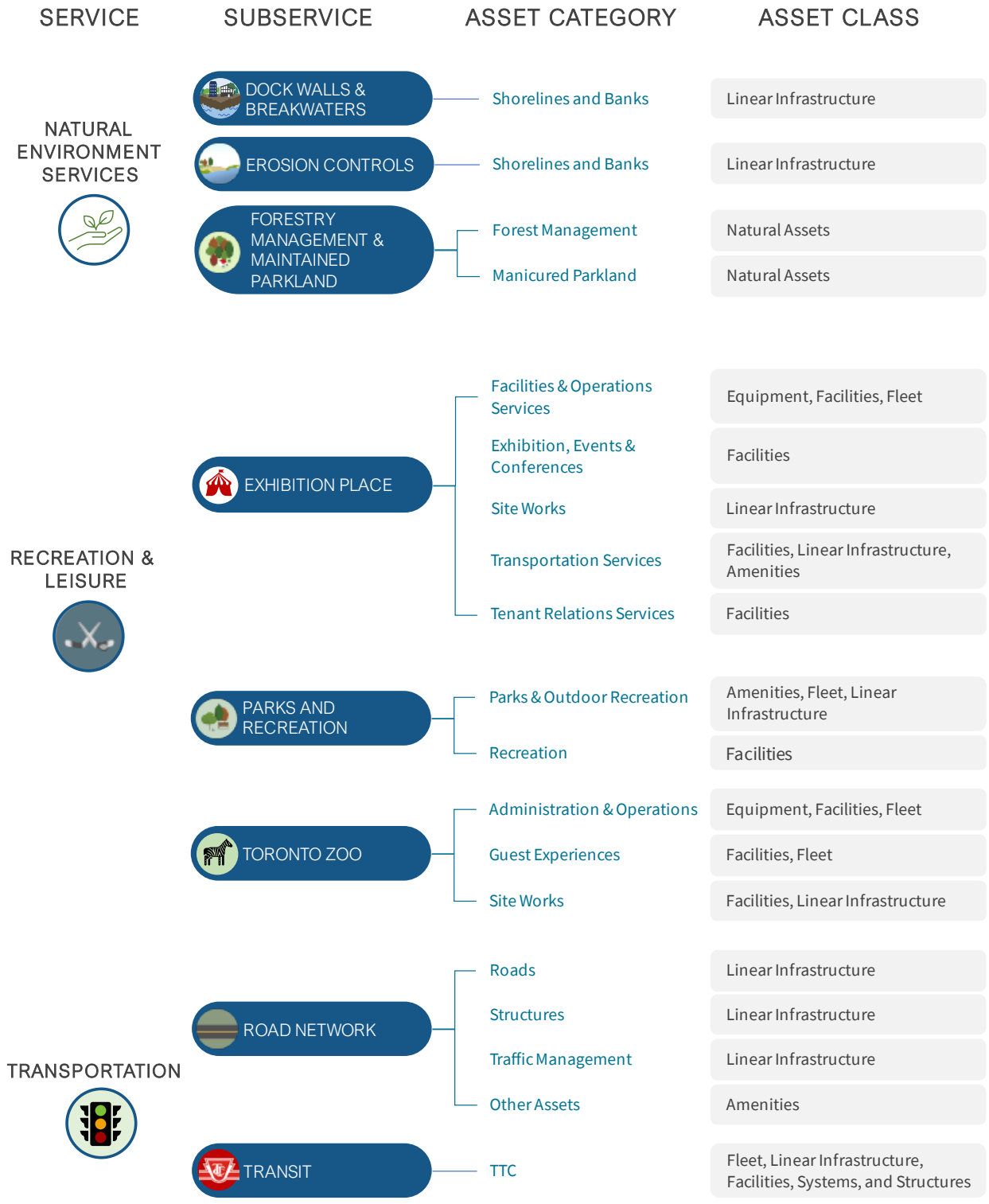
e. bridge or culvert[2].

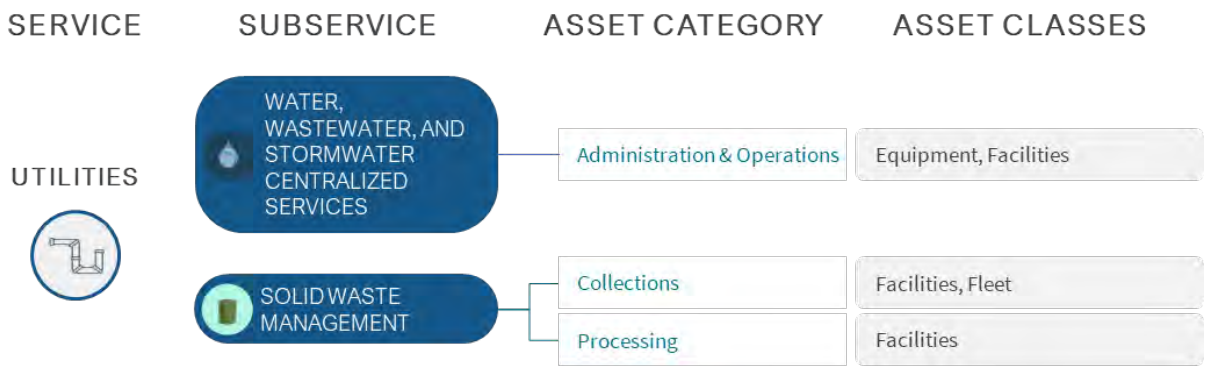
The following asset hierarchy figures illustrate the service areas and corresponding asset classes that are reported within this AMP.

[2] Ontario Regulation 588/17 (https://www.ontario.ca/laws/regulation/r17588)

SERVICE	SUBSERVICE	ASSET CATEGORY	ASSET CLASS
CULTURE & EDUCATIONAL SERVICES 	ARTS, CULTURE & HERITAGE SERVICES	Administration & Operations	Facilities
		Heritage Buildings	Facilities
		Heritage Theatres	Facilities
		Museums & Galleries	Facilities
		Public Art	Collections
		Theatre Services	Equipment, Facilities
	LIBRARY SERVICES	Administration & Operations	Equipment, Facilities, Fleet
		Library Branches	Equipment, Facilities, Fleet
EMERGENCY SERVICES 	TORONTO FIRE SERVICES	Emergency Response (Operations)	Equipment, Facilities, Fleet
		Heavy Urban Search & Rescue (HUSAR)	Equipment, Fleet
		Prevention & Public Education	Fleet
	TORONTO PARAMEDIC SERVICES	Central Ambulance Communications Centre	Equipment
		Community Paramedicine & Emergency Call Mitigation	Equipment, Fleet
		Emergency Medical Care	Equipment, Fleet
	TORONTO POLICE SERVICE	Various Asset Categories	Equipment, Fleet

SERVICE	SUBSERVICE	ASSET CATEGORY	ASSET CLASS
GENERAL GOVERNMENT AND CORPORATE SERVICES	ADMINISTRATIVE AND ELECTION SERVICES	Corporate Information Management Services (CIMS)	Equipment
		Customer Experience	Equipment
		Election Services	Equipment
		Member Services & Program Support	Equipment
		Secretariat	Equipment
		Strategic Protocol & External Relations	Equipment
	CORPORATE REAL ESTATE	Administration & Operations	Facilities
		Fire Services	Facilities
		Fleet Services	Facilities
		Paramedic Services	Facilities
		Police Services	Facilities
	FLEET SERVICES	Fuel & Energy Management	Facilities
		Maintenance & Training	Equipment
		Vehicle & Equipment	Equipment, Fleet
	TECHNOLOGY SERVICES	End-user Devices & Applications	Equipment
		Network Devices	Equipment
HEALTH & SOCIAL SERVICES	CHILDREN S SERVICES	Child Care	Amenities, Facilities
	COMMUNITY HOUSING	Administrative/ Support Services	Equipment, Facilities
		Subsidized Housing	Facilities
	SHELTER & SUPPORT SERVICES	Shelters, Support and Housing	Facilities
	PUBLIC HEALTH	Disease Prevention & Healthy Living	Equipment
		Public Health Monitoring	Equipment
	SENIOR SERVICES & LONG TERM CARE	Long-Term Care Homes	Equipment, Facilities


SERVICE
SUBSERVICE
ASSET CATEGORY
ASSET CLASS
NATURAL ENVIRONMENT SERVICES
DOCK WALLS & BREAKWATERS
Shorelines and Banks
Linear Infrastructure
EROSION CONTROLS
Shorelines and Banks
Linear Infrastructure
FORESTRY MANAGEMENT & MAINTAINED PARKLAND
Forest Management
Natural Assets
Manicured Parkland
Natural Assets
RECREATION & LEISURE
EXHIBITION PLACE
Facilities & Operations Services
Equipment, Facilities, Fleet
Exhibition, Events & Conferences
Facilities
Site Works
Linear Infrastructure
Transportation Services
Facilities, Linear Infrastructure, Amenities
Tenant Relations Services
Facilities
PARKS AND RECREATION
Parks & Outdoor Recreation
Amenities, Fleet, Linear Infrastructure
Recreation
Facilities
TORONTO ZOO
Administration & Operations
Equipment, Facilities, Fleet
Guest Experiences
Facilities, Fleet
Site Works
Facilities, Linear Infrastructure
TRANSPORTATION
ROAD NETWORK
Roads
Linear Infrastructure
Structures
Linear Infrastructure
Traffic Management
Linear Infrastructure
Other Assets
Amenities
TRANSIT
TTC
Fleet, Linear Infrastructure, Facilities, Systems, and Structures



These assets are managed by a variety of Divisions, Agencies and Corporations throughout the City. The following list of DACs manage assets within the scope of this 2024 Corporate Asset Management Plan.

Not that the Toronto Transit Commission (TTC) developed its 2024 TTC Asset Management Plan in response to the July 1, 2024 regulatory requirement, which was approved by its Board on April 11, 2024. The content of TTC's AMP was directly used for inclusion and consolidation of the City's Corporate AMP. Please refer to TTC's AMP for further information and details in response to the provincial regulation.

COMMUNITY AND SOCIAL SERVICES

- Children's Services
- Economic Development and Culture
- Parks, Forestry and Recreation
- Senior Services and Long-Term Care
- Toronto Shelter and Support Services
- Toronto Fire Services
- Toronto Paramedic Services
- Toronto Public Health

CORPORATE SERVICES

- Customer Experience
- Corporate Real Estate Management
- Fleet Services
- Technology Services

GOVERNANCE, OVERSIGHT AND ACCOUNTABILITY

- City Clerk's Office

INFRASTRUCTURE AND DEVELOPMENT SERVICES

- Solid Waste Management
- Toronto Water
- Transportation Services

AGENCIES AND CORPORATIONS

- CreateTO
- Exhibition Place
- Toronto Police Service
- Toronto Public Library
- Toronto Transit Commission
- Toronto Zoo
- Toronto Community Housing Corporation
- TO Live
- Yonge-Dundas Square

Figure 2-1 In-scope Divisions, Agencies and Corporations.

2.4 Timeframes

The Corporate Asset Management Plan covers a planning forecast period of 10-years. The City endeavors to review its AM practices and update this AMP at least once every five (5) years.

Note that due to the ongoing regulatory milestones of O. Reg. 588/17 (as detailed in Subsection 3.3), a supplementary version of this AMP is required to be developed for July 1, 2025.

2.5 Limitations

The 2024 Corporate Asset Management Plan was developed to meet the requirements of the July 1, 2024, milestone of O. Reg. 588/17. The regulation provides a multi-phased approach to implementing an asset management system and developing asset management plans. The next, and final milestone of the regulation (for July 1, 2025) will contain additional information that this AMP does not.

The primary difference between the 2024 and forthcoming 2025 Corporate AMPs is related to the municipality's approach to reporting on the costs required to meet service levels. The regulation requires this 2024 Corporate AMP to report on the costs required to **maintain current levels of service**. The regulation requires the 2025 AMP to report on the costs required to **provide proposed levels of service**.

This AMP compares the City's current budgets to the costs required to maintain current levels of service and identifies a gap between them (if any). It is important to note that the term "gap" as it is used in this AMP, refers only to the difference between the City's current planned budget, and the costs to **maintain current levels of service**.

Therefore, if current levels of service can be maintained (or exceeded) for the planned budget, then the no infrastructure gap will be reported (i.e. the gap will be reported as $0). This indicates that there is sufficient funding to maintain or exceed current levels of service over the next 10-years. Note that a $0 gap should not be interpreted as an indication that additional funding is no longer required by the service area – it is simply the gap between planned budgets and the cost to maintain current service levels.

This is specifically reported to respond to the requirements of the 2024 milestone of O. Reg. 588/17. In meeting this requirement, this AMP does not provide an indication of whether the current levels of service are the 'necessary' or 'proposed' levels of service needed to support continued growth, mitigate ongoing risks and minimize future costs. The context behind the reported costs in this AMP is provided in the AMP document, as well as in each of the subservice summary documents.

The City's 2025 Corporate AMP will identify the gap between planned budgets and proposed levels of service and will provide recommendations on funding strategies to address this funding gap. Future iterations of the Corporate AMP (beyond 2025) will continue to report on proposed levels of service and will not necessarily report on costs to maintain current levels of service.

3.0 Alignment to City Goals

The City's Vision, Motto, and Mission are documented in the Corporate Strategic Plan. The City of Toronto aims to be a friendly and sustainable city that is desirable to live in and provides people with opportunities for innovation and growth.

Vision

- Toronto is a caring and friendly city. We have opportunities to sustain and enrich our lives and reach our highest potential. Our diversity is valued and celebrated and our communities are a source of pride. We are actively involved in the social, cultural and political life of the city.
- Toronto is a clean, green and sustainable city. We integrate environmental stewardship into our daily activities. We maintain and improve the health of the environment for present and future generations.
- Toronto is a dynamic city. As the nation's leading economic engine, we are a centre of innovation and growth with a strong international presence. Our dynamic city is well positioned to succeed in the world economy.
- Toronto invests in quality of life. We invest in quality of life – socially, economically, culturally and environmentally – to make Toronto a desirable place to live, prosper and visit.

Motto

Toronto is one of the most diverse cities in the world. We value the contributions made by everyone and believe that the diversity among its people has strengthened Toronto.

Mission

To serve a great city and its people.

3.1 Alignment with Corporate Strategic Plan

The City's Corporate Strategic Plan establishes two corporate priorities and four strategic priorities. These priorities are based on public consultation, directions, and budget decisions received from City Council.

Corporate Priorities:

1. Financial sustainability.
2. A well-run City.

Strategic Priorities:

1. Maintain and create housing that's affordable.
2. Keep Toronto moving.
3. Invest in people and neighbourhoods.
4. Tackle climate change and build resilience.

The principles of asset management, and the content provided within this AMP are in alignment with the City's corporate priorities. The core of AM planning is to ensure financial sustainability by optimizing value, mitigating risk and reducing cost which will in-turn contribute to sustaining a well-run City.

Many of the strategic priorities are also reflected in the AMP, through the various assets related to housing and transportation, as well as the investment plans that detail strategies for ensuring consistent and continual service delivery to the community. Furthermore, this AMP contains a climate change lens, which describes the City's approach to fighting climate change through asset management practices.

The 2024 Corporate AMP will assist the City in managing its various infrastructure assets that support service delivery, strengthen community viability and sustainability, and enable the City to focus on the key priorities and initiatives necessary to accomplish its long-term goals.

3.2 Alignment with Corporate Asset Management Policy

In 2019, the City of Toronto adopted their Corporate Asset Management Policy. The purpose of the policy is to guide the development and implementation of the City's AM framework and AMPs to perform asset management in a consistent, systematic manner across the organization. The CAM policy, while conceptual in nature, contains the overarching principles and guidelines for establishing a framework and integrated approach to asset management to:

- ensure long-term asset sustainability;
- demonstrate a commitment to good stewardship of the City's infrastructure assets; and
- support improved accountability and transparency to the community through the adoption of appropriate AM practices.

The objective is to establish a whole-of-government approach to asset management that will promote and foster logical and evidence-based decision-making and support the delivery of sustainable community services.

The 2024 Corporate AMP is aligned with the CAM Policy by:

- Ensuring legislative requirements for asset management are achieved.
- Providing the City with the information needed to make infrastructure investment decisions to balance lifecycles, provide services, prioritize needs and minimize risks at the lowest possible cost.
- Linking infrastructure investment decisions to service outcomes.
- Providing an evidence-based approach to decision-making, ensuring accountability and transparency.
- Providing the information to support prudent financial planning and decision-making.

The City's Corporate Asset Management Framework is illustrated below. The framework was adopted to facilitate a coordinated approach to the management of all infrastructure assets essential for service delivery. The figure represents the integrated relationship between elements of an effective AM system, and provides a foundation for implementation of the City's AM program and a structure for standardization of AM practices across the organization while supporting the City vision and mission.

Figure 3-1 The City's Corporate Asset Management Framework.

3.3 Ontario Regulation 588/17

On January 1, 2018, Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure came into effect. The regulation sets out requirements for municipal asset management planning to help municipalities better understand their infrastructure needs and inform infrastructure planning and investment decisions.

The regulation will be phased in over six years and in 2025 will culminate in the development of an AMP that addresses the future investment needs for all infrastructure assets owned by the City.

Key legislative deadlines for all Ontario municipalities are provided in Table 3-1.

Table 3-1 O. Reg. 588/17 Milestones and Timelines.

Date	Milestone	City of Toronto Status
July 1, 2019	Prepare and publish a strategic asset management policy.	Completed – June 2019
July 1, 2022	Develop enhanced AMPs that include the cost to maintain current service levels covering core infrastructure assets.	Completed – November 2021
July 1, 2024	Develop enhanced AMPs that include the cost to maintain current service levels covering all other infrastructure assets.	Completed – June 2024
July 1, 2025	Expand AMPs to provide further details on all infrastructure assets, including proposed service levels and the revenue and expenditure plan to achieve the proposed service levels (if greater than current service levels).	In progress

This AMP has been developed in line with the requirements of O. Reg. 588/17 and meets the requirements for the July 1, 2024, milestone. This AMP addresses these requirements as follows:

- It applies to all assets (not including “core infrastructure assets”) as defined in O. Reg. 588/17.
- It includes a summary, replacement costs, average age, and condition (refer to the “State of Infrastructure” sections).
- It includes a description of the City’s approach to assessing the condition of assets (refer to the “State of Infrastructure” sections in the Service Summary documents).
- It includes a description of the lifecycle activities that need to be undertaken in order to maintain current LOS, as well as risks associated with those activities (refer to the “Lifecycle Management” sections).
- It includes population and employment forecasts as set out in the City’s official plan.
- It includes the estimated capital expenditures and operating costs related to the lifecycle activities required to maintain current LOS and accommodate growth.
- It applies a 10-year horizon to these activities and projections.
- It is supported by the best available and most current data that is available at the City.

A key objective of this AMP, which is also prescribed by O. Reg. 588/17 is to ensure that the document is publicly available to residents and other key stakeholders of the City of Toronto. This Asset Management plan is accessible to the community through the City of Toronto's website.

Furthermore, several studies and other documents supported the development of this Asset Management Plan. These are also made available on the City's website. Where other supporting documents are described in this AMP, they are either referenced as a footnote, or available through a hyperlink in the document text.

3.4 Climate Change

The City of Toronto has explicitly identified '*tackling climate change and building resilience*' as a key strategic priority in its Corporate Strategic Plan. In particular, the City's TransformTO Net Zero Strategy outlines specific actions to drive down community-wide emissions in the short-term, and establishes the trajectory needed to reach net zero by 2040. As the climate changes, cities also need to plan-ahead to respond and recover from gradual shifts in climate and climate-related shocks, such as floods or extreme heat events. Divisions and agencies across the City of Toronto are working to address climate impacts that currently affect their services, assets, programs and policies, and to prepare for the future. Many initiatives provide frameworks and strategies that highlight the importance of maintaining its green infrastructure, natural areas, and grey infrastructure to ensure Toronto is a city that respects the environment while flourishing as an urban area.

In the context of climate change it is anticipated that the investment and effort to maintain a state of good repair (SOGR) will increase. Already aging infrastructure may degrade faster than planned as it is impacted by more frequent extreme weather events and an increasing population. Maintenance and repair costs are expected to increase, with implications for long-term preventive maintenance programs. Existing natural infrastructure, which offers many climate resilience benefits, may not be ideally suited to thrive under future climate conditions. Additionally, through increased damage and disruption, climate will have an ongoing and increasing impact on the ability of the City to meet current and future levels of service. The lifecycle costs for infrastructure will continue to shift with the climate and infrastructure designs will need to be updated to consider these impacts for the design life of the assets.

Research indicates that climate change impacts will indeed be very expensive and although not adapting will be much more costly. The costs of weather-related disasters, such as floods, storms, and wildfires, have risen in Canada from an average of $8.3 million per event in the 1970s to $112 million per event from 2010 to 2019 – an increase of 1,250 per cent. The Insurance Bureau of Canada reports dramatic increases in weather-related catastrophic losses over the last decade. Nationally, 2022 and 2023 were two of the top four most expensive years in terms of insured losses, at $3.4 and $3.1 billion respectively. Without adaptation, the dangers of a changing climate could add more than $4 billion per year to the cost of maintaining Ontario's public infrastructure over the rest of the century.

Taking action early saves money: spending a dollar today on adaptation will save $15 in the future. Across Ontario, a proactive adaptation approach would save $1.1 billion per year in climate costs by the end of the century, compared with simply reacting to the impacts of climate change. There are also many co-benefits including mental and physical health benefits of access to green urban spaces, creation of green jobs, connecting communities and addressing inequities.

Given the anticipated increased frequency of extreme weather events, some assets will become essential for emergency response and recovery, making their operability even more critical in the context of climate change. An example would be a public park in a densely built community, where the park provides respite from extreme heat, especially in the event of a power outage and extreme heat event. It will become increasingly important to prioritize what types of assets are to be built and maintained for robustness and community resilience.

When prioritizing asset management investments, principles of infrastructure system interdependencies and the potential for cascade failure will also need to be taken into account. For example, if failures in drainage systems result in major damages to electrical system equipment, the long-term power disruption impacts could be substantial across multiple infrastructure systems and service areas. Collaboration between asset owners will likely become more important. For example, trees are valued for shade and runoff retention, but those same trees cause havoc to overhead electrical wires in the event of storms. Asset managers may also need to consider the changing needs of the population in the context of future extreme weather. For example, if there are more heat waves and power outages, community centres and libraries may become important as reception centres for persons seeking assistance and respite from the heat or cold. Accordingly, community centres and libraries or other civic buildings may need to have capabilities as community reception centres and/or resilience hubs.

The City's Corporate Asset Management (CAM) Policy states that assets will be managed to achieve sustainable service delivery that can meet these future challenges posed by climate change. This entails using a holistic approach when making asset decisions to minimize the effects of climate change through the implementation and management of infrastructure. The City is working with Toronto Region Conservation Authority (TRCA) and federal experts to identify best available future extreme weather projections that can be used when planning work with assets that should be built to last many decades into the future.

This is the City of Toronto's first corporate-wide AMP, which will lead to future iterations as the City's asset management practices and data maturity improve. The lifecycle costs and levels of service (LOS) associated with the effects of climate change will be incorporated into the AMP as a future-state and climate change will be integrated within the City's asset management practices and analyses. Climate change and asset management will inform each other when making decisions.

With the goal of making Toronto one of the most environmentally sustainable cities in the world, the City's Environment & Climate Division leads and supports the development and implementation of strategic community and corporate-wide environment, climate and energy policies and programs to advance the City's overall sustainability outcomes. These include energy conservation, reducing greenhouse gas (GHG) emissions, improving resilience, and community engagement.

Some of the City's related strategies, plans, and initiatives with respect to climate change are documented in Section 9.0.

4.0 Approach to Incorporating Growth

The City of Toronto – Canada's largest municipality, continues to grow. The City's Official Plan is a policy framework that is intended to ensure that the City of Toronto evolves, improves and realises its full potential in several areas. It contains the following:

- Chapters 1 – 5: City-wide policies including land use designations.
- Chapter 6: Secondary Plans.
- Chapter 7: Site and Area Specific Policies.
- Official Plan Maps.
- Schedules 1, 2, 3 & 4: Including application requirements and descriptions of views.
- Official Plan Review: Statutory Reviews of the Toronto Official Plan.

The original certified documents of the Official Plan were approved b the Ontario Municipal Board on July 6, 2006. Since then, the most recent official plan consolidation of Chapters 1 to 5 is in effect as of December 2023; the most recent consolidations of Chapters 6 and 7 are in effect as of June 2015; and, the most recent consolidation of Schedules 1-4 is in effect as of March 2022. The Official Plan is reviewed and updated periodically, and the public is engaged to support this process. Progress towards the implementation of the Official Plan is monitored by the City and reported through indicators.

Population and employment forecasts, which detail the growth that the City is anticipated to experience, are identified by the Growth Plan for the Greater Golden Horseshoe and provided in the table below.

Table 4-1 City of Toronto Population and Employment Forecasts (000s)[3].

Year	Population	Employment
2022	3,025[4]	-
2023	-	1,535[5]
2031	3,190	1,660
2036	3,300	1,680
2041	3,400	1,720

Growth in population and employment within the City will correspond to increased demand for services across the City, which will translate into a need to acquire new assets and ensure that existing assets are maintained to continue to provide services. Growth is managed through the City Planning Division. The results of the City's detailed growth planning processes are integrated into it's budget planning process, the results of which are integrated into this asset management plan. The 2024 Budget Notes provided a reference for understanding the financial impact of growth needs. Further information on growth planning can be found at the City of Toronto Website, and through the links embedded within this section of the 2024 Corporate AMP.

[3] Schedule 3 – Distribution of Population and Employment for the Greater Golden Horseshow to 2041, Growth Plan for the Greater Golden Horseshow – May 2017 (https://files.ontario.ca/appendix_-_growth_plan_2017_-_oc-10242017.pdf)
[4] Toronto at a Glance (https://www.toronto.ca/city-government/data-research-maps/toronto-at-a-glance/)
[5] Toronto Employment Survey 2023 (https://www.toronto.ca/wp-content/uploads/2024/01/8f30-CityPlanning-Toronto-Employment-Survey-2023-Bulletin.pdf)

5.0 Asset Management Plan Overview

The Asset Management Plan is organized via this main document and eight (8) Service Summary documents, which are provided in the appendices. The main document provides a summary of all information at a higher-level, and the service area summaries provide additional details at a more granular level.

The City has developed an asset hierarchy to organize its service areas and corresponding assets for reporting purposes in this AMP. An asset hierarchy is a classification system that is used to group assets with similar characteristics or functions. It can be used to help organize asset data/information using a common framework (or "language") to assist in understanding, communicating and visualizing groups of assets. The City's asset hierarchy featured in this AMP is a service-centric hierarchy that has the primary objective of describing the relationship between services provided by the City and the infrastructure assets that support those services.

Generally, the City's service-centric asset hierarchy can be characterized as follows:

- **Strategic (Asset Levels 1 to 4)** – generally used for reporting and to apply asset management strategies. These asset levels detail each asset's place in the overall service/system.
- **Tactical (Asset Levels 5 to 6)** – generally used to detail the assets and their components. These asset levels are generally the levels in which data resides and typically represent data records on individual assets.

Figure 5-1 provides a conceptual asset hierarchy structure.

Figure 5-1 Conceptual Asset Hierarchy Structure.

For the purposes of this AMP, only the strategic level of the hierarchy is reported (i.e. levels 1 through 4). For the main AMP document, reporting is completed at levels 1 and 2. In each of the service summaries, reporting is completed to level 4 of the hierarchy (the asset class level). The appendices are organized by service, and further broken down into sections by each major subservice of the hierarchy.

Each service summary document begins with a brief overview of the service area. It provides an aggregate summary of the service as well as the following figure, which provides a visual summary of key information on the service.

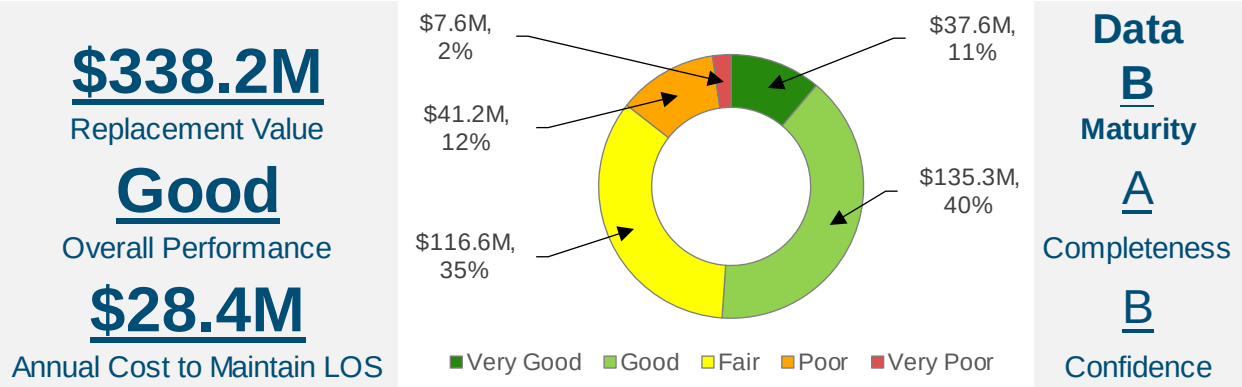


Figure 5-2 Example Asset Summary.

This summary figure includes the total replacement value of all assets within the service area, the overall performance, which is a weighted average (by replacement cost) of the performances of individual assets within the service area, and the annual renewal or State of Good Repair (SOGR) cost to maintain levels of service.

The figure also provides a condition donut chart, which illustrates the distribution of asset performance replacement cost over the five (5) applicable performance states (refer to Section 6.0 below for more details).

The right side of the figure details the service area's data maturity. Data maturity grades have been assigned to the data that was used to complete the analyses in this AMP. Data maturity is a metric that can be used to understand the completeness and confidence in the data that is being used for the AM analyses. It provides context to the results of the analyses that are reported in this AMP. Asset areas with high data maturity grades can be considered to have the best possible accuracy, as they are founded by the best available information to support the analyses. Conversely, the analysis results for areas with low maturity grades may be less accurate and subject to change as better data becomes available.

Data maturity is based on an evaluation of data completeness and data confidence, as illustrated in the following framework. The data maturity grade is taken as the lower of the completeness and confidence grades.

Table 5-1 Data Maturity Rating Framework.

Maturity Grade	Completeness	Confidence
A - Very High	Key data fields for asset management are complete within 5%.	Data based on sound records, procedures, investigations and analysis, documented properly and recognized as the best method of assessment.
B - High	Key data fields for asset management are complete within 10%.	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation.
C - Medium	Key data fields for asset management are complete within 25%.	Data 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.
D - Low	Key data fields for asset management are complete within 50%.	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.
E - Very Low	Key data fields for asset management are less than 50% complete.	None or very little data held.

This summary figure is followed by a visual description of the asset hierarchy for the entire service area. The hierarchy illustrates all subservices, asset categories and asset classes for the given service.

Following this initial summary, each service area summary document is broken down further by subservice. Each subservice section begins with summary information on the subservice. This includes a brief description of the subservice, and where applicable, commentary on the Divisions, Agencies and Corporations that manage the subservice.

Following the introductory comments, the Service Statement is provided for the subservice. This Service Statement is a one- or two-line statement that details the strategic objectives and vision for service delivery for each subservice area. It is tied to the City's overall strategic objectives and serves as a bridge between those strategic objectives, and the subservice's levels of service (refer to subsection 7.0 below for details).

At the subservice level, an asset breakdown is also provided. This is a description of the elements of the asset hierarchy within the subservice. The asset breakdown details the applicable asset categories, asset classes and descriptions of the types of assets within each asset class. The following figure illustrates this asset breakdown.

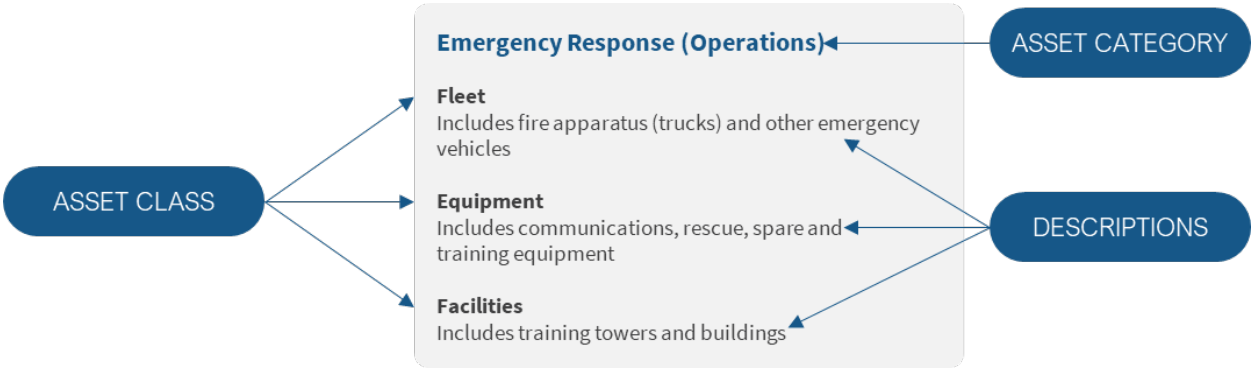


Figure 5-3 Example Asset Breakdown.

Following these introductory sections in each subservice area, the major content sections are reported.

As noted above, the major content sections in the AMP are reported at the service level in this summary document, and at a more granular level in each of the Subservice Summary documents. The following table describes the major content sections of the AMP, and how they are reported.

Table 5-2 Major Content Sections of the City's 2024 Corporate AMP.

Content Section	Description	Reported at Service Level	Reported at Subservice Level
State of Infrastructure	A description of the current state of the City's infrastructure, current asset inventories, valuations, performance, age and estimated service life.	Y	Y
Levels of Service	A description of the service levels that the City is currently monitoring, and the City's current performance with respect to those service levels.	Y	Y
Lifecycle Management Strategy	A description of the lifecycle activities the City undertakes to its assets to maintain service levels and maintain service levels.	Y	Y
Climate Change	A description to the City's approach to addressing climate change as it relates to asset management planning.	Y	Y
State of Good Repair Performance and Investment Needs	Summarizes asset investment needs forecasts related to the state of good repair of assets.	Y	Y
Financial Summary	A description of the costs required to maintain current service levels, and a comparison of those costs to current budget forecasts for all lifecycle activities.	Y	Y
Improvement Plan	A description of initiatives that the City can undertake to improve future iterations of this Corporate AMP.	Y	N

6.0 State of Infrastructure

6.1 Understanding the State of Infrastructure

The state of infrastructure section in this AMP describes key information related to the current state of the City's assets it summarizes the following information.

- **Replacement Value:** the replacement value of the City's assets is determined from data where available. This value is intended to represent the current cost to replace assets like-for-like in present dollars. This is a requirement of O. Reg. 588/17.
- **Age:** a summary of the average age of the assets is provided. This average is calculated by averaging the age of each individual asset, weighted by replacement cost. This is a requirement of O. Reg. 588/17.
- **Estimated Service Life:** a summary of the average estimated service life (ESL) of the assets is provided. This average is calculated by averaging the ESL of each individual asset, weighted by replacement cost.
- **Performance:** a summary of the average performance of the assets is also provided. This is calculated by averaging the performance ratings of each individual asset, weighted by replacement cost. This is a requirement of O. Reg. 588/17.

Of note is the reporting that is provided on asset performance. The term performance is used to represent the current state of an asset, evaluated by many factors that go beyond the asset's current condition. For many asset groups, decisions to repair/replace or maintain an asset are tied to performance, and not solely condition. The factors that dictate asset performance are different for each asset class. In many cases, the only measure of performance that is understood is asset condition. In others, several factors contribute to performance, such as asset utilization or maintenance costs. Furthermore, in cases where data is unavailable or unknown, asset age and service life can be used to estimate performance.

The City has established five (5) performance categories which are used to understand asset performance. They are: Very Good, Good, Fair, Poor and Very Poor. The following framework defines these performance categories.

Table 6-1 Overall Performance Rating Scale.

Performance Category	Description
Very Good	The asset is typically new or recently rehabilitated. The asset is fit for service.
Good	The asset is generally performing acceptably and is generally in the mid stage of its service life. Asset may show preliminary signs of deterioration requiring attention or minor maintenance. The asset is fit for service.
Fair	The asset is performing acceptably but below standard. It is approaching the end of its service life. Ongoing monitoring and significant maintenance may be required. The asset is still fit for service.
Poor	The asset is at or beyond its service life and shows signs of advanced deterioration. The asset may exhibit signs of imminent failure that can affect service or increase risk. Its condition may be critical. Extensive monitoring, rehabilitation and/or replacement may be required. The asset is not considered fit for service.
Very Poor	The asset is well beyond its service life and shows signs of advanced deterioration. The asset may exhibit signs of imminent failure that can affect service or increase risk. The asset condition is likely critical. Imminent replacement is required. The asset is not considered fit for service.

Additional information on the state of infrastructure can be found in each of the subservice summaries in the appendices of the AMP. Each subservice summary begins with a tabular asset summary section. It provides the following information organized at the asset category and class level:

- The quantity of assets within the asset class.
- The total replacement value of the asset class.
- The average performance of the asset class, using the performance categories defined in Table 6-1.
- The average age of the asset class (weighed by replacement value).
- The average ESL of the asset class (weighted by replacement value).

Following this tabular summary section, details explaining how asset performance categories were established are provided. First, a table entitled “Condition Assessment Approaches” summarizes the approach the City has used to assess the condition of its assets. This is a requirement of O. Reg. 588/17.

For most assets, one of three approaches to assessing condition is utilized.

1. **Asset-specific Condition Rating** – For many asset types, an asset-specific condition rating metric that follows to industry best practices or a standardized system of assessing condition for a particular asset type or group. Some examples of this are a facility condition index (FCI) rating for buildings or a bridge condition index (BCI) rating for bridges/municipal structures.
2. **Remaining Life** – For many other asset types, it is not common practice to develop an asset-specific condition rating index, rather, condition is understood and expressed in terms of remaining life as a percentage of its estimated service life. Note that this metric is not necessarily a reflection of the asset's age – it is a condition or performance metric. For example, some assets may have aged beyond their estimated service life, but are still fit for purpose. They may still have remaining life although they are advanced in age. Conversely, assets that are not advanced in age, may be in poor condition, which can be reflected in a lower than anticipated remaining life.
3. **Life Consumed** – Life consumed is simply the asset age divided by its estimated service life. It is a function of asset age and is often used when condition information (including remaining life) is not available or known. It can also be used in cases where it is not feasible to complete condition assessments of assets for financial, practical or other reasons (these assets are sometimes referred to as "run to failure" assets).

The following table provides an example of the Condition Assessment Approaches table.

Table 6-2 Example Condition Assessment Approaches Table.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	FCI ratings are developed from regular condition assessments of facilities, which are completed by the City on a five-year cycle.
Fleet	Remaining Life	Lifecycle needs are estimated based on the asset's remaining life, which is assessed by staff.
Equipment	Life Consumed	Lifecycle needs are estimated based on the asset's life consumed, which is a function of its age as a proportion of its service life.

Following this table, a second table details the relationships between these condition metrics and asset performance categories. The following table provides an example of the Performance Category Mapping table in each subservice section.

Table 6-3 Example Performance Category Mapping Table.

Performance Category	Facilities (FCI)	Fleet (Remaining Life)	Equipment (Life Consumed)
Very Good	0% to 3%	100% to 67%	0% to 33%
Good	3% to 5%	67% to 33%	33% to 67%
Fair	5% to 10%	33% to 0%	67% to 100%
Poor	10% to 30%	0% to -33%	100% to 133%
Very Poor	>30%	>-33%	>133%

6.2 State of Infrastructure Summary

The City's Asset portfolio within the scope of this AMP (i.e. excluding "core municipal infrastructure assets") has a current replacement value of $72.9 billion.

The following figures summarize the state of infrastructure for each service area of the AMP, including a summary of asset replacement value; a summary of asset age (as a proportion of service life); and, a summary of asset performance. Refer to each subservice section for further breakdowns of the state of infrastructure.

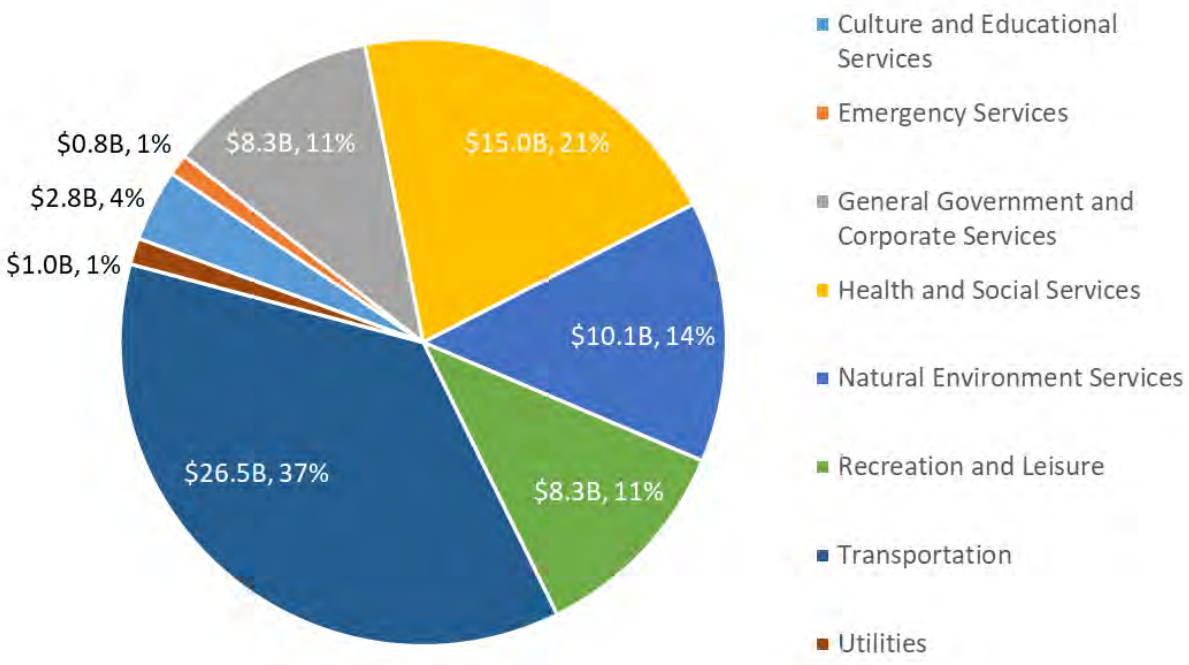


Figure 6-1 Replacement Value Summary ($ billions).

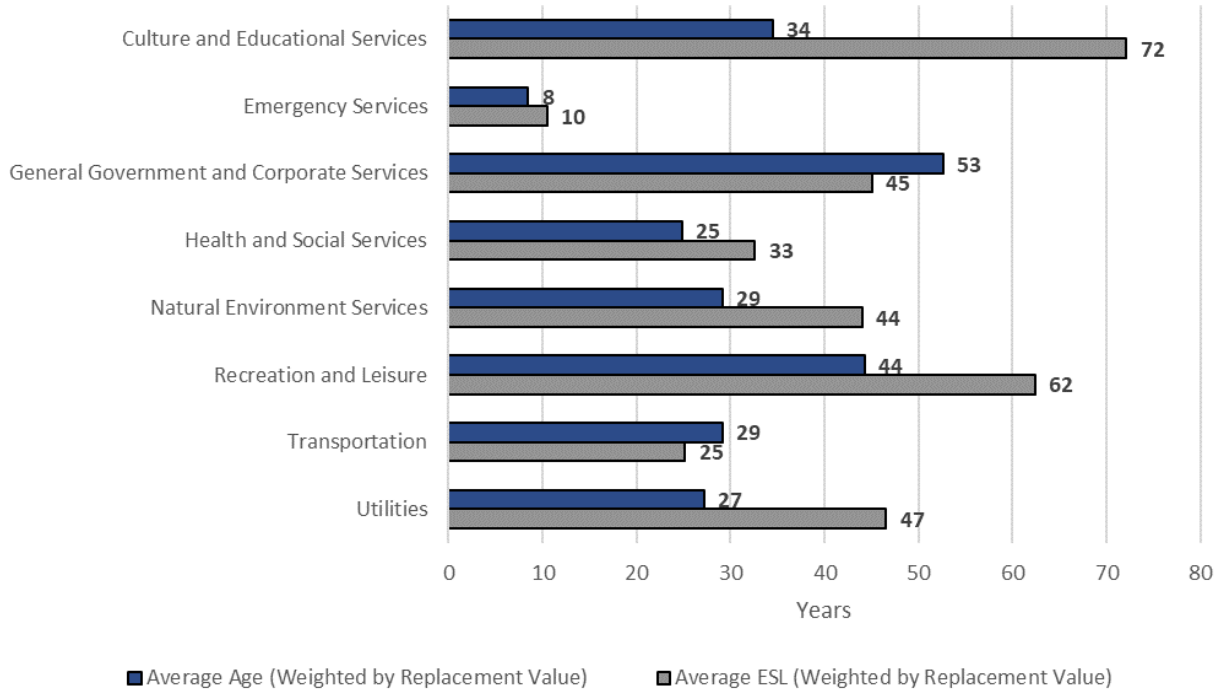


Figure 6-2 Age and Estimated Service Life Summary.

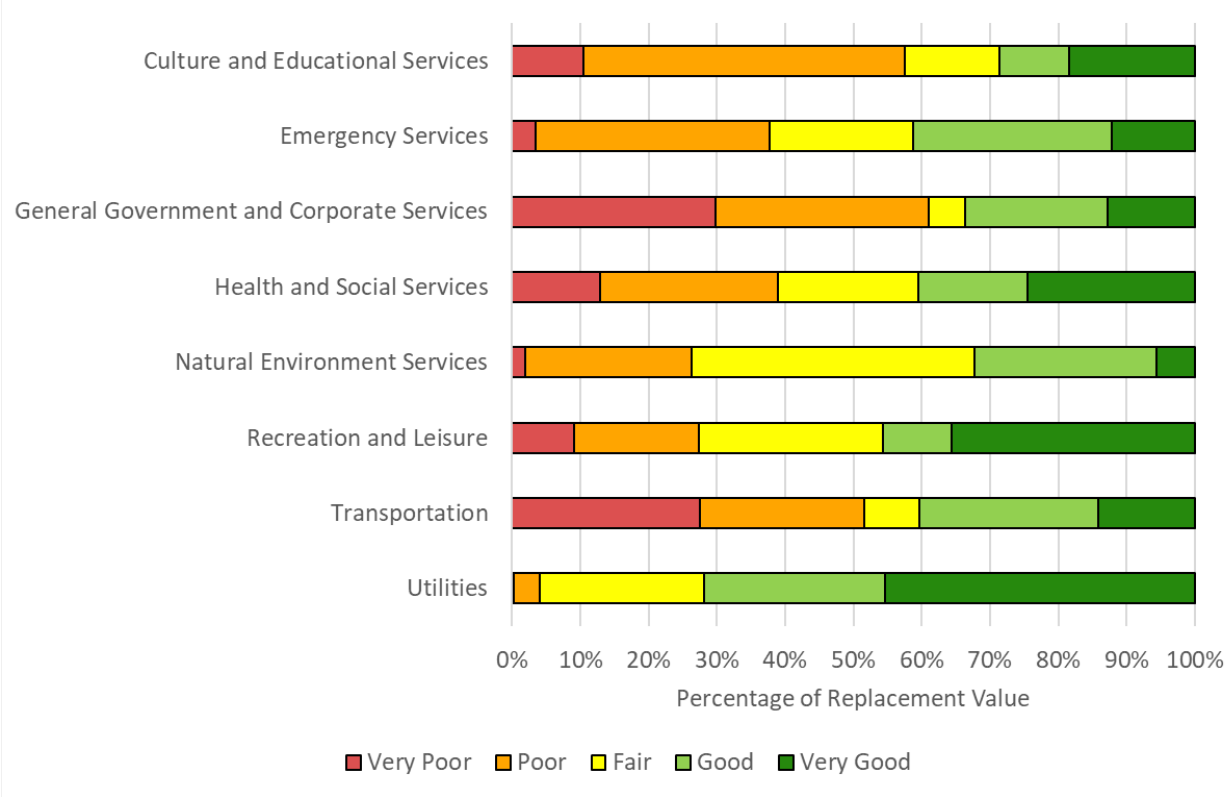


Figure 6-3 Performance Distribution by Replacement Value.

7.0 Levels of Service

7.1 Understanding Levels of Service

Levels of Service (LOS) are a measure of the degree to which an asset meets functional or user requirements. Typically, LOS are measured in terms of parameters that reflect social, political, environmental, and economic outcomes that an organization delivers.

The City's LOS framework begins with a service statement, for each subservice. It is described at the beginning of each section in the subservice summaries. It details the subservice's strategic objectives and vision for service delivery. LOS measures are defined around this Service Statement. The LOS measures are organized by key service attributes that describe the service (i.e. 'reliable', 'quality' or 'safe').

The Service Summary documents provide the established LOS and current performance for each subservice. The City's LOS framework is presented in two tables within the service summaries: the Customer LOS Table and the Technical LOS Table. Each of these tables follow a slightly different structure but contain common elements that link them together. The tables are structured as follows:

The Customer LOS table consists of the following headings:

1. **Service Attributes** consists of single word(s) or phrase(s) that describe an important characteristic or theme for each subservice that is aligned with the service statement. Examples of service attributes include 'Safe', 'Reliable', 'Accessible' and 'Environmentally Sustainable'. The listed Service Attributes are meant to cover important aspects of the service and be easy for the community/public to understand and recognize. They are intended to identify each of the areas of focus that are related to the community's experience of the service.
2. **Customer Levels of Service** are statements that articulate the customer's expectations from the service area which are tied to the service attributes. These Customer LOS are linked to the Technical LOS that are provided in the Technical LOS table through the service attributes.
3. **Current Performance** is a description or descriptions that indicate the municipality's current performance for each Customer LOS for the most recent complete calendar year (which is 2023 at the time of this writing). The Current Performance as it relates to Customer LOS is qualitative, and typically consists of a written description.

The Technical LOS table consists of the following headings:

1. **Service Attributes** are the same as those listed in the Customer LOS table. These attributes link the Customer and Technical LOS. As with the Customer LOS table, the service attributes detail specific characteristics or themes of each subservice that is aligned with the service statement.
2. **Technical Levels of Service** are statements that identify the technical measures that support each service attribute. These technical levels of service are typically quantitative, and express numerical measures of performance that can be evaluated and compared from year-to-year.
3. **Asset Type** details the asset type to which the given performance measure applies.
4. **Current Performance** are numerical values that indicate the current performance for each performance measure based on the most recent complete calendar year (which is 2023 at the time of the initial framework development).

7.2 Levels of Service Summary

The following summarizes the LOS measures established for each subservice in the City's asset hierarchy. The Service Summary documents also contain the selected performance measures and current performances for each subservice. The following provides a high-level overview of the service statements and the types of performance measures that can be found in the Service Summary documents. It also provides reporting on one key technical LOS measure that is consistent across all subservices and asset classes – the percentage of assets in fair or better performance. This measure is used to link asset performance to investment needs forecasts. Additional details on forecasts are described in Section 10.0.

CULTURE & EDUCATIONAL SERVICES

Arts, Culture & Heritage Services

Celebrate and preserve cultural richness by curating diverse artistic experiences, preserving heritage sites, and fostering creative expression. Provide timely, accessible and high-quality engaged and collaborative services to all of our clients, partners and communities and residents of Toronto.

Customer and Technical Service Attributes Focus

Accessible, Available, Quality, and Reliable

82% Percentage of Assets in Fair or Better Performance

Library Services

Toronto Public Library (TPL) provides free and equitable access to services that meet the changing needs of Torontonians. The Library preserves and promotes universal access to a broad range of human knowledge, experience, information and ideas in a welcoming and supportive environment.

Customer and Technical Service Attributes Focus

Reliable and Accessible

29% Percentage of Assets in Fair or Better Performance

EMERGENCY SERVICES

Toronto Fire Services

In accordance with the Ontario Fire Protection and Prevention Act (FPPA), Toronto Fire Services (TFS) provides residents and businesses with a comprehensive suite of fire protection services 24 hours per day, 7 days per week.

Customer and Technical Service Attributes Focus

Reliable and Safe

86% Percentage of Assets in Fair or Better Performance

Toronto Paramedic Services

Toronto Paramedic Services provides 24/7 emergency medical care, emergency medical dispatch, and community paramedicine in response to life-threatening medical emergencies to improve the quality of life and protect communities and the well-being of residents.

Customer and Technical Service Attributes Focus

Reliable and Quality

43% Percentage of Assets in Fair or Better Performance

Toronto Police Services

Toronto Police Service aims to deliver essential public safety services that are sensitive to the needs of the community.

Customer and Technical Service Attributes Focus

Safe, Reliable, and Effective

47% Percentage of Assets in Fair or Better Performance

GENERAL GOVERNMENT & CORPORATE SERVICES

Administrative and Election Services

Build public trust and confidence in local government, ensure that the Toronto municipal government is democratically elected through open, fair and accessible elections; that Elected officials, City officials and the public can participate in a transparent, accessible, and democratic Council decision-making process and the public has timely, reliable, transparent and accurate access to City information, except where protected by privacy laws. Residents, businesses, and visitors have access to real time, accurate, and reliable information on City services.

Customer and Technical Service Attributes Focus
Reliable, Quality, and Accessible

95% Percentage of Assets in Fair or Better Performance

Corporate Real Estate

City staff and the public have access to safe, clean and operational City facilities that are also economically and environmentally sustainable.

Customer and Technical Service Attributes Focus
Reliable, Safe, Accessible, and Environmentally Sustainable

33% Percentage of Assets in Fair or Better Performance

Fleet Services

Fleet Services Division keeps the City moving by enabling City Divisions and Agencies to provide critical services to the community by ensuring the City's fleet is safe, reliable, economical, and environmentally sustainable.

Customer and Technical Service Attributes Focus
Reliable and Environmentally Sustainable

74% Percentage of Assets in Fair or Better Performance

Technology Services

Technology Services provides reliable Information Technology assets to public staff that support service delivery of many services and programs to the public as well as provide residents with access to the public assets that enrich their lives and well-being.

Customer and Technical Service Attributes Focus
Reliable and Available

67% Percentage of Assets in Fair or Better Performance

HEALTH & SOCIAL SERVICES

Children's Services

Providing access to safe and affordable child care and early-years programs that contribute to healthy child development, family and well-being and increased economic activity by enabling them to go to work and school.

Customer and Technical Service Attributes Focus

Reliable, Safe, and Available

98% Percentage of Assets in Fair or Better Performance

Community Housing

To provide clean, safe, well-maintained, affordable homes for residents, to connect residents to services and opportunities, and help foster great neighbourhoods where people can thrive.

Customer and Technical Service Attributes Focus

Accessible, Available, Reliable, and Safe

58% Percentage of Assets in Fair or Better Performance

Shelter and Support Services

People experiencing homelessness in Toronto have access to safe, high-quality emergency shelters that offer housing-focused supports.

Customer and Technical Service Attributes Focus

Reliable, Safe, Quality, Available, and Accessible

65% Percentage of Assets in Fair or Better Performance

Public Health

Toronto Public Health's programs, services and policy directions strive to create the optimal conditions to achieve a healthy city for all, meet population public health needs, comply with the Ontario Public Health Standards, and contribute to a broader sustainable health system.

Customer and Technical Service Attributes Focus

Reliable

98% Percentage of Assets in Fair or Better Performance

Senior Services and Long-Term Care

We are committed to ensuring eligible adults and seniors have access to City-operated long-term care homes and community services that are inclusive, available, diverse and resident-focused which contribute to improved health outcomes quality of life.

We want seniors to maintain their independence and stay in their homes as long as possible (i.e. age in place) with support and access to integrated City services that are timely, inclusive and comprehensive.

The City of Toronto aims to deliver these outcomes equitably, efficiently and with excellent customer service to help improve the lives of Torontonians and work to earn their trust and confidence.

Customer and Technical Service Attributes Focus

Reliable, Quality, Regulatory, Accessible, and Available

98% Percentage of Assets in Fair or Better Performance

NATURAL ENVIRONMENT SERVICES

Dock Walls and Breakwaters

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our dock walls and breakwaters to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation.

Customer and Technical Service Attributes Focus

Reliable and Safe

16% Percentage of Assets in Fair or Better Performance

Erosion Controls

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our erosion control structures to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation. Erosion control structures provide protection and preservation across City services through the maintenance of grey and green infrastructure that contribute to the safety, sustainability and viability of the city.

Customer and Technical Service Attributes Focus

Reliable, Safe, and Environmentally Sustainable

86% Percentage of Assets in Fair or Better Performance

Forestry Management and Maintained Parkland

Ensure that city parks, tree-lined streets, trails, forests, meadows, marshes, and ravines are beautiful, safe and accessible, and that they expand and adapt to meet the needs of a growing city.

Customer and Technical Service Attributes Focus

Availability, Environmental Sustainability, Accessibility, Quality, Reliability, and Sustainability

98% Percentage of Assets in Fair or Better Performance

RECREATION & LEISURE

Exhibition Place

Deliver exceptional experiences to our customers, which include attendees and clients, through events and site animation while promoting economic activity and investment in the City of Toronto.

Customer and Technical Service Attributes Focus

Reliable, Safe, Accessible, Available, Quality, and Shine

88% Percentage of Assets in Fair or Better Performance

Parks and Recreation

Provide inclusive, accessible, and vibrant parks, facilities, and programs that enhance the quality of life for all members of our community. With a focus on equity, sustainability, and innovation, we strive to be responsive to the evolving needs and interests of our diverse community, enriching lives and fostering a sense of belonging for all.

Customer and Technical Service Attributes Focus

Availability, Environmental Sustainability, Accessibility, Quality, and Sustainability

67% Percentage of Assets in Fair or Better Performance

Toronto Zoo

The Toronto Zoo strives to be an iconic guest destination that provides incredible guest experiences and connects people, animals, and conservation science to fight extinction. We base our objectives around four (4) cares:

1. We care about our animals.
2. We care about our team.
3. We care about our guests.
4. We care about our community.

Customer and Technical Service Attributes Focus

Reliable, Safe, Accessible, and Environmentally Sustainable

86 Percentage of Assets in Fair or Better Performance

TRANSPORTATION

Road Network

Transportation Services strives to build and maintain Toronto's transportation networks so that:

- People and businesses are connected to a resilient and reliable transportation network where they can access opportunities and places that they value.
- People have access to streets in their communities that are complete, safe, equitable and vibrant.

Customer and Technical Service Attributes Focus

Accessible, Reliable, Resilient, Safe, Quality, and Sustainability

48% Percentage of Assets in Fair or Better Performance

Transit Services

To be a transit system that makes Toronto proud. To provide a reliable, efficient, accessible and integrated bus, streetcar, and subway network that draw its high standards of customer care from our rich traditions of safety, service and courtesy.

The TTC developed their own tactical AMP in response to the July 1, 2024 requirement that was approved by their Board on April 11th, 2024. Please refer to TTC's AMP for levels of service details.

UTILITIES

Water, Wastewater, and Stormwater Centralized Services

Centralized Services support the delivery of water, wastewater, and stormwater services to ensure that they can be provided to the community in a safe, reliable, and environmentally sustainable manner.

Customer and Technical Service Attributes Focus

Reliable, Safe, and Environmentally Sustainable

82% Percentage of Assets in Fair or Better Performance

Solid Waste Management

Provide a safe, efficient, and reliable waste management program that supports city beautification and environmental sustainability, while developing staff and creating a culture of service excellence, planning for the future and advocating for the best interests of Toronto.

Customer and Technical Service Attributes Focus

Reliable, Environmentally Sustainable, and Community Stewardship

97% Percentage of Assets in Fair or Better Performance

8.0 Lifecycle Management Strategy

8.1 Understanding Lifecycle Management Strategies

The City's Lifecycle Strategy is the set of planned actions performed on assets to provide levels of service in a sustainable way, while managing risk, at the lowest lifecycle cost. Lifecycle activities detail the actions that are executed as part of the strategy. They document the activities that the City is undertaking to provide services through assets to the community. The City's lifecycle activities are organized into six (6) categories, as per the definitions below.

Table 8-1 Lifecyle Activity Categories and Descriptions.

Lifecycle Activity Category	Description
Non-Infrastructure	Actions or policies that can lower costs or extend asset life.
Operations and Maintenance	Regularly scheduled inspection and maintenance, or repair and activities associated with unexpected events.
Renewals (Rehabilitation/Replacement)	Renewals consist of rehabilitations, which are significant repairs designed to extend the life of the asset, and replacements, which are activities involving the removal of an existing asset and replacement with a new one, expected to occur once an asset has reached the end of its useful life and rehabilitation is no longer an option.
Disposal	Activities associated with disposing of an asset once it has reached the end of its useful life or is otherwise no longer needed by the municipality.
Growth	Planned activities required to extend services to previously un-serviced areas, or to expand services to meet an increase in demand, either through population growth or other factors.
Service Improvement	Activities to improve or upgrade services to meet changing business drivers, such a change in community needs or a change in regulatory requirements.

The City's lifecycle activities are supplemented using a series of lifecycle models, which provide a mathematical representation of the City's lifecycle activities that was used to forecast asset needs and planned actions into the future. This forecasting is important to understanding how the City's lifecycle strategy will evolve over time to address asset needs. The forecasting analysis is discussed further in Section 10.0.

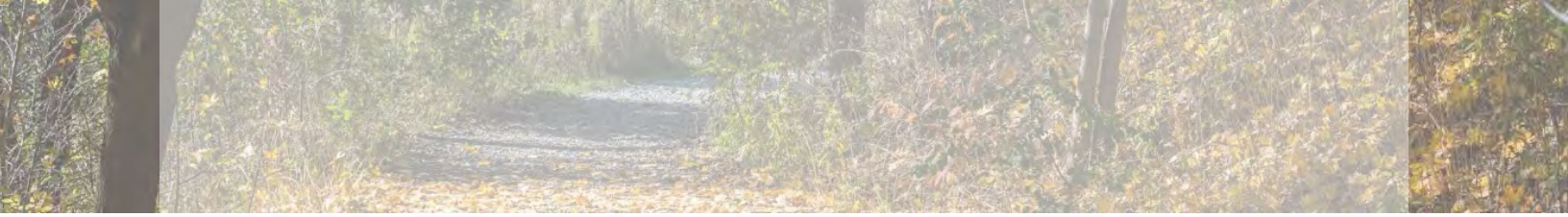
8.2 Lifecycle Management Strategies Summary

Many of the assets within this AMP are managed through similar types of general lifecycle activities that are common amongst many different asset classes. The following table lists general lifecycle activities that apply to most, if not all assets throughout the City.

Table 8-2 City's General Lifecycle Activities.

Lifecycle Activity	Description
Non-Infrastructure	• Planning and studies (Master Plans, financial plans, capacity studies, tactical AMPs, etc.). • Community Engagement to identify community needs.
Operations and Maintenance	• Scheduled inspections and condition assessments of assets. • Preventive maintenance programs. • Reactive maintenance as required.
Renewals (Rehabilitation/Replacement)	• Rehabilitation based on inspections to extend service life where opportunities exist. • Replacement of assets at end of life.
Disposal	• Asset disposal coordinated with replacement.
Growth	• Construction/procurement of new assets to meet increased demand and population growth, based on planning and studies.
Service Improvement	• Upgrades or procurement of new assets as required to meet regulatory requirements or community needs/requests.

While these general activities apply to most assets, the City recognizes that some assets are unique, and have unique lifecycle activities that are associated with them. To supplement this list of lifecycle activities, each Service Summary document provides information on subservice or asset-specific lifecycle activities at a more granular level. Refer to each of the subservice summary documents for additional details on these specific activities.



9.0 Climate Change

Several related strategies, plans and initiatives throughout the City are aligned with the City's Asset Management practices and support the City's Asset Management vision and goals. The following table provides a summary of some of these strategies, plans and initiatives. Links to each are provided within the table.

Table 9-1 Summary of Climate Change Strategies, Plans and Initiatives.

Strategy/Plan/Initiative	Description
Biodiversity Plan	The Strategy aims to support healthier, more robust biodiversity and increased awareness of nature in Toronto. The plan consists of one vision, 10 principles, and 23 actions for the City to undertake to enhance the quality and quantity of biodiversity and increase awareness of nature in Toronto.
City-Wide Real Estate Transformation	The city-wide real estate service delivery model centralizes real estate and facilities management activities, which includes climate considerations for making investments in City buildings to support net zero emission targets.
EV Strategy	Identifies 10 actions to help the City achieve its 2050 goal of having all transportation powered by zero carbon energy sources.
Green Roof Bylaw	To require and govern the construction of green roofs for new developments or additions that are greater than 2000 m^2 in gross floor area. This includes commercial, institutional, and residential development, and industrial buildings.
Long-Term Waste Strategy	The Waste Strategy is a high-level decision-making document to guide Solid Waste Management Services' (SWMS) policy decisions for the duration of the planning horizon of 30 to 50 years.
Green Streets	The Green Streets initiative is a cost-effective, resilient approach to managing the impact of wet weather events and provides social, economic and environmental benefits. Green Streets are being introduced to replace 'traditional streets' that were designed to quickly direct stormwater into storm sewer systems that often discharge contaminants into our waterways.
Parkland Strategy	The Strategy guides the long-term planning for new parks and expansion and improved access to existing parks.
Pollinator Protection Strategy	The Strategy is a guideline on how Toronto can be a home to diverse pollinator communities to support pollinators. The document includes a series of actions for the City and community to take to help protect and sustain healthy pollinator populations in Toronto.
Ravine Strategy	The Ravine Strategy provides a framework for decision-making to keep ravines healthy, while connecting people with nature.
Resilience Strategy	The Resilience Strategy identifies actions for the City to undertake to adapt and survive various challenges that the City faces, especially the effects of climate change.
Strategic Forest Management Plan	This Plan outlines the strategies and actions that the City undertakes to manage urban forestry that offers several benefits such as healthy neighbourhoods, habitat and biodiversity support, clean air and water, opportunities for recreation and education, economic prosperity, and enhancing the quality of life for residents.

Toronto Green Standard	Sustainable design and performance requirements for new private and city-owned developments since 2010.
TransformTO	TransformTO Net Zero Strategy aims to achieve net zero GHG emissions by 2040 and includes thirty near-term actions for the City to undertake to achieve its net zero goal.
Sustainable City of Toronto Fleets Plan	The Sustainable Fleets Plan outlines actions to ensure the City transitions to sustainable, resilient, and net zero operations to achieve its goal of net zero emissions by 2040.
Wet Weather Flow Master Plan	Toronto's Wet Weather Flow Master Plan (WWFMP) is a long-term plan to protect our environment and water quality in the lake, rivers, streams and other water bodies from the rain and melted snow (stormwater).

In addition to these initiatives, many of the City's Divisions, Agencies and Corporations have also undertaken specific initiatives to address the effects of climate change. Each of the subservice summaries include a climate section providing further details on these initiatives, where applicable.

10.0 State of Good Repair Performance and Investment Needs

10.1 Understanding State of Good Repair Needs and Forecasting

A primary objective of the Corporate AMP and the July 1, 2024 milestone of O. Reg. 588/17 is to understand the costs required to manage the City's lifecycle activities and maintain current service levels for the next 10-years. To understand these costs, a forecasting analysis of asset lifecycle needs was undertaken.

A series of lifecycle logic models, detailing asset deterioration and intervention strategies, were applied to asset data in order to project asset needs over a 10-year horizon. These intervention strategies represent the renewal (rehabilitation/replacement) activities that are described in Section 8.0 and in each service summary document. These logic models are tied to the City's documented technical levels of service, through the primary performance-based LOS measures. Note that every asset grouping/subservice area contains a technical level of service that is related to asset performance. This measure is often expressed as, "the percentage of assets in fair or better performance". This is the primary LOS measure that is tied to the lifecycle logic to produce forecasts. This creates a link between the aforementioned LOS measure and the City's renewal lifecycle strategies that are enacted to maintain assets in a state of good repair and continue to provide services to the community through those assets.

Using this lifecycle logic, two (2) forecast scenarios were analyzed, which provided insight on the City's current renewal status, and the LOS that the City would achieve under budgetary or performance-based targets. The following describes these two (2) scenarios:

- **Scenario 1: Current Planned Budget** – This scenario demonstrates the asset performance achieved under the current 10-year capital budget the City has available to allocate towards a given asset grouping. The current capital budget forecast is based on the City's 2024-2033 Capital Budget and Plan. The results of this scenario analysis illustrate the change in LOS under anticipated conditions. This is also used as a baseline scenario, which can be used to assess the other scenarios analyzed.
- **Scenario 2: Cost to Maintain LOS** – This scenario determines the cost that would be required to maintain LOS at current levels over a 10-year forecast period. It utilizes the performance (condition) based LOS measure to set a target LOS and understand the funding required to maintain that level. For example, the percentage of assets in fair or better condition is assumed to be maintained over the 10-year forecast period, to understand the required funding to achieve this state.

The scenario results are communicated through a series of figures.

The first figure is referred to as the “Performance Forecast” figure. This figure depicts the distribution of performance categories for each year, over the 10-year forecast period in a bar graph. Each bar of the bar graph contains the distribution of assets (by replacement cost) over the 5 performance categories. If the proportion of “Very Poor” and “Poor” assets increase over the forecast period, it represents a decline in service levels. Conversely, an increase in the proportion of “Very Poor” and “Poor” assets over the forecast period would represent an increase in service levels. This figure was only developed for Scenario 1. An example of the Performance Forecast figure is illustrated below.

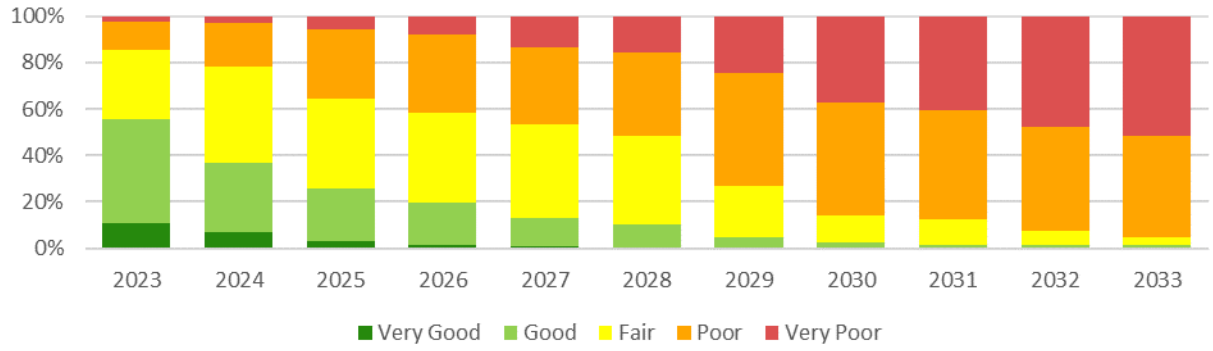


Figure 10-1 Example Performance Forecast Figure.

Another figure used to communicate the scenario results is the “Expenditure Forecast” figure, illustrated below. This figure illustrates the forecasted expenditures over the 10-year forecast period for both analyzed scenarios. The results of Scenario 1 are depicted as the “Planned Budget” expenditures. The results of Scenario 2 are depicted as the “Maintain Current LOS” expenditures. An example of the Expenditure Forecast figure is illustrated below.

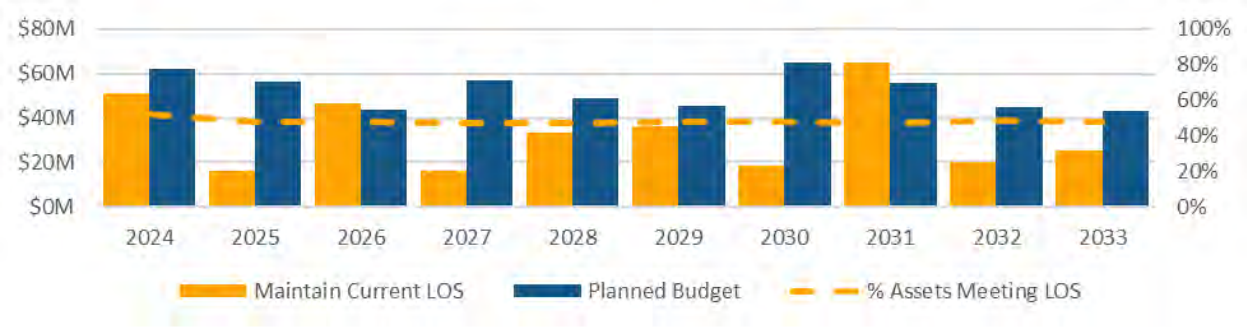


Figure 10-2 Example Expenditure Forecast Figure.

These figures are provided in the service summary documents.

10.2 State of Good Repair Performance and Investment Needs Summary

The following table summarizes the state of good repair performance and investment needs for each subservice.

Table 10-1 State of Good Repair Investment Needs Analysis Summary.

Subservice	Average Annual SOGR Planned Budget ($M)	Average Annual SOGR Budget Required to Maintain LOS ($M)	LOS Trend Under Current Budget
Arts, Culture and Heritage Services	$18.454	$19.694	Decreasing
Library Services	$23.663	$26.227	Decreasing
Toronto Fire Services	$28.783	$28.422	Maintaining
Toronto Paramedic Services	$22.473	$8.475	Increasing
Toronto Police Services	$52.219	$32.999	Increasing
Administrative and Election Services	$2.695	$2.402	Maintaining
Corporate Real Estate	$55.626	$133.758	Decreasing
Fleet Services	$87.698	$78.246	Increasing
Technology Services	$26.888	$10.068	Increasing
Children's Services	$2.410	$1.980	Increasing
Community Housing	$160.000	$334.114	Decreasing
Shelter and Support Services	$7.224	$4.596	Increasing
Public Health	$0.633	$0.487	Maintaining
Senior Services and Long-Term Care	$7.700	$31.405	Decreasing
Dock Walls and Breakwaters	$1.520	$2.353	Decreasing
Erosion Controls	$21.960	$0.000	Increasing
Forestry Management & Maintained Parkland	$3.300	$7.800	Decreasing
Exhibition Place	$16.424	$25.414	Decreasing
Parks and Recreation	$85.700	$112.700	Decreasing
Toronto Zoo	$18.476	$7.424	Increasing
Road Network	$12.247	$23.202	Decreasing
Transit	$720.176	$3,084.023	Decreasing
Solid Waste Management	$27.873	$25.205	Increasing
Water, Wastewater, and Stormwater Centralized Services	$1.049	$0.940	Maintaining
Total	**$1,405.191**	**$4,001.933**	**Decreasing**

11.0 Financial Summary

11.1 Introduction

As the largest municipality in Canada, and the economic engine of our nation, the City of Toronto holds a momentous responsibility to deliver services, execute projects, and uphold strategic priorities that far exceed the traditional role of municipal government, and which substantially benefit the region and other orders of government in the contribution to Canada's economic health, social standing, and environmental sustainability.

With high inflationary pressures causing a series of cost escalations and supply chain issues, coupled with COVID-19 impacts resulting in deferred SOGR investments, the City has been unable to keep up with the significant costs required to deliver both the upfront infrastructure requirements associated with growth, and the ongoing and sustained demand for services to the community. Considering funding constraints and competing priorities, many capital projects experience delays or deferrals which only increase the risks of asset degradation and/or operating failure that typically increase over time and result in costly emergency repairs, both in dollars and impact on residents.

Through the 2024 Budget process, the City of Toronto was able to 'strike a new deal' with the Province of Ontario to upload control of the Don Valley Parkway (DVP) and F.G. Gardiner Expressway to provide some capital relief to the mounting financial pressures the City is facing. The provincial support is $1.2 billion in operating funding over three years and $3.0 billion in capital investment over ten years, with $1.9 billion being allocated to the upload of the DVP and Gardiner specifically.

Albeit an enormous help to the City, it is only one step to improving the City's ability to meet its infrastructure needs now and in the future. As identified in the Updated Long-Term Financial Plan, there is a need for a City-wide capital optimization and prioritization framework to promote efficiencies in service delivery and procurement, improve the approach to capital planning and investments, and address surmounting SOGR backlog and unfunded capital needs which account for the majority of the City's forecasted fiscal pressure. A formalized framework will enhance existing prioritization processes and be used to make strategic decisions regarding the 10-Year Capital Plan, including both the funded and unfunded portions, during the City's annual budget process. It will also allow Council to set strategic direction in the allocation of available capital funds using a consistent set of guiding principles, while considering overall affordability and capacity to deliver capital investments. Following completion of the 2024 Budget process, staff began developing a comprehensive framework for capital prioritization, which is intended to provide the City with an objective tool and approach for prioritizing capital projects within the City's financial and project delivery capacity, based on a set of weighted criteria.

The City's asset management plan has a significant role to play in the City's financial planning. While budgets and financial plans thus far have articulated state of good repair needs and funded vs. unfunded capital needs, asset management offers a new perspective on these financial forecasts – by incorporating levels of service. The future state of the City's asset management program and budgeting process is to build out its understanding of service levels and the effect that funding (or not funding) capital needs will have on levels of service.

This Corporate AMP has taken a significant first step towards establishing the relationship between investment in infrastructure and corresponding service levels. To meet the requirements of O. Reg 588/17, the City has completed an analysis to establish the cost to maintain current service levels. It has also provided a high-level connection of its existing funded budget to lifecycle models and service level objectives, to describe the changes in performance over time associated with its current planned budget. By doing this, the City is able to compare its current forecasted performance to the cost to maintain service levels over the next 10-years.

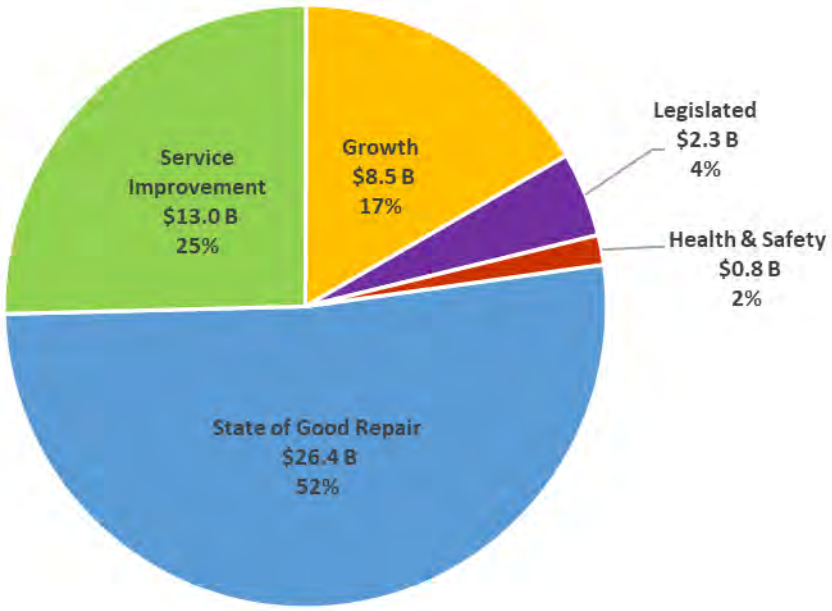


Figure 11-1 City of Toronto's Total 10-year Capital Plan of $51 billion by Project Category.

The City's next (2025) Corporate Asset Management Plan will also take another significant step forward. For the development of that AMP, the City will establish a series of proposed service levels, and the costs associated with achieving them. Through this, it will identify the gap between current planned budgets and investments required to achieve proposed service levels, and develop a financial strategy to fund those investments, as well as to mitigate the risks that may arise if needs cannot be funded.

11.2 Disclaimer

Note that this AMP focused on identifying the renewal need for infrastructure investments. In comparison to the City's capital budget process, there may be several state of good repair related projects that are categorized under health and safety, service improvement, or growth. For this reason, the comparison of renewal needs to planned budget is not necessarily a one-to-one comparison. In addition, for certain asset classes, the relationship between asset ownership, maintenance and funding is not always under the same division or agency. As a result, the renewal needs for those asset groups may be spread across different service areas. The City may be experiencing investment gaps from the other lifecycle activities and should work towards aligning the details of the SOGR budget with the lifecycle activities articulated in this AMP.

As the City completes future iterations of this Corporate AMP, and advances the maturity of its AM analysis, it will be better able to align planned budget data to asset data to delineate and quantify true renewal costs through the 2025 milestone of O. Reg. 588/17. Through this requirement, the City will establish its proposed levels of service, which will provide more context around the required investment needs.

11.3 Full Lifecycle Investment Forecasts

The results of the SOGR (renewal) forecasts are compared against the budget forecast, which is obtained from the City's 2024 Operating Budget and 2024-2033 Capital Budget and Plan and reflected in a summary table and figure. The summary table lists the planned expenditures for a series of various lifecycle activities, including operating, growth, service improvements and state of good repair (i.e. renewals). It uses the information from the budget and integrates the results of the two analyzed scenarios into these values. The difference between the two scenarios is identified as an "infrastructure gap", which is calculated as difference in the total expenditures between the "Planned Budget" scenario and the "Maintain Current LOS" scenario. The following is the summary table for this analysis for all assets within the scope of this AMP. Note that summary tables broken down by subservice areas are also provided in the Service Summary documents in the appendices.

Table 10-1 Total City Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$216.6	$216.7
State of Good Repair	$1,405.2	$4,001.9
Service Improvement	$736.5	$768.1
Growth Related	$331.9	$331.9
Operating	$10,841.8	$10,841.8
Total Expenditures	**$13,532.1**	**$16,160.5**
Infrastructure Gap	**-**	**$2,628.4**
SOGR Infrastructure Gap	**-**	**$2,596.7**

The information in this summary table is also summarized in a bar graph, which illustrates expenditures for each year over 10-years, based on the “Maintain Current LOS” scenario. The bars on the figure are colour-coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The difference between these two lines represents the additional investment that is needed by the City to continue to maintain current levels of service over the next 10-years (which would apply if the “Scenario 2” line is higher than the “Scenario 1” line). If the “Scenario 1” line is equal to or higher than the “Scenario 2” line, this would indicate that current investment needs are sufficient to maintain (or improve) service-levels over the 10-year forecast period. The following figure provides this graph for all assets within the scope of this AMP. This graph is also provided for each subservice, in the Service Summary documents in the appendices.

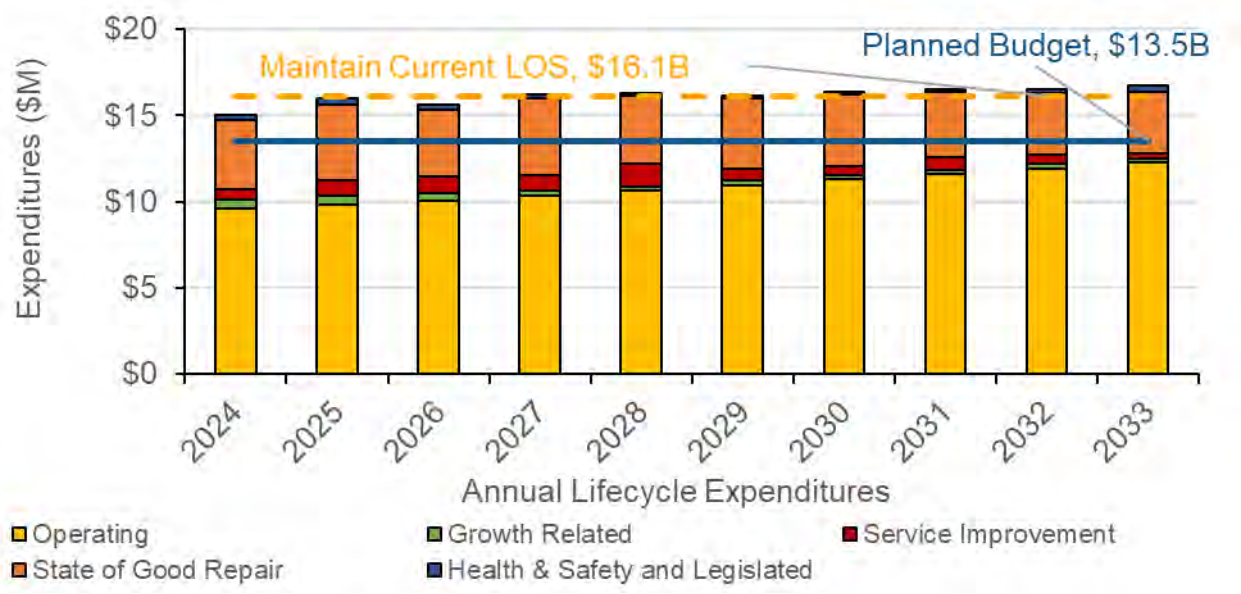


Figure 11-2 Total City Scenario Comparison.

11.4 Risks

The City’s objectives in integrating asset management planning into its business processes and financial planning exercises, is to provide perspective on the relationships between investment needs, planned investments, service levels and risks. For this 2024 Corporate AMP, the City has identified high-level risks tied to the results of this asset management plan. Costs are developed from the City’s lifecycle management strategies and current/proposed future performance, tied to levels of service. Some of the risks associated with those strategies are detailed below.

11.4.1 Risks Associated with Information Gaps

The asset management and forecasting analysis is dependent on City’s available information and data, which includes asset inventory data. The City’s available information was assessed using a Data Maturity framework to provide context to the results that are reported in this AMP. Areas with low data maturity may include datasets that are incomplete, out of date, or have low accuracy. The results of the asset management plan are dependent on the maturity level of the data that is used to support them.

Furthermore, asset data was paired to financial data to analyze the relationship between asset performance/costs and planned budgets. Note that the exercise of aligning budget data to asset data for the purposes of this analysis can be complex, as asset-level inventory data often does not easily align with project-level budget data. A future improvement of the City's AM program will be to develop a framework to associate project-level budget data to asset inventories to increase the maturity of its asset management analyses.

As part of its asset management program, the City endeavours to continue to update, maintain and improve its asset data, to provide a level of confidence to the analyses that will be completed for future iterations of this AMP. The City's data maturity framework is a starting point to help facilitate this work.

11.4.2 Risks Associated with Lifecycle Strategies and Available Funding

This Asset Management Plan was focused on identifying costs to maintain current levels of service and comparing those costs to planned budgets. In some cases, the City has identified that planned budgets are not sufficient to maintain current levels of service.

The asset management analyses that were completed to understand these costs were completed for a 10-year forecast horizon. The analyses take into account current asset condition, age and projected deterioration. As infrastructure continues to age, if budgets are unable to keep up with new investment needs (as well as current backlogs), it is represented as a decline in service levels, which would put more financial pressure on the City.

Table 10-1 summarizes the results of this analysis (from a state of good repair perspective only). Subsection 11.3 summarizes the full lifecycle costs associated with planned budgets and maintaining current levels of service for the next 10-years. Note that this AMP has not yet explored whether or not current levels of service are appropriate for the City of Toronto. The City's next (2025) AMP will explore levels of service further and provide commentary on the costs to maintain proposed levels of service and proposed performance.

Assets that are not able to maintain LOS targets are likely to experience a reduction in service levels over the analysis period. They may potentially experience more frequent asset failures, asset closures or lapses in the delivery of services as a result. Assets in a state of poor performance may also experience increased levels of maintenance to ensure that they remain in service, which could have impacts to the operating costs.

11.4.3 Risks from External Influences

Risks Due to Economic Factors

The economic climate in the City of Toronto has changed in recent years, particularly in the wake of COVID-19. The current degree of economic uncertainty has had an effect on residents and businesses within the City. Particularly, recent bouts of high inflation have elevated procurement and construction costs associated with investment in infrastructure and addressing state of good repair needs. Low economic productivity may also affect the ability to complete infrastructure projects and ensure that assets remain in service to continue supporting service delivery to the community. Uncertain costs of construction and asset lifecycle work may result in lower than anticipated project execution and completion, which could affect the overall performance of the City's assets.

These factors may result in an increase in the overall financial impact of maintaining and replacing infrastructure, as well as constructing and procuring new assets.

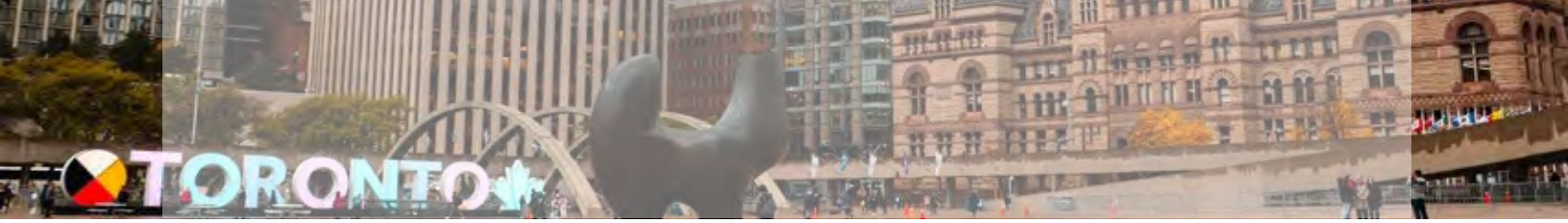
Risks Due to Climate Change

Climate change also poses a significant risk to the City. The effects of climate change could result in impacts to assets that would require additional funding from the City. Impacts could include increased risk of failures, accelerated deterioration or a reduction in capacity of some assets that are impacted by the effects of climate change. Refer to Subsection 3.4 and Section 9.0 for more information on the City's approach to addressing climate change.

Risks Due to Other Unforeseen Circumstances

Other internal influences that are unforeseen have the ability to affect the City's asset management plan and lifecycle strategy for maintaining assets in a state of good repair. Changes in regulations could result in increased costs or changes in construction activities associated with maintaining assets in a state of good repair. These risks are generally considered to be low since the City endeavors to keep current with regulatory changes and incorporate them into its planning.

Changing community expectations may also have an effect on the City's asset management planning. As customer expectations change, the City must respond, which could result in increased costs to deliver services.



12.0 Improvement Plan

The City's various Divisions, Agencies and Corporations have been doing asset management as part of their business practices, either formally or informally, prior to the development of this AMP. In 2023, the City formed a Corporate Asset Management group within Finance and Treasury Services to support the development of this Corporate AMP in alignment with the requirements of O. Reg. 588/17. The Corporate Asset Management group's role will be to provide standardization and centralization for asset management practices across the City and to support the various DACs in their asset management journeys.

This document represents the first Corporate Asset Management Plan for the City of Toronto that has been completed under the guidance of the Corporate Asset Management group. It is a significant step forward in the City's asset management journey. The AMP is considered a "living document", which will evolve and be updated over time. The City derives value from the processes, exercises and analyses that are required to update this AMP – and the AMP itself is a documentation of that exercise.

Adopting a culture of continual improvement is an integral part of an effective asset management program. To do this, the City must recognize and document the maturity of its asset management program, identify areas for improvement, develop actions necessary to address these areas, and prioritize those initiatives over the short, medium and long-term horizon. This will provide the roadmap to continue the implementation and development of appropriate policies, plans, processes and tools to keep the City's asset management program operational and provide oversight and alignment with other corporate initiatives.

In keeping with the concept of continual improvement, the process of developing this Corporate AMP has identified several opportunities to advance the maturity of the City's AM program as well as future iterations of the City's Corporate AMP. The following subsections document these opportunities.

12.1 Asset Management Program

As noted above, within the City, asset management practices have traditionally occurred at the divisional/ agency level. Although this has resulted in establishing in-depth service specific knowledge and customization of practices, it has also resulted in inconsistent practices across the organization, with limited corporate visibility into asset needs. The current approach presents challenges for short-term and long-term capital and financial planning and management. Benefits of a 'whole-of-government approach' to asset management allows for greater integration and stability in asset, capital, and financial planning; better informed decision-making regarding investments in assets; and enhanced collaboration on projects that involve infrastructure assets.

To optimize asset management and implement this integrated business approach, the Corporate Asset Management (CAM) group has identified strategic level initiatives essential to building the City's asset management (AM) program in the near, medium and long-term, including a strategic-level roadmap. The objective is to centralize some asset management practices, to enable the City's diverse asset groups to be managed in a consistent fashion but, also to ensure that it is applied in a manner that acknowledges and accounts for City program and agency service-specific standards and needs.

The following table details the Asset Management Program Initiatives.

Table 12-1 AMP Improvement Initiatives – Asset Management Program.

Number	Initiative
1	Complete a formalized and detailed maturity assessment of AM practices across the City. While the City recognizes that this improvement plan provides commentary on asset management maturity and initiatives to increase that maturity, the content herein was developed by City staff and the authors of this AMP. The City can benefit from a formalized and independent maturity assessment.
2	Develop a Corporate Asset Management Strategy, including a Governance Framework and Roadmap, to provide strategic direction to the advancement of the City's Corporate Asset Management program.

12.2 Asset Information and Data

Data provided by various stakeholders across the City was integral to supporting the analyses and insights that are presented in this AMP. In many cases, data maturity was low, or data may have been unavailable. Assumptions and estimations were made to fill these gaps for the development of the AMP. Several opportunities for improvement were identified related to this supporting information and data. Some revolve around practices that are related to obtaining and managing data, and others are related to the data itself. The following table details these initiatives.

Table 12-2 AMP Improvement Initiatives – Asset Information and Data.

Number	Initiative
1	Develop data standards that inform the requirements for data collection that provides the foundation for this AMP.
2	Develop a data collection policy and plan, which articulates how and when data will be collected for the various subservices and asset classes.
3	Work towards increasing the City's AM data maturity, by collecting additional data to fill in gaps, and by adopting a process to update data and improve its confidence/accuracy.

12.3 Asset Management Strategies

Asset Management Strategies refer to the frameworks, processes and models that are used to document and articulate the various aspects of managing assets and delivering services to the community through those assets. Levels of Service are a key component of asset management, and an integral part of O. Reg. 588/17. Lifecycle management strategies include the practices that the City undertakes to continue to manage assets and deliver services through those assets. A Risk Management Strategy documents and identifies the risks that the municipality may experience under different scenarios.

Tying these strategies together helps to inform the relationships between investments in infrastructure, levels of service and risk. The City experiences a constant need to balance these three items to ensure that it is making the best possible informed decisions. Through the City's budget process, service levels and outcomes are established and reported on annually. Many of these service levels can be applied to asset management, however there is still room to improve the understanding and setting of LOS in the context of asset management. In particular, climate-related LOS should be developed and tracked over time, as climate impacts become increasingly critical to service delivery. Furthermore, there is a significant opportunity to better understand risk from a corporate lens, and how investments impact risks and service levels. The following table details some improvement initiatives related to the city's Asset Management Strategies.

Table 12-3 AMP Improvement Initiatives – Asset Management Strategies.

Number	Initiative
1	Develop a Levels of Service Framework (to supplement/complement the LOS measures developed for this AMP). Adopt a process to update LOS annually as part of Asset Management planning processes.
2	Adopt a process to establish proposed levels of service to accommodate the 2025 Milestone of O. Reg. 588/17, as well as future iterations of this Corporate AMP.
3	Develop a lifecycle strategy framework and enhance the lifecycle models used for this AMP analysis to better align them with the behaviours of various asset types.
4	Develop a risk management strategy and framework to articulate risk across all subservices and asset classes.

12.4 Financial Strategy

The City's financial strategy explores how lifecycle activities will be funded, as well as funding gaps and associated impacts to service delivery/risks. This AMP contains a financial summary/outlook. A key requirement of the 2025 Milestone of O. Reg. 588/17 will be to provide a detailed financial strategy that goes beyond the financial information in this AMP to discuss funding sources, whether or not funding needs can be achieved, and associated risks.

The City recognizes that a corporate AM lens is required to centralize and better align asset performance and lifecycle costs with capital planning and budget development. Divisional level (or tactical) Asset Management Plans are not consistently completed across the City. Some programs complete tactical AMPs; however, for many others, the Corporate AMP is their first official AMP. Some divisions use high-level assumptions to understand the budget allocations towards asset lifecycle activities, whereas others may have more advanced AM practices and use more progressive methodologies and systems for analyzing asset data to model full lifecycle costs and align them to budgets. Standardized policies and frameworks are beneficial to promote consistency on how costs are estimated and how projects are prioritized and managed.

As identified in the City's 2023 Updated Long-Term Financial Plan, a capital optimization and prioritization framework will be developed to address the City's compounding capital pressures, taking into account asset management practices of lifecycle costs, risk, levels of service, strategic alignment, and climate and other socio-economic factors. Staff have begun developing a comprehensive framework for capital prioritization with consideration being given to a variety of criteria, including capital project categories, state of good repair requirements, spend rates, availability and eligibility of funding, risk assessment, environmental, social and governance contributions, and strategic alignment with the City's priorities. The framework is intended to ultimately enhance the City's existing prioritization process. The CAM group will be involved in its development and implementation, providing key insights and recommendations coming out of the Corporate AMP initiative. The framework is intended to ultimately enhance the City's existing prioritization process and support asset management practice and integration.

Table 12-4 AMP Improvement Initiatives – Financial Strategy.

Number	Initiative
1	Complete a detailed budget analysis to align specific projects from the budget with asset management strategies. This will aid in correlating financial needs to budgetary allocations.
2	Integrate the AMP process with the annual budgeting process, providing an AM lens to budgetary decisions that incorporates levels of service and risk.
3	Support the development of a City-wide capital optimization and prioritization framework.

12.5 Climate Change

The impacts of climate change are becoming increasingly important in asset management to be able to identify risk, predict potential vulnerabilities to our infrastructure assets, and plan for such impacts with respect to capital prioritization and establishing mitigation strategies.

In December 2021, the Council approved staff report "IE26.16 - TransformTO - Critical Steps for Net Zero by 2040" identified the need for a climate lens to be incorporated into operating programs and capital project planning; and become a standard for reporting on major climate risks to assets and services (Action #25B). Identifying and disclosing climate related impacts on assets enables the City to minimize risk; inform more efficient, long-term decision-making; and enhance accountability to meeting targets.

Table 12-5 AMP Improvement Initiatives – Climate Change.

Number	Initiative
1	Collaborate with the Environment & Climate Division to identify the information, training and resources needed by City staff to improve understanding of climate change considerations in asset management and the value of embedding climate change into AM planning.
2	Develop a Framework to identify costs associated with climate change and integrate them into the AM planning process.

A

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX A

Service Summary – Culture and Educational Services

1.0 Cultural and Educational Services

1.1 Summary

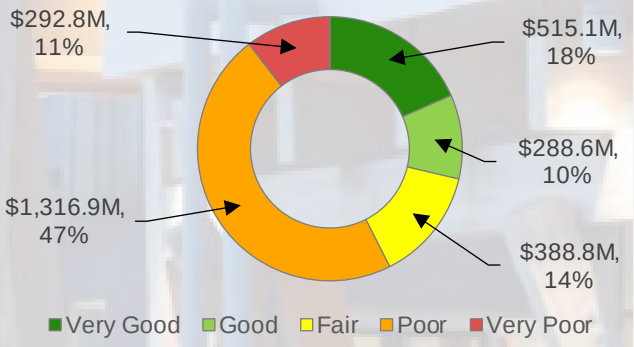
Culture and Educational Services at the City of Toronto consist of three primary divisions and agencies: Economic Development and Culture, TO Live, and Toronto Public Library. These services are provided to the community through a multitude of different programs, events, and business functions, which are supported by various infrastructure assets. The infrastructure assets critical to ensuring service delivery are comprised mainly of collections, equipment, facilities, and fleet which support the reliability and accessibility of programs, information, and events to all residents across the city. The total replacement value of this asset portfolio is $2.8 billion.

A summary of the key portfolio details including the portfolio replacement value, condition distribution, data maturity and costs to maintain service levels are provided below. The asset hierarchy, which illustrates the relationship between the service and major asset classes that provide the service, is also detailed below.

$2,802.3M
Replacement Value

Fair
Overall Performance

$45.9M
Annual Cost to Maintain LOS



Data
B
Maturity

A
Completeness

B
Confidence

Figure 1-1 Summary of the Culture and Education Services Assets.

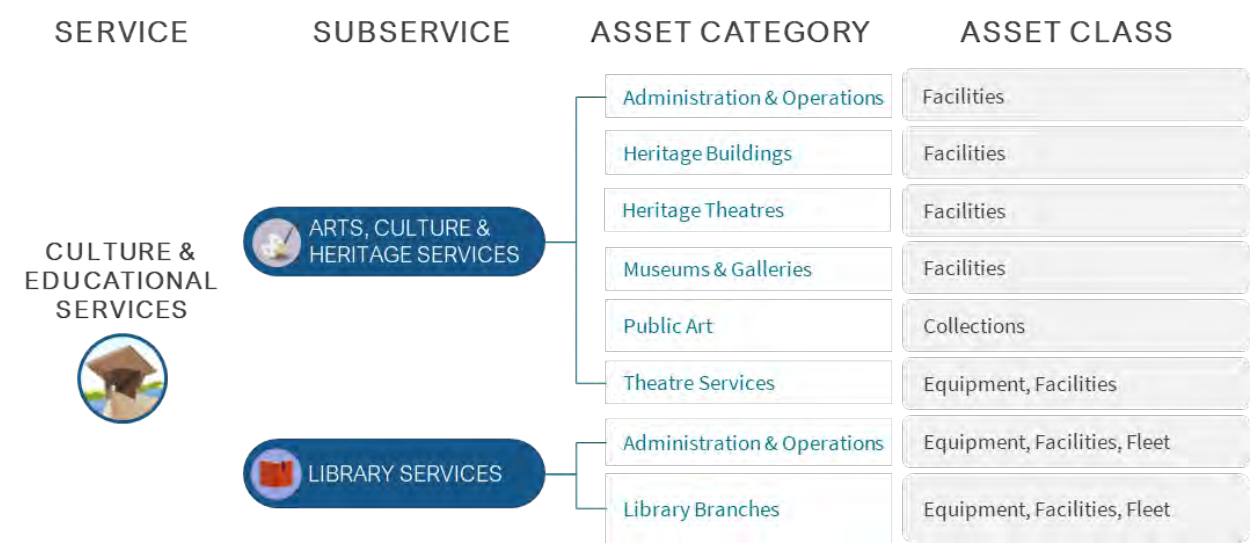


Figure 1-2 Culture and Educational Services Asset Hierarchy.

1.2 Arts, Culture and Heritage Services

The City Division and Agency that manage the Arts, Culture and Heritage Services assets are Economic Development and Culture, and TO Live.

Economic Development and Culture strives to make Toronto a place where business and culture thrive. The division's objective is to advance Toronto's prosperity, opportunity, and liveability by fostering employment and investment opportunities, encouraging Toronto's cultural vibrancy through more and enhanced cultural experiences, and engaging partners in the planning and development of the City's economic and cultural resources.

TO Live is a City agency which manages and operates the City's three major civic theatres the St. Lawrence Centre for the Arts, Meridian Arts Centre and Meridian Hall. The mandate of TO Live is to provide quality performance and event facilities and to promote its contribution to the artistic, cultural and social vitality of Toronto and its communities.

Service Statement

Celebrate and preserve cultural richness by curating diverse artistic experiences, preserving heritage sites, and fostering creative expression. Provide timely, accessible and high-quality engaged and collaborative services to all of our clients, partners and communities and residents of Toronto.

Asset Breakdown

ADMINISTRATION & OPERATIONS

Facilities

Includes offices and storage buildings.

MUSEUMS & GALLERIES

Facilities

Includes creative centers, cultural centers, galleries and museums.

HERITAGE BUILDINGS

Facilities

Includes heritage buildings and sites such as Casa Loma, Brickworks, Fort York, Roundhouse, etc.

PUBLIC ART

Collections

Includes sculptures, monuments, memorials, and other mixed-media installations that are accessible to the public across the City.

HERITAGE THEATRES

Facilities

Includes Assembly Hall and heritage theatres.

THEATRE SERVICES

Equipment

Includes IT equipment, leasehold improvements, and stage equipment.

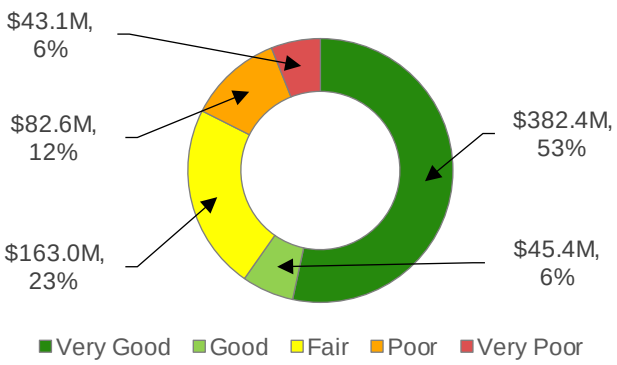
Facilities

Includes Meridian Hall, Meridian Arts Centre, and St. Lawrence Centre for the Arts.

$716.5M
Replacement Value

Good
Overall Performance

$19.7M
Annual Cost to Maintain LOS



Data
C
Maturity
A
Completeness
C
Confidence

Figure 1-3 Arts, Culture and Heritage Services Summary of Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Arts, Culture and Heritage Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Administration & Operations	Facilities	6 Buildings	$29.194	Very Good	115	154
Heritage Buildings	Facilities	70 Buildings	$216.984	Very Good	162	265
Heritage Theatres	Facilities	9 Buildings	$55.314	Good	170	300
Museum & Galleries	Facilities	14 Buildings	$20.524	Very Good	133	208
Public Art	Collections	250 Assets	$108.994	Fair	40	30
Theatre Services	Equipment	620 Assets	$17.130	Good	11	10
Theatre Services	Facilities	3 Buildings	$268.371	Good	49	50


Nick Sweetman, StART Underpass (UP) Program Photo: Kathy Toth

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Arts, Culture and Heritage Services Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCA) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Collections	Life Consumed	The condition assessments performed on an as needed basis or prior to installation. Staff are in the beginning stages of developing a data collection process (e.g. condition ratings, values, etc.). For this AMP, lifecycle needs are estimated based on life consumed/remaining life.
Equipment	Life Consumed	Condition is not measured for equipment. Lifecycle needs are estimated based on life consumed/remaining life.

1.2.1.2.2 Performance Rating

Table 1-3 Arts, Culture and Heritage Services Performance Category Mapping.

Category	Equipment and Collections (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.2.2 Levels of Service

Table 1-4 Arts, Culture and Heritage Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Accessible	Facilities are accessible to all groups of people and provide the appropriate amenities and programs.	We prioritize accessibility by providing barrier-free environments, including ramps, elevators, and accessible parking spaces. We continuously evaluate and improve our facilities and programs to enhance accessibility and promote inclusivity for all.
Available; Quality	Unique public art assets and heritage buildings serve as destination landmarks, are unique to Toronto, and promote the City's cultural identity.	The City is delivering the Toronto Public Art Strategy outlined for 2020-2030. This will help expand the public art collection to enhance cultural identity, enrich public spaces and promote social cohesions.
Reliable	Facilities are open as scheduled and artwork is available for public enjoyment.	Facilities and artwork are replaced and/or maintained in a state of good repair.

Table 1-5 Arts, Culture and Heritage Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable	Percentage of assets in fair or better performance.	Collections	
		Equipment	93%
		Facilities	

1.2.3 Lifecycle Management Activities

The Arts, Culture and Heritage Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the 'Climate Change' section of the report for further details.

1.2.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $18.5 million and results in the performance forecast illustrated in Figure 1-4. Under this scenario, the percentage of assets in fair or better performance will decrease from 82% to 75% by the end of the 10-year forecast period, which represents a decrease to service levels.

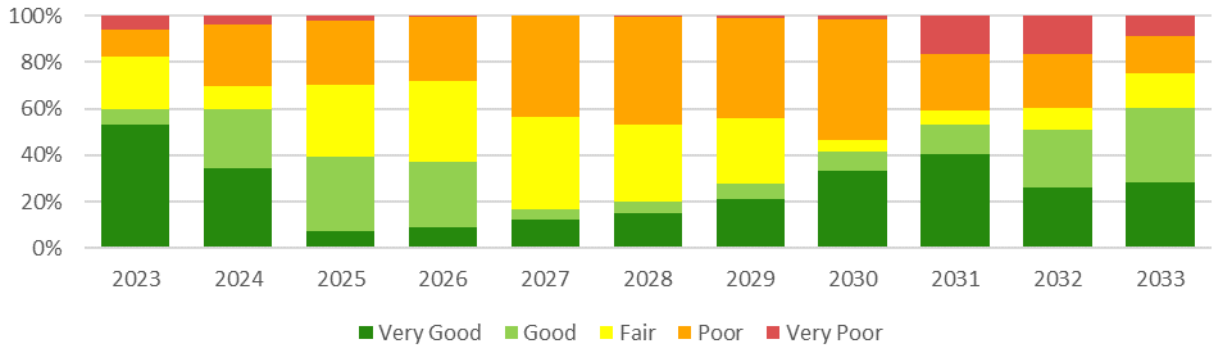


Figure 1-4 Arts, Culture and Heritage Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 82% of assets in fair or better performance was determined to be $19.7 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5.

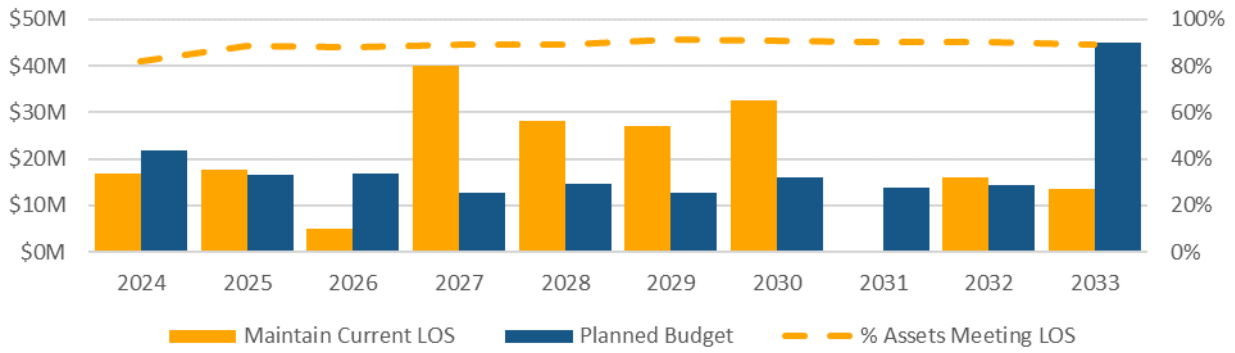


Figure 1-5 Arts, Culture and Heritage Services Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-6 Arts, Culture and Heritage Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$5.823	$5.823
State of Good Repair	$18.454	$19.694
Service Improvement	$3.550	$3.550
Growth Related	$5.061	$5.061
Operating	$150.050	$150.050
Total Expenditures	**$182.938**	**$184.178**
Infrastructure Gap		**$1.240**

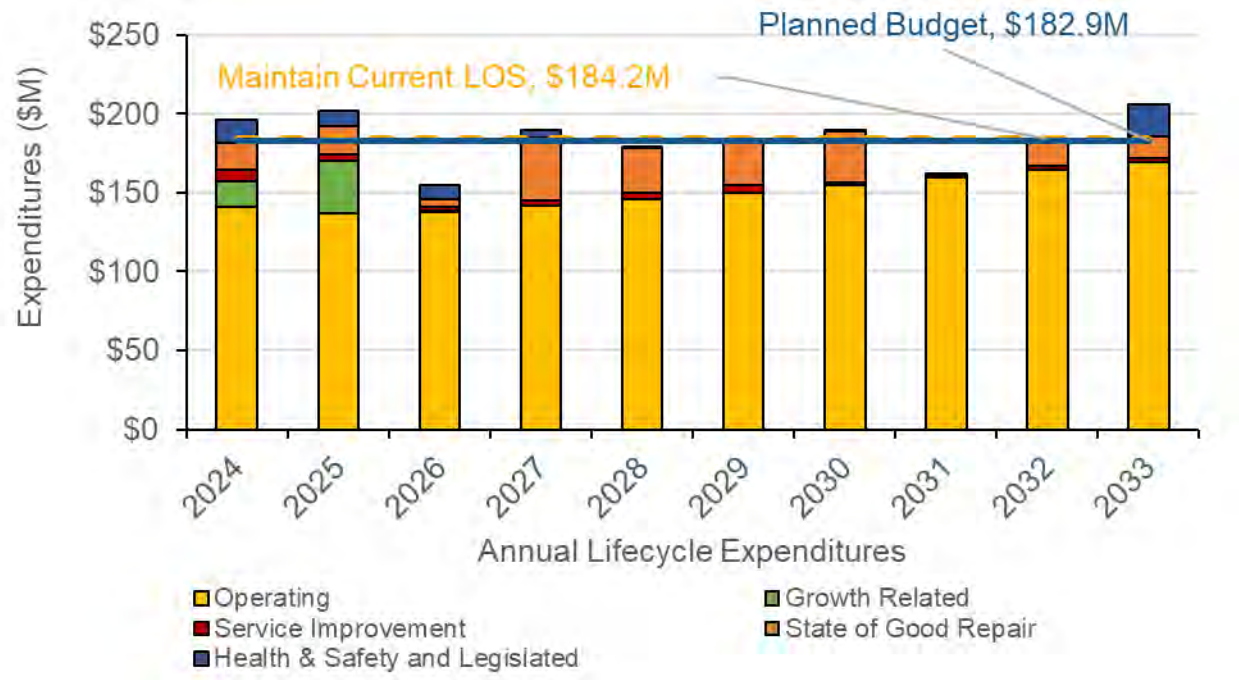


Figure 1-6 Arts, Culture and Heritage Services Scenario Comparison.

1.2.7 Conclusion

Valued at $716.5 million, the City's Arts, Culture and Heritage Services assets are overall in good performance. Data maturity is rated as medium where the confidence in the data could be improved from an enhanced condition assessment program. Under current planned SOGR investments of $18.5 million, service levels are anticipated to decrease over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $19.7 million over the next 10-year period. Figure 1-6 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $1.2 million annually over the next decade.

In all metrics including performance and LOS, the Collections department is delivering lower results compared to the other asset categories in the Arts, Culture, and Heritage subservice. This is reflective of a lack of sufficient resources to keep up with the growing need for maintenance. Demands are growing due to a) exponential worsening of condition due to lack of preventative maintenance and b) continued growth of the assets in the collection, which will increase by a minimum of 20% in the next 5 years. In anticipation of this growth, Collections requires an increase in investment to improve current condition and maintain LOS for the next 10 years. Further analysis is required to further quantify and verify these investment gaps and determine the impact to services delivered to staff and citizens.

It is also noted that the City of Toronto also has an extensive museum artifact collection containing 150,000 artifacts, and over a million pieces in its archaeology collection. These priceless pieces of art and history are not included in the scope of this AMP as the valuation and treatment of these collections are not recorded at a specified replacement value or service life, nor are they subject to depreciation or depletion. The collections are managed outside of the conventional lifecycle activities and assetization practices of infrastructure assets. Divisional staff ensure these items are recognized as unique holdings that are treated with an ethical standard for preservation as it is intended to be conserved for future generations.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Library Services

The Toronto Public Library provides a diverse range of resources, programs, and services to meet the informational, educational, cultural, and recreational needs of our community. The library preserves and promotes universal access to a broad range of human knowledge, experience, information, and ideas in a welcoming and supportive environment.

Service Statement

Toronto Public Library (TPL) provides free and equitable access to services that meet the changing needs of Torontonians. The Library preserves and promotes universal access to a broad range of human knowledge, experience, information and ideas in a welcoming and supportive environment.

Asset Breakdown

ADMINISTRATION & OPERATIONS

Facilities

Includes support buildings.

Equipment

Includes processing equipment and software.

LIBRARY BRANCHES

Facilities

Includes libraries.

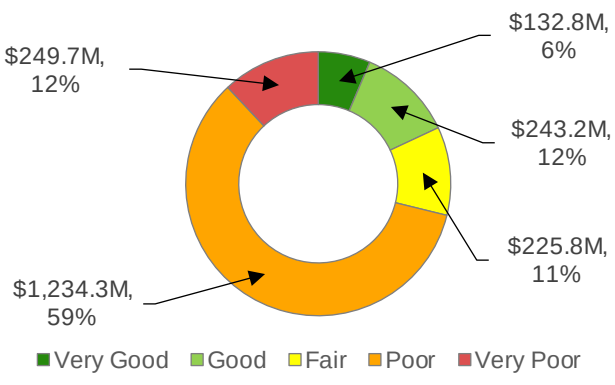
Equipment

Includes IT equipment and software.

$2,085.7M
Replacement Value

Poor
Overall Performance

$26.2M
Annual Cost to Maintain LOS



Data
C
Maturity
A
Completeness
C
Confidence

Figure 1-7 Library Services Summary of Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Table 1-7 Library Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Administration & Operations	Equipment	47 Assets	$27.365	Poor	7	8
Administration & Operations	Facilities	2 Buildings	$99.681	Fair	33	50
Library Branches	Equipment	32 Assets	$15.196	Very Poor	7	5
Library Branches	Facilities	100 Buildings	$1,943.507	Poor	21	50

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-8 Library Services Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Fleet	Life Consumed	Condition is not measured for Fleet. Lifecycle needs are estimated based on life consumed/remaining life.
Equipment	Life Consumed	Condition is not measured for Equipment. Lifecycle needs are estimated based on life consumed/remaining life.

1.3.1.2.2 Performance Rating

Table 1-9 Library Services Performance Category Mapping.

Category	Equipment and Fleet (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.3.2 Levels of Service

Table 1-10 Library Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Libraries are open as scheduled to provide programs to the community. Other assets remain in service (e.g. fleet, equipment, etc.).	Toronto Public Library strives to maintain its assets in a state of good repair, ensuring libraries can remain open as scheduled and that services and amenities are available to the public.
Accessible	Libraries and programs are accessible by all residents.	New buildings are constructed to Accessibility for Ontarians with Disabilities Act (AODA) accessibility standards. Older buildings, when renovations are required, are upgraded to meet AODA accessibility standards. Toronto Public Library tracks its AODA backlog in dollars, to help it gauge needs related to accessibility.

Table 1-11 Library Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	28%
		Facilities	29%
Accessible	10-year AODA backlog plan ($ millions).	Facilities	$64.600

1.3.3 Lifecycle Management Activities

The Library Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

All new buildings or expansions of library facilities greater than 100 square meters are designed and built in compliance with the City of Toronto Green Standard. Toronto Public Library also uses the latest design and construction technologies and when feasible, create net zero buildings that are sustainable and climate resilient. Other climate change initiatives include replacing heating, ventilation and air conditioning (HVAC) units system-wide for top efficiency, incorporating green roofs into new designs where possible, retrofitting of light-emitting diode (LED) lighting, and incorporating smart building technology in new branch builds.

1.3.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $23.7 million and results in the performance forecast illustrated in Figure 1-12. Under this scenario, the percentage of assets in fair or better performance will decrease from 29% to 22% by the end of the 10-year forecast period, which represents a decrease to service levels.

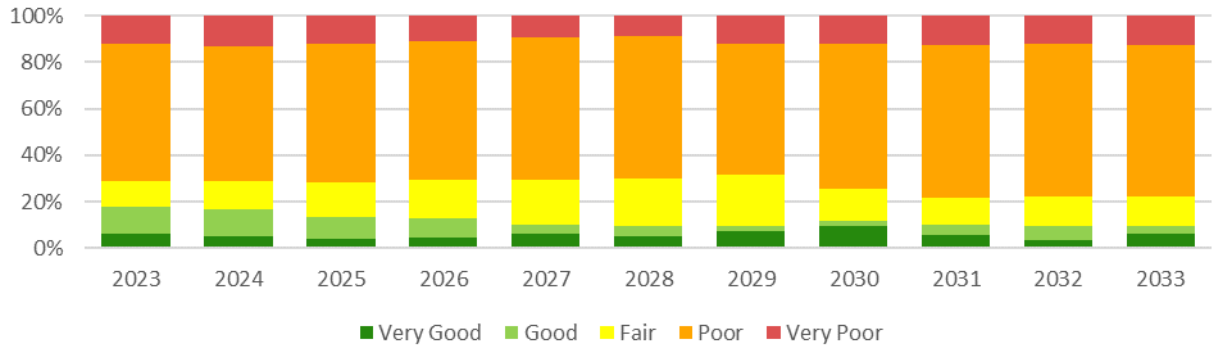


Figure 1-8 Library Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 29% of assets in fair or better performance was determined to be $26.2 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-13.

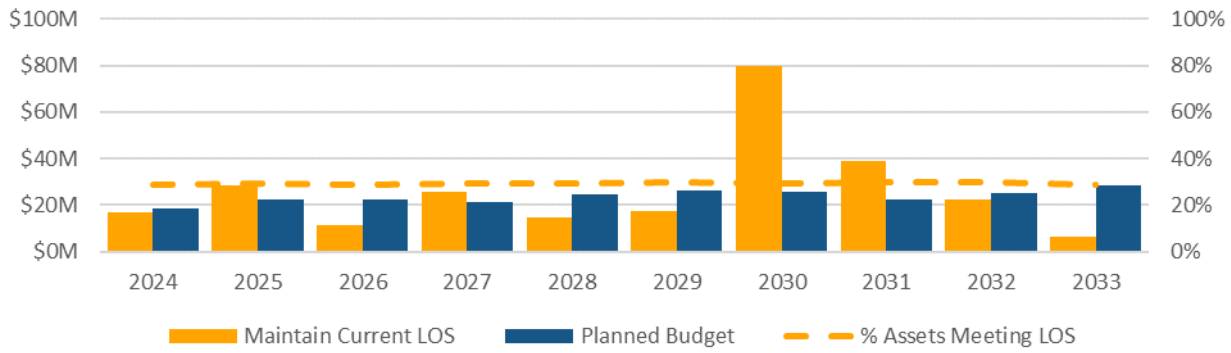


Figure 1-9 Library Services Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-14. Figure 1-14 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-12 Library Services Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$1.500	$1.500
State of Good Repair	$23.663	$26.227
Service Improvement	$2.092	$2.092
Growth Related	$29.286	$29.286
Operating	$293.775	$293.775
Total Expenditures	**$350.316**	**$352.880**
Infrastructure Gap		**$2.564**

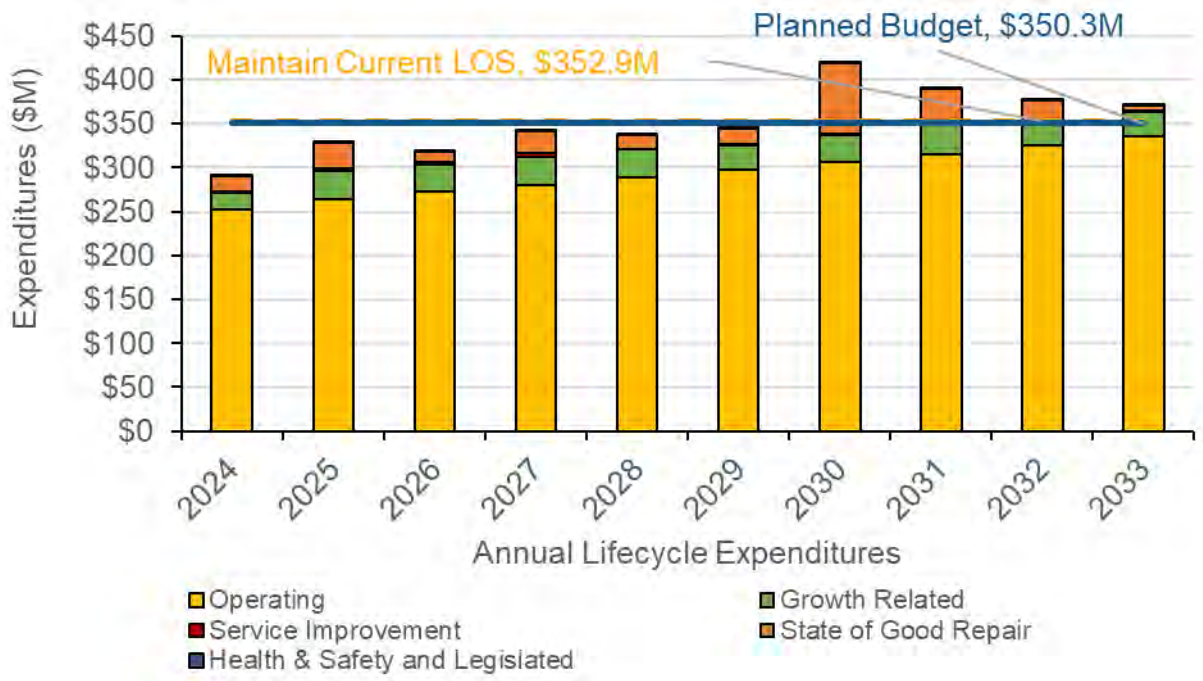


Figure 1-10 Library Services Scenario Comparison.

1.3.7 Conclusion

Valued at $2.1 billion, the City's Library Services assets are overall in poor performance. Data maturity is rated as medium where valuation and age and useful life estimates were based on latest information and professional judgement and expertise of divisional staff. Under current planned SOGR investments of $23.7 million, service levels are anticipated to decrease over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $26.2 million over the next 10-year period. Figure 1-14 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $2.6 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

It is important to recognize that the Toronto Public Library experienced a significant cybersecurity attack on October 28, 2023, that disrupted systems and technology across more than 100 branches across the city. Upon alert of the attack, staff immediately initiated security measures by shutting down all internal and external networks and systems. As a result, staff had limited ability to access and collect data on its various assets to support this AMP. With reduced access to data and information systems, the content included is based on available data, expertise and proficiency of agency staff. Further details on this incident can be found in the final report to the Toronto Public Library Board in February 2024.

B

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX B

Service Summary – Emergency Services

1.0 Emergency Services

1.1 Summary

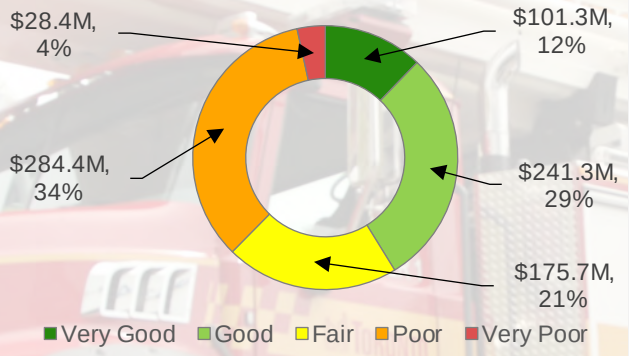
Emergency Services at the City of Toronto consists of three primary subservice areas: Toronto Fire Services, Toronto Police Service and Toronto Paramedic Services. These services are provided to the community through a multitude of different programs, training and resources, which are supported by various infrastructure assets. The infrastructure assets critical to ensuring service delivery are comprised mainly of facilities, equipment, and fleet which support the reliability, availability and response of emergency and non-emergency care, education programs, and safety and medical resources and information to all residents across the city. The total replacement value of this asset portfolio is $831.1 million.

A summary of the key portfolio details including the portfolio replacement value, condition distribution, data maturity and costs to maintain service levels are provided below. The asset hierarchy, which illustrates the relationship between the service and assets that provide services, is also detailed below.

$831.1M
Replacement Value

Fair
Overall Performance

$69.9M
Annual Cost to Maintain LOS



Data
B
Maturity

A
Completeness

B
Confidence

Figure 1-1 Summary of Emergency Services Assets.

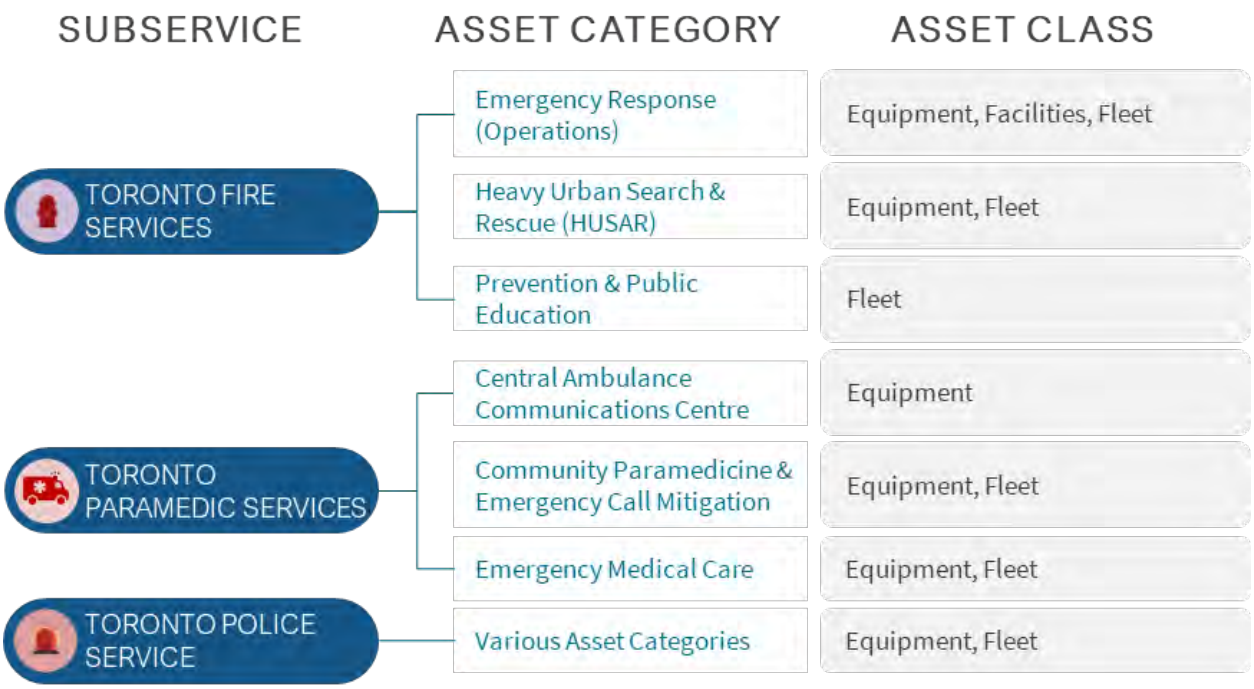


Figure 1-2 Emergency Services Asset Hierarchy.

1.2 Toronto Fire Services

Toronto Fire Services is the City's only all hazards emergency response organization. Fire Services provides Toronto residents, visitors and businesses with protection against loss of life, property and the environment from the effects of fire, illness, accidents, and all other hazards through preparedness, prevention, public education, and emergency response, with an emphasis on quality services, efficiency, effectiveness, and safety.

Service Statement

In accordance with the Ontario Fire Protection and Prevention Act (FPPA), Toronto Fire Services (TFS) provides residents and businesses with a comprehensive suite of fire protection services 24 hours per day, 7 days per week.

Asset Breakdown

Emergency Response (Operations)

Fleet
Includes fire apparatus (trucks) and other emergency vehicles.
Equipment
Includes communications, rescue, spare and training equipment.
Facilities
Includes training towers and other training buildings.

Heavy Urban Search and Rescue (HUSAR)

Fleet
Includes fire apparatus (trucks) and other emergency vehicles.
Equipment
Includes communications, rescue, retired/spare and training equipment.

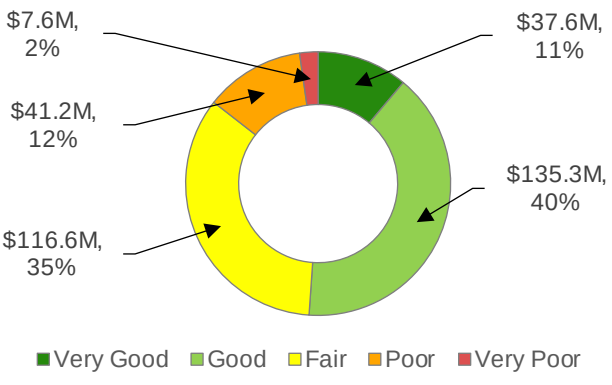
Prevention and Public Education

Fleet
Includes non-emergency vehicles.

$338.2M
Replacement Value

Good
Overall Performance

$28.4M
Annual Cost to Maintain LOS



Data
B
Maturity
A
Completeness
B
Confidence

Figure 1-3 Summary of Toronto Fire Services Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Emergency Response	Facilities	22 Buildings	$6.712	Fair	41	54
HUSAR	Equipment	121 Assets	$2.531	Fair	11	7
Prevention & Public Education	Fleet	156 Vehicles	$8.886	Fair	10	11

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Toronto Fire Services Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Fleet	Remaining Life	Lifecycle needs are estimated based on the asset's remaining life, which is assessed by staff.

1.2.1.2.2 Performance Rating

Table 1-3 Toronto Fire Services Performance Category Mapping.

Performance Category	Facilities, Fleet, Equipment (Remaining Life)
Very Good	100% to 67%
Good	67% to 33%
Fair	33% to 0%
Poor	0% to -33%
Very Poor	<-33%

1.2.2 Levels of Service

Table 1-4 Toronto Fire Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Protect lives, property, and the environment from the effects of various hazards.	TFS ensures it has trained staff, who are equipped with the appropriate equipment and tools to effectively respond to emergencies of all types.
	Emergencies are responded to in a timely manner.	TFS records and monitors response times as per the National Fire Protection Association (NFPA) 1710 standards and ensures that they are kept within appropriate limits.

Table 1-5 Toronto Fire Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Safe	Percentage of assets in fair or better performance.	Equipment	97%
		Facilities	100%
		Fleet	80%
	Percentage of assets maintained in accordance with the Vehicle Inspection Program mandated by Ministry of Transportation Office and recommended by City's Auditor General.	Fleet	100%

1.2.3 Lifecycle Management Activities

The Toronto Fire Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

Actions taken by Toronto Fire Services to combat Climate Change include:

- Toronto Fire Services designed and ordered two fully NFPA-compliant electric pumper trucks, as a pilot program, which will inform future plans to transition the TFS heavy fleet to electric and hybrid vehicles moving forward. Delivery is expected in 2024.
- New fire stations/facilities are being designed and built as 'net zero' efficient and environmentally conscious emergency service facilities that mitigate GHG emissions, use robust materials for longer service life, and include a green roof. Station designs also incorporate post-disaster requirements to ensure continued delivery of emergency services when impacted by extreme weather patterns.

1.2.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $28.8 million and results in the performance forecast illustrated in Figure 1-4. Under this scenario, the percentage of assets in fair or better performance maintains at 86% by the end of the 10-year forecast period.

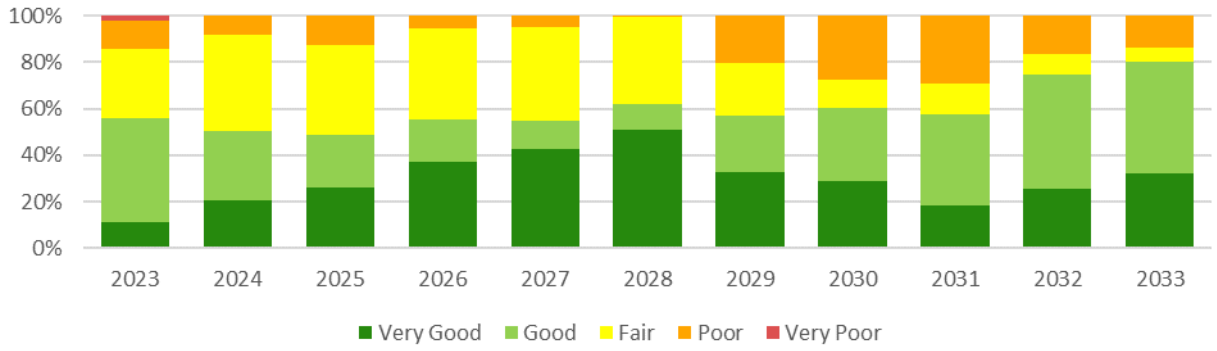


Figure 1-4 Toronto Fires Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 86% of assets in fair or better performance was determined to be $28.4 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5.

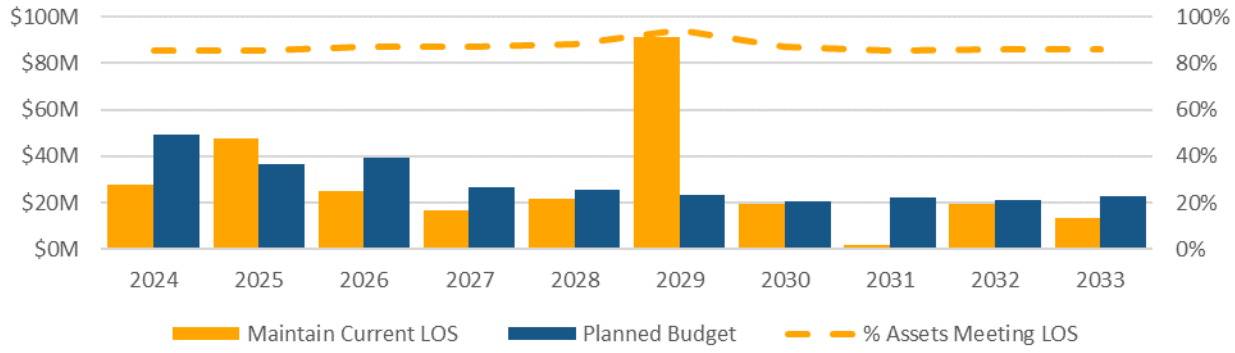


Figure 1-5 Toronto Fire Services Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates the current planned investments are sufficient to continue to maintain current levels of service over the next 10 years.

The full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP, are provided in the following table and figure.

Table 1-6 Toronto Fire Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$4.198	$4.198
State of Good Repair	$28.783	$28.422
Service Improvement	$1.652	$1.652
Growth Related	$0.364	$0.364
Operating	$611.263	$611.263
Total Expenditures	**$646.260**	**$645.899**
Infrastructure Gap		**$0**

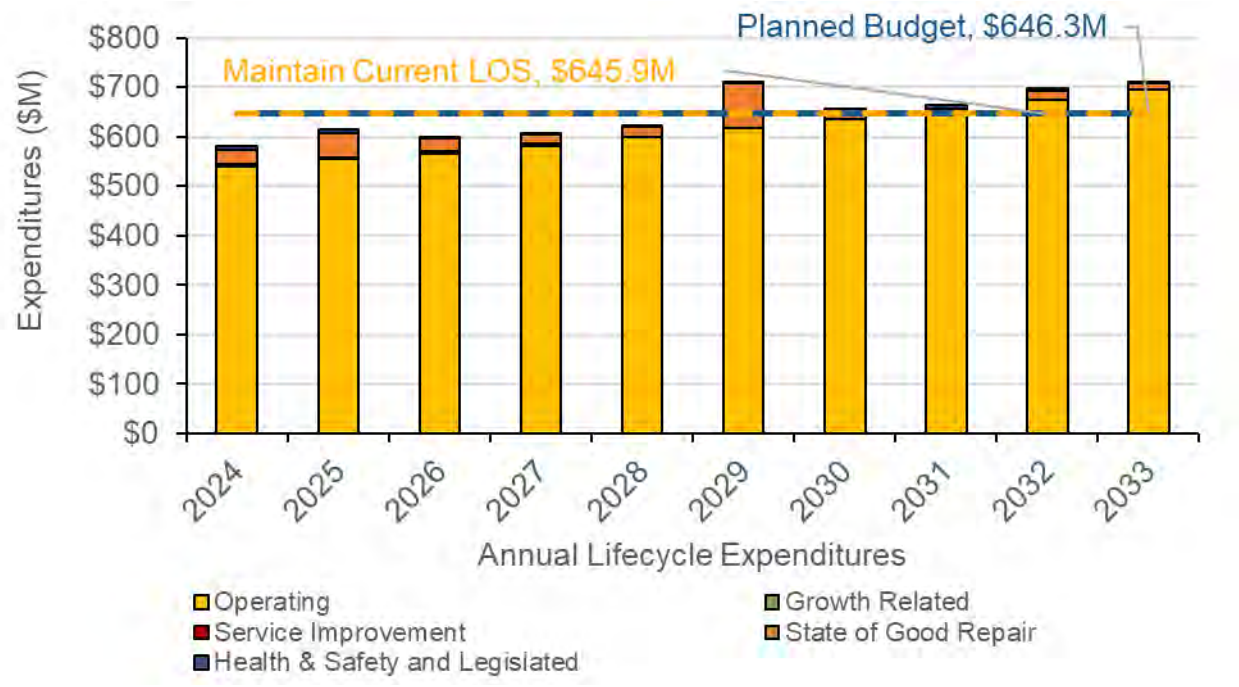


Figure 1-6 Toronto Fire Services Scenario Comparison.

1.2.7 Conclusion

Valued at $338.2 million, the City's Toronto Fire Services assets are overall in good performance. Data maturity is high, indicating confidence in this value. Currently, 86% of these assets are in fair or better performance. Under current planned SOGR investments of $28.8 million annually, this LOS is forecasted to be maintained over a 10-year period.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Toronto Paramedic Services

Toronto Paramedic Services is the largest municipal paramedic service in Canada. It provides 24 hour pre hospital emergency and non emergency care and transportation to and between hospitals for ill or injured individuals, and also offers public education programs to promote rapid and appropriate use of emergency medical resources in times of need.

Service Statement

Toronto Paramedic Services provides 24/7 emergency medical care, emergency medical dispatch, and community paramedicine in response to life-threatening medical emergencies to improve the quality of life and protect communities and the well-being of residents.

Asset Breakdown

CENTRAL AMBULANCE COMMUNICATIONS CENTRE (CACC)

Equipment
Includes CACC software and technology equipment.

EMERGENCY MEDICAL CARE

Fleet
Includes ambulances, emergency response vehicles, support, and light-duty vehicles.
Equipment
Includes emergency IT, garage and medical equipment.

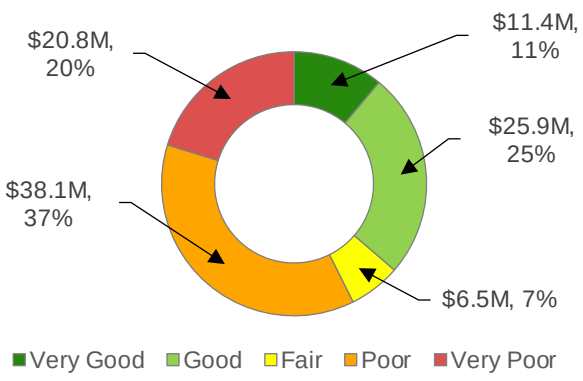
COMMUNITY PARAMEDICINE AND EMERGENCY CALL MITIGATION

Fleet
Includes support and light-duty vehicles.
Equipment
Includes IT and medical equipment.

$102.6M
Replacement Value

Fair
Overall Performance

$8.5M
Annual Cost to Maintain LOS



Data
B
Maturity
A
Completeness
B
Confidence

Figure 1-7 Toronto Paramedic Services Summary of Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Community Paramedicine and Emergency Call Mitigation	Equipment	1,255 Assets	$3.460	Poor	7	7
Emergency Medical Care	Equipment	5,987 Assets	$35.902	Fair	5	7

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-8 Toronto Paramedic Services Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Fleet	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Equipment	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.3.1.2.2 Performance Rating

Table 1-9 Toronto Paramedic Services Performance Category Mapping.

Performance Category	Fleet and Equipment (Life Consumed)
Very Good	0% to 33%
Good	33% to 67%
Fair	67% to 100%
Poor	100% to 133%
Very Poor	>133%

1.3.2 Levels of Service

Table 1-10 Toronto Paramedic Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Provide immediate access to dispatch life support instructions through Toronto's Central Ambulance Communications Centre prior to paramedic arrival. And provide outstanding paramedic-based emergency medical response and treatment and ensure medically appropriate transport for all patients in the community.	"Service Time" is the total length of time required to service an emergency call -- from time of receipt of the call to the return to ambulance including medical equipment, availability, driven particularly by in-hospital wait times for Paramedics.
Quality	Provide community-based primary medical care and referrals, at-home medical care to support seniors and vulnerable residents, and first-response education and awareness within the community.	In 2023, Toronto Paramedic Services had 29,044 interactions with vulnerable patients. These interactions aim to mitigate emergency call demand through chronic disease management; support for those awaiting long-term care placement; home visits to support living/aging at home; community wellness clinics; integrated care partnerships.

Table 1-11 Toronto Paramedic Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Quality	Percentage of assets in fair or better performance.	Equipment	47%
		Fleet	39%

1.3.3 Lifecycle Management Activities

The Toronto Paramedic Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP. In addition to the abovementioned lifecycle strategies, Toronto Paramedic Services also enacts the following strategies:

Table 1-12 Paramedic Services Specific Lifecycle Activities.

Lifecycle Activity Category	Description
Operations and Maintenance	Preventative maintenance programs as regulated by the Ministry of Health.
Renewals (Rehabilitation/Replacement)	Remounting program for eligible ambulances to extend asset service life.
Growth	Construction/procurement of new stations, emergency vehicles and medical equipment assets are needed to meet 3-5% annual increase in service demand due to aging and growing population.
Service Improvement	Emergency vehicles are part of the Sustainable City of Toronto Fleets Plan to address climate mitigation and adaptation with strategies for transitioning Paramedic Services fleet to sustainable, climate resilient, net zero operations.

1.3.4 Climate Change

Actions taken by Toronto Paramedic Services to combat Climate Change include:

- Investments in innovative technologies to reduce the use of fossil fuels and reduce greenhouse gas (GHG) emissions and air pollutants.
- Frontline vehicles have been outfitted to be more green. Anti-idle technologies and solar panels all help reduce our carbon footprint through the reduction of GHG emissions and reduced fossil fuel use.
- Toronto Paramedic Services' first multifunction ambulance station located at 1300 Wilson Avenue is the largest built in the city and is equipped with a green roof. In addition, there are several ambulance stations equipped with solar panels.
- The next multifunction ambulance station (to be located at 300 Progress Avenue) is being designed as a net zero facility.
- Toronto Paramedic Services headquarters is undergoing a comprehensive retrofit that will reduce GHG emissions up to 75%, and energy usage up to 60% by leveraging solar and geothermal technologies.

1.3.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $22.5 million and results in the performance forecast illustrated in Figure 1-8. Under this scenario, the percentage of assets in fair or better performance decreases from 43% to 100% by the end of the 10-year forecast period, which is an increase in LOS.

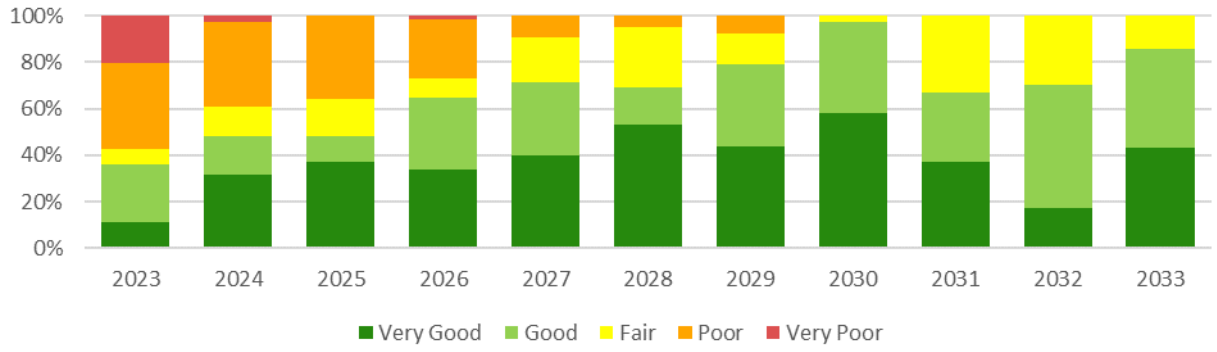


Figure 1-8 Toronto Paramedic Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 43% of assets in fair or better performance was determined to be $8.5 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-9.

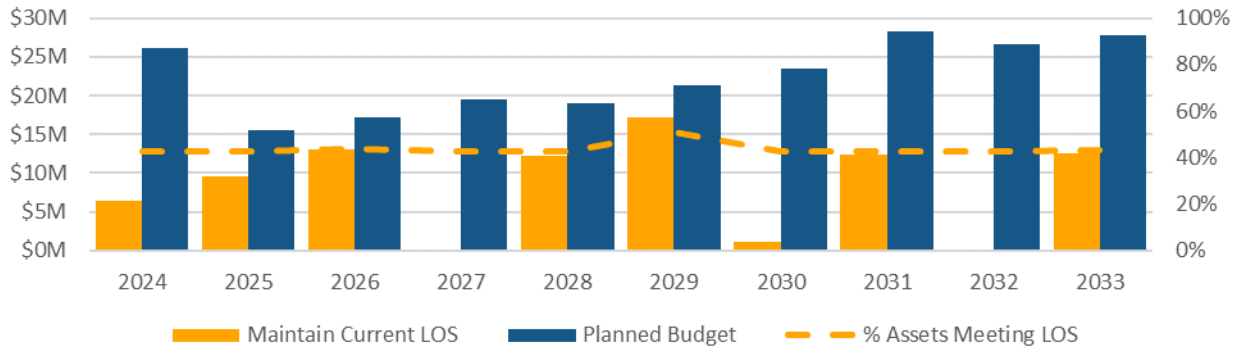


Figure 1-9 Toronto Paramedic Services Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-12 and Figure 1-10. Figure 1-10 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-13 Toronto Paramedic Services Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$2.090	$2.090
State of Good Repair	$22.473	$8.475
Service Improvement	$1.786	$1.786
Growth Related	$14.860	$14.860
Operating	$393.445	$393.445
Total Expenditures	**$434.655**	**$420.656**
Infrastructure Gap		**$0**

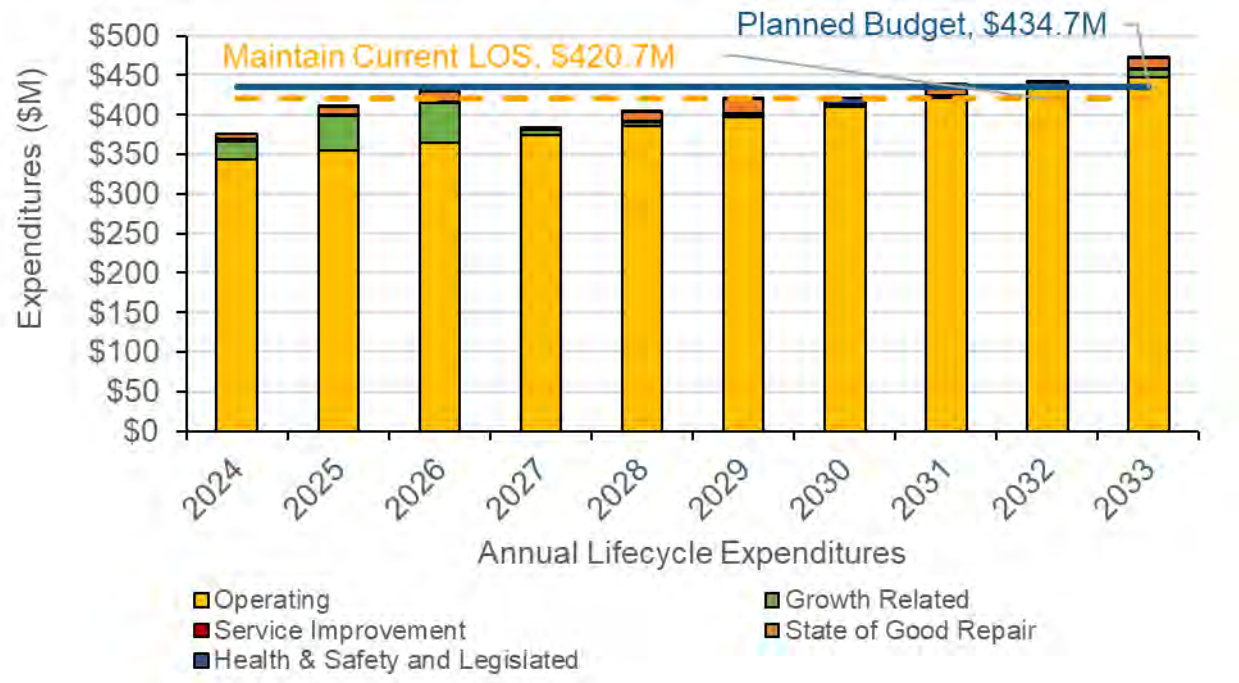


Figure 1-10 Toronto Paramedic Services Scenario Comparison.

1.3.7 Conclusion

Valued at $102.6 million, the City's Toronto Paramedics Services assets are overall in fair performance. Data maturity is high, indicating confidence in this value. Currently, 43% of these assets are in fair or better performance. Under current planned SOGR investments of $22.5 million annually, this LOS is forecasted to increase over a 10-year period. The cost to maintain current LOS requires an annual SOGR investment of $8.5 million over the next 10-year period, which is lower than the current planned budget. Having said that, the current performance (43% of assets in fair or better condition) is quite low, therefore planned budgets will increase that amount over the forecast period.

The impacts of Covid-19 resulted in production shortages and procurement delays, requiring existing ambulances to be serviced longer than anticipated. In addition, normal business processes of replacing vehicles was interrupted, resulting in greater spending on preventative maintenance. Although these ambulances continue to provide safe and reliable services to the community, they are being kept in-service longer than they have been historically. These longer-serviced ambulances maintain compliance to the Ontario Provincial Land Ambulance and Emergency Response Vehicle Standard. Toronto Paramedic Services has not procured new ambulances for the last 2.5 to 3 years, which is not standard practice. This is reflected in the current performance distribution of assets where a larger portion is in a "poor" or "very poor" state. As a result, the current cost to maintain the LOS is lower than current planned budget.

Improving LOS based on the current planned SOGR may result in lower maintenance costs. Proposed Levels of Service (which will be included in the City's next iteration of its Corporate AMP) will define the levels of service objectives that Toronto Paramedic Services plans to achieve, which may differ from the investment required to maintain current LOS.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.4 Toronto Police Service

Toronto Police Service and Toronto Police Parking Enforcement Unit have approximately 8,500 full time and part time uniform and civilian members including front line police officers, criminal investigators, Neighbourhood Officers, parking enforcement officers, communications operators, Special Constables, civilian specialists and support staff. Working in partnership with communities, Toronto Police Service keeps Toronto safe through:

- Community based crime prevention initiatives.
- Enforcement for all applicable laws in Toronto including Provincial Offences, the Highway Traffic Act and City bylaws.
- Maintaining public order to ensure safe and secure communities.
- Providing emergency response to major threats and public safety risks.

Service Statement

Toronto Police Service aims to deliver essential public safety services that are sensitive to the needs of the community.

Asset Breakdown[1]

VARIOUS ASSET CATEGORIES

Equipment

Includes software and computer hardware, enforcement, police, office and field equipment.

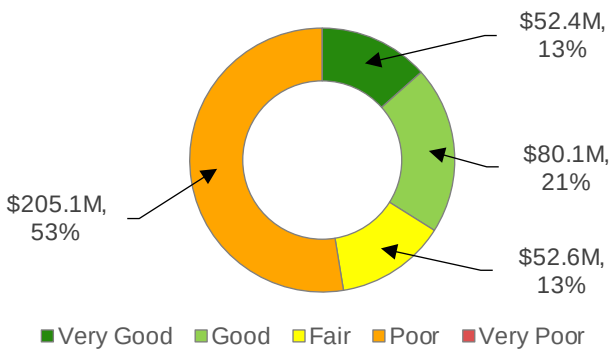
Fleet

Includes emergency response and support vehicles, boats, bicycles and trailers.

$390.2M
Replacement Value

Fair
Overall Performance

$33.0M
Annual Cost to Maintain LOS



Data
B
Maturity
A
Completeness
B
Confidence

Figure 1-11 Toronto Police Service Summary of Assets.

[1] Toronto Police Service Asset Categories includes consolidated asset information from 911 Response & Patrol, Crime Prevention, Investigations & Victim Support, Courts & Prisoner Management, Events & Protests, and Traffic & Parking Enforcement. Toronto Police Service assets are prioritized holistically to ensure the safety of its members and the public.

1.4.1 State of Infrastructure

1.4.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Various Asset Categories	Fleet	1,819 Assets	$73.716	Fair	5	6

1.4.1.2 Asset Performance

1.4.1.2.1 Condition Assessments

Table 1-15 Toronto Police Service Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Fleet	Remaining Life	Lifecycle needs are estimated based on the asset's remaining life, which is assessed by staff.

1.4.1.2.2 Performance Rating

Table 1-16 Toronto Police Service Performance Category Mapping.

Performance Category	Equipment and Collections (Remaining Life)
Very Good	100% to 67%
Good	67% to 33%
Fair	33% to 0%
Poor	0% to -33%
Very Poor	<-33%

1.4.2 Levels of Service

Table 1-17 Toronto Police Service Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Safe	The public expects the police to serve and protect the community.	87% of residents feel safe in their neighbourhood.
Reliable	Police have the tools and resources they need to respond to calls in a timely manner.	Asset are maintained to high standards to ensure services can be delivered effectively and appropriately.
Effective	The police provide a sense of security in responding to emergency calls.	72% of residents have confidence that police do well at improving public safety/security.
	Technology innovation and data enablement allows the Service to deliver efficient, responsive and accountable policing.	Key Performance Indicator (KPI) measures are monitored to measure effectiveness of systems.

Table 1-18 Toronto Police Service Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	46%
	Percentage of assets in fair or better performance.	Fleet	54%

1.4.3 Lifecycle Management Activities

The Toronto Police Service assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.4.4 Climate Change

The Toronto Police Service supports carbon reduction strategies where possible through climate change mitigation and adaptation as part of the asset management decision making process. Specific Toronto Police Service climate reduction initiatives include:

Light Emitting Diode (L.E.D.) lighting: The Service has installed L.E.D. lighting in various facilities. This has resulted in hydro savings, and the Service will continue to convert to L.E.D. in the new facilities.

Hybrids/electric vehicles: The Service has limited number of hybrid Ford Explorers for Priority Response officers. These vehicles demonstrated functionality in terms of operational efficiency, fuel savings and carbon reduction. The Service plans to extend the use of hybrid vehicles to all front-line policing needs as we lifecycle the vehicles.

Net Zero Emission – Net Zero by 2040 initiatives: The Service works with the City of Toronto's Corporate Real Estate Management (CREM) Division in matters related to the Service's facilities. A long-term facility plan is being developed with the objective of enhancing operational flexibility, improving aging facility infrastructure, optimizing resources, and, where possible, reducing the Service's facilities footprint in support of Climate resiliency and Greenhouse Gas (GHG) reductions strategies.

1.4.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $52.2 million per year, which results in the performance forecast illustrated in Figure 1-12. Under this scenario, the percentage of assets in fair or better performance increases from 47% to 79% by the end of the 10-year forecast period, which represents an increase in service levels over 10-years.

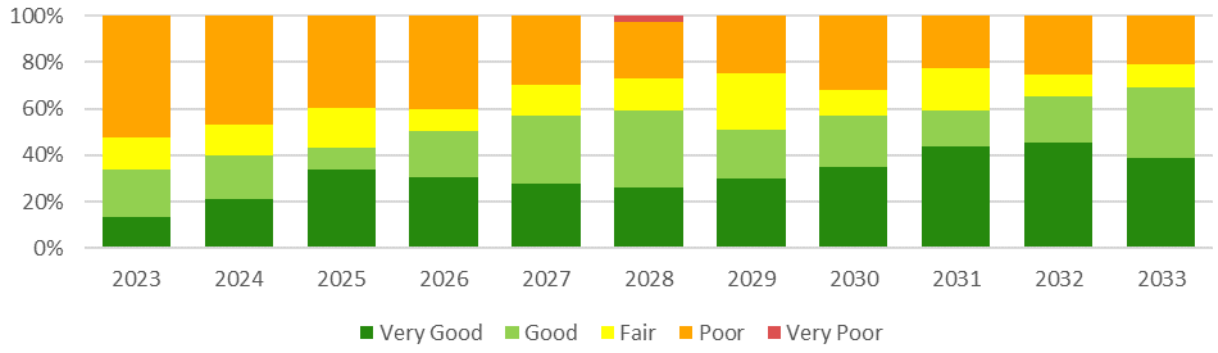


Figure 1-12 Toronto Police Service Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 47% of assets in fair or better performance was determined to be $33.0 million annually over a 10-year forecast period and resulted in the expenditure forecast illustrated in Figure 1-13.

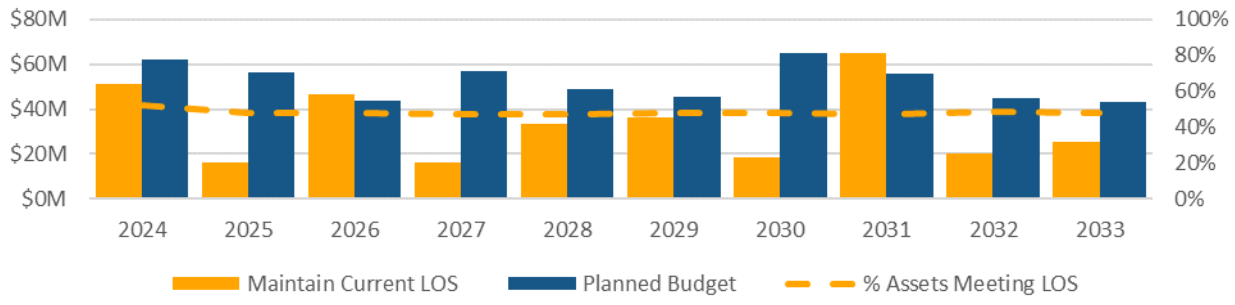


Figure 1-13 Toronto Police Service Expenditure Forecast for Maintaining Current LOS.

1.4.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-14. Figure 1-14 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that no additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-19 Toronto Police Service Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$1.074	$1.074
State of Good Repair	$52.219	$32.999
Service Improvement	$33.195	$33.195
Growth Related	$0.000	$0.000
Operating	$1,591.580	$1,591.580
Total Expenditures	**$1,678.068**	**$1,658.848**
Infrastructure Gap		**$0**

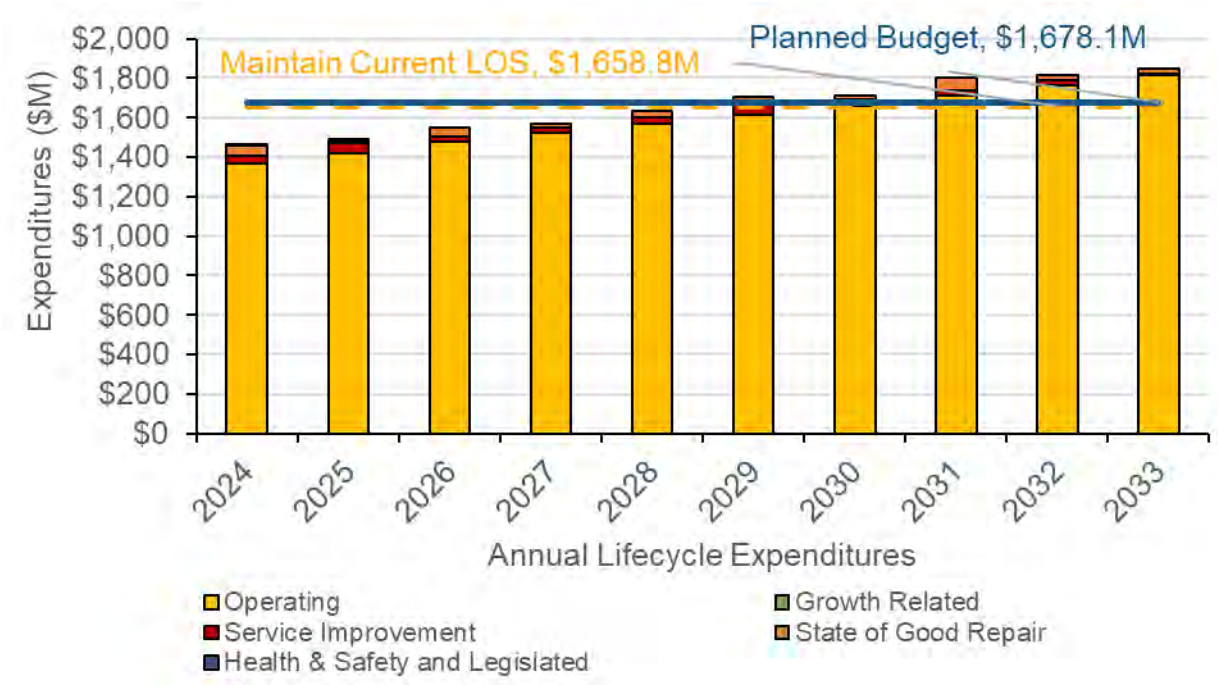


Figure 1-14 Toronto Police Service Scenario Comparison.

1.4.7 Conclusion

Valued at $390.2 million, the City's Toronto Police Service assets are overall in fair performance. Data maturity is high, indicating confidence in this value. Currently, 47% of these assets are in fair or better performance. Under current planned investments of $52.2 million annually, this LOS is forecasted to increase over a 10-year period. Based on current asset inventories, the cost to maintain current LOS requires an annual SOGR investment of $33.0 million over the next 10-year period, which is lower than the current planned budget. Having said that, the current performance (47% of assets in fair or better condition) is low, therefore planned budgets will increase that amount over the forecast period. Proposed Levels of Service (which will be included in the City's next iteration of its Corporate AMP) will define the levels of service objectives that Toronto Police Service plans to achieve, which may differ from the investment required to maintain current LOS.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

C

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX C

Service Summary – Central Government and Corporate Services

1.0 General Government and Corporate Services

1.1 Summary

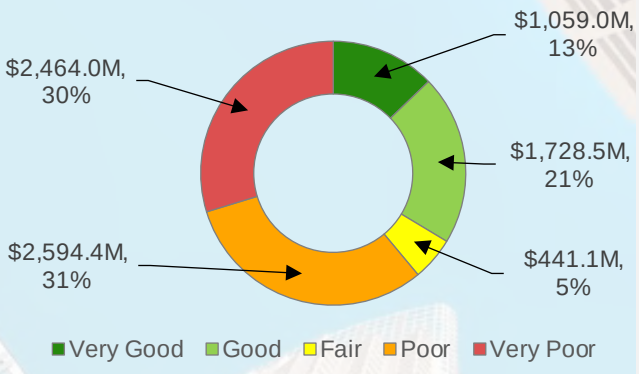
The City's General Government and Corporate Services includes several programs and business functions providing a multitude of services and support to both the public and City staff. The infrastructure assets critical to ensuring service delivery are comprised mainly of facilities, equipment, and fleet which support the reliability and accessibility of programs, information, and support to all residents across the city. The total replacement value of this asset portfolio is $8.3 billion.

A summary of the replacement value and condition of the assets within this service area and the associated asset hierarchy are provided below.

$8,287.0M
Replacement Value

Poor
Overall Performance

$224.5M
Annual Cost to Maintain LOS



Data
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Maturity
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Completeness
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Confidence

Figure 1-1 Summary of the General Government and Corporate Services Assets.

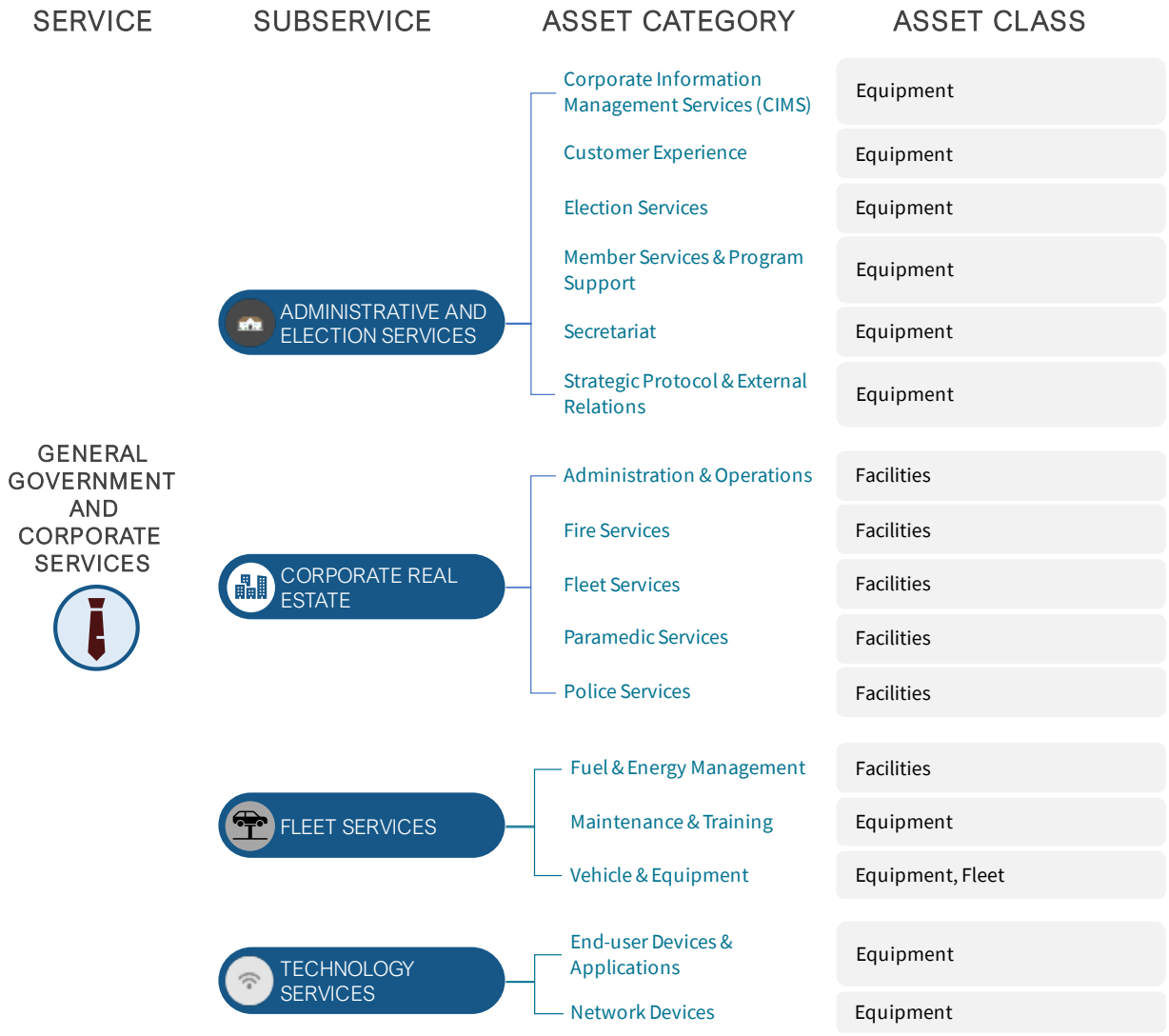


Figure 1-2 General Government and Corporate Services Asset Hierarchy.

1.2 Administrative and Election Services

This section covers the assets managed by the City Clerk's Office and the Customer Experience Division. The City Clerk's Office provides the foundation for municipal government in Toronto delivering more than 70 types of services from over 30 locations across the City. Most services are prescribed in more than 60 distinct pieces of legislation including the City of Toronto Act 2006, Vital Statistics Act, Assessment Act and Planning Act. The City Clerk has broad and independent authority under the Municipal Elections Act to deliver elections and by elections. Customer Experience serves as a central point of contact for residents, businesses, and stakeholders. They offer assistance, information, and resolution for inquiries, complaints, and service requests.

Fleet and facilities assets used by City Clerk's Office and Customer Experience are managed by Fleet Services and Corporate Real Estate Management respectively, and are included in those subsections.

Service Statement

Build public trust and confidence in local government, ensure that the Toronto municipal government is democratically elected through open, fair and accessible elections; that Elected officials, City officials and the public can participate in a transparent, accessible, and democratic Council decision-making process and the public has timely, reliable, transparent and accurate access to City information, except where protected by privacy laws. Residents, businesses, and visitors have access to real time, accurate, and reliable information on City services.

Asset Breakdown

CORPORATE INFORMATION MANAGEMENT SERVICES (CIMS)

Equipment
Includes scanners, copiers and archival collections.

CUSTOMER EXPERIENCE

Equipment
Includes applications and other software.

ELECTION SERVICES

Equipment
Includes election voting equipment.

MEMBER SERVICES AND PROGRAM SUPPORT

Equipment
Includes paper binding, pressing and stitching equipment, and electronic reporting system.

STRATEGIC PROTOCOL & EXTERNAL RELATIONS

Equipment
Includes cameras and video recorders.

SECRETARIAT

Equipment
Includes information systems.

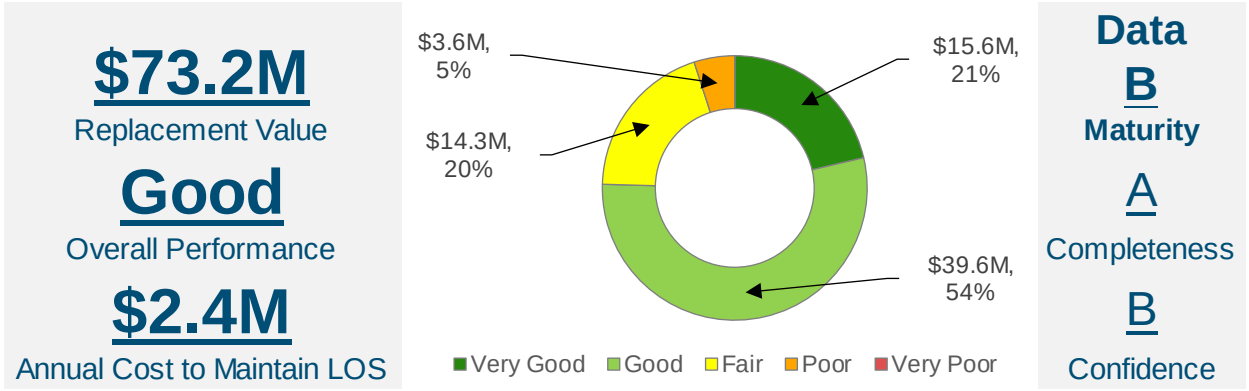


Figure 1-3 Administrative and Election Services Summary of Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Administrative and Election Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
CIMS	Equipment	27 Assets	$35.492	Good	60	97
Customer Experience	Equipment	20 Assets	$0.750	Good	3	5
Election Services	Equipment	5 Assets	$18.892	Very Good	4	14
Member Services & Program Support	Equipment	22 Assets	$6.410	Fair	18	22
Secretariat	Equipment	6 Assets	$11.548	Fair	12	15
Strategic Protocol & External Relations	Equipment	9 Assets	$0.090	Fair	8	10

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Administrative and Election Services Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition
Equipment	Life Consumed	Condition is not measured for equipment. Lifecycle needs are estimated based on life consumed/remaining life.

1.2.1.2.2 Performance Rating

Table 1-3 Administrative and Election Services Performance Category Mapping.

Performance Category	Equipment (Life Consumed)
Very Good	0% to 33%
Good	33% to 67%
Fair	67% to 100%
Poor	100% to 133%
Very Poor	>133%

1.2.2 Levels of Service

Table 1-4 Administrative and Election Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Quality	Open, accessible and democratic government decision-making process through the planning, staging and recording of meeting proceedings of City Council, its committees, agency, boards and tribunals that meets legislative and Council requirements, and reliable, accurate and accessible Toronto By-Laws.	Applications that support government decision-making processes and by-law status registry are replaced and/or maintained in a state of good repair.
	Statutory duties on marriage and death registration are carried out, and review of municipal liquor licenses for endorsements and approval are undertaken.	Systems that support delivery of statutory services are replaced and/or maintained in a state of good repair.

Service Attributes	Customer Levels of Service	Current Performance
	Open, fair and accessible elections whenever one is called which meets all legislative requirements, allow voters to exercise their right to vote, allow individuals to exercise their right to seek office, allow individuals their right to support or contribute to campaigns, and allow third party advertisers to exercise their right to campaign.	Applications and equipment that are used to deliver the elections are assessed and upgraded or replaced each election cycle or whenever one is required to ensure the integrity of the elections.
	Records are publicly accessible, secured ad retained in accordance with standards and retention schedules while ensuring privacy is protected.	Equipment in Toronto Archives and the City's Records Centres are replaced and/or maintained in a state of good repair.
	Members of Council can be held to account by the public by supporting Members in their expense disclosure.	Applications that support public disclosure of Members' expenses are replaced and/or maintained in a state of good repair.
	City Divisions, Members of Council, and City Agencies have reliable, timely access to the print materials they need to effectively communicate with their clients and constituents, and mail recipients can be assured their mail has been through security screening.	Equipment and application system that support the delivery of printing and mailing services are replaced and/or maintained in state of good repair.
	Photography and videography of the City's milestones and ceremonies and events of the Mayor, Members of Council and City divisions are documented.	Equipment that supports the photography and videography of significant ceremonies and events of the City, Mayor and Members of Council are replaced and/or maintained in a state of good repair.
Accessible	The customer service system is accessible when customers need it.	81% of calls that were answered within approved service standards.
	Customers are provided with the information that they need through the service.	85% of customer contacts were resolved at first point of contact.

Table 1-5 Administrative and Election Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	95%

1.2.3 Lifecycle Management Activities

The Administration and Operations assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the 'Climate Change' section of the report for further details.

1.2.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $2.7 million and results in the performance forecast illustrated in Figure 1-4[1]. Under this scenario, the percentage of assets in fair or better performance increases from 95% to 100% by the end of the 10-year forecast period, which is an increase to current levels of service.

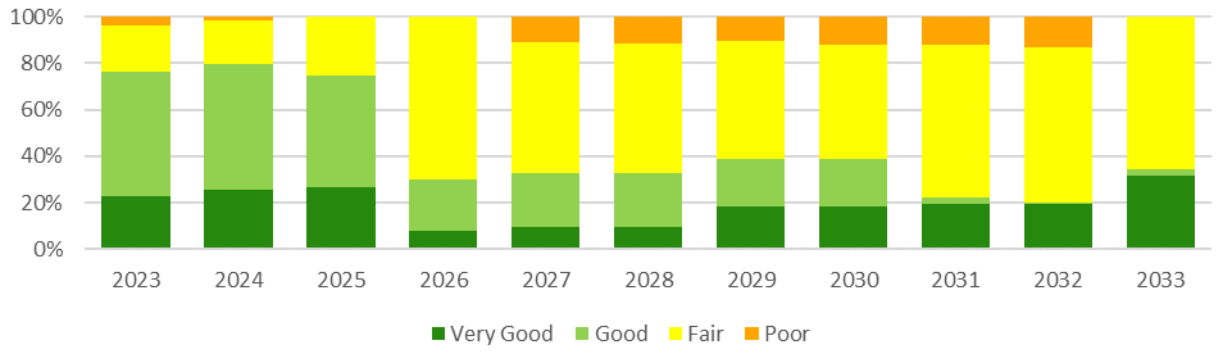


Figure 1-4 Administrative and Election Services Performance Forecast for Current Budget.

[1] The performance forecast excludes customer experience equipment because no inventories were available. High-level estimates were used to determine the cost to maintain LOS.

The renewal costs required to maintain the existing service levels of 95% of assets in fair or better performance was determined to be $2.4 million annually over a 10-year period and results in the expenditure forecast illustrated in Figure 1-5.

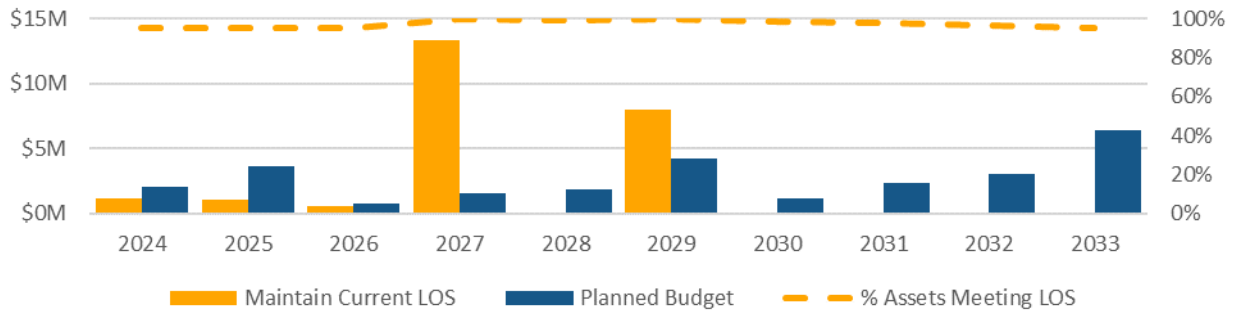


Figure 1-5 Administrative and Election Services Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned investments are sufficient to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-6 Administrative and Election Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.461	$0.461
State of Good Repair	$2.695	$2.402
Service Improvement	$0.388	$0.388
Growth Related	$0.000	$0.000
Operating	$94.257	$94.257
Total Expenditures	**$97.801**	**$97.509**
Infrastructure Gap		**$0**

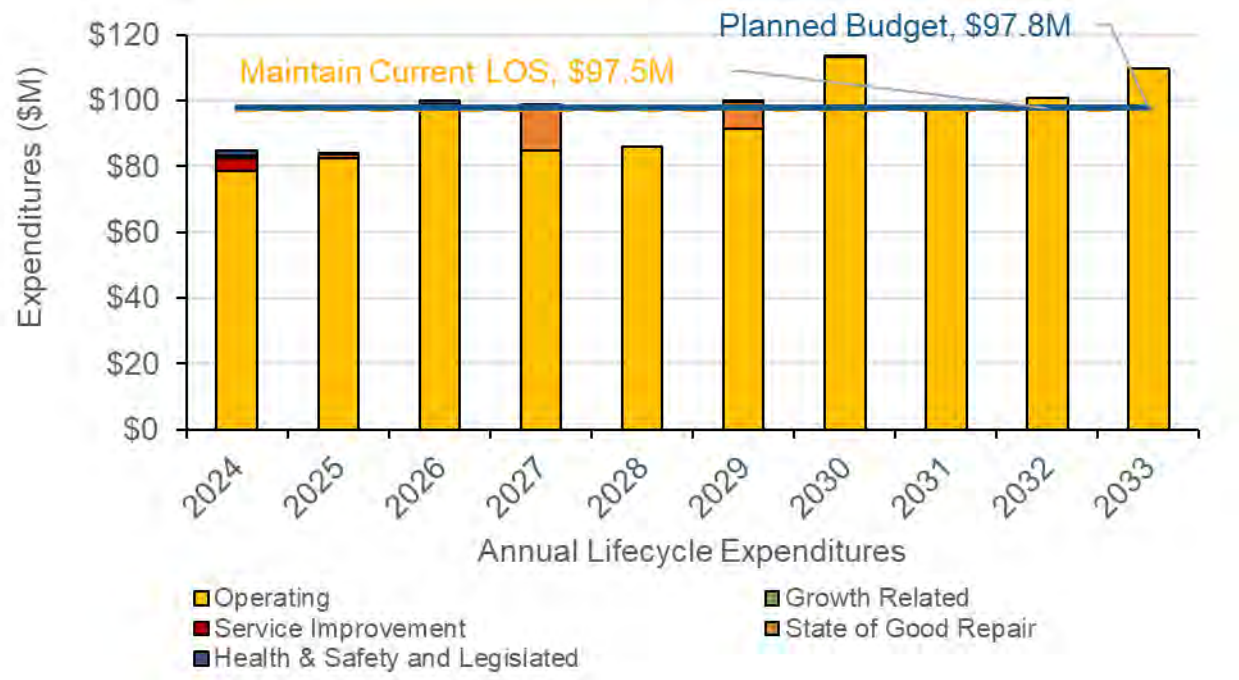


Figure 1-6 Administrative and Election Services Scenario Comparison.

1.2.7 Conclusion

Valued at $73.2 million, the City's Administrative and Election Services assets are overall in good condition. Data maturity is rated as high where valuation and age and useful life estimates were based on latest information and professional judgement and expertise of divisional staff. Figure 1-6 establishes that the cost to maintain current LOS requires an annual SOGR investment of $2.4 million for the next 10-year period, which is lower than planned investments. As a result, planned investments should result in an increase in service levels over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Corporate Real Estate

The Corporate Real Estate Management (CREM) Division is responsible for the operational day to day stewardship and planning of the City's real estate assets. The division's mandate is to provide efficient real estate service delivery City wide, manage City assets through their lifecycles and implement strategies to utilize City real estate effectively to deliver on City of Toronto objectives.

Service Statement

City staff and the public have access to safe, clean and operational City facilities that are also economically and environmentally sustainable.

Asset Breakdown[2]

AMINISTRATION & OPERATIONS

Facilities
Includes corporate services buildings and multi-service buildings.

Fire Services
Facilities
Includes fire halls, offices, workshops, and yards.

Fleet Services
Facilities
Includes yard garages.

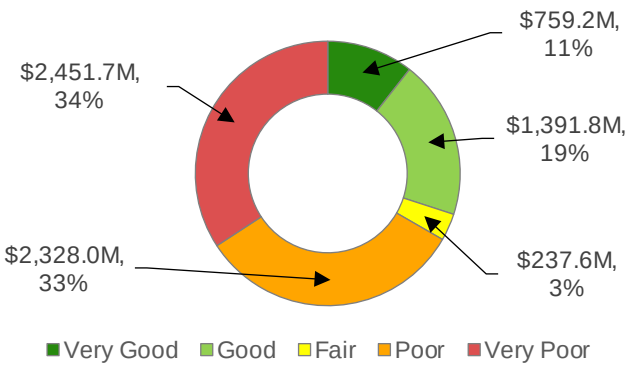
Paramedic Services
Facilities
Includes emergency medical services (EMS) stations, offices, workshops, and yards.

Police Services
Facilities
Includes police stations, stable, warehouse and yards.

$7,168.4M
Replacement Value

Poor
Overall Performance

$133.8M
Annual Cost to Maintain LOS



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Maturity
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Confidence

Figure 1-7 Corporate Real Estate Summary of Assets.

[2] For the purpose of the Corporate Asset Management Plan, summary of assets has been recalibrated to align with services and support to both the public and City staff and may differ from previously reported values.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Fire Services	Facilities	102 Buildings	$458.330	Poor	54	50
Paramedic Services	Facilities	35 Buildings	$181.771	Poor	47	50

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-8 Corporate Real Estate Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition

1.3.1.2.2 Performance Rating

Table 1-9 Corporate Real Estate Performance Category Mapping.

Performance Category	Facilities (FCI)
Very Good	0% to 3%
Good	3% to 5%
Fair	5% to 10%
Poor	10% to 30%
Very Poor	>30%

1.3.2 Levels of Service

Table 1-10 Corporate Real Estate Customer Levels of Service..

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Facilities are open as scheduled and safe for occupants.	Through regular inspections, maintenance checks, and adherence to building codes and regulations, we strive to create a safe and secure environment for all occupants. Our team of trained professionals is committed to promptly addressing any safety concerns or issues that may arise, ensuring that our facilities remain safe and accessible for everyone.
Accessible	Facilities are accessible by all residents and provide sufficient amenities, equipment, and programs.	Through the implementation of barrier-free design, including ramps, elevators, and accessible parking, we strive to create welcoming environments that accommodate diverse needs. Additionally, we work to provide a wide range of amenities, equipment, and programs that cater to the interests and preferences of our community members.
Environmentally Sustainable	Facilities have minimal impact on the environment by reducing water usage, energy usage, and GHG emissions.	Through initiatives such as water-efficient fixtures, energy-efficient lighting and HVAC systems, renewable energy sources, and waste reduction programs, we strive to mitigate our carbon footprint and conserve natural resources.

Table 1-11 Corporate Real Estate Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable; Safe	Percentage of facilities below target FCI (10%).	Facilities	33%

1.3.3 Lifecycle Management Activities

The Corporate Real Estate assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

The following actions are being taken by the Asset Management and Building Performance team to address climate change:

- Scope of work has been developed for net zero feasibility studies.
- Net zero studies have been completed at 12 City sites with $4.0 million identified for program expansion.
- A process framework has been identified for retrofit implementation.
- Net zero retrofit projects are underway at 13 City sites with plans to expand as feasibility studies are completed. Measures include envelope upgrades, fuel switching, electrical upgrades, and renewable energy installations.
- A training curriculum on net zero technologies and concepts is in development for internal staff. Target audiences include project managers, building operators, and directors.
- Standard specifications are in development for retrofits and operations to consider climate impacts.
- Energy benchmarking program is in development for key City sites with future plans for expansion.
- Consulting system implemented for providing technical support to project managers on net zero related measures.

1.3.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $55.6 million and results in the performance forecast illustrated in Figure 1-8. Under this scenario, the percentage of assets in fair or better performance decreases from 33% to 8% by the end of the 10-year forecast period, which represents a decrease to service levels.

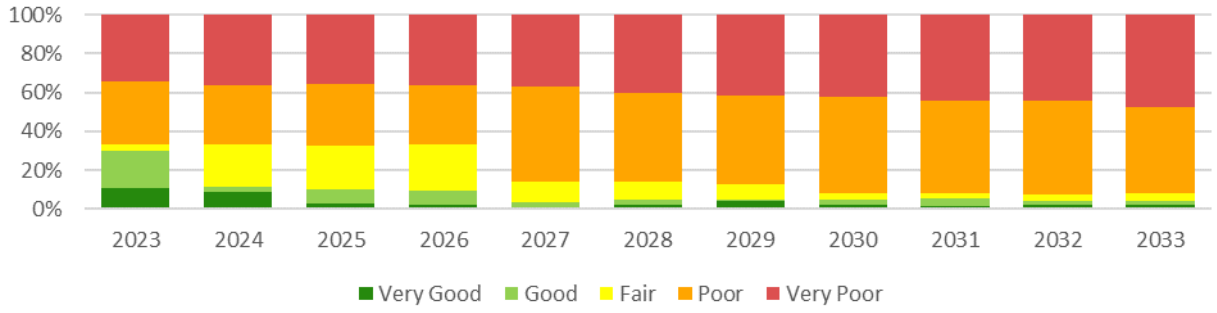


Figure 1-8 Corporate Real Estate Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 33% of assets in fair or better performance was determined to be $133.8 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-9.

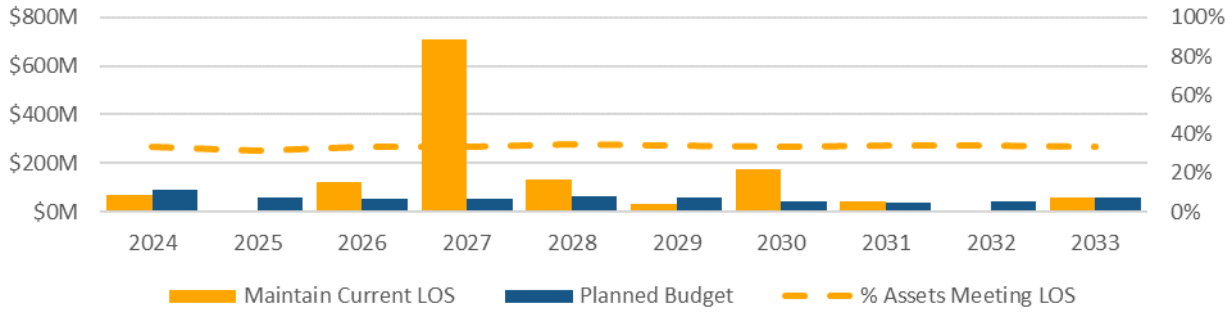


Figure 1-9 Corporate Real Estate Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-12 and Figure 1-10. Figure 1-10 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-12 Corporate Real Estate Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$10.675	$10.675
State of Good Repair	$55.626	$133.758
Service Improvement	$77.162	$77.162
Growth Related	$0.886	$0.886
Operating	$243.674	$243.674
Total Expenditures	**$388.023**	**$466.155**
Infrastructure Gap		**$78.132**

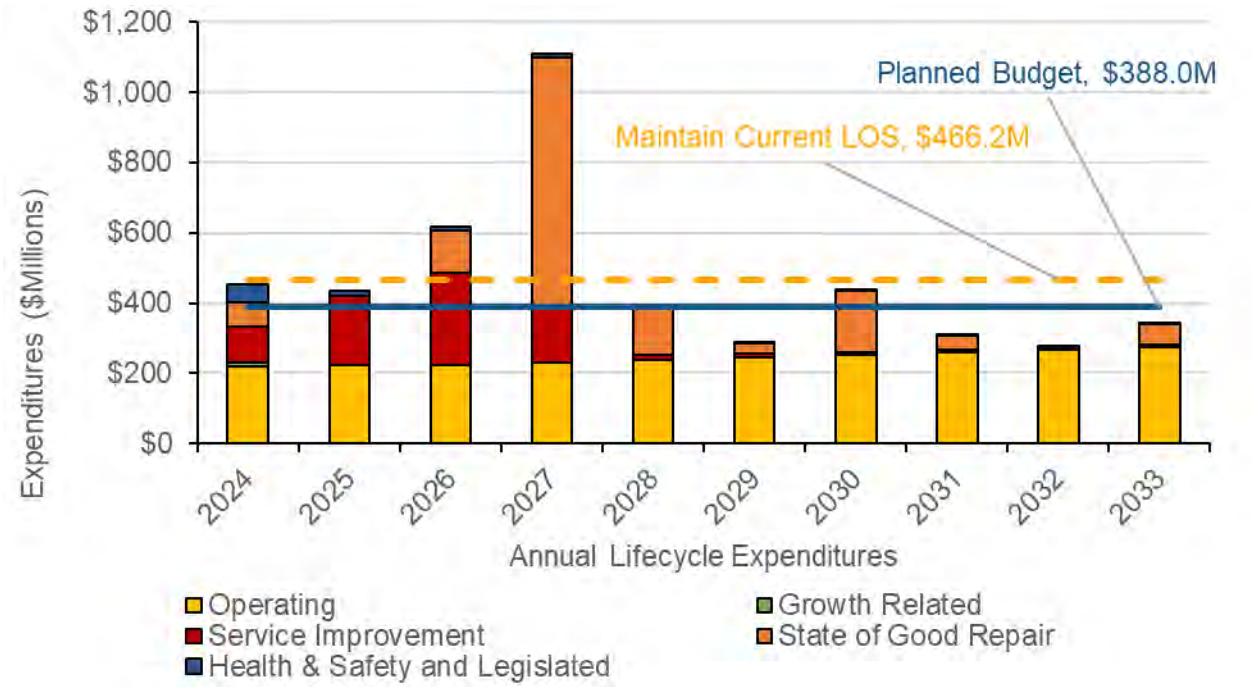


Figure 1-10 Corporate Real Estate Scenario Comparison.

1.3.7 Conclusion

Valued at $7.2 billion, the City's Corporate Real Estate Services assets are overall in poor performance. Data maturity is low, but staff are working towards collecting condition assessment data and improving the division's asset management practices. Under current planned SOGR investments of $55.6 million annually, service levels are anticipated to decline over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $133.8 million annually over the next 10-year period. Figure 1-10 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $78.1 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

The Corporate Real Estate Management (CREM) Division recognizes the need for a City-wide view of real estate capital needs and governance for prioritization of real estate capital expenditures, in alignment with the recommendations made in the City-wide Real Estate – Next Phase of Implementation report adopted by City Council in 2021. Currently, DACs are collecting data at various levels of detail and completeness, and in varying formats, which results in inconsistencies and overlap in datasets that are unsearchable and/or unstructured. CREM is in the process of soliciting consulting expertise to facilitate the centralization of real estate asset stewardship and standardization of AM practices for collecting and managing structured real estate data. This will improve the City's ability to identify real estate assets, their condition and renewal needs, the forecasted health of the real estate portfolio based on various investment scenarios, and to enable data-driven decision-making for capital allocation and future asset management plans.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.4 Fleet Services

Fleet Services Division manages the procurement and lifecycle of the City's vehicles and equipment to support the delivery of public programs and services. A portion of the fleet, including specialized vehicles used in the provision of emergency services such as Toronto Fire Services, Toronto Police Services, and Toronto Paramedic Services, is managed centrally by these subservice areas. In addition, Fleet Services provides training, certification, and compliance services that enable more than 11,000 City staff to deliver safe services to the residents of Toronto.

Service Statement

Fleet Services Division keeps the City moving by enabling City Divisions and Agencies to provide critical services to the community by ensuring the City's fleet is safe, reliable, economical, and environmentally sustainable.

Asset Breakdown

FUEL & ENERGY MANAGEMENT

Facilities

Includes fuel stations and electric vehicle charging stations.

MAINTENANCE & TRAINING

Equipment

Includes shop equipment and training equipment.

VEHICLE & EQUIPMENT

Equipment

Includes fleet equipment.

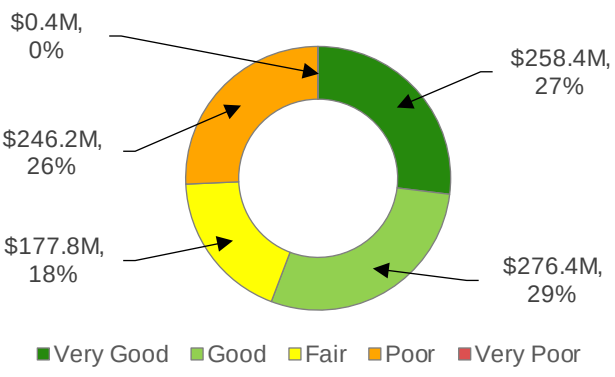
Fleet

Includes light, medium and heavy-duty vehicles.

$959.2M
Replacement Value

Good
Overall Performance

$78.2M
Annual Cost to Maintain LOS



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Maturity
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Completeness
A
Confidence

Figure 1-11 Fleet Services Summary of Assets.

1.4.1 State of Infrastructure

1.4.1.1 Asset Summary

Table 1-13 Fleet Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Fuel & Energy Management	Facilities (Fueling Stations)	23 Assets	$35.200	Good	12	25
Fuel & Energy Management	Facilities (EV Charging Stations)	237 Assets	$0.486	Very Good	1	10
Maintenance and Training	Equipment	121 Assets	$2.006	Good	6	10
Vehicle and Equipment	Equipment	1,997 Assets	$326.975	Good	7	11
Vehicle and Equipment	Fleet	3,194 Assets	$594.507	Good	6	9

1.4.1.2 Asset Performance

1.4.1.2.1 Condition Assessments

Table 1-14 Fleet Services Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition
Fleet	Remaining Life	Condition is assessed using three factors: life consumed, maintenance cost relative to purchase price, and utilization relative to expected utilization. These three factors are combined to establish an overall score of asset's remaining life, which is utilized as a condition metric.
Equipment and Facilities[3]	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on life consumed/remaining life.

1.4.1.2.2 Performance Rating

Table 1-15 Fleet Services Performance Category Mapping.

Performance Category	Equipment and Facilities (Life Consumed)	Fleet (Remaining Life)
Very Good	0% to 33%	100% to 67%
Good	33% to 67%	67% to 33%
Fair	67% to 100%	33% to 0%
Poor	100% to 133%	0% to -33%
Very Poor	>133%	<-33%

[3] The fuel stations and EV charge stations are managed like equipment.

1.4.2 Levels of Service

Table 1-16 Fleet Services Estate Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Vehicles and equipment are well-designed, well-maintained, safe, and available for customer use.	Fleet division maintains its vehicles in Fair or better condition. Preventative maintenance compliance is at 91%. The MTO Commercial Vehicle Operators Registration (CVOR) used to monitor the City's compliance with safe maintenance and operation requirements for our commercial fleet equipment, has been well within the acceptable target of at or below 35%. At the end of 2023 this metric was at 27% and is currently at 23% as of February 2024. The fleet availability is kept at 90% to ensure availability for customers.
Environmentally Sustainable	Vehicles and equipment have minimal impact on the environment.	Transition City Fleets to sustainable, resilient, net zero operations by 2040, including 45% emissions reduction by 2025, and 65% by 2030.

Table 1-17 Fleet Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable	Percentage of assets in fair or better performance.	Facilities	87%
		Equipment	81%
		Fleet	70%
Environmentally Sustainable	% of fleet assets that are zero-emission vehicles.	Fleet	8%

1.4.3 Lifecycle Management Activities

The Fleet Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.4.4 Climate Change

The Carbon Accountability system adopted by City Council on May 2023 will support actions across the City government to reduce greenhouse gas (GHG) emissions within the community and from the City's internal operations ("corporate" emissions). This will increase value for money and facilitate deeper engagement by Council, residents, and stakeholders on the City's implementation of the Net Zero Strategy. It will also support the City's commitment to lead by example by reducing emissions from corporate operations even further and faster than community emissions.

1.4.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $87.7 million and results in the performance forecast illustrated in Figure 1-12. Under this scenario, the percentage of assets in fair or better performance will increase from 74% to 84% by the end of the 10-year forecast period, which represents an increase to service levels. However, it is well below renewal investment needed to balance existing SOGR backlog and zero emission vehicle (ZEV) replacement costs over the long-term.

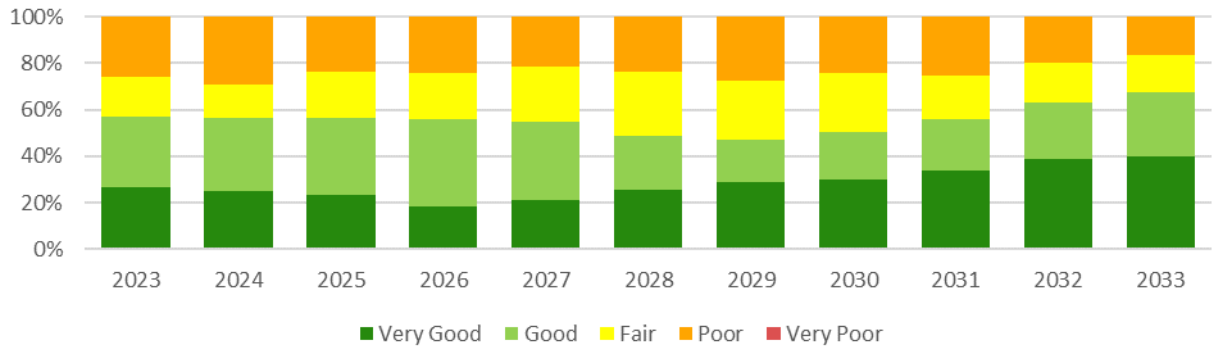


Figure 1-12 Fleet Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 74% of assets in fair or better performance was determined to be $78.2 million annually over 10 years and results in the expenditure forecast illustrated in Figure 1-13.

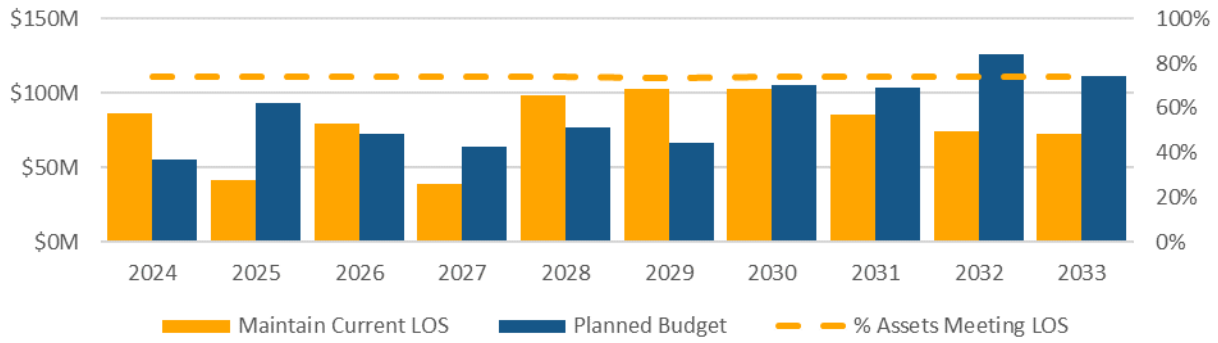


Figure 1-13 Fleet Services Expenditure Forecast for Maintaining Current LOS.

1.4.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-14. Figure 1-14 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-18 Fleet Services Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$1.266	$1.266
State of Good Repair	$87.698	$78.246
Service Improvement	$0.138	$0.138
Growth Related	$0.000	$0.000
Operating	$84.970	$84.970
Total Expenditures	**$174.071**	**$164.620**
Infrastructure Gap		**$0**

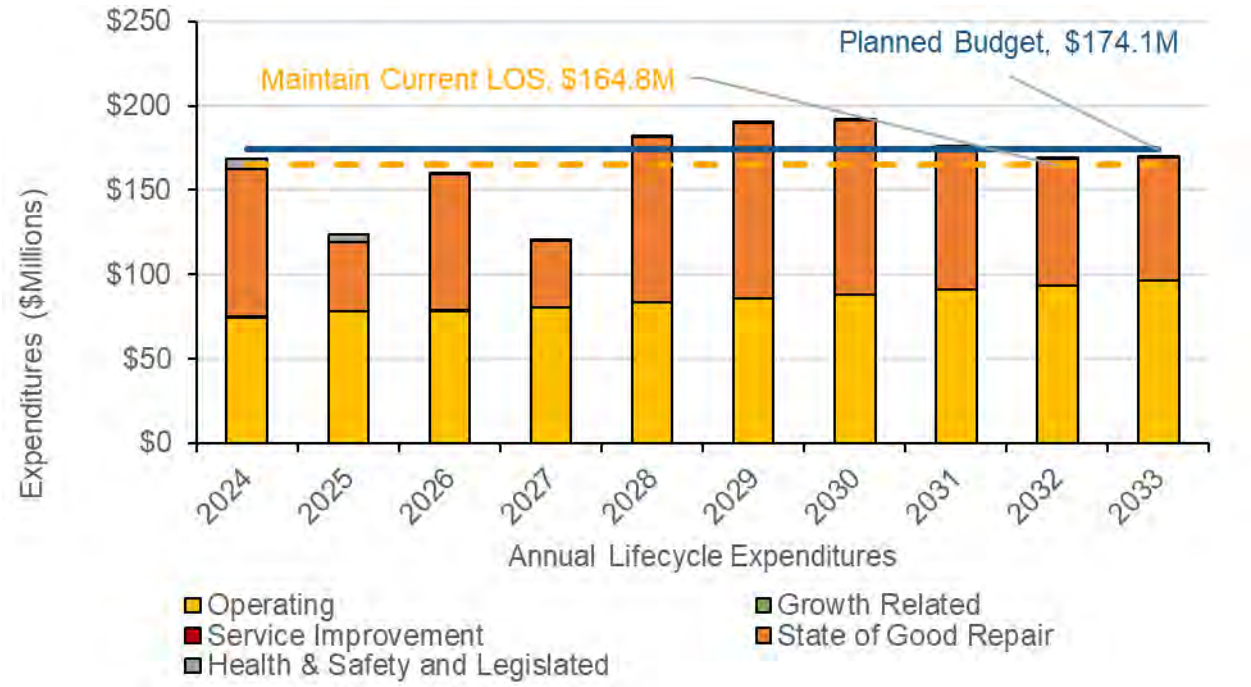


Figure 1-14 Fleet Services Scenario Comparison.

1.4.7 Conclusion

Valued at $959.2 million, the City's Fleet Services assets are overall in good condition. The data provided by divisional staff to support this report is rated as high where the assessment, useful life, utilization, and cost estimates were based on the latest information and professional judgment and expertise of the divisional staff. Figure 1-17 establishes that the cost to maintain current LOS requires an annual SOGR investment of $78.2 million for the next 10-year period, which is lower than planned investments. As a result, planned investments should result in an increase in service levels over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

Ultimately, the analysis shows that Fleet Service can address some of its existing SOGR backlog but not all. The cost to eliminate all SOGR backlog is estimated at $106.6 million per year, which is far greater than its current cost to maintain LOS of $78.2 million. Fleet Services is continually challenged with balancing between reducing its backlog and replacing existing fleet with zero emission vehicles (ZEVs) which are higher in cost to purchase. Current estimates indicate the cost of ZEVs range from 30% to 100% higher, depending on the vehicle class. Fleet Services' objective is to improve SOGR backlog while also introducing ZEVs to support the City's Net Zero Strategy and will continue to work towards optimizing value, fleet size and configuration while mitigating risk and ensuring cost efficiency where possible.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.5 Technology Services

The Technology Services Division provides leadership in modernizing City services through strategic investment, digital transformation and management of the City's technology systems. They partner and collaborate with all City Divisions to deliver innovative business solutions and secure, reliable and dependable technology infrastructure in support of City programs and services.

Service Statement

Technology Services provides reliable Information Technology assets to public staff that support service delivery of many services and programs to the public as well as provide residents with access to the public assets that enrich their lives and well-being.

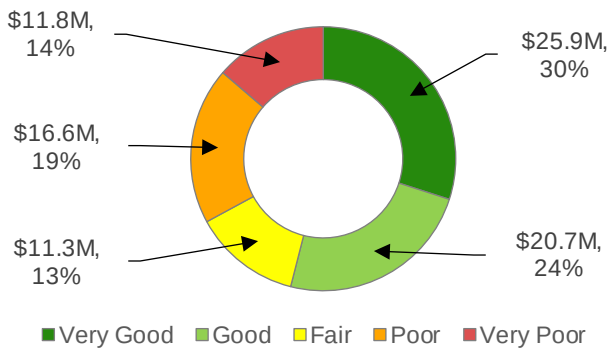
Asset Breakdown

END-USER DEVICES & APPLICATIONS	NETWORK DEVICES
Equipment Includes audio-visual (AV), hardware, software and wireless assets	**Equipment** Includes networks, servers and printers

$86.3M
Replacement Value

Fair
Overall Performance

$10.1M
Annual Cost to Maintain LOS



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Maturity
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Confidence

Figure 1-15 Technology Services Summary of Assets.

1.5.1 State of Infrastructure

1.5.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Network Devices	Equipment	758 Assets	$32.107	Fair	4	5

1.5.1.2 Asset Performance

1.5.1.2.1 Condition Assessments

Table 1-20 Technology Services Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition

1.5.1.2.2 Performance Rating

Performance Category	Equipment (Life Consumed)
Very Good	0% to 33%
Good	33% to 67%
Fair	67% to 100%
Poor	100% to 133%
Very Poor	>133%

1.5.2 Levels of Service

Table 1-22 Technology Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Maintaining the reliability and performance of technology systems and infrastructure to minimize downtime and disruptions.	Disruptions to the servers and networks are minimized for public staff. This involves monitoring system uptime, response times, and performance metrics to identify and address potential issues proactively.
Available	Ensuring that technology services are available and accessible to all users within the municipality during specified hours of operation.	Machinery and Equipment assets are available to public staff. IT assets are available to public staff. This includes providing helpdesk support or service desk assistance to address user inquiries, issues, or requests in a timely manner.

Table 1-23 Technology Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable	Percentage of asset in fair or better performance.	Equipment	67%

1.5.3 Lifecycle Management Activities

The Technology Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.5.4 Climate Change

Actions taken by Technology Services to address Climate Change, include:

- Cathode-ray tube (CRT) monitors were replaced with light-emitting diode (LED) monitors to provide financial savings with additional energy savings.
- Environmentally conscious process is in place that addresses the disposal of assets for reuse or for scrap recycling.
- Reduction in the size of the desktop footprint which has saved on power draw consumption (e.g. minicomputers vs standard size).

1.5.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $26.9 million and results in the performance forecast illustrated in Figure 1-16. Under this scenario, the percentage of assets in fair or better performance will increase from 67% to 100% by the end of the 10-year forecast period, which represents a significant increase to service levels.

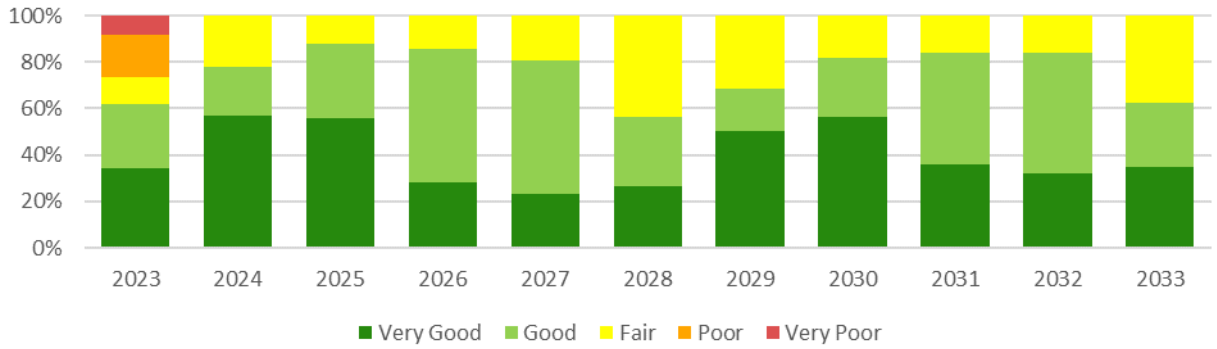


Figure 1-16 Technology Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 67% of assets in fair or better performance was determined to be $10.1 million annually over a 10-year period and results in the expenditure forecast illustrated in Figure 1-17.

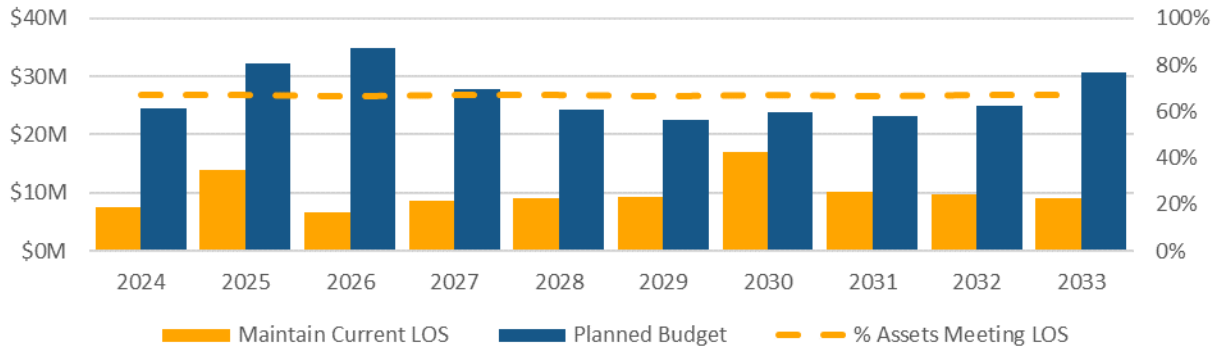


Figure 1-17 Technology Services Expenditure Forecast for Maintaining Current LOS.

1.5.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-24 and Figure 1-18. Figure 1-18 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-24 Technology Services Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.244	$0.244
State of Good Repair	$26.888	$10.068
Service Improvement	$10.652	$10.652
Growth Related	$0.286	$0.286
Operating	$220.974	$220.974
Total Expenditures	**$259.044**	**$242.225**
Infrastructure Gap		**$0**

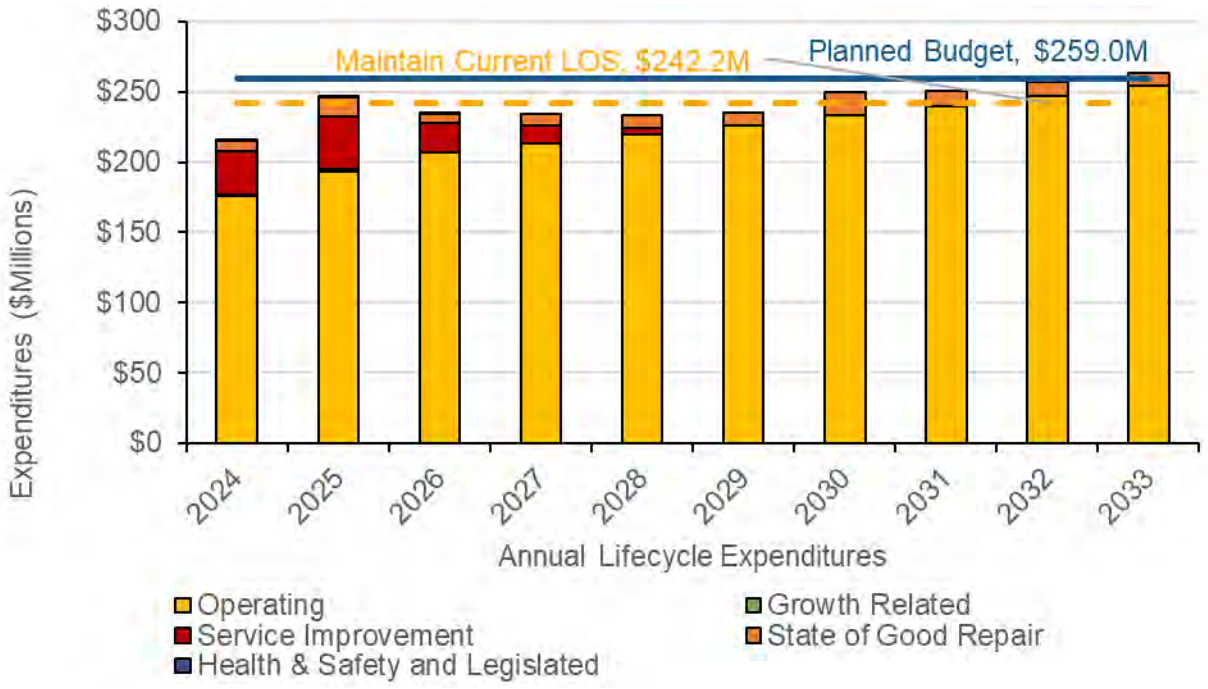


Figure 1-18 Technology Services Scenario Comparison.

1.5.7 Conclusion

Valued at $86.3 million, the City's Technology Services assets are overall in fair performance. Data maturity is medium where it could be enhanced from improvements to the collection and management of inventory and replacement cost values. A detailed inventory management system is maintained that automates the process of identifying technology assets throughout the City. This system keeps track of current as well as legacy technology assets, including various attributes on those assets. Technology Services is in the process of migrating its information to a new system whereby an inventory of "active" or currently "in-service assets" may be difficult to obtain and validate, as there may be inconsistencies in tracking this information. Figure 1-18 establishes that the cost to maintain current LOS requires an annual SOGR investment of $10.1 million for the next 10-year period, which is lower than planned investments. As a result, planned investments should result in an increase in service levels over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The information reported in this AMP represents the best available understanding of the current stock of technology assets at the time of writing of this AMP. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

D

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX D

Service Summary – Health & Social Services

1.0 Health and Social Services

1.1 Summary

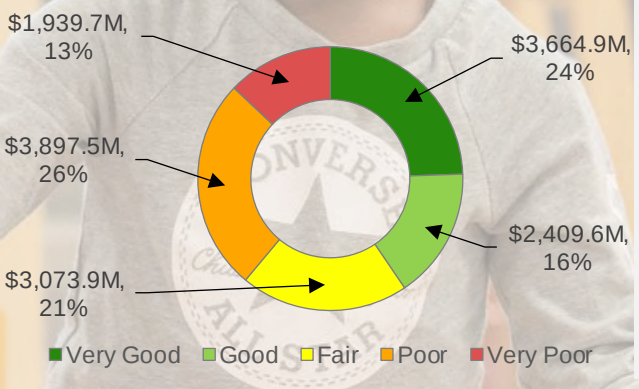
The City of Toronto provides a variety of social services and health services to the community, through five primary subservice areas: Children's Services, Community Housing, Shelter and Support Services, Public Health, and Senior Services and Long-Term Care. The City's Health and Social Services service area includes several programs and business functions providing a multitude of services to the public. The infrastructure assets critical to ensuring service delivery are comprised mainly of amenities, facilities, equipment, and fleet which support the reliability and accessibility of programs, information, social support and health care to all residents across the city. The total replacement value of this asset portfolio is $15.0 billion.

A summary of the replacement value and performance of the assets within this service area and the associated asset hierarchy are provided below.

$14,985.6M
Replacement Value

Fair
Overall Performance

$372.6M
Annual Cost to Maintain LOS



Data
B
Maturity

A
Completeness

B
Confidence

Figure 1-1 Summary of Health and Social Services Assets.

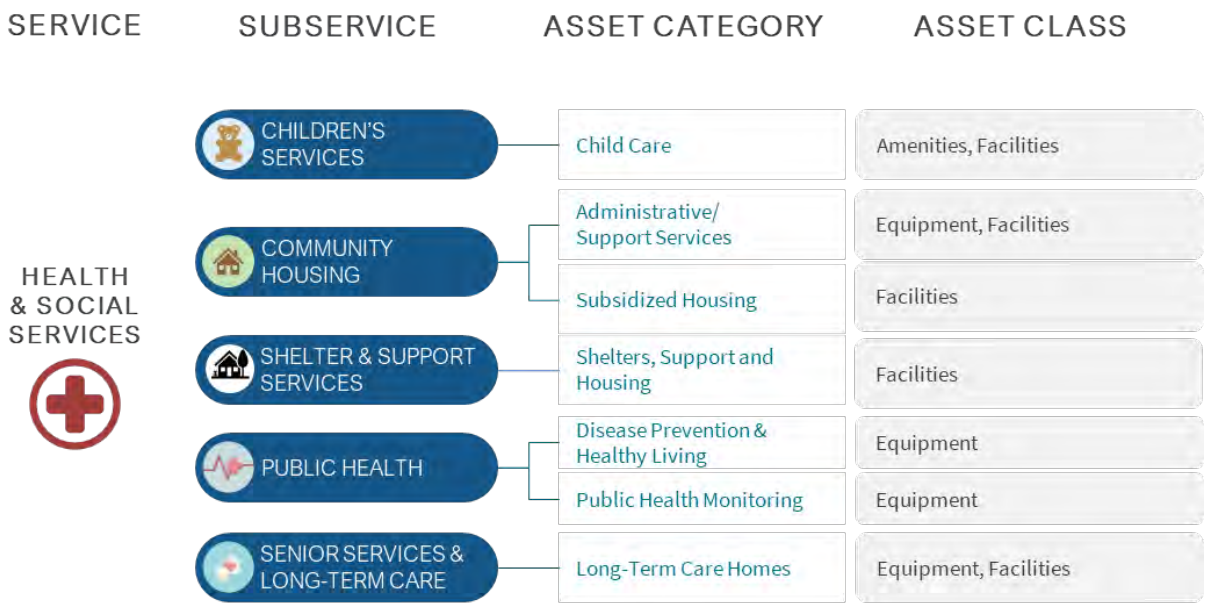


Figure 1-2 Health and Social Services Asset Hierarchy.

1.2 Children's Services

Child care is a key lever to children's health and development, child and family well being, improving the economy, improving education rates, and addressing poverty. Child care services are provided through the City's Children's Services Division. Children's services promotes access to high quality early learning and child care services and works closely with the community to develop a coordinated system that meets the diverse needs of Toronto families and children.

Service Statement

Providing access to safe and affordable child care and early-years programs that contribute to healthy child development, family and well-being and increased economic activity by enabling them to go to work and school.

Asset Breakdown

CHILD CARE

Facilities

Includes child care centres.

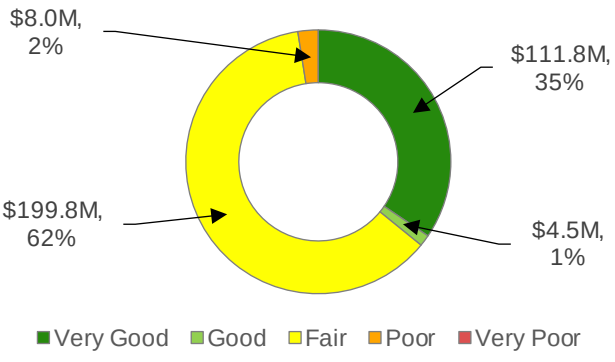
Amenities

Includes playgrounds and other amenities.

$324.2M
Replacement Value

Good
Overall Performance

$2.0M
Annual Cost to Maintain LOS



Data
C
Maturity

C
Completeness

C
Confidence

Figure 1-3 Summary of Children's Services Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Children's Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Child Care	Amenities	1 Pool of Assets	$195.000	Fair	39	50
Child Care	Facilities	22 Buildings	$129.239	Very Good	30	73

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Children's Services Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5-years to understand asset needs within a building. Asset needs are translated to a FCI rating, which is an expression of the dollar value of asset needs related to the facility's replacement value.
Amenities	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.2.1.2.2 Performance Rating

Table 1-3 Children's Services Performance Category Mapping.

Performance Category	Amenities (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.2.2 Levels of Service

Table 1-4 Children's Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Child care centres are open as scheduled and safe for staff, children, and families.	The City meets is legislative requirement to maintain facilities in a condition that meets health and safety and licensing standards, and that promotes positive child and family outcomes.
Available	Child care centres are available to families in their communities.	The City offers directly operated child care services through both owned and leased facilities, to support service availability for families.

Table 1-5 Children's Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Amenities Facilities	100% 94%

1.2.3 Lifecycle Management Activities

The Children's Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the 'Climate Change' section of the report for further details.

1.2.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $2.4 million and results in the performance forecast illustrated in Figure 1-4[1]. Under this scenario, the percentage of assets in fair or better performance increases from 94% to 100% by the end of the 10-year forecast period, which represents an increase in service levels over the forecast period.

[1] The performance forecast excludes amenities because no inventories were available. High-level estimates were used to determine the cost to maintain LOS.

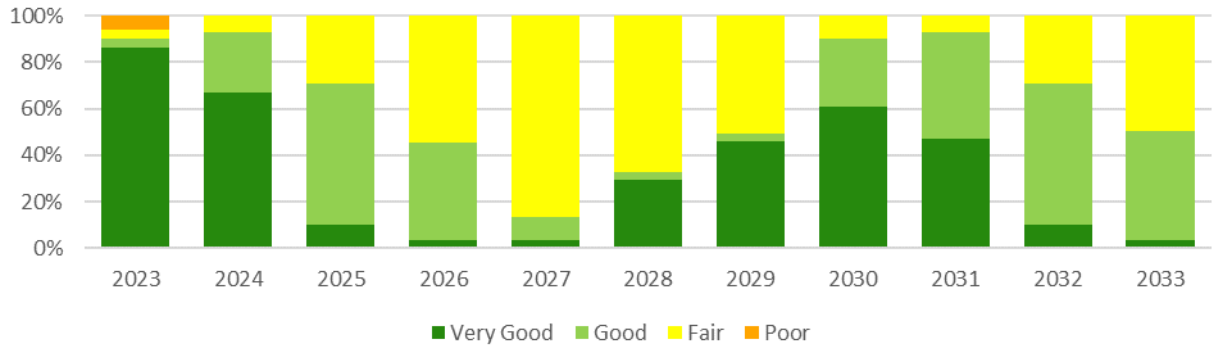


Figure 1-4 Children's Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 98% of assets in fair or better performance was determined to be $2.0 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5.

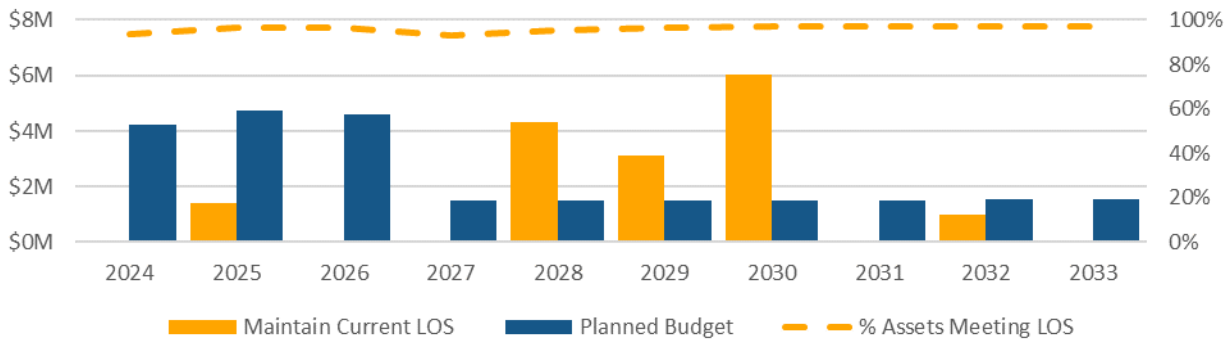


Figure 1-5 Children's Services Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned investments are sufficient to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-6 Children's Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$2.410	$1.980
Service Improvement	$7.013	$7.013
Growth Related	$2.592	$2.592
Operating	$1,204.223	$1,204.223
Total Expenditures	**$1,216.238**	**$1,215.809**
Infrastructure Gap		**$0**

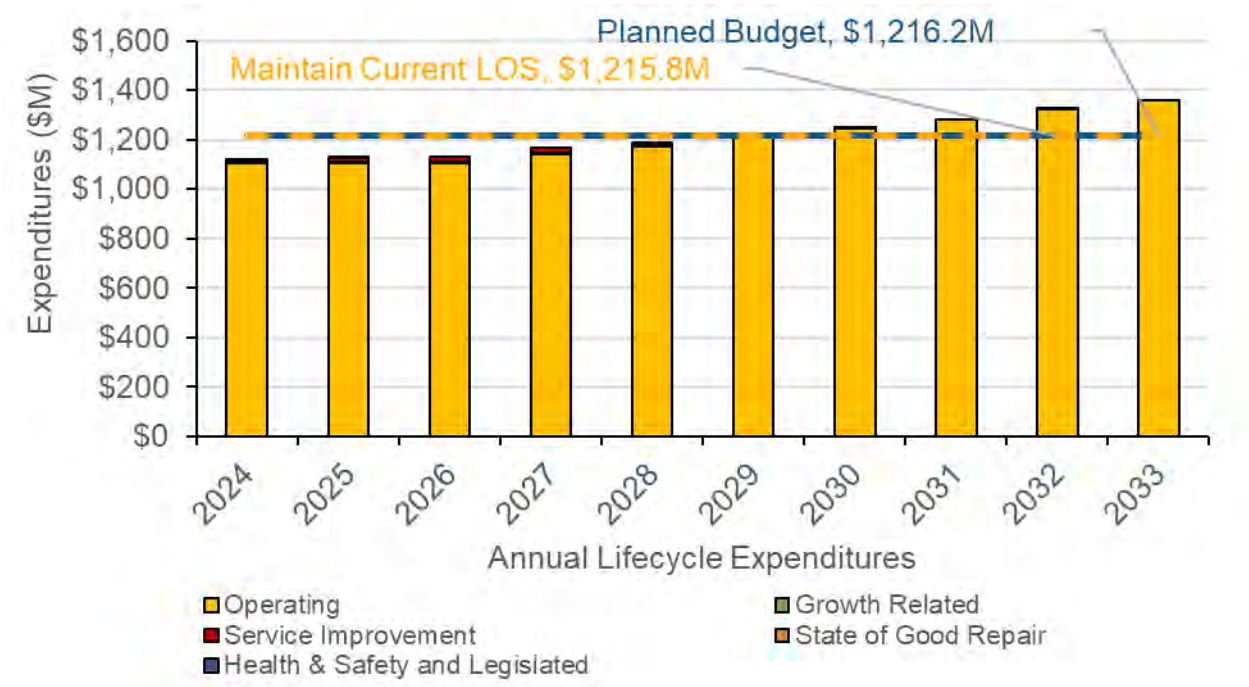


Figure 1-6 Children's Services Scenario Comparison.

1.2.7 Conclusion

Valued at $324.2 million, the City's Children's Services assets are overall in good performance. Data maturity is medium and could be improved from developing an inventory of the amenity assets. Figure 1-5 establishes that the cost to maintain current LOS requires an annual SOGR investment of $2.0 million for the next 10-year period, which is lower than planned investments. As a result, planned investments should result in an increase in service levels over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Community Housing

The service of community housing is provided through Toronto Community Housing Corporation (TCHC) the largest social housing provider in Canada and the second largest in North America. It provides affordable rental housing to about 58,500 low and moderate income households, including seniors, families, singles, refugees, recent immigrants to Canada, and people with special needs. In support of its mandate, TCHC engages in the following business activities:

- Operates subsidized rental housing and provides related services
- Develops or facilitates the development of new affordable and subsidized rental housing, including revitalization and redevelopment of TCHC lands and buildings in partnership with the City and others
- Delivers program related services directly to tenants and supports tenant services provided through other organizations
- Develops and operates commercial space and services in support of TCHC objectives

Service Statement

To provide clean, safe, well-maintained, affordable homes for residents, to connect residents to services and opportunities, and help foster great neighbourhoods where people can thrive.

Asset Breakdown

ADMINISTRATIVE/SUPPORT SERVICES

Equipment
Includes IT Equipment and Regent Park Energy.
Facilities
Includes administrative buildings, including headquarters.

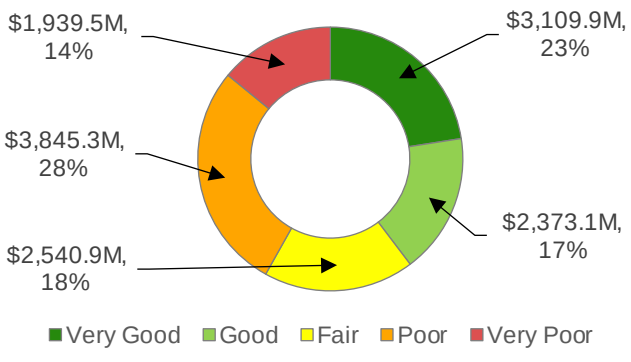
SUBSIDIZED HOUSING

Facilities
Includes commercial buildings, community centres, daycares, parking garages, and various types of housing.

$13,808.7M
Replacement Value

Fair
Overall Performance

$334.1M
Annual Cost to Maintain LOS



Data
B
Maturity
A
Completeness
B
Confidence

Figure 1-7 Community Housing Summary of Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Table 1-7 Community Housing Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Administrative/Support Services	Equipment	2 Pools of Assets	$94.100	Good	17	27
Administrative/Support Services	Facilities	2 Buildings	$12.633	Poor	14	18
Subsidized Housing	Facilities	1952 Buildings /Sites	$13,679.956	Fair	25	33

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-8 Community Housing Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities (Elements)	Remaining Life	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Data is collected at the element level, and each element is assigned a condition rating and remaining life, based on the assessor's observations.
Equipment	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.3.1.2.2 Performance Rating

Table 1-9 Community Housing Performance Category Mapping.

Performance Category	Facilities (Elements) (Remaining Life)	Equipment (Life Consumed)
Very Good	100% to 67%	0% to 33%
Good	67% to 33%	33% to 67%
Fair	33% to 0%	67% to 100%
Poor	0% to -33%	100% to 133%
Very Poor	<-33%	>133%

1.3.2 Levels of Service

Table 1-10 Community Housing Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Accessible	Housing is affordable and accessible.	Community housing is mandated to have 20% AODA accessibility. Common area renovations are completed to meet AODA accessibility standards.
Available	There is housing available to families that need it.	TCHC actively completes redevelopments of existing housing to ensure new units are available to the community.
Reliable; Safe	Housing is well-maintained and safe for residents.	TCHC maintains a state of good repair in its facilities, which is measured by regular building condition assessments. Maintaining facilities in a state of good repair helps to reduce or eliminate unplanned permanent closures.

Table 1-11 Community Housing Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Safe	Percentage of assets in fair or better performance.	Equipment	88%
		Facilities	58%
Accessible	Percentage of units that meet AODA accessibility standards.	Facilities	20%

1.3.3 Lifecycle Management Activities

The Community Housing assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the ‘Climate Change’ section of the report for further details.

1.3.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $160.0 million and results in the performance forecast illustrated in Figure 1-8[2]. Under this scenario, the percentage of assets in fair or better performance decreases from 58% to 46% by the end of the 10-year forecast period, which represents a decrease in service levels over the forecast period.

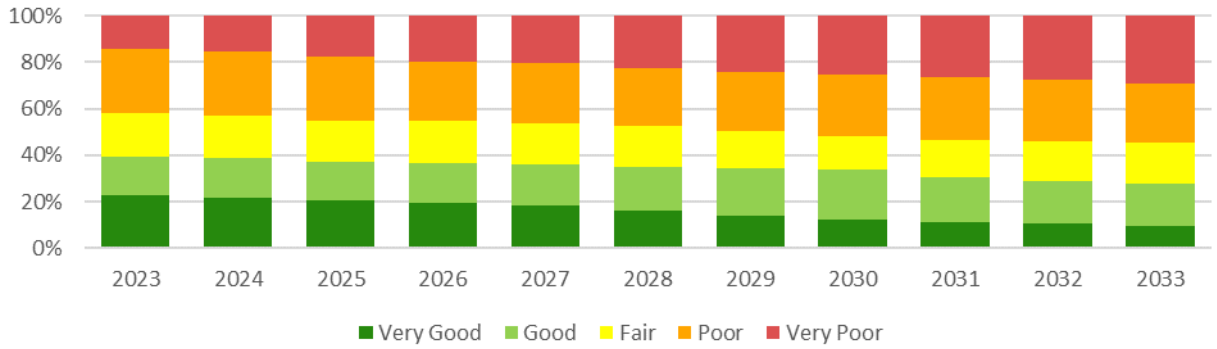


Figure 1-8 Community Housing Performance Forecast for Current Budget.

The renewal costs required to maintain the current performance distribution of 58% of assets in fair or better performance was determined to be $334.1 million annually over a 10-year period and results in the expenditure forecast illustrated in Figure 1-9.

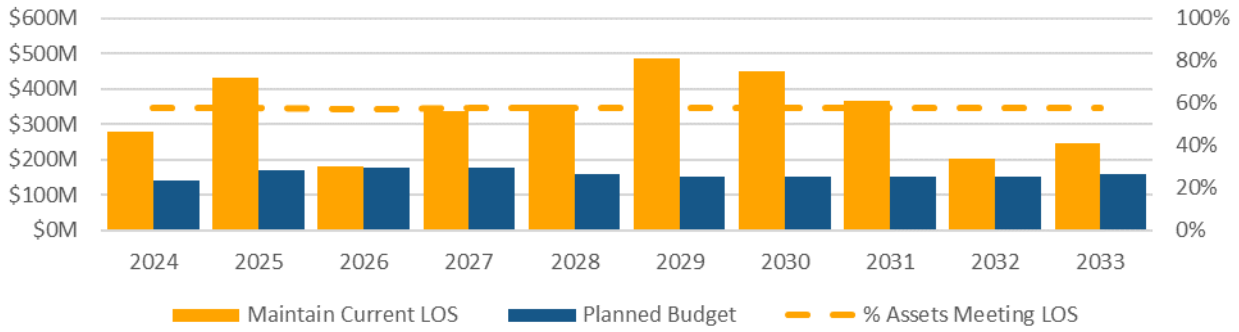


Figure 1-9 Community Housing Expenditure Forecast for Maintaining Current LOS.

[2] The performance forecast excludes IT equipment and power plant equipment because no inventories were available. High-level estimates were used to determine the cost to maintain LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-12 and Figure 1-10. Figure 1-10 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-12 Community Housing Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.861	$0.861
State of Good Repair	$160.000	$334.114
Service Improvement	$19.879	$19.879
Growth Related	$0.000	$0.000
Operating	$344.065	$344.065
Total Expenditures	**$524.804**	**$698.917**
Infrastructure Gap		**$174.114**

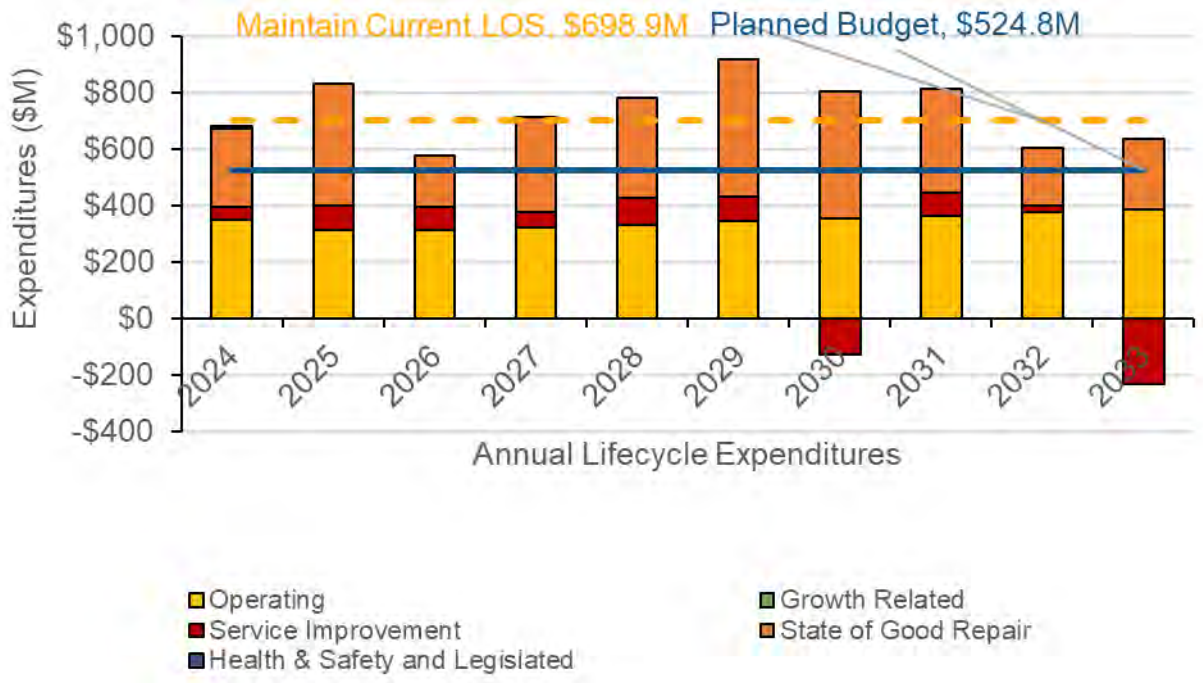


Figure 1-10 Community Housing Scenario Comparison.

1.3.7 Conclusion

Valued at $13.8 billion, the City's Toronto Community Housing assets are overall in fair performance. Data maturity is high, indicating confidence in this value. Community housing inventory data was quite detailed, and comprised of element level data that was obtained and updated through a regular building condition assessment process. The data maturity can be improved by developing inventories for the IT and power plant equipment. Under current planned SOGR investments of $160.0 million, service levels are anticipated to decline over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $334.1 million over the next 10-year period. Figure 1-10 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $174.1 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.4 Shelter and Support Services

Toronto Shelter and Support Services directly operates and also funds community agencies that deliver:

- Emergency shelter; 24 hour respite and drop in programs
- Wrap around support services
- Street outreach

Service Statement

People experiencing homelessness in Toronto have access to safe, high-quality emergency shelters that offer housing-focused supports.

Asset Breakdown

SHELTERS, SUPPORT AND HOUSING

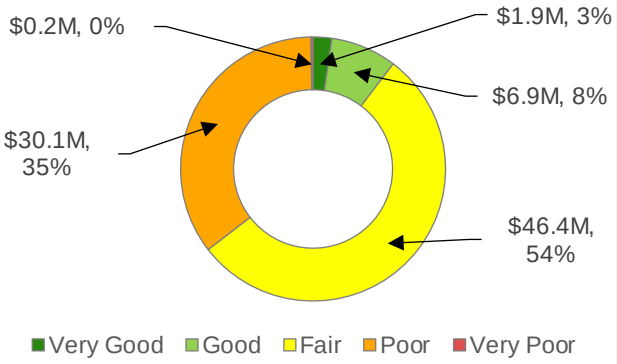
Facilities

Includes emergency shelters.

$85.6M
Replacement Value

Fair
Overall Performance

$4.6M
Annual Cost to Maintain LOS



Data
A
Maturity
A
Completeness
A
Confidence

Figure 1-11 Shelter and Support Services Summary of Assets.

1.4.1 State of Infrastructure

1.4.1.1 Asset Summary

Table 1-13 Shelter and Support Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL

1.4.1.2 Asset Performance

1.4.1.2.1 Condition Assessments

Asset Class	Condition Rating Metric	Approach to Assessing Condition

1.4.1.2.2 Performance Rating

Performance Category	Facilities (Elements) (Remaining Life)
Very Good	100% to 67%
Good	67% to 33%
Fair	33% to 0%
Poor	0% to -33%
Very Poor	>-33%

1.4.2 Levels of Service

Table 1-16 Shelter and Support Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable, Safe, Quality	Facilities are open and available for client use and maintained to a level to ensure quality and safety.	The City keeps attempts to maintain the number of beds to less than 100 per facility, to reduce overcrowding and ensure comfort to clients. The City maintains a state of good repair in its shelter facilities, which is measured by regular building condition assessments. This ensures quality and safety within the facilities.
Available, Accessible	Facilities are available to clients who need them, and have appropriate capacity and amenities.	The City attempts to maintain the number of beds to less than 100 per facility, to reduce overcrowding and ensure comfort to clients.
Available, Accessible	Facilities are equipped to meet the needs of clients with disabilities.	The City has defined accessibility standards to meet AODA requirements as well as targets to achieve a level of accessible beds. The city is upgrading facilities where possible to meet its accessibility objectives.

Table 1-17 Shelter and Support Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Safe; Quality	Percentage of assets in fair or better performance.	Facilities	65%

1.4.3 Lifecycle Management Activities

The Shelter and Support Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.4.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the ‘Climate Change’ section of the report for further details.

1.4.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $7.2 million and results in the performance forecast illustrated in Figure 1-12. Under this scenario, the percentage of assets in fair or better performance increases from 65% to 95% by the end of the 10-year forecast period, which represents an increase to service levels.

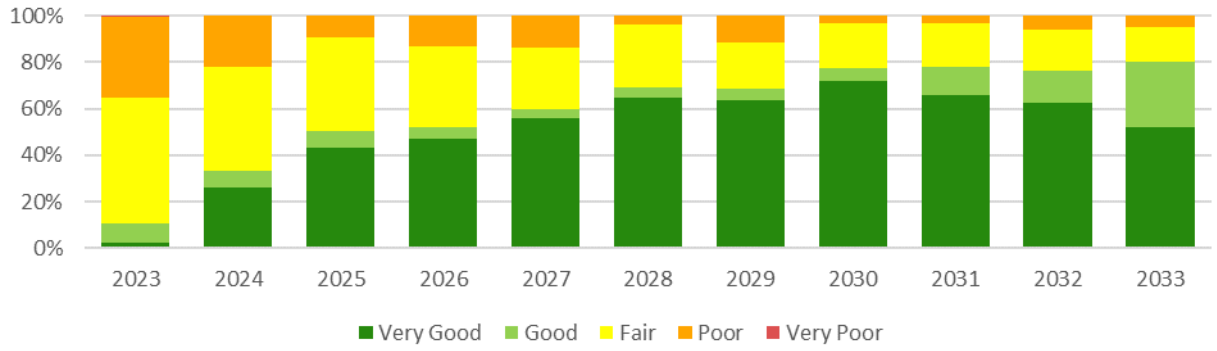


Figure 1-12 Shelter and Support Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 65% of assets in fair or better performance was determined to be $4.6 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-13.

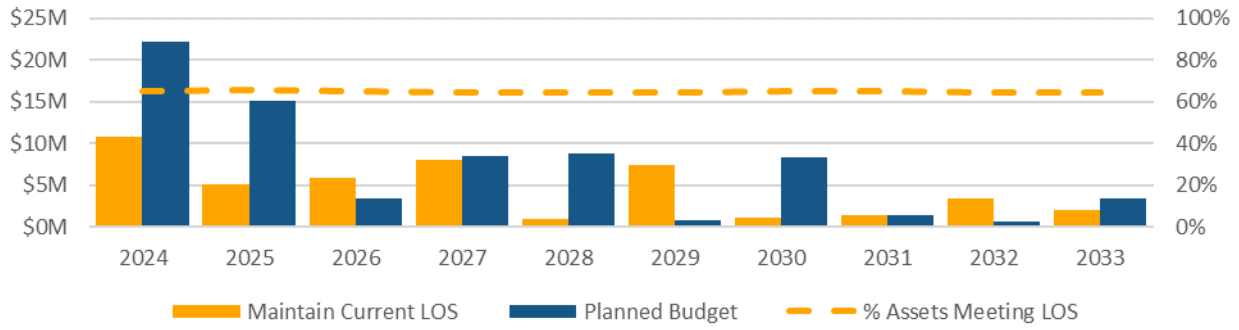


Figure 1-13 Shelter and Support Services Expenditure Forecast for Maintaining Current LOS.

1.4.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-14. Figure 1-14 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned investments are sufficient to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-18 Shelter and Support Services Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$1.740	$1.740
State of Good Repair	$7.224	$4.596
Service Improvement	$64.827	$64.827
Growth Related	$0.000	$0.000
Operating	$881.306	$881.306
Total Expenditures	**$955.097**	**$952.469**
Infrastructure Gap		**$0**

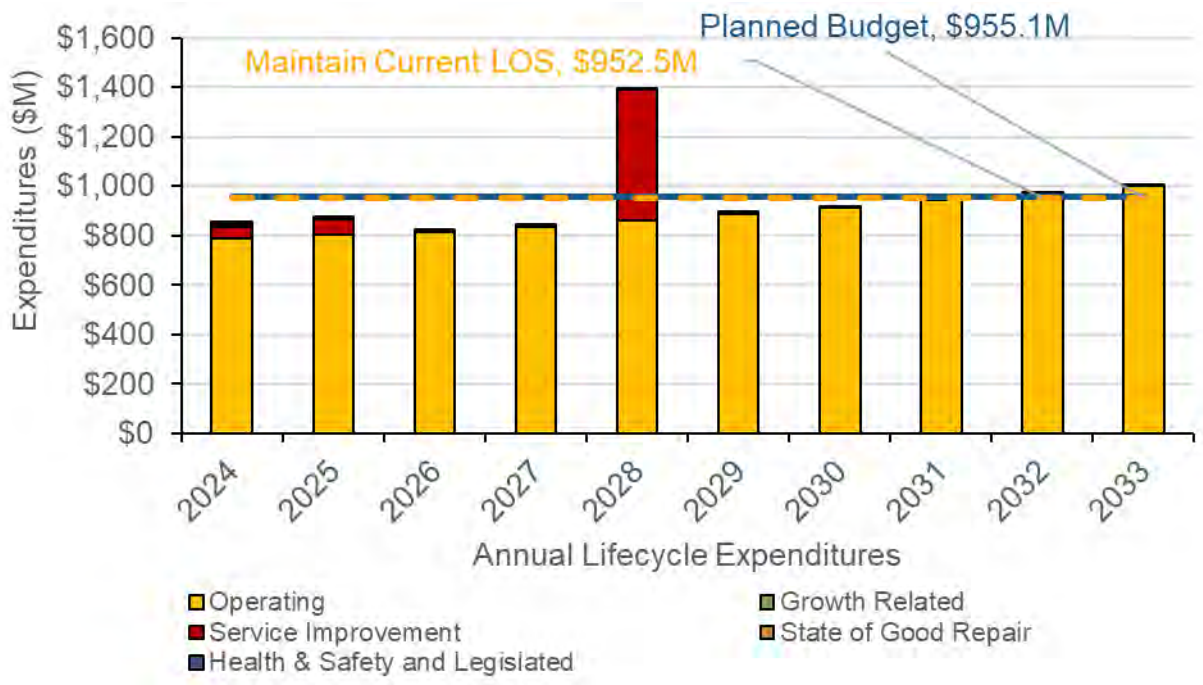


Figure 1-14 Shelter and Support Services Scenario Comparison.

1.4.7 Conclusion

Valued at $85.6 million, the Shelter and Support Services assets are overall in fair performance. Data maturity is high, indicating confidence in this value. Inventory data was quite detailed, and comprised of element level data that was obtained and updated through a regular building condition assessment process. Under current planned SOGR investments of $7.2 million, service levels are anticipated to increase over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $4.6 million over the next 10-year period. Figure 1-14 illustrates that maintaining current investment will not result in an infrastructure gap over the next decade. Given the anticipated growth in population, it is expected that there will be a greater need for shelter and support services. As such, further analysis is required through the next iteration of the AMP in 2025, to identify investment gaps in other lifecycle activities and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.5 Public Health

Toronto Public Health (TPH) reports to the Board of Health and is responsible for the health and well being of all three million plus residents in the city of Toronto. TPH's purpose is to deliver public health programs, services, and policies to prevent the spread of disease and promote and protect the health of the people of Toronto.

Service Statement

Toronto Public Health's programs, services and policy directions strive to create the optimal conditions to achieve a healthy city for all, meet population public health needs, comply with the Ontario Public Health Standards, and contribute to a broader sustainable health system.

Asset Breakdown

DISEASE PREVENTION AND HEALTHY LIVING

Equipment
Includes dental and medical equipment.

PUBLIC HEALTH MONITORING

Equipment
Includes software applications for public health monitoring.

Note that Toronto Public Health also operates dental clinics out of some City facilities, as well as mobile dental vans. Facilities are managed by the City's Corporate Real Estate Management (CREM) Division, and the dental vans are managed by the City's Fleet Services Division. Please refer to their respective subservice sections for details on these assets.

$7.1M
Replacement Value

Good
Overall Performance

$0.5M
Annual Cost to Maintain LOS

Data
E
Maturity
E
Completeness
E
Confidence

Figure 1-15 Public Health Summary of Assets.

1.5.1 State of Infrastructure

1.5.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Public Health Monitoring	Equipment	1 Pools of Assets	$0.100	Fair	4	5

1.5.1.2 Asset Performance

1.5.1.2.1 Condition Assessments

Table 1-20 Public Health Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition

1.5.1.2.2 Performance Rating

Performance Category	Equipment (Life Consumed)
Very Good	0% to 33%
Good	33% to 67%
Fair	67% to 100%
Poor	100% to 133%
Very Poor	>133%

1.5.2 Levels of Service

Table 1-22 Public Health Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Public Health services are reliable to all who use them in the community.	Public health equipment is maintained in a state of good repair to ensure that it is fit for service.

1.5.2.1 Technical Levels of Service Table

Table 1-23 Public Health Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	98%

1.5.3 Lifecycle Management Activities

The Public Health assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.5.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the ‘Climate Change’ section of the report for further details.

1.5.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Data for TPH equipment was unavailable, and as a result, a simplified reinvestment rate calculation was completed to understand asset needs. The current planned budget indicates an average annual renewal investment of $0.6 million, which is higher than the average annual investment to maintain current service levels of $0.5 million. As a result, current planned funding will result in an increase in service levels.

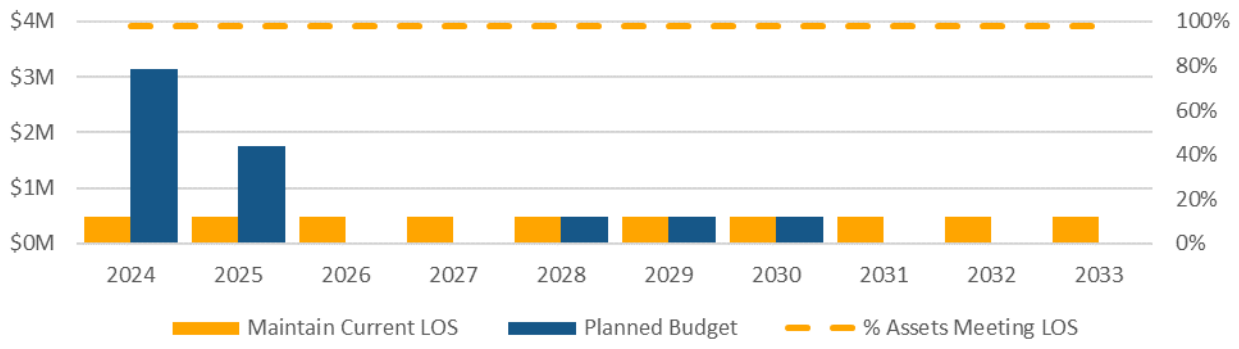


Figure 1-16 Public Health Expenditure Forecast for Maintaining Current LOS.

1.5.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-24 and Figure 1-17. Figure 1-17illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned investments are sufficient to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-24 Public Health Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$0.633	$0.487
Service Improvement	$1.737	$1.737
Growth Related	$0.000	$0.000
Operating	$302.254	$302.254
Total Expenditures	**$304.624**	**$304.478**
Infrastructure Gap		**$0**

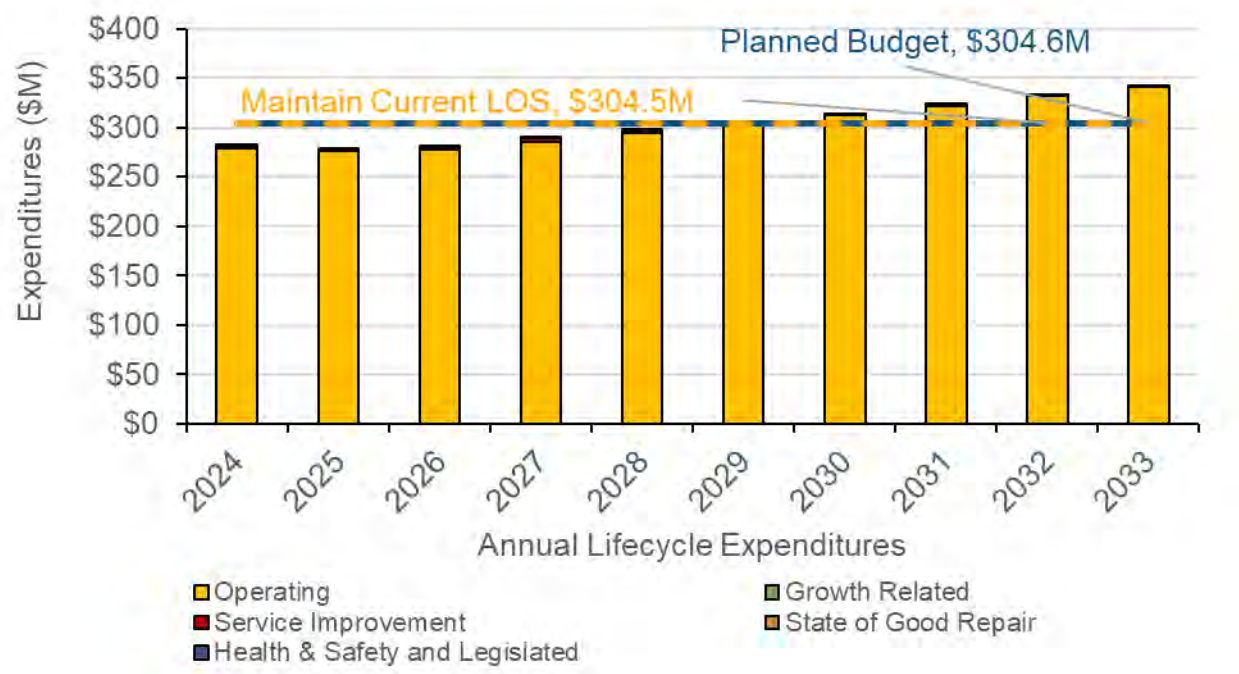


Figure 1-17 Public Health Scenario Comparison.

1.5.7 Conclusion

Valued at $7.1 million, the City's Public Health assets are overall in good performance. Data maturity is low, as detailed inventory records of equipment are not necessarily kept with all pertinent information to complete the asset management analyses for this report. Based on a simplified analysis it was established that the current planned SOGR investments of $0.6 million are sufficient to maintain and even exceed current service levels.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.6 Senior Services and Long-Term Care

Seniors Services and Long Term Care (SSLTC) is responsible for service planning and strategic integration of City services for seniors. The scope of services provided includes:

- Community support programs such as adult day programs, supportive housing services, tenancy support and homemakers and nurses services for vulnerable individuals who reside in the community.
- Operating of 10 long term care homes which provide 24 hour resident focused care for permanent and short stay admissions; care, services and programs enhance quality of life by responding to individual resident needs.

Service Statements

We are committed to ensuring eligible adults and seniors have access to City-operated long-term care homes and community services that are inclusive, available, diverse and resident-focused which contribute to improved health outcomes quality of life.

We want seniors to maintain their independence and stay in their homes as long as possible (i.e. age in place) with support and access to integrated City services that are timely, inclusive and comprehensive.

The City of Toronto aims to deliver these outcomes equitably, efficiently and with excellent customer service to help improve the lives of Torontonians and work to earn their trust and confidence.

Asset Breakdown

LONG-TERM CARE SERVICES

Equipment

Includes long-term care medical equipment, building services equipment, food services equipment, and IT equipment.

Facilities

Includes 10 long-term care homes.

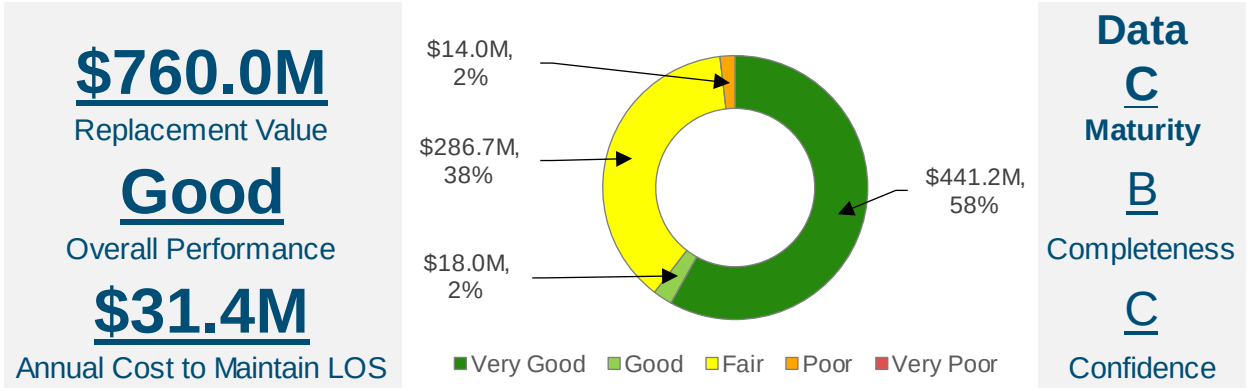


Figure 1-18 Senior Services and Long-Term Care Summary of Assets.

1.6.1 State of Infrastructure

1.6.1.1 Asset Summary

Table 1-25 Senior Services and Long-Term Care Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Long-Term Care Services	Equipment	4 Pools of Assets	$302.369	Fair	11	15
Long-Term Care Services	Facilities	10 Buildings	$457.586	Very Good	20	27

1.6.1.2 Asset Performance

1.6.1.2.1 Condition Assessments

Table 1-26 Senior Services and Long-Term Care Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Equipment	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.6.1.2.2 Performance Rating

Table 1-27 Senior Services and Long-Term Care Performance Category Mapping.

Performance Category	Equipment (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.6.2 Levels of Service

Table 1-28 Senior Services and Long-Term Care Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Facilities and equipment are safe and well maintained to meet the needs of residents.	SSLTC maintains its assets in a state of good repair, to ensure that they are reliable when needed by the community.
Quality; Regulatory	The City ensure a high-quality of service by following all provincial regulations to ensure that services meet the needs of the public.	The City is assessed by a team of independent surveyors against national standards and receives an accreditation rating (most recently in October 2022). The Ministry of Long-Term care completes regular inspections as needed and provides reports to maintain ongoing compliance with regulations.
Accessible; Available	Facilities provide residents with appropriate amenities, equipment, and programming to support their well-being.	The Residents Care Index is at 108. The Resident Care Index also known as the Case Mix Index (CMI) is a standard measurement of resident care requirements, reflecting the diversity, complexity, and severity of the resident needs used in all of Ontario's Long-Term Care Homes.

Table 1-29 Senior Services and Long-Term Care Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	100%
		Facilities	100%
Accessible; Available	LTC Homes Occupancy Rate.[3]	Facilities	98%

[3] The Provincial target for occupancy in long-term care homes is 97%.

1.6.3 Lifecycle Management Activities

The Senior Services and Long-Term Care assets follow the overall lifecycle activities described Section 8.0 (Table 8-1) of the AMP.

1.6.4 Climate Change

SSLTC continues to have a Climate Change lens as it operates 10 long-term care (LTC) homes across the City. Our commitment is to integrate climate considerations into the planning, design, construction, and operation of long-term care facilities where possible to ensure they are resilient to current and future climate impacts. SSLTC will continue to participate in available Federal/Provincial/Municipal Climate Change Programs.

Currently, SSLTC has participated with the Independent Electricity System Operator (IESO) “Save On Energy” program in the available geographical areas to retrofit 3 LTC homes with new Variable Frequency Drives (VFD) programmed into our Building Automation Systems for the pumps for cooling systems and domestic cold water to adjust the equipment speed resulting in energy savings, as well as refitting of light fixtures with new LED lighting.

SSLTC has 5 LTC homes to redevelop as part of the Ministry of Long-Term Care (MLTC) directive. SSLTC has 1 active capital redevelopment project in progress and is working towards embedding the carbon targets and Toronto Green Standards (TGS) V3-Tier #4 criteria into the new build.

1.6.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the 10-year average annual renewal investment is $7.7 million and results in the performance forecast illustrated in Figure 1-19[4]. Under this scenario, the percentage of assets in fair or better performance will decrease from 100% to 0% by the end of the 10-year forecast period, which represents a significant decrease to service levels.

[4] The performance forecast excludes long-term care, medical, building services, IT, and food services equipment because no inventories were available. High-level estimates were used to determine the cost to maintain LOS.

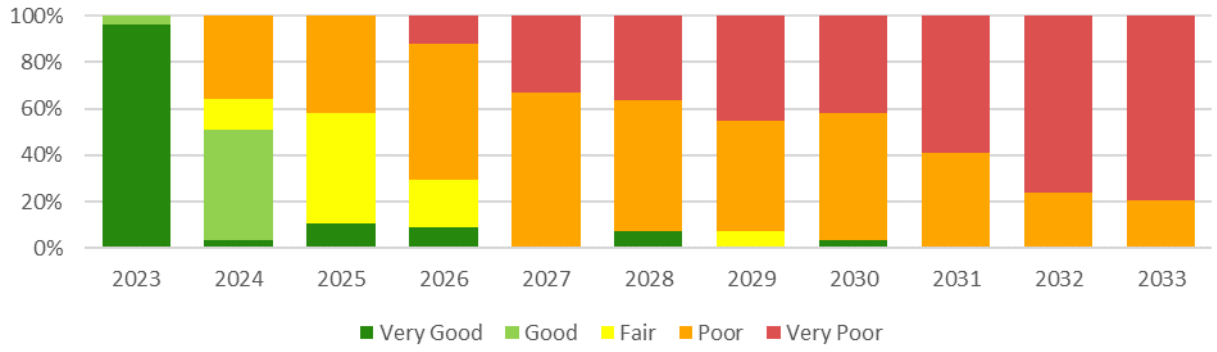


Figure 1-19 Senior Services and Long-Term Care Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 98% of assets in fair or better performance was determined to be $31.4 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-20.

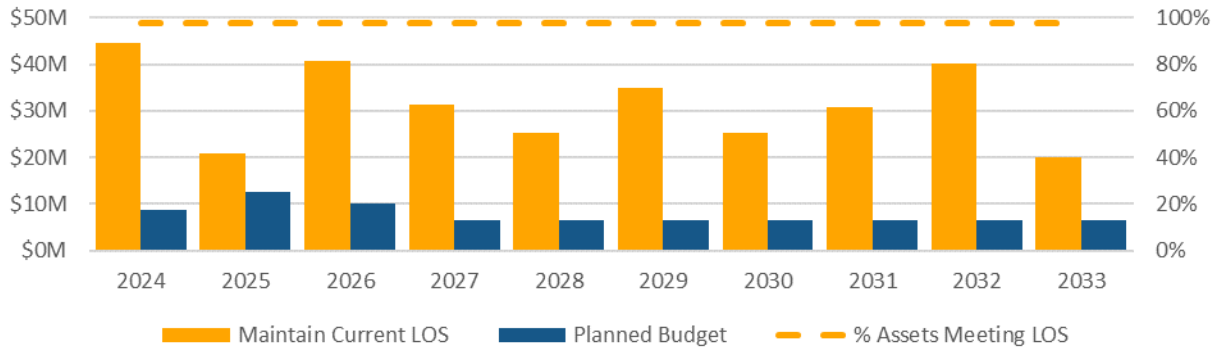


Figure 1-20 Senior Services and Long-Term Care Expenditure Forecast for Maintaining Current LOS.

1.6.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-30 and Figure 1-21. Figure 1-21 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, over an average of 10-years, as described in detail in Subsection 11.3 of the AMP.

Table 1-30 Senior Services and Long-Term Care Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$5.109	$5.109
State of Good Repair	$7.700	$31.405
Service Improvement	$0.058	$0.058
Growth Related	$17.408	$17.408
Operating	$443.562	$443.562
Total Expenditures	**$473.836**	**$497.541**
Infrastructure Gap		**$23.705**

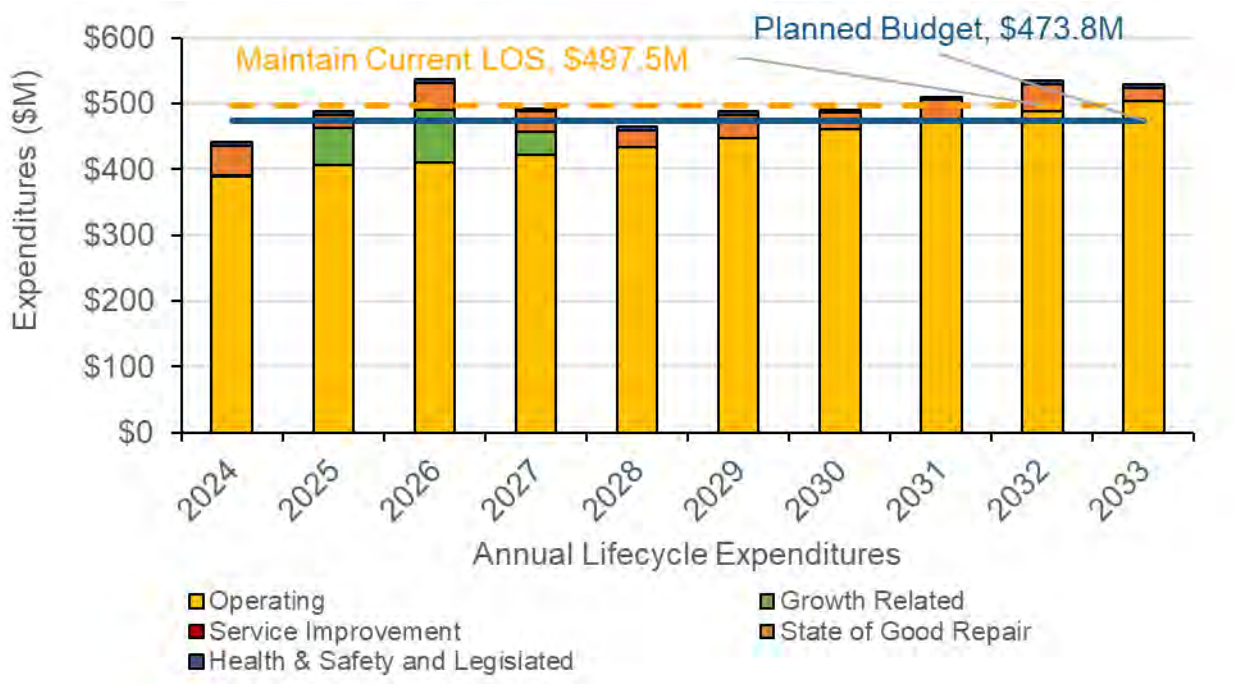


Figure 1-21 Senior Services and Long-Term Care Scenario Comparison.

1.6.7 Conclusion

Valued at $760.0 million, the City's Senior Services and Long-Term Care assets are overall in good performance. Data maturity is high for facilities, indicating confidence in this value. However, high-level estimates were used for the long-term care and medical, building services, IT, and food services equipment. Data maturity could be improved by developing an inventory for the equipment assets. Under current planned 10-year average of SOGR investments of $7.7 million, service levels are anticipated to decrease over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $31.4 million over the next 10-year period. Figure 1-21 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $23.7 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX E

Service Summary – Natural Environment Services

1.0 Natural Environment Services

1.1 Summary

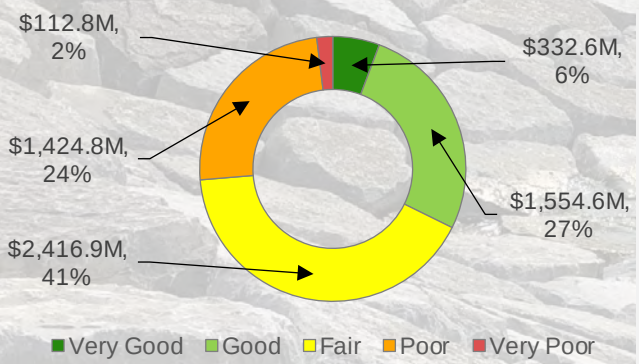
The City's Natural Environment Services includes several programs and business functions that work to preserve and enhance the natural environment and protect existing City infrastructure for the benefit of present and future generations. The infrastructure assets that support vital economic and tourism activities in the city, critical to ensuring service delivery, are comprised mainly of linear infrastructure and natural assets which support the reliability and environmental sustainability of our City. The total replacement value of this asset portfolio is $10.1 billion.

A summary of the key portfolio details including the portfolio replacement value, condition distribution, data maturity and costs to maintain service levels are provided below. The asset hierarchy, which illustrates the relationship between the service and assets that provide services, is also detailed below.

$10,133.0M
Replacement Value

Good
Overall Performance

$10.2M
Annual Cost to Maintain LOS



Data

D
Maturity

D
Completeness

D
Confidence

Figure 1-1 Summary of Natural Environment Services Assets.

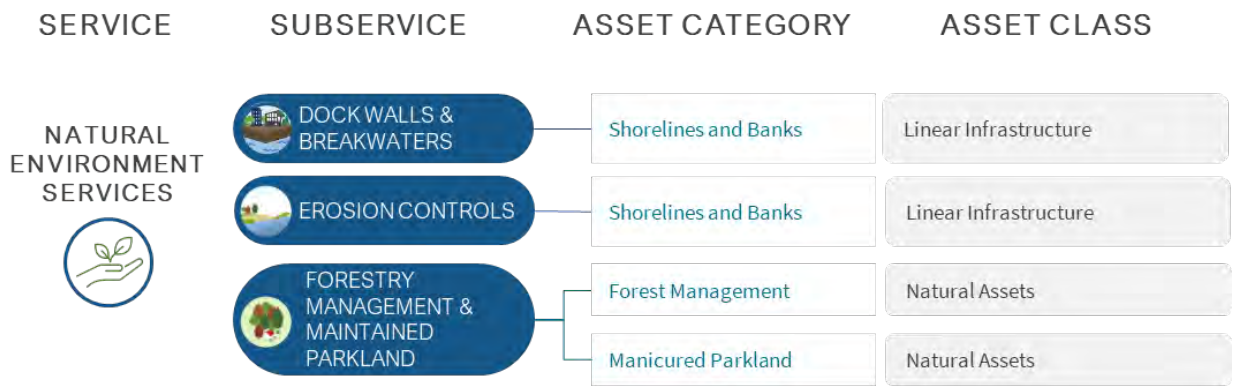


Figure 1-2 Natural Environment Services Asset Hierarchy.

1.2 Dock Walls and Breakwaters

The dock walls and breakwaters are managed by multiple divisions and agencies within the City. Toronto Port Lands Company (TPLC) manages and maintains dock walls within the Port Lands. An estimate of the remaining dock walls and breakwater assets are informed by the members of the Marine Coordinating Committee, including City of Toronto, Waterfront Toronto, PortsToronto, CreateTO, Toronto and Region Conservation Authority (TRCA) and Harbourfront Centre. It is important to note is that the data used is preliminary and requires further verification. Not all breakwaters and remaining waterfront dock walls are City of Toronto assets, dock walls owned by private companies that are known are excluded from this AMP. There are also locations where dock walls and breakwaters may be federal or provincial assets. These require verification with government partners. This work will inform priorities for maintenance/repair and overall improvements required.

Service Statement

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our dock walls and breakwaters to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation.

Asset Breakdown

SHORELINES AND BANKS

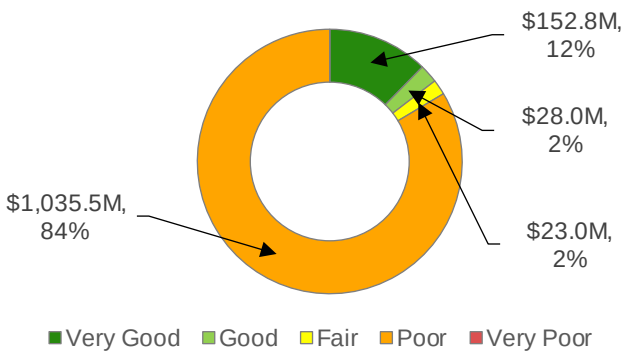
Linear Infrastructure

Includes Central dock walls and break waters, Port Lands dock walls.

$1,239.2M
Replacement Value

Poor
Overall Performance

$2.4M
Annual Cost to Maintain LOS



Data
D
Maturity
D
Completeness
D
Confidence

Figure 1-3 Summary of Dock Walls and Breakwaters Assets.[1]

[1] Overall data maturity is influenced by Port Lands dock walls. The Central Waterfront dock walls and breakwaters reflect a data maturity of E.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Dock Walls and Breakwaters Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Shorelines and Banks	Linear Infrastructure (Port Lands)	8,384 m	$419.210	Poor	75	50
Shorelines and Banks	Linear Infrastructure (Central Waterfront)	16,318 m	$820.000	Poor	93	100

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Dock Walls and Breakwaters Condition Assessment Approaches.

Asset Type	Condition Rating Metric	Approach to Assessing Condition
Linear Infrastructure (Port Lands)	Remaining Life	Condition assessments are used to establish a remaining life value for the anticipated renewal needs.
Linear Infrastructure (Central Waterfront)	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on life consumed/remaining life.

1.2.1.2.2 Performance Rating

Table 1-3 Dock Walls and Breakwaters Performance Category Mapping.

Category	Linear Infrastructure - Port Lands (Remaining Life)	Linear Infrastructure – Central Waterfront (Life Consumed)
Very Good	100% to 67%	0% to 33%
Good	67% to 33%	33% to 67%
Fair	33% to 0%	67% to 100%
Poor	0% to -33%	100% to 133%
Very Poor	<-33%	>133%

1.2.2 Levels of Service

Table 1-4 Dock Walls and Breakwaters Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Port Lands assets are maintained in a state of good repair.	The Port Lands asset management and property management groups ensure all assets are managed and maintained in a state of good repair through the following initiatives: dock wall inspection and repair program, management of service contracts including street sweeping, security, and snow removal, enforcement of lease terms with tenants, and reactive maintenance as required.
	Central Waterfront assets are maintained in a state of good repair to support waterfront economy, tourism, recreation and community activities.	Assets are currently not maintained to a reliable level of service. Most are in poor condition, declining on an annual basis and failing in some locations. City staff are in the process of identifying a coordinated approach for improved asset management. This will include dock wall and breakwater condition assessments, an annual repair/reinforcement program, management services, funding strategy, lease monitoring and reactive maintenance as required.

Table 1-5 Dock Walls and Breakwaters Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable; Safe	Percentage of assets in fair or better performance.	Dock Walls (Port Lands)	18%
		Dock Walls (Central Waterfront)	17%
		Breakwaters (Western Beaches)	16%

1.2.3 Lifecycle Management Activities

The Environmental Protection assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1).

1.2.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the 'Climate Change' section of the report for further details.

1.2.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $1.5 million and results in the performance forecast illustrated in Figure 1-4. Under this scenario, the percentage of assets in fair or better performance will hold at 16% over the 10-year forecast period.

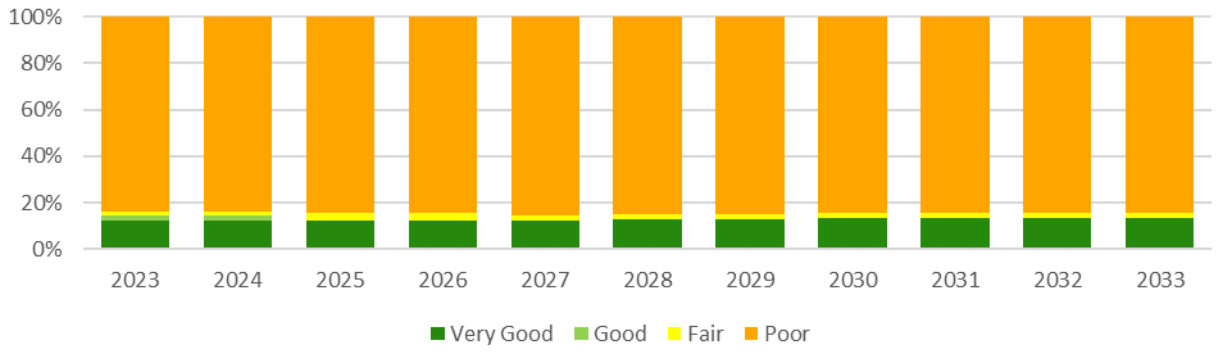


Figure 1-4 Dock Walls and Breakwaters Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 16% of assets in fair or better performance was determined to be $2.4 million annually over a 10-year forecast period and resulted in the expenditure forecast illustrated in Figure 1-5.

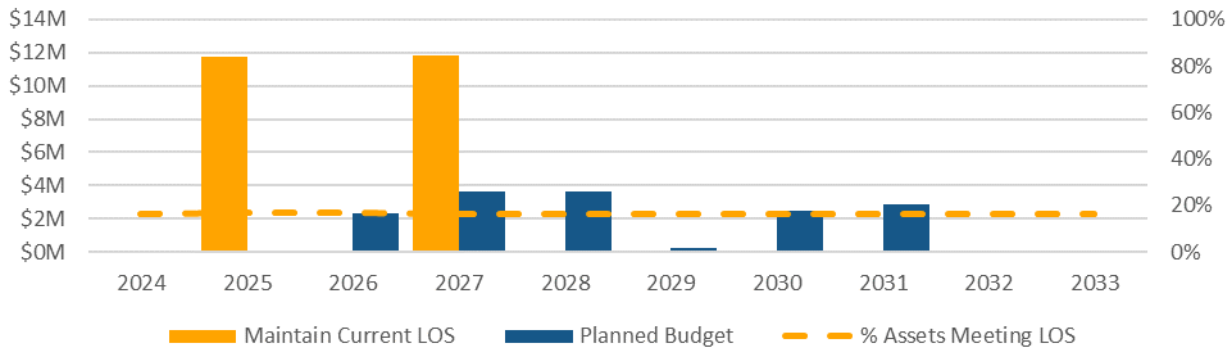


Figure 1-5 Dock Walls and Breakwaters Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned will maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-6 Dock Walls and Breakwaters Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$1.520[2]	$2.353
Service Improvement	$0.000	$0.000
Growth Related	$0.000	$0.000
Operating	$0.000	$0.000
Total Expenditures	**$1.520**	**$2.353**
Infrastructure Gap		**$0.832**

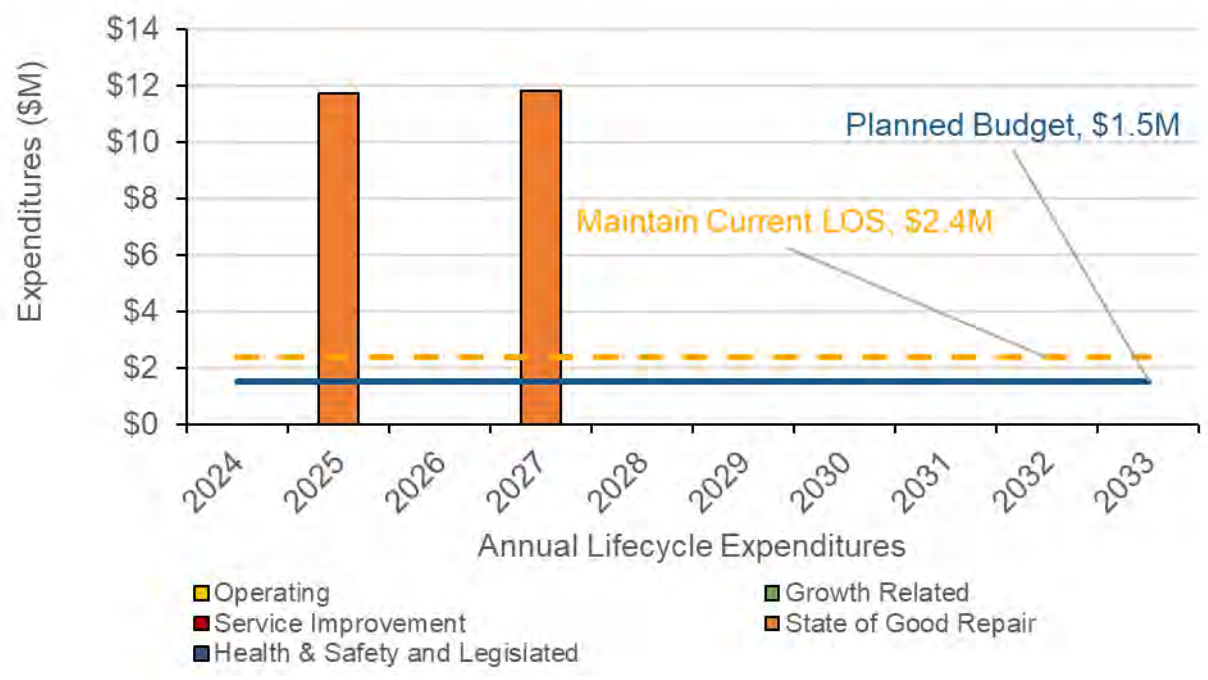


Figure 1-6 Dock Walls and Breakwaters Scenario Comparison.

[2] This Planned SOGR comes from the Parks, Forestry and Recreation Division's 10-year Capital Plan related to dock wall rehabilitations.

1.2.7 Conclusions

Valued at $1.2 billion, the City's dock walls and breakwaters are overall in poor condition and require significant investment to address the backlog of infrastructure needs. The cost to maintain current LOS requires an annual SOGR investment of $2.4 million over the next 10-year period. However, the current backlog of infrastructure needs is $1.0 billion and would require $174.9 million annually to address the backlog and upcoming infrastructure needs over the next 10 years. Proposed Levels of Service (which will be included in the City's next iteration of its Corporate AMP) will define the levels of service objectives that Dock Walls and Breakwaters plans to achieve, which may differ from the investment required to maintain current LOS.

The numbers presented in this document for Central waterfront dock walls and breakwaters are preliminary and will be verified through a joint project process led by City Planning (Waterfront Secretariat), Corporate Real Estate Management (CREM), Parks, Forestry and Recreation (PFR) and Legal Services. City staff will be working with consultants starting in 2024 to verify ownership, confirm extents and undertake condition assessments for these assets. This work will inform priorities for maintenance/repair and overall improvements required to ensure the safety and preservation of the waterfront dock walls and breakwaters.

The numbers presented in the document for Port Lands dock walls were sourced from CreateTO staff. The Toronto Port Lands Company (TPLC) is a City corporation that manages real estate assets and promotes development in Toronto's Port Lands. TPLC works with CreateTO (an agency of the City of Toronto), which supports the corporation's business operations through a service agreement. In recent years, rehabilitation work on these dock walls has primarily been funded by TPLC to ensure uninterrupted service in the Port of Toronto, given its vital economic role in the City. However, given the significant capital costs that will be required over the next 50 years, investment will likely be required from TPLC, the City and other orders of government in future. These are discussions that are currently being had to ensure the preservation of the dock walls and safety of the public.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment
need.



1.3 Erosion Controls

Erosion control structures are managed by multiple divisions and agencies within the City. Toronto Water manages and maintains the erosion control structures to protect it's buried linear infrastructure as detailed within this section. Erosion control structure constructed to protect other infrastructure including land, transportation infrastructure, and the public realm requires further verification and will inform future asset management plans.

Service Statement

Safeguard our coastal and waterway environments as well as existing City infrastructure by ensuring the structural integrity and resilience of our erosion control structures to protect waterfront communities, waterfront economic activity and tourism, habitats, and ecosystems from erosion, flooding, and environmental degradation. Erosion control structures provide protection and preservation across City services through the maintenance of grey and green infrastructure that contribute to the safety, sustainability and viability of the city.

Asset Breakdown

SHORELINES AND BANKS

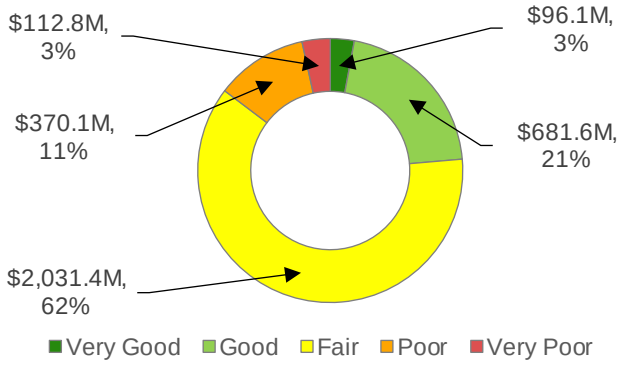
Linear Infrastructure

Includes erosion controls structures within stream banks and beds.

$3,292.1M
Replacement Value

Fair
Overall Performance

$0.0M
Annual Cost to Maintain LOS



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Confidence

Figure 1-7 Summary of Erosion Controls Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Table 1-7 Erosion Controls Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Asset Type	Condition Rating Metric	Approach to Assessing Condition

1.3.1.2.2 Performance Rating

Category	Linear Structure – Erosion Control (Field Inspection Rating)
Very Good	1
Good	2
Fair	3
Poor	4
Very Poor	5

1.3.2 Levels of Service

Table 1-10 Erosion Controls Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Protect adjacent buried infrastructure from watercourse erosion and help ensure services are provided with minimal disruptions.	Through proactive monitoring, erosion control measures, and strategic planning, critical infrastructure is protected from the effects of erosion. By employing sustainable erosion control techniques, such as bank stabilization, natural channel design, and stormwater management, we mitigate the risk of damage to infrastructure and minimize disruptions to essential services.
Environmentally Sustainable	Prevent the release of water and wastewater into the environment by protecting buried infrastructure from watercourse erosion.	By proactively monitoring and maintaining erosion control structures, we ensure its integrity and resilience, mitigating the potential for environmental contamination and safeguarding public health and the natural ecosystem.

Table 1-11 Erosion Controls Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliable; Safe	Percentage of assets in fair or better condition.	Erosion Control Structures	85%
Environmentally Sustainable	Prevent spills from water and wastewater systems and damage to adjacent public infrastructure due to erosion within watercourses.	Percentage of watercourse crossings exposed	5%
		New instances (points) of exposed buried infrastructure in last 5 years	105

1.3.3 Lifecycle Management Activities

The Environmental Protection assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the ‘Climate Change’ section of the report for further details.

1.3.5 SOGR Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $22.0 million and results in the performance forecast illustrated in Figure 1-4. Under this scenario, the percentage of assets in fair or better performance will increase from 86% to 92% by the end of the 10-year forecast period, which represents a marginal increase to service levels.

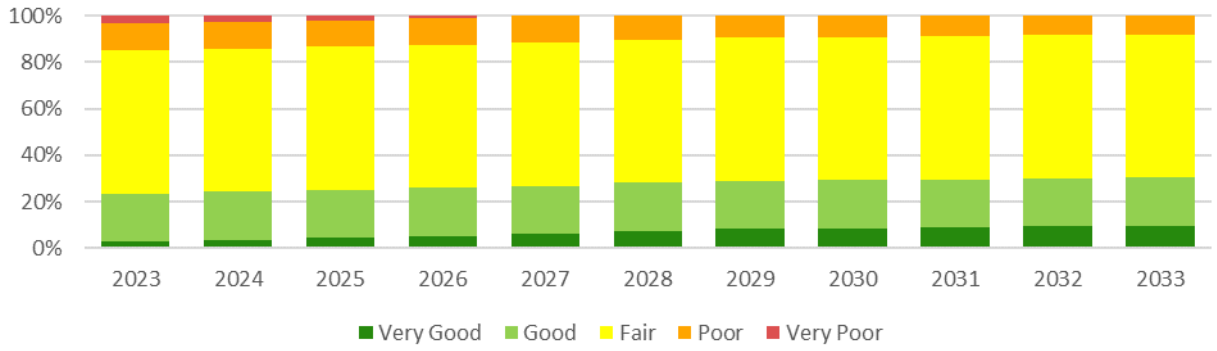


Figure 1-8 Erosion Controls Performance Forecast for Current Budget.

It has been determined that no additional investment is required over a 10 year forecast period to maintain the existing service levels of 86% of assets in fair or better performance. This is illustrated in the expenditure forecast in Figure 1-9.

The natural environment experiences erosion resulting in the exposure of buried infrastructure and a reduction in the environmental sustainability service level. At this time there is no mechanism to forecast the progression of erosion in the natural environment. The planned budget to construct new erosion control structures mitigates this erosion to sustain the current service level.

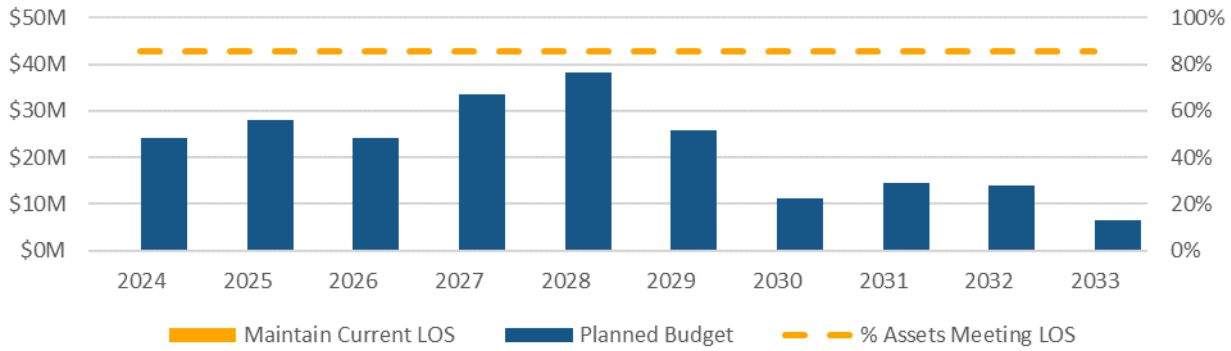


Figure 1-9 Erosion Controls Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures to maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that current planned will maintain current levels of service over the next 10 years. The budget surplus implied by these tables and figures reflects the need for new infrastructure necessary to stabilize the natural environment and protect existing TW infrastructure, as well as addressing current infrastructure backlogs, and there is currently no funding surplus recognized by Toronto Water.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-12 Erosion Controls Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$21.960	$0.000
Service Improvement	$16.069	$16.069
Growth Related	$0.000	$0.000
Operating	$0.000	$0.000
Total Expenditures	**$38.029**	**$16.069**
Infrastructure Gap		**$0**

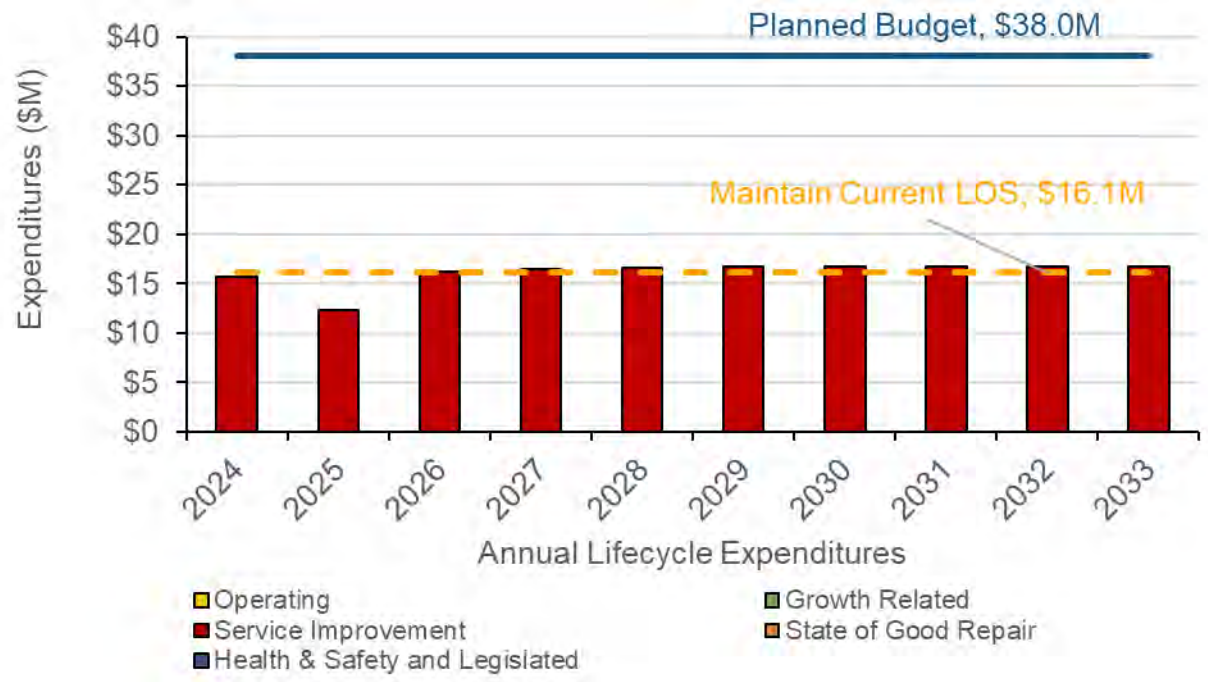


Figure 1-10 Erosion Controls Scenario Comparison.

1.3.7 Conclusions

Valued at $3.3 billion, this subset of the City's Environmental Protection assets are overall in fair condition. The City's allocated budget is based on the current understanding of erosion control funding needs and will evolve as new erosion control projects are identified. Planned investments are unlikely to result in an increase in service levels over the next 10-years. Proposed Levels of Service (which will be included in the City's next iteration of its Corporate AMP) will define the levels of service objectives that Erosion Controls plans to achieve, which may differ from the investment required to maintain current LOS.

Further validation of ownership is required to confirm existing inventory for erosion control assets. There are assets that may be privately-owned or those managed by other City Divisions such as Transportation Services. The erosion controls represented in this analysis are those assets under the responsibility of Toronto Water and does not represent the full inventory of erosion control assets nor total renewal need. New erosion controls will be needed over the next 10-years to prevent soil erosion and mitigate impacts to surrounding communities and habitats.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.4 Forestry Management and Maintained Parkland

The City's Forestry Management & Maintained Parkland assets are managed by Parks, Forestry and Recreation (PFR) division. Toronto's parks and natural spaces are places where Torontonians come together to build community and play, celebrate and explore. The results presented in this subsection are summarized from the tactical AMP being developed by PFR.

Service Statement

Ensure that city parks, tree-lined streets, trails, forests, meadows, marshes, and ravines are beautiful, safe and accessible, and that they expand and adapt to meet the needs of a growing city.

Asset Breakdown

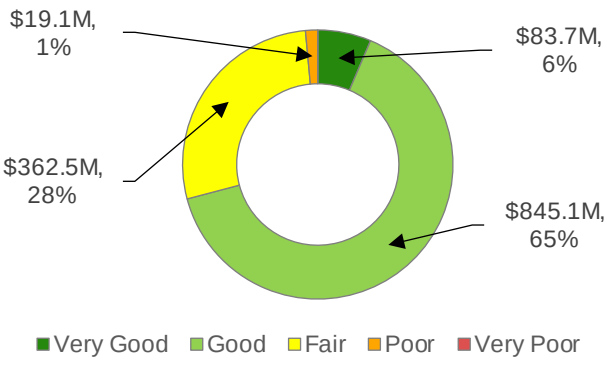
Forest Management
Natural Assets
Includes natural areas such as forests, wetlands, meadows, beaches, and bluffs. Also includes street trees and park trees.

Manicured Parkland
Natural Assets
Includes enhanced green spaces such as park turf, gardens, golf courses.

$5,601.7M
Replacement Value

Good
Overall Performance

$7.8M
Annual Cost to Maintain LOS



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Completeness
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Confidence

Figure 1-11 Summary of Forestry Management & Maintained Parkland Assets.[3]

[3] Only street trees included in condition summary, as reflected in the PFR tactical AMP.

1.4.1 State of Infrastructure

1.4.1.1 Asset Summary

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Performance	Average Age	Average ESL
Forest Management	Natural Assets (Trees)	1,120,638 trees	$1,982.2	Good	22	50

1.4.1.2 Asset Performance

1.4.1.2.1 Condition Assessments

Table 1-14 Forestry Management & Maintained Parkland.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Natural Assets (Natural Areas and Manicured Parkland)	N/A	Condition is not formally assessed and no age data available. Future improvements to better understand asset condition include continuing to collaborate with TRCA to establish a suitable condition assessment process, including development of a condition rating system in alignment with the City's asset management condition grading system.

1.4.1.2.2 Performance Rating

Table 1-15 Forestry Management & Maintained Parkland.

Category	Natural Assets (Trees)
Very Good	Excellent
Good	Good
Fair	Fair
Poor	Poor
Very Poor	N/A

[4] Condition is not formally assessed and no age data available.

1.4.2 Levels of Service

Table 1-16 Forestry Management & Maintained Parkland Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Availability	Parks, facilities, and green spaces are created and enhanced to respond to the City's growth and evolving use (Strategic Directions).	PFR is managing risks associated with City growth and changing use through targeted asset enhancements, creation of new parkland, and other strategies as part of the updates to the Facilities Master Plan and Parkland Strategy.
Environmental Sustainability	Greener infrastructure and operations, and a healthy and resilient urban forest, ravine, and parkland system, that conserve and enhance biodiversity and ecosystem functions and mitigate and adapt to climate change (Strategic Directions).	PFR is currently seeking to better understand climate vulnerabilities to identify and plan actions that mitigate or adapt to climate change, such as reducing GHG emissions, implementing the Ravine Strategy, and planting, protecting and maintaining trees across the City.
Accessibility	Equitable access to inclusive, affordable and welcoming recreational facilities and programs, parks, green spaces and urban forest (2024 Budget Notes, Strategic Directions).	PFR continues to improve equitable access and enhance the equity of its programs and spaces by developing new equity-focused data tools to better identify, understand, and respond to barriers, and guide geographic prioritization of investments. PFR designs new facilities and completes major rehabilitations to existing facilities to meet Toronto Design Accessibility Guidelines.
Quality	High-quality recreation facilities and programs, parks, green spaces and urban forest (2024 Budget Notes, Strategic Directions).	PFR has a significant state of good repair backlog and is striving to improve the quality of its aging infrastructure through enhanced inter-branch capacity and coordination, proactive condition assessments and predictive maintenance, and limiting unplanned service disruptions by identifying critical and time-sensitive asset repairs.

Table 1-17 Forestry Management & Maintained Parkland Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Type	Current Performance
Reliability	% of assets in fair or better performance.	Street Trees	98%
Availability	Total hectares of parkland.[5]	Natural areas and recreation park turf	8106
Sustainability	# of trees planted per year. [6]	Street Trees, Recreation Park Trees	122,000
	% canopy cover (City-wide).[7]	Wetland, Forest, Street Trees, Recreation Park Trees	28.4-31%
	Hectares of natural area parkland managed.	Natural Areas	728

1.4.3 Lifecycle Management Activities

The Environmental Protection assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.4.4 Climate Change

One of the City's Strategic Plan priorities is to tackle climate change and build resilience. Several of PFR existing strategies related to natural areas and enhanced green spaces already specifically incorporate climate change considerations. The Ravine Strategy calls for assessment of potential climate change impacts on the ravine system, including impacts on the natural systems and existing and proposed infrastructure. The Strategic Forest Management Plan identifies climate change as one of the key challenges for the urban forest and identifies specific adaptation actions. The Tree Planting Strategy calls for actions related to planting trees on public lands.

[5] Total area of parkland covers mainly natural areas and enhanced green space, but also covers the space covered by some built assets such as pathways within parks. Includes conveyed land that may not have been developed yet into parkland.
[6] Includes both public and private (non-city owned) assets.
[7] Asset age is not commonly reported for most natural assets since natural areas (e.g. forest and wetlands) are predominantly self-sustaining systems if not exposed to external pressures. For tree assets where management is based on individual units, age is appropriate and can be measured.

PFR is actively seeking ways to improve operation and management of natural assets and enhanced green spaces considering anticipated climate change impacts. Initiatives include updates to the Parkland Strategy which will develop guidelines for climate resiliency in new parks and park improvements; exploring options to improve tree resiliency and urban canopy enhancements; reviewing and updating the invasive species and natural areas management programs; and seeking opportunities for park naturalization.

1.4.5 SOGR Performance and Investment Forecasts

The renewal costs required to maintain the existing service levels current service levels is estimated to be an average of $7.8 million per year. This amount is based on the anticipated renewal costs over the next 10-years plus $44.9 million related to unfunded state of good repair needs related to the Ravine Strategy implementation.

As part of the 10-year capital plan, a total of $33.4 million has been committed for renewal activities, which amounts to a 10-year annual average funding of $3.3 million. Therefore, the estimated average annual infrastructure gap is $4.5 million. This is based on $44.9 million of unfunded SOGR needs related to the implementation of the ravine strategy, as documented in the budget notes (the total unfunded amount is $99.4 million which includes both service improvements and renewal needs). It is important to reiterate that the identified infrastructure gap is only based on work needed for the 10 priority investment areas of the Ravine strategy and does not capture funding needs outside those 10 priority areas. Therefore, the actual infrastructure gap is likely to be higher than $4.5 million per year.

Figure 1-12 Forestry Management & Maintained Parkland Performance Forecast for Maintaining LOS.

1.4.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-13. Figure 1-13 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-18 Forestry Management & Maintained Parkland Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.090	$0.090
State of Good Repair	$3.300	$7.800
Service Improvement	$0.500	$6.000[8]
Growth Related	$26.900	$26.900
Operating	$129.00	$129.00
Total Expenditures	**$159.800**	**$169.800**
Infrastructure Gap		**$10.000**
SOGR Infrastructure Gap		**$4.500**

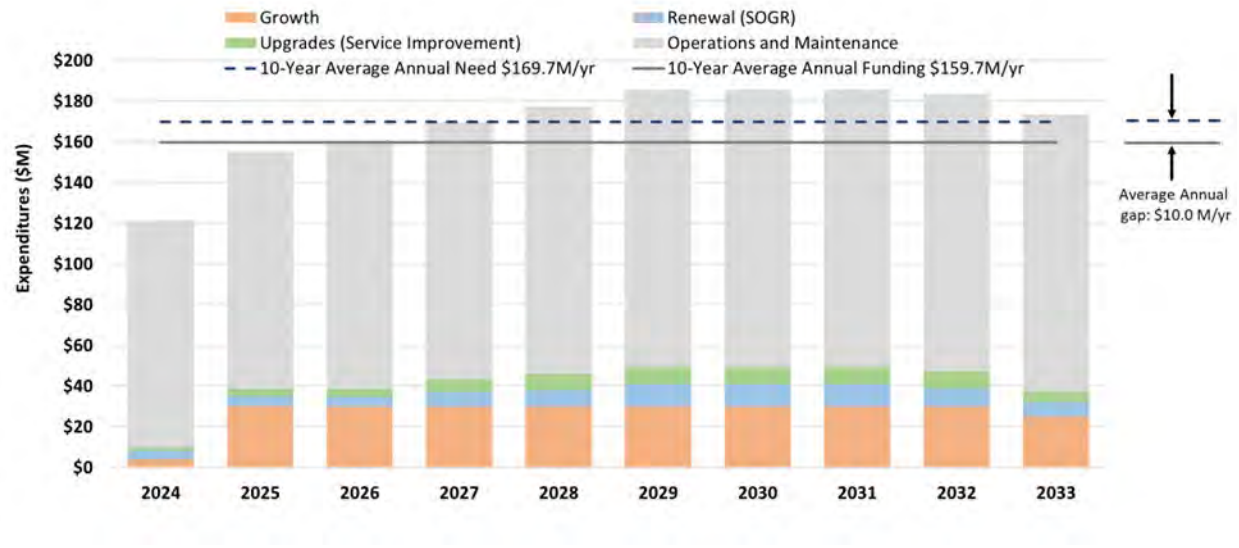


Figure 1-13 Forestry Management & Maintained Parkland Scenario Comparison.

[8] PFR have identified a service improvement gap. This goes beyond the cost to maintain current LOS and will be further explored when proposed LOS are required by O.Reg.588/17.

1.4.7 Conclusions

Valued at $5.6 billion, the City's Forestry Management & Maintained Parkland assets are overall in good performance. Data maturity is rated as low where it could be improved from improvements to the accuracy of replacement values, establishing a condition assessment protocol for natural areas and manicured parklands, and inventory improvements to park trees. Currently, 98% of street trees are in fair or better performance. Under current planned SOGR investments of $3.3 million annually, this LOS is forecasted to decrease to over a 10-year period. The cost to maintain current LOS requires an annual SOGR investment of $7.8 million over the next 10-year period. Figure 1-12 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $4.5 million annually over the next decade.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. PFR has identified a service improvement gap of $5.5 million annually over the 10-year period. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX F

Service Summary – Recreation and Leisure

1.0 Recreation and Leisure

1.1 Summary

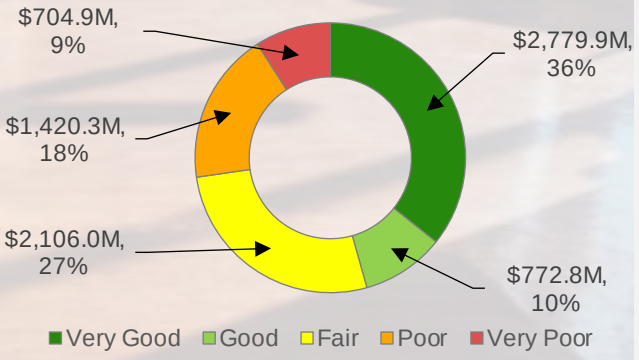
The City of Toronto provides a variety of recreation and leisure services to the community, through three primary subservice areas: Exhibition Place, Parks, Forestry & Recreation, and the Toronto Zoo. These subservices look to enhance the quality of life and well-being of our community by providing diverse, accessible, and engaging recreational programs, facilities, and services. Recreation and Leisure strives to create inclusive environments that promote physical activity, social interaction, personal development, and community connections for people of all ages, abilities, and backgrounds. The infrastructure assets critical to ensuring service delivery are comprised mainly of amenities, equipment, facilities, fleet and linear infrastructure which support the reliability, accessibility and availability of recreation and leisure services for our city. The total replacement value of this asset portfolio is $8.3 billion.

A summary of the replacement value and condition of the assets within this service area and the associated asset hierarchy are provided below.

$8,261.2M
Replacement Value

Good
Overall Performance

$148.1M
Annual Cost to Maintain LOS



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Maturity
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Completeness
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Confidence

Figure 1-1 Summary of Recreation and Leisure Assets.

Figure 1-2 Recreation and Leisure Asset Hierarchy.

1.2 Exhibition Place

Exhibition Place is a Toronto landmark serving as an entertainment, tradeshow and business destination and urban parkland on Toronto's waterfront. The 192-acre Exhibition Place site is managed, operated, maintained and promoted by Exhibition Place (officially the Board of Governors of Exhibition Place), an agency of the City of Toronto.

Exhibition Place hosts over 350 events and attracts over 5.3 million visitors annually. It is home to the Allstream Centre, Enercare Centre, Beanfield Centre, Better Living Centre, Queen Elizabeth Building, Bandshell Park, the Coca-Cola Coliseum, BMO Field, and Hotel X and several heritage buildings.

Service Statement

Deliver exceptional experiences to our customers, which include attendees and clients, through events and site animation while promoting economic activity and investment in the City of Toronto.

Asset Breakdown

FACILITIES & OPERATIONS SERVICES

Equipment
Includes HVAC, security/surveillance, furniture/fixtures and equipment (FF&E), fire safety & systems, power generators/electrical, IT & telecom.

Facilities
Includes office and administrative buildings.

Fleet
Includes electrical vehicles, utility vehicles, golf carts, tractors, and pool vehicles (transport).

EXHIBITION, EVENTS & CONFERENCES

Facilities
Includes conference buildings, trade/consumer show buildings.

SITE WORKS

Linear Infrastructure
Includes utilities, bridges/structures and fencing.

TRANSPORTATION SERVICES

Facilities
Includes parking lots.

Linear Infrastructure
Includes roads, parks/playground.

Amenities
Includes monuments, exterior washrooms buildings and fountains.

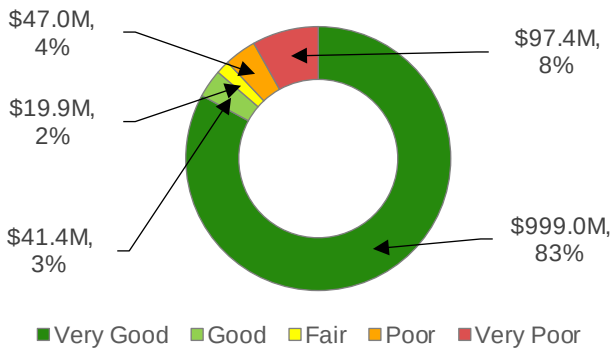
TENANT RELATIONS SERVICES

Facilities
Includes tenanted buildings.

$1,204.7M
Replacement Value

Very Good
Overall Performance

$25.4M
Annual Cost to Maintain LOS



Data
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Maturity
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Completeness
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Confidence

Figure 1-3 Exhibition Place Summary of Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Exhibition Place Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Exhibition, Events & Conferences	Facilities	8 Buildings	$490.088	Very Good	59	50
Facilities & Operations Services	Equipment	6 Pools of Assets	$107.000	Very Poor	16	11
Facilities & Operations Services	Facilities	2 Buildings	$8.119	Good	111	50
Facilities & Operations Services	Fleet	23 Assets	$1.783	Good	5	14
Site Works	Linear Infrastructure	9 Pools of Assets	$10.552	Very Good	36	49
Tenant Relations Services	Facilities	11 Buildings	$512.631	Very Good	25	50
Transportation Services	Amenities	17 Buildings	$15.234	Good	77	50
Transportation Services	Facilities	15 Assets	$21.489	Good	79	50
Transportation Services	Linear Infrastructure	2 Pools of Assets	$37.840	Very Poor	20	15

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Exhibition Place Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Fleet	Life Consumed	Adjusted understanding of life consumed based on vehicle's utilization.
Equipment	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Linear Infrastructure	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Amenities	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.2.1.2.2 Performance Rating

Table 1-3 Exhibition Place Performance Category Mapping.

Performance Category	Fleet, Equipment, Linear Infrastructure and Amenities (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.2.2 Levels of Service

Table 1-4 Exhibition Place Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Reliability is reflected in customer service, continuity of events and retention of new business.	Facilities are open as scheduled and maintained in good working order/condition.
Safe	Mitigate incidents and lawsuits on the grounds.	Grounds are well-lit with a lot of green and open space. Paying customers are provided clean, exceptional, high-quality services.
Accessible; Available	Facilities are accessible by all residents, show clients, staff, and patrons. Sufficient amenities, equipment, and programs are provided.	Facilities are designed and maintained to ensure that all residents, regardless of age, ability, or background, can access and enjoy our amenities and programs.
Quality; Shine	Facilities and grounds provide attendees and clients with high quality and exceptional experiences that keep them returning.	With world-class facilities, stunning grounds, and a diverse range of events and attractions, we offer something for everyone. Whether attending a trade show, concert, festival, or corporate event, our commitment to excellence shines through in every aspect of your experience.

Table 1-5 Exhibition Place Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Safe	Percentage of assets in fair or better condition.	Amenities	100%
		Equipment	0%
		Facilities	100%
		Fleet	100%
		Linear Infrastructure	23%

1.2.3 Lifecycle Management Activities

The Exhibition Place assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

The City of Toronto is dedicated to fighting climate change and building resilience to improve the quality of life for Torontonians. To date, the City has eliminated approximately 180 kilotonnes of GHG emissions, a 40% reduction from 1990 levels. City divisions and agencies are committed to working collectively with the municipality to prepare our infrastructure, ecosystems, and communities, for a changing climate – with several initiatives and projects that supports climate resiliency, sustainability and adaptation. Please see the 'Climate Change' section of the report for further details.

1.2.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment is $16.4 million and results in the performance forecast illustrated in Figure 1-4[1]. Under this scenario, the percentage of assets in fair or better performance maintains at 100% by the end of the 10-year forecast period.

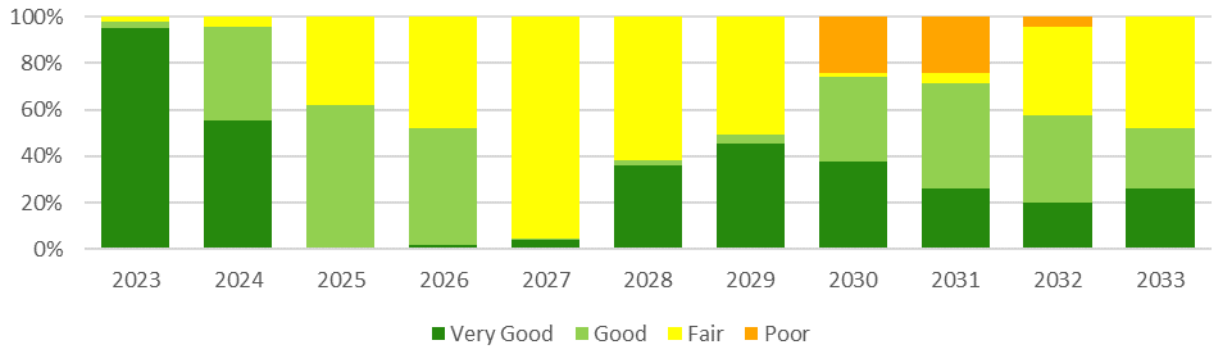


Figure 1-4 Exhibition Place Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 88% of assets in fair or better performance was determined to be $25.4 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5.

[1] The performance forecast excludes linear infrastructure, facilities & operations services fleet and equipment because no inventories were available. High level estimates were used to determine the cost to maintain LOS.

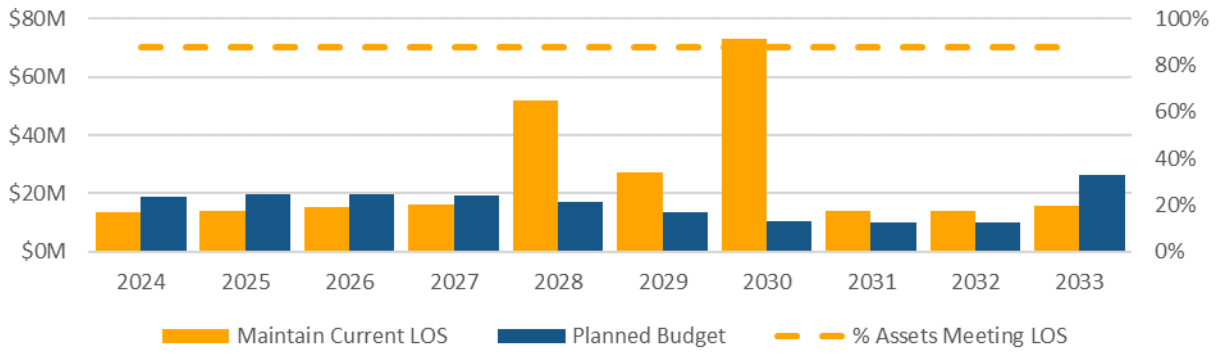


Figure 1-5 Exhibition Place Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-6 Exhibition Place Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.300	$0.300
State of Good Repair	$16.424	$25.414
Service Improvement	$8.211	$8.211
Growth Related	$0.000	$0.000
Operating	$76.452	$76.452
Total Expenditures	**$101.386**	**$110.376**
Infrastructure Gap		**$8.990**

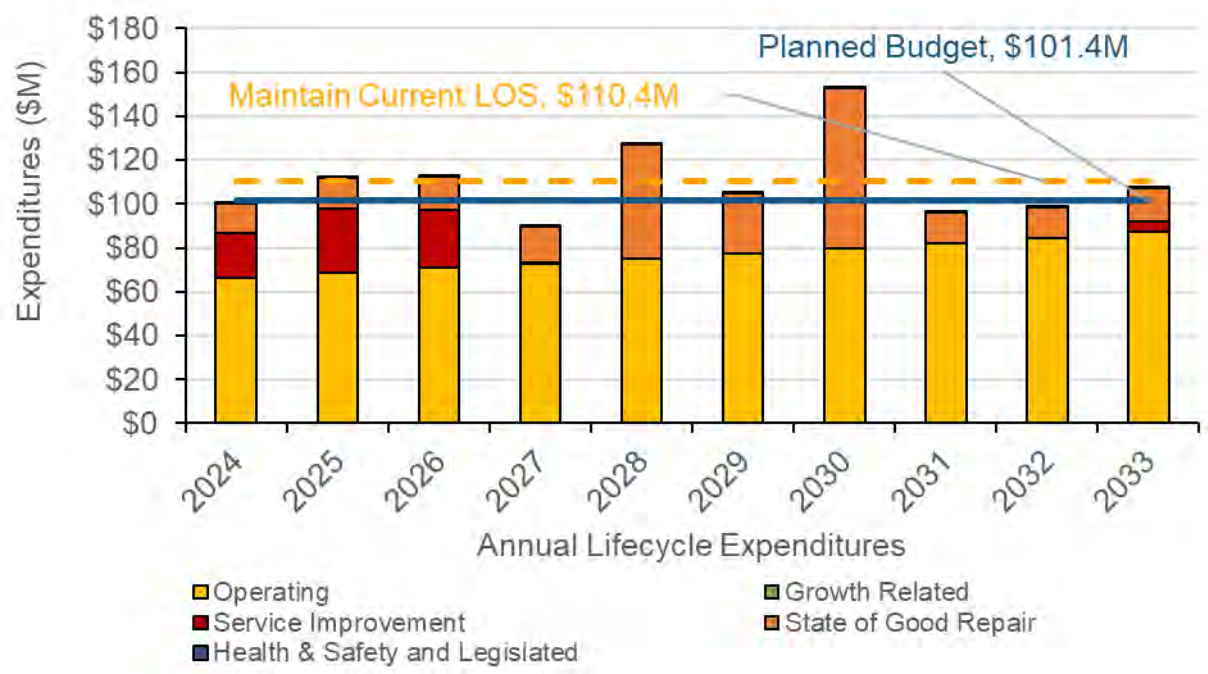


Figure 1-6 Exhibition Place Scenario Comparison.

1.2.7 Conclusion

Valued at $1.2 billion, the Exhibition Place assets are overall in very good condition. Data maturity is low, as detailed inventory records of assets are not necessarily kept with all pertinent information to complete the asset management analyses for this report.

Under current planned SOGR investments of $16.4 million annually, this LOS is forecasted to maintain the assets in the inventory. However, adding the high-level estimate of reinvestment rate required to maintain the assets missing from the inventory[2] suggest that there is insufficient funding. The cost to maintain current LOS requires an annual SOGR investment of $25.4 million over the next 10-year period. Figure 1-6 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $9.0 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

[2] The performance forecast excludes linear infrastructure, facilities & operations services fleet and equipment because no inventories were available. High level estimates were used to determine the cost to maintain LOS.

1.3 Parks and Recreation

Toronto's parks and recreation facilities are places where Torontonians come together to build community and play, celebrate and explore. Parks, Forestry and Recreation (PFR) Division's role as stewards of these spaces, is to contribute to the city's social and environmental resilience by ensuring that our parks, playing fields, recreation centres, ice rinks and pools are beautiful, safe and accessible, that they expand and adapt to meet the needs of a growing city, and are filled with vibrant, active, and engaged communities. The results presented in this subsection are summarized from the tactical AMP being developed by PFR.

Service Statement

Provide inclusive, accessible, and vibrant parks, facilities, and programs that enhance the quality of life for all members of our community. With a focus on equity, sustainability, and innovation, we strive to be responsive to the evolving needs and interests of our diverse community, enriching lives and fostering a sense of belonging for all.

Asset Breakdown

PARKS & OUTDOOR RECREATION

Amenities
Includes trails, sports courts, fields & diamonds, aesthetic amenities such as ornamental fountains and art sculptures.

Linear Infrastructure & Fleet
Includes support facilities or amenities, such as parking lots, bridges, park roads. Major equipment covers ferries and boats.

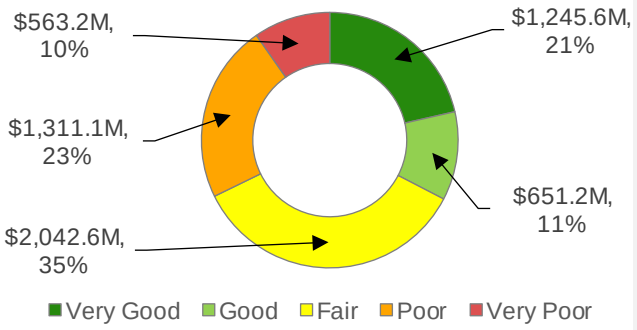
RECREATION

Facilities
Includes community recreation centre, arenas, aquatic centres, etc.

$6,291.0M
Replacement Value

Fair
Overall Performance

$115.2M
Annual Cost to Maintain LOS



Data
C
Maturity
C
Completeness
C
Confidence

Figure 1-7 Summary of Parks and Recreation Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Table 1-7 Parks and Recreation Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Parks & Outdoor Recreation	Amenities	3,460 assets and 534,003 m of trails	$1,289.100	Good	30	36
Parks & Outdoor Recreation	Fleet	9 boats and 5 ferries	$100.200	Poor	21	25
Parks & Outdoor Recreation	Linear Infrastructure	690 assets and 45,811 m of roads and seawall	$375.500	Good	41	31
Recreation	Facilities	617 Buildings	$4,526.200	Fair	50	80

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-8 Parks and Recreation Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	5-Year Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value. Total 5-year cost of needed repairs and renewals divided by replacement value of assets.
Amenities	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Fleet	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Linear Infrastructure	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.3.1.2.2 Performance Rating

Table 1-9 Parks and Recreation Performance Category Mapping.

Performance Category	Amenities, Fleet and Linear Infrastructure (Life Consumed)	Facilities (5-Year FCI)
Very Good	0% to 35%	0% to 5%
Good	35% to 60%	5% to 15%
Fair	60% to 85%	15% to 30%
Poor	85% to 100%	30% to 60%
Very Poor	>100%	>60%

1.3.2 Levels of Service

Table 1-10 Parks and Recreation Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Availability	Parks, facilities, and green spaces are created and enhanced to respond to the City's growth and evolving use (Strategic Directions).	PFR is managing risks associated with City growth and changing use through targeted asset enhancements, creation of new parkland, and other strategies as part of the updates to the Facilities Master Plan and Parkland Strategy.
Environmental Sustainability	Greener infrastructure and operations, and a healthy and resilient urban forest, ravine, and parkland system, that conserve and enhance biodiversity and ecosystem functions and mitigate and adapt to climate change (Strategic Directions).	PFR is currently seeking to better understand climate vulnerabilities to identify and plan actions that mitigate or adapt to climate change, such as reducing GHG emissions, implementing the Ravine Strategy, and planting, protecting and maintaining trees across the City.
Accessibility	Equitable access to inclusive, affordable and welcoming recreational facilities and programs, parks, green spaces and urban forest (2024 Budget Notes, Strategic Directions).	PFR continues to improve equitable access and enhance the equity of its programs and spaces by developing new equity-focused data tools to better identify, understand, and respond to barriers, and guide geographic prioritization of investments. PFR designs new facilities and completes major rehabilitations to existing facilities to meet Toronto Design Accessibility Guidelines.
Quality	High-quality recreation facilities and programs, parks, green spaces and urban forest (2024 Budget Notes, Strategic Directions).	PFR has a significant state of good repair backlog and is striving to improve the quality of its aging infrastructure through enhanced inter-branch capacity and coordination, proactive condition assessments and predictive maintenance, and limiting unplanned service disruptions by identifying critical and time-sensitive asset repairs.

Table 1-11 Parks and Recreation Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Availability	# of registrations.	Facilities, Recreational Amenities	422,000
	# of bookings in recreation facilities.	Community Recreation Centres	122,000
	# of bookings in parks (for picnics, sports fields, etc.).	Recreational Amenities	163,000
	# of permit hours.	Community Recreation Centres	368,442 (2022)
Sustainability	Annual Greenhouse gas emissions from City-owned PFR buildings.	Facilities	26,471 tCO2e (2018-2022 annual average)
Accessibility	# Registrations supported by Welcome Policy.	Facilities, Recreational Amenities	10%
	Winter washrooms operational.	Outdoor Recreation facilities (park washrooms), Special Facilities	152[3]
Quality	% of Assets in fair or better performance.	Facilities, Amenities, Infrastructure and Major Equipment	~62%
	Facility Condition Index.	Facilities	20%
	State of Good Repair Backlog for parks and facilities.	All assets	805.3 million
	% of residents satisfied with park washrooms.	Outdoor Recreation facilities (park washrooms), Special Facilities	75% (2022)

1.3.3 Lifecycle Management Activities

The Parks, Forestry and Recreation assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

One of the City's Strategic Plan priorities is to tackle climate change and build resilience. The Net Zero Strategy builds on the City's initial TransformTO Strategy with a goal to drive down GHG emissions. PFR plans to factor in climate mitigation design considerations as part of State of Good Repair prioritization, such as renewable energy system projects and energy efficiency upgrades. As part of service improvement and growth projects, the City has adopted climate resilient design standards for new and existing facilities that implement the highest tiers of the Toronto Green Standard.

[3] Includes 51 portable toilets and 27 artificial ice rink buildings.

For adaptation strategies, the City has developed a Heat Relief Strategy which provides education and services to vulnerable groups at increased risk for heat-related illnesses. PFR's responsibilities include:

- Providing information with telephone numbers and locations of City Parks and services where people who are homeless can go to cool down;
- Maintain PFR facilities being used as cool spaces as part of the Heat Relief Network; and
- Operate additional facilities and extended hours of cooling, including community centres, recreation facilities, swimming pools and splash pads.

PFR has also identified flood vulnerable assets and has planned for resiliency improvements to protect shorelines from the increased impacts of windstorms and flooding. Funding is provided through the Disaster Mitigation and Adaptation Fund, which is a federal program for new infrastructure or reinforcement of existing infrastructure that prevent, mitigate or protect against the impacts of climate change.

1.3.5 State of Good Repair Performance and Investment Forecasts

The renewal costs required to maintain the existing service levels current service levels is estimated to be an average of $112.7 million per year. The estimated amount of renewal funding available over the next 10 years is based on the funding available for SOGR projects in the City's 10-Year Capital Plan, excluding $5 million per year dedicated to critical imminent service disruption contingencies. The funding available for renewal is $85.7 million per year over the next 10 years, resulting in an estimated annual infrastructure gap of $27.0 million, as shown in Figure 1-8.

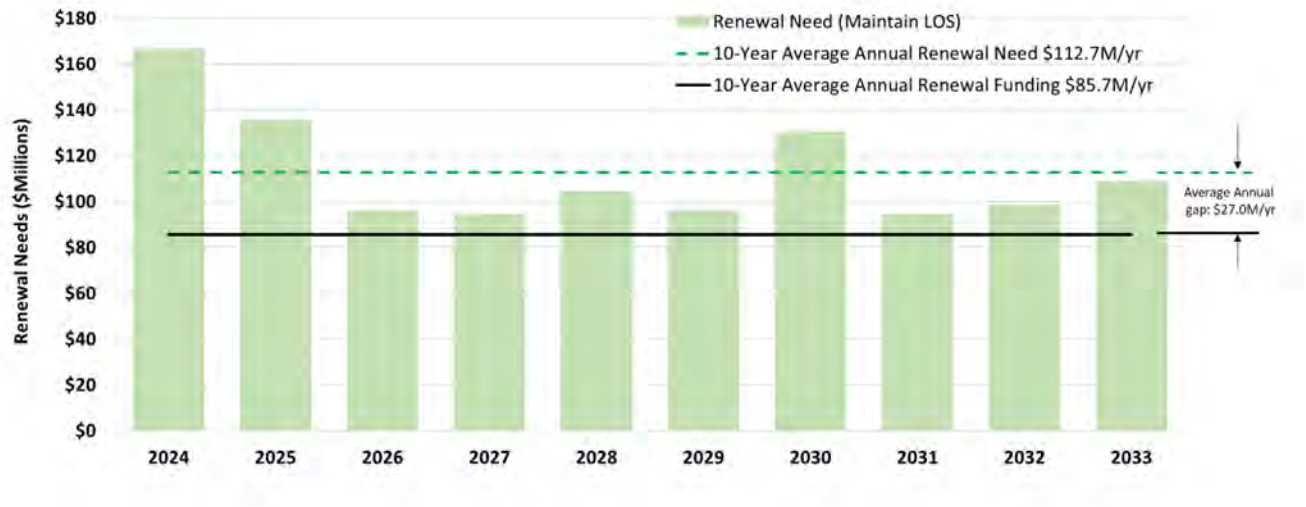


Figure 1-8 Parks and Recreation Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-12 and Figure 1-9. Figure 1-9 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-12 Parks and Recreation Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.070	$0.070
State of Good Repair	$85.700	$112.700
Service Improvement	$87.000	$113.100[4]
Growth Related	$145.100	$145.100
Operating	$219.000	$219.000
Total Expenditures	**$536.900**	**$590.000**
Infrastructure Gap		**$53.100**
SOGR Infrastructure Gap		**$27.000**

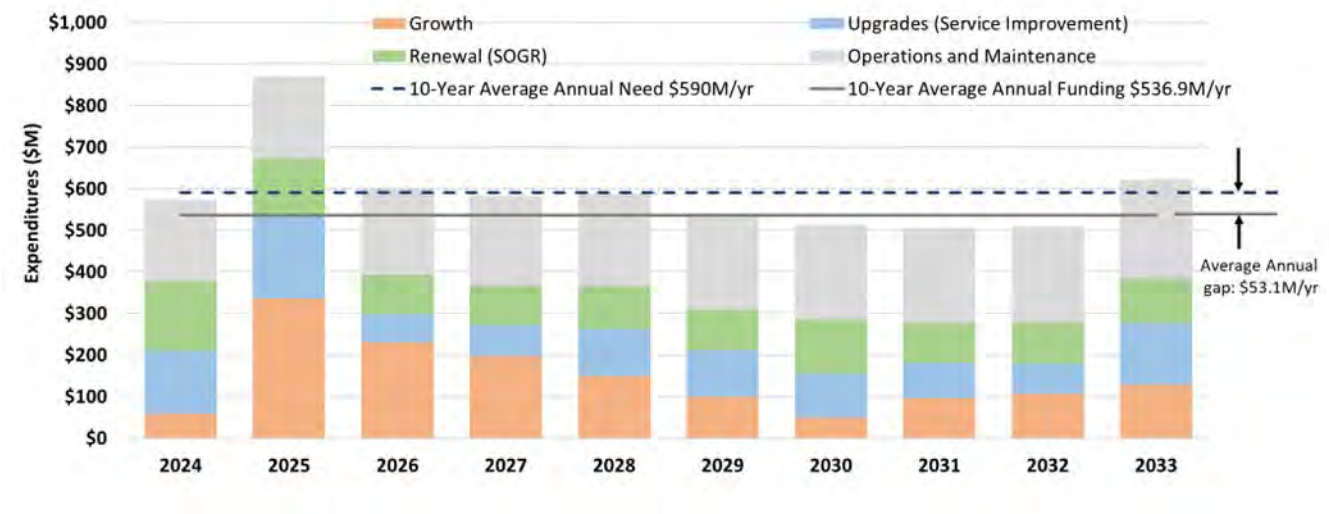


Figure 1-9 Parks and Recreation Scenario Comparison.

[4] PFR have identified a service improvement gap. This goes beyond the cost to maintain current LOS and will be further explored when proposed LOS are required by O.Reg.588/17.

1.3.7 Conclusion

Valued at $6.3 billion, the City's Parks and Recreation assets are overall in good performance. Data maturity is rated as medium where it could be enhanced from improvements to the accuracy of FCI data, inventory completeness (ferry dock, retaining wall, seawall, wave deck, park lighting and fencing), accuracy of replacement cost values, and regular condition assessments. Currently, 67% of park and recreation assets are in fair or better performance. Under current planned SOGR investments of $85.7 million annually, this LOS is forecasted to decrease over a 10-year period. The cost to maintain current LOS requires an annual SOGR investment of $112.7 million over the next 10-year period. Figure 1-9 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $27.0 million annually over the next decade.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. PFR has identified a service improvement gap of $26.1 million annually over the 10-year period. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.4 Toronto Zoo

Toronto Zoo is a City agency that operates, manages, and maintains the City of Toronto's Zoo. The Toronto Zoo is the largest in Canada, home to over 3,000 animals representing over 280 species on more than 500 acres of land next to Canada's Rouge National Urban Park.

Toronto Zoo's mission is to connect people, animals and conservation science to fight extinction. Service Statement

The Toronto Zoo strives to be an iconic guest destination that provides incredible guest experiences and connects people, animals, and conservation science to fight extinction. We base our objectives around four (4) cares:

1. We care about our animals.
2. We care about our team.
3. We care about our guests.
4. We care about our community.

Asset Breakdown

ADMINISTRATION AND OPERATIONS

Equipment
Includes animal equipment, facilities and maintenance equipment and IT equipment.

Facilities
Includes administrative buildings, animal off-exhibit yards, animal support buildings, facilities, and maintenance buildings.

Fleet
Includes heavy duty vehicles and light duty vehicles.

GUEST EXPERIENCES

Facilities
Includes animal habitats, attractions, concessions and guest areas, event spaces, information and education centres, and retail facilities.

Fleet
Includes zoo mobile.

SITE WORKS

Facilities
Includes parking lot and other parking infrastructure.

Linear Infrastructure
Includes electrical infrastructure, fencing, lighting, natural gas, paths, sidewalks, roads, stormwater, wastewater, and water.

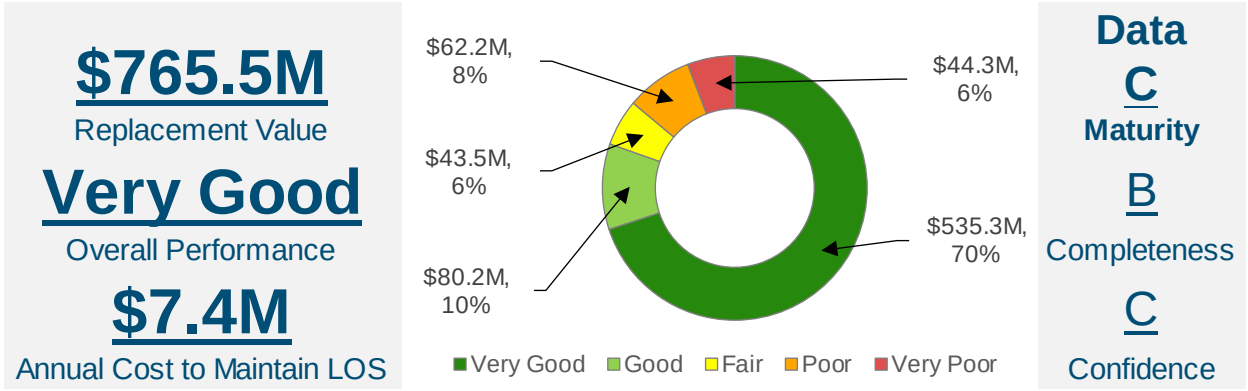


Figure 1-10 Toronto Zoo Summary of Assets.

1.4.1 State of Infrastructure

1.4.1.1 Asset Summary

Table 1-13 Toronto Zoo Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Administration and Operations	Equipment	1,624 Assets	$9.232	Very Good	4	33
Administration and Operations	Facilities	68 Buildings	$92.340	Very Good	40	50
Administration and Operations	Fleet	85 Vehicles	$4.695	Fair	9	12
Guest Experiences	Facilities	41 Buildings	$439.149	Very Good	49	50
Guest Experiences	Fleet	43 Assets	$4.589	Poor	22	13
Site Works	Facilities	2 Pools of Assets	$12.500	Very Poor	47	30
Site Works	Linear Infrastructure	11 Pools of Assets	$203.700	Fair	43	53

1.4.1.2 Asset Performance

1.4.1.2.1 Condition Assessments

Table 1-14 Toronto Zoo Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building condition assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Fleet	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Equipment	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Linear Infrastructure	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.4.1.2.2 Performance Rating

Table 1-15 Toronto Zoo Performance Category Mapping.

Performance Category	Equipment, Fleet and Linear Infrastructure (Life Consumed)	Facilities (FCI)
Very Good	0% to 33%	0% to 3%
Good	33% to 67%	3% to 5%
Fair	67% to 100%	5% to 10%
Poor	100% to 133%	10% to 30%
Very Poor	>133%	>30%

1.4.2 Levels of Service

Table 1-16 Toronto Zoo Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable; Safe	Animal habitats and other buildings used to house animals are appropriate and well maintained to ensure animal well-being.	Staff work to ensure that animal habitats and facilities are not only appropriate but also meticulously maintained to meet the highest standards of care.
Reliable; Safe	Exhibits and facilities are open as scheduled and that guest/staff safety is paramount.	We are committed to maintaining regular hours of operation for all exhibits and facilities, ensuring that visitors have access to enriching and educational experiences as planned. Our Public Safety Committee and Joint Health & Safety Committee works diligently to implement comprehensive safety protocols and procedures to minimize risks and hazards throughout the zoo.
Accessible	The Zoo is family-friendly and accessible for all groups of people.	We measure and strives towards making spaces AODA compliant. The Master Plan identifies projects and timelines required to achieve this objective and is actively working towards full compliance.
Environmentally Sustainable	Facilities have minimal impact on the environment.	A Net Zero plan has been identified to ensure all of its facilities are constructed to net zero.

Table 1-17 Toronto Zoo Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Equipment	91%
		Facilities	98%
		Fleet	59%

1.4.3 Lifecycle Management Activities

The Toronto Zoo assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.4.4 Climate Change

As of 2023, actions taken by Toronto Zoo to combat Climate Change include:

- Reduced annual greenhouse gas emission 48% below 1990 levels;
- Reduced annual potable water consumption 45% below 1990 levels;
- Purchased clean renewable power to offset 13% of our greenhouse gas emissions annually;
- Net zero carbon conservation programs and special events;
- Added systems to utilize grey water;
- Diverted 66% of waste from landfill;
- Purchased food and supplies produced locally and using environmentally sound practices; and
- Implemented sustainable construction and landscaping practices at the Wildlife Health Centre.
- Committed to Net Zero Emission Construction Practices.

1.4.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $18.5 million and results in the performance forecast illustrated in Figure 1-11[5]. Under this scenario, the percentage of assets in fair or better performance increases from 99% to 100% by the end of the 10-year forecast period, which represents an increase to service levels.

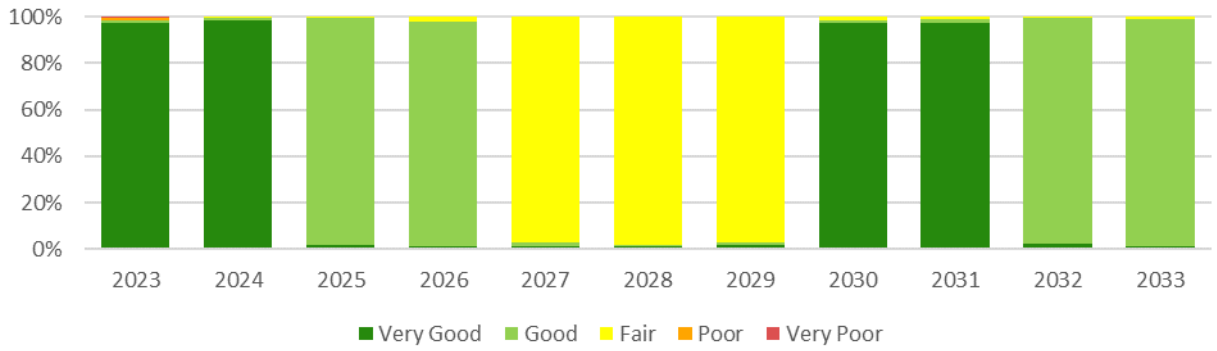


Figure 1-11 Toronto Zoo Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 86% assets in fair or better performance was determined to be $7.4 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-12.

[5] The performance forecast excludes animal, maintenance, and horticulture equipment, and site works assets because no inventories were available. High level estimates were used to determine the cost to maintain LOS.

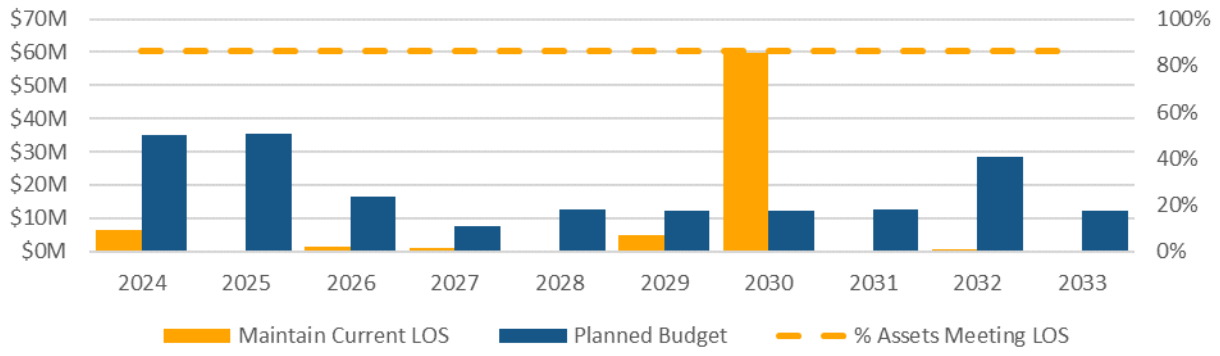


Figure 1-12 Toronto Zoo Expenditure Forecast for Maintaining Current LOS.

1.4.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-18 and Figure 1-13. Figure 1-13 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that no additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-18 Toronto Zoo Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$18.476	$7.424
Service Improvement	$2.875	$2.875
Growth Related	$0.000	$0.000
Operating	$71.865	$71.865
Total Expenditures	**$93.216**	**$82.180**
Infrastructure Gap		**$0**

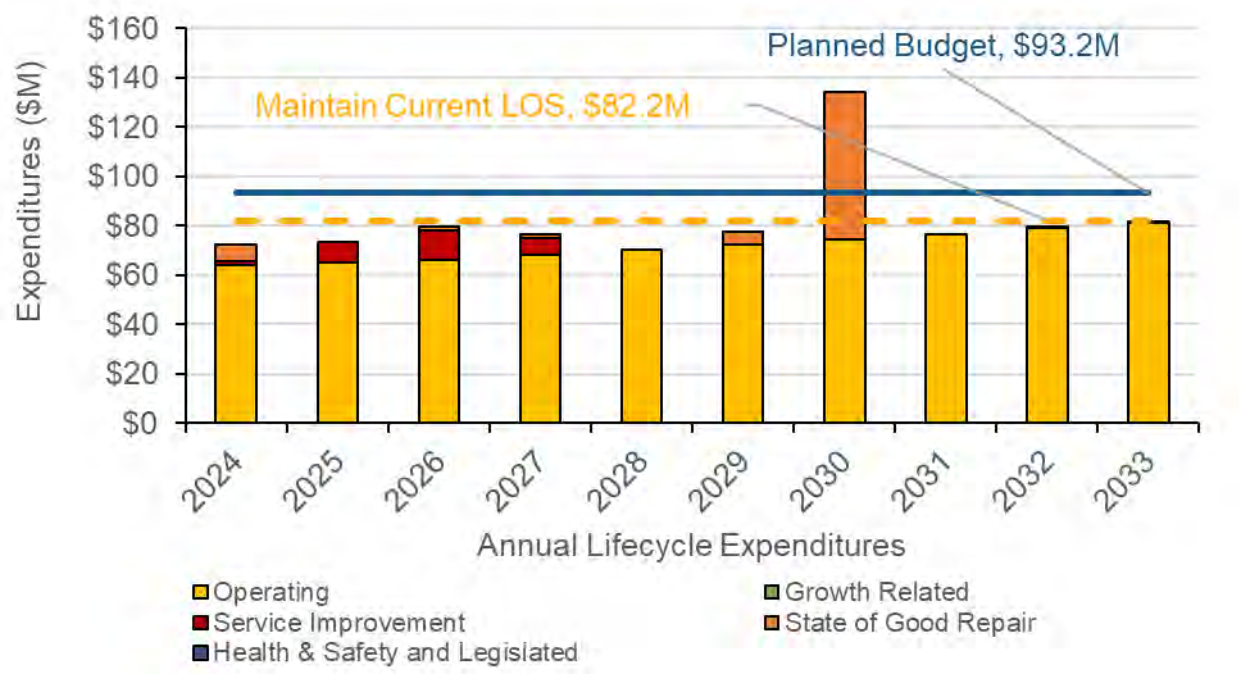


Figure 1-13 Toronto Zoo Scenario Comparison.

1.4.7 Conclusion

Valued at $765.5 million, the Toronto Zoo assets are overall in very good condition. Data maturity is low and could be improved from developing a fulsome inventory of its various assets. Facility Inventory data in particular was detailed, and comprised of facility level data that was obtained and updated through a regular building condition assessment process. Under the current planned SOGR funding of $18.5 million, service levels are anticipated to increase over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX G

Service Summary – Transportation

1.0 Transportation

1.1 Summary

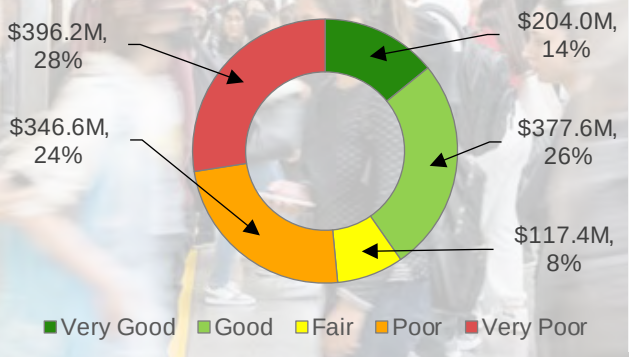
The City of Toronto provides a variety of transportation services to the community, through two primary subservice areas: the Road Network subservice is provided through the City's Transportation Services Division, and the Transit service is provided by the Toronto Transit Commission (TTC). The infrastructure assets critical to ensuring service delivery are comprised mainly of amenities, facilities, fleet, linear infrastructure, structures and systems which support the mobility and accessibility of residents and visitors travelling throughout the city. The total replacement value of this asset portfolio is $26.5 billion.

A summary of the replacement value and condition of the assets within this service area and the associated asset hierarchy are provided below.

$26,541.8M
Replacement Value

Fair
Overall Performance

$3,107.2M
Annual Cost to Maintain LOS



Data
D
Maturity
A
Completeness
C
Confidence

Figure 1-1 Summary of Transportation Assets.[1]

[1] The overall performance, performance graph, and data maturity only includes Road Network assets. Information on Transit Services can be found in the 2024 TTC Asset Management Plan.

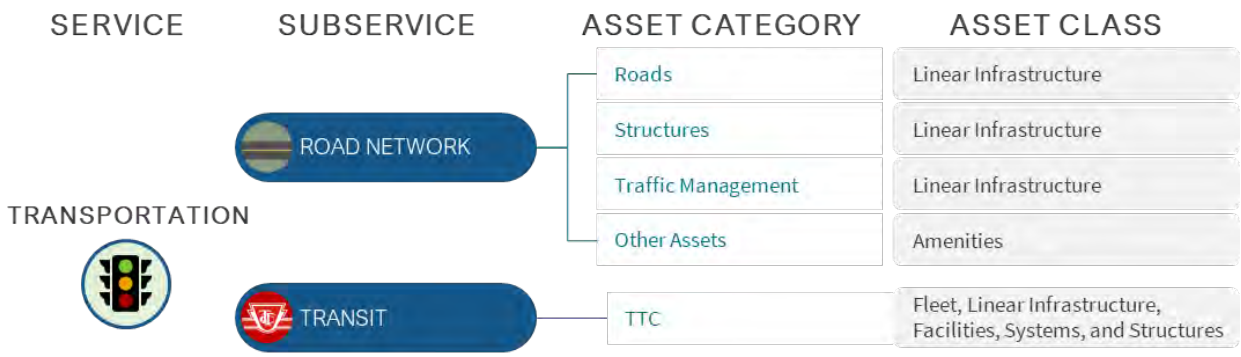


Figure 1-2 Transportation Asset Hierarchy.

1.2 Road Network

Transportation Services plans, constructs and manages the transportation infrastructure within the public right-of-way, including the public realm, sidewalks and roads. The Division handles:

- Seasonal and year-round maintenance activities (e.g., road repair, snow clearing, salting, potholes, sidewalk maintenance, grass cutting, street sweeping, etc.).
- Traffic planning and right-of-way enforcement and management.
- On-street parking, construction, and event permits.
- Neighbourhood improvements, street furniture and graffiti management programs.
- Infrastructure and cycling planning, management and programming
- Road safety, traffic signals, street signs and pavement markings.

The Division's vision is to provide a safe, efficient, and effective transportation system that serves our residents, businesses, and visitors in an environmentally, socially and economically sustainable manner. Note that "core assets" defined by O.Reg.558/17 (roads, bridges and culverts) were reported in the City's 2021 Core Infrastructure Asset Management Plan.

Service Statement

Transportation Services strives to build and maintain Toronto's transportation networks so that:

- People and businesses are connected to a resilient and reliable transportation network where they can access opportunities and places that they value.
- People have access to streets in their communities that are complete, safe, equitable and vibrant.

Asset Breakdown

Roads
Linear Infrastructure
Includes cycling infrastructure and walkways.

Structures
Linear Infrastructure
Includes retaining walls.

Traffic Management
Linear Infrastructure
Includes pedestrian scale lighting, traffic calming, signals and signs.

Other Assets
Amenities
Includes street furniture such as transit shelters, benches, bike posts, and wayfinding structures.

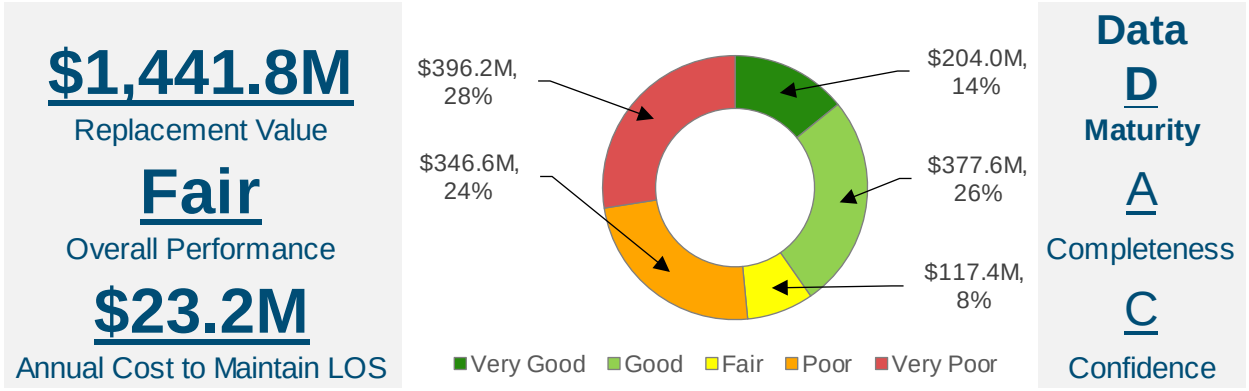


Figure 1-3 Road Network Summary of Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Road Network Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Roads (Cycling Infrastructure, Walkways)	Linear Infrastructure	709.4 KM	$697.124[2]	Fair	16	22
Structures (Retaining Walls)	Linear Infrastructure	12.6 KM	$41.000	Fair	42	63
Traffic Management	Linear Infrastructure	387,289 Assets	$677.377	Fair	41	25
Other Assets (Street Furniture)	Amenities[3]	17,356 Assets	$10.100	Good	10	20

[2] The replacement value for Cycling Infrastructure may account for portions of existing roads in some locations and those would have already been reported as a core Roads asset. This value is expected to be further refined in future reporting.
[3] The City-managed Bike Post & Ring Program. The total replacement value of Street Furniture is significantly higher with the balance of the program and assets maintained via a contract with Astral Media: https://secure.toronto.ca/council/agenda-item.do?item=2019.IE3.7

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Road Network Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Linear Infrastructure (Walkways/Pathways)	Pavement Quality Index (PQI)	Walkways and pathways assessments are performed annually for maintenance and on an ad-hoc basis for capital improvements. Condition is recorded using an industry best-practice condition rating methodology, which assigns a Pavement Quality Index (PQI) rating to each walkway/pathway segment based on observed condition. PQI ratings have a 100-point scale.
Linear Infrastructure (Retaining Walls)	Bridge Condition Index (BCI)	Retaining walls are assessed on a 2-year cycle along with the City's mandated Ontario Structure Inspection Manual (OSIM) inspections for bridges and culverts. A Bridge Condition Index (BCI) rating is developed for the retaining wall which reflects measures the observed condition of each element of the structure, as a proportion of the overall structure, by replacement cost. BCI ratings have a 100-point scale.
Linear Infrastructure	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.
Amenities	Life Consumed	Condition is not measured. Lifecycle needs are estimated based on asset age and estimated service life.

1.2.1.2.2 Performance Rating

Table 1-3 Road Network Performance Category Mapping.

Performance Category	Linear Infrastructure and Amenities (Life Consumed)	Linear Infrastructure - Walkways/Pathways (PQI)	Linear Infrastructure - Retaining Walls (BCI)
Very Good	0% to 33%	100% to 80%	100% to 85%
Good	33% to 67%	80% to 60%	85% to 70%
Fair	67% to 100%	60% to 45%	70% to 50%
Poor	100% to 133%	45% to 20%	50% to 40%
Very Poor	>133%	20% to 0%	40% to 0%

1.2.2 Levels of Service

Table 1-4 Road Network Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Accessible	Active transportation routes are easily accessible in all communities.	The active transportation routes, including sidewalks, bike lanes, multi-use paths, and pedestrian crossings, are designed to provide seamless connectivity and accessibility across all communities.
Reliable; Resilient; Safe,	The transportation network is operational, safe and well-maintained so that commuters have access to multiple methods of transportation and a high-quality experience i.e. Will be kept in good working condition	Through proactive maintenance programs, regular inspections, and responsive repairs, we strive to keep our road network in good working condition. By investing in technology, traffic management systems, and safety enhancements, we aim to enhance the reliability, safety, and efficiency of our transportation network.

1.2.2.1 Technical Levels of Service Table

Table 1-5 Road Network Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Quality; Safe; Sustainability	Percentage of assets in fair or better performance.	Linear Infrastructure	48%
		Amenities	100%

1.2.3 Lifecycle Management Activities

The Road Network assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

The City continues to develop and implement innovative policies and programs, inspiring the community to take action in response to climate change and make Toronto one of the most environmentally sustainable cities in the world. In alignment with our climate action plan, and our goal of improving the resilience and energy security of our city, Transportation Services has adopted strategies from programs such as TransformTO and ResilientTO. One of the key activities involves strategic planning and managing our green infrastructure network to increase environmental benefits by tackling climate change challenges through mitigation and adaptation[4].

[4] More information can be found at: https://www.toronto.ca/services payments/streets-parking-transportation/enhancing-our-streets-and-public-realm/green streets/

1.2.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $12.2 million and results in the performance forecast illustrated in Figure 1-4[5]. Under this scenario, the percentage of assets in fair or better performance decreases from 48% to 38% over the 10-year forecast period.

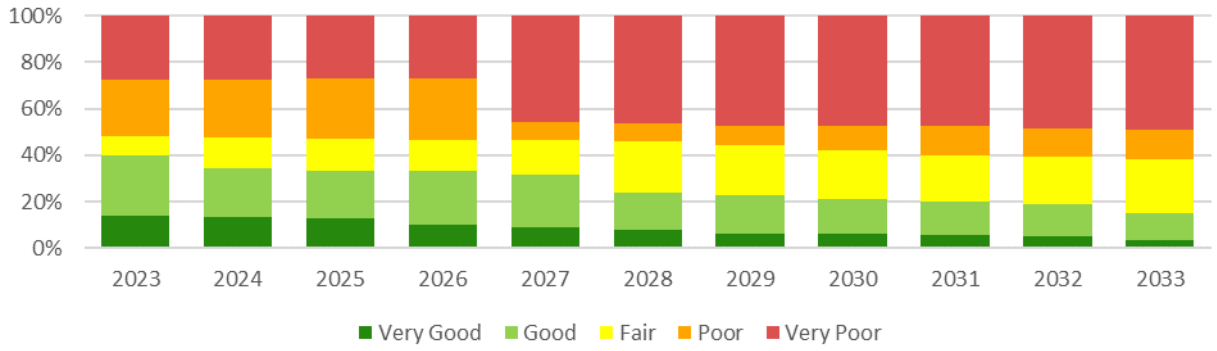


Figure 1-4 Road Network Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 48% of assets in fair or better performance was determined to be $23.2 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5.

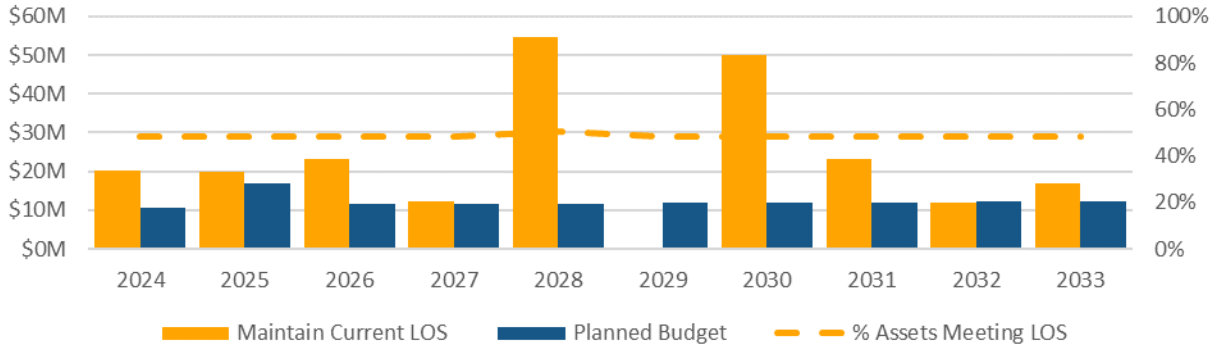


Figure 1-5 Road Network Expenditure Forecast for Maintaining Current LOS.

[5] The performance forecast excludes street furniture because no inventories were available. High-level estimates were used to determine the cost to maintain LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-6 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed by the City to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 in the AMP.

Table 1-6 Road Network Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$6.149	$6.149
State of Good Repair	$12.247	$23.202
Service Improvement	$34.367	$34.367
Growth Related	$1.430	$1.430
Operating	$49.674	$49.674
Total Expenditures	**$103.867**	**$114.822**
Infrastructure Gap		**$10.955**

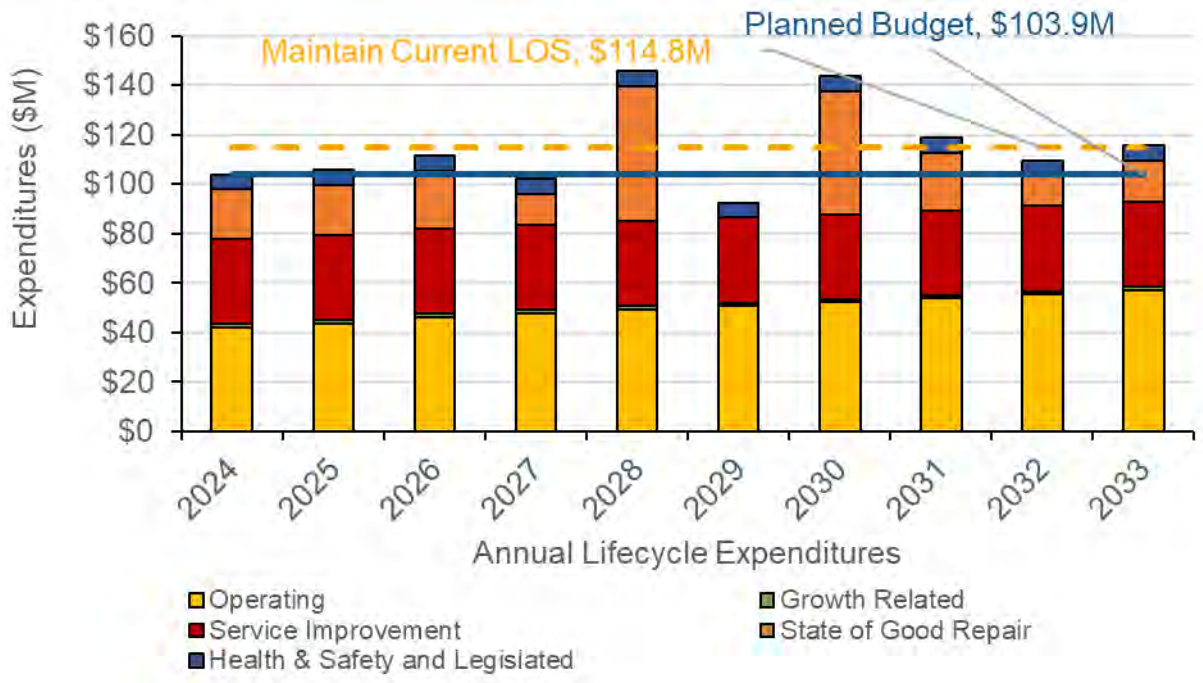


Figure 1-6 Road Network Scenario Comparison.

1.2.7 Conclusion

Valued at $1.4 billion, the City's Road Network assets (not including roads, bridges and culverts) are overall in fair condition. Data maturity is low due to the lack of detailed asset inventory records (historical data) and may not contain all pertinent information needed to complete the asset management analyses for this report. Under current planned SOGR investments of $12.2 million, service levels are anticipated to decline over the next 10-years. The cost to maintain current LOS requires an annual SOGR investment of $23.2 million over the next 10-year period. Figure 1-6 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $11.0 million annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Transit Services

The Toronto Transit Commission (TTC) is a City agency that provides public transit services to approximately 1.7 million daily commuters in Toronto and from surrounding municipalities. The TTC's mandate is to establish, operate and maintain the local passenger transportation system in the city of Toronto, which is the largest public transit system in Canada and the third-largest in North America. Public transit services are provided through the TTC's network of subways, light-rail vehicles, streetcars and buses. The TTC's Wheel-Trans service provides specialized door-to-door transit services for individuals with accessible transportation needs. The TTC also provides parking lots at its subway stations.

The state of infrastructure, levels of service, lifecycle management activities, climate change, and state of good repair section information can be found in the 2024 TTC Asset Management Plan that was approved by its Board on April 11, 2024.

Service Statement

To be a transit system that makes Toronto proud. To provide a reliable, efficient, accessible and integrated bus, streetcar, and subway network that draw its high standards of customer care from our rich traditions of safety, service and courtesy.

Asset Breakdown

TTC

Fleet
Includes Buses, Streetcars, Subway, Heritage Fleet, Surface Vehicles and Equipment, Rail Vehicles, and Industrial Equipment

Linear Infrastructure
Includes Subway Track, Streetcar Way, and Overhead Power.

Facilities
Maintenance and Administrative Buildings, Passenger Facilities, and Other Facilities

Systems
Communication, Signal, Electrical, Mechanical, and Other Systems.

Structures
Box Structures, Bored Tunnels, Stations, Bridges & Culverts, Overhead Structures, Retaining Walls, and Miscellaneous Structures.

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1.3.1 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-12 and Figure 1-10. Figure 1-10 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates that additional investment is needed for the TTC to continue to maintain current levels of service over the next 10 years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-7 Transit Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$102.606	$102.606
State of Good Repair	$720.176	$3,084.023
Service Improvement	$340.939	$340.939
Growth Related	$68.081	$68.081
Operating	$2,963.668	$2,963.668
Total Expenditures	**$4,195.470**	**$6,559.317**
Infrastructure Gap		**$2,363.847**

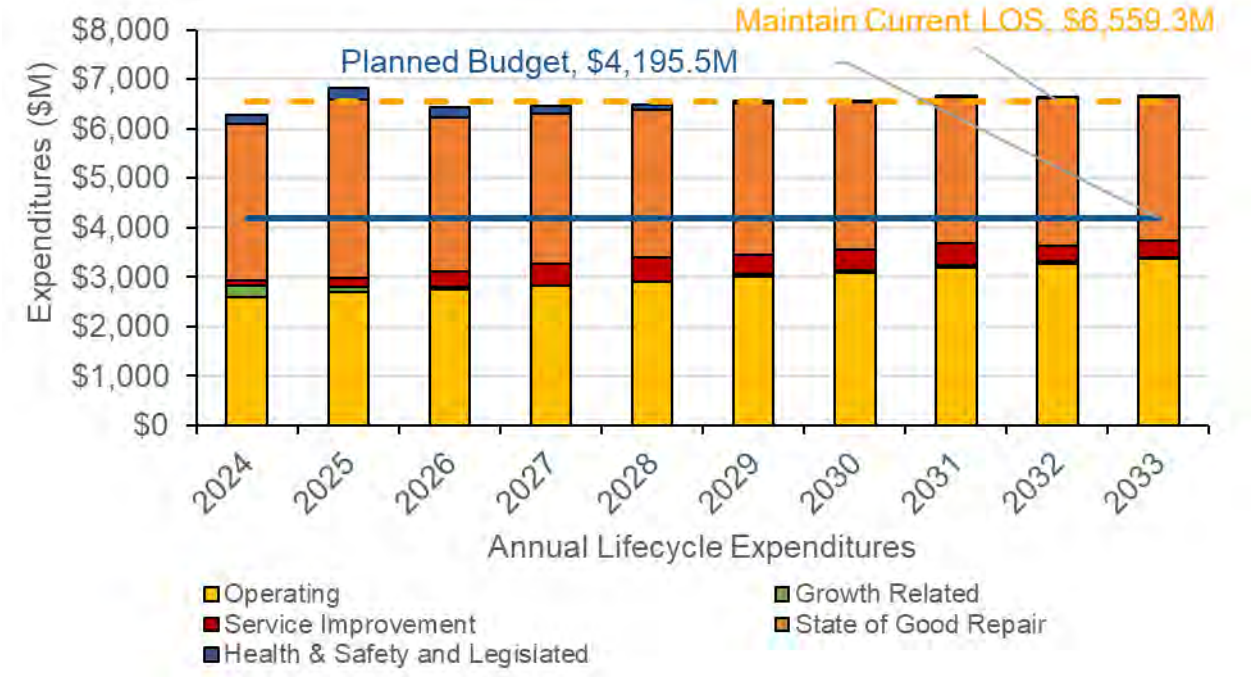


Figure 1-7 Transit Services Scenario Comparison.

1.3.2 Conclusion

Valued at $25.1 billion, the City's Transit Services asset performance spans from poor to excellent. TTC is working to improve data maturity over time and will be reflected in future iterations of their tactical AMP. Under current planned annual SOGR investments of $720.2 million, service levels are anticipated to continue to decline over the next 10-years. The cost to maintain current LOS requires an average annual SOGR investment of $3.1 billion over the next 10-year period. Figure 1-10 illustrates that maintaining current investment will result in a SOGR infrastructure gap of $2.4 billion annually over the next decade. Further analysis is required to verify these investment gaps and determine the impact to services delivered to staff and citizens. Additional details can be found in the 2024 Toronto Transit Commission Asset Management Plan.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. TTC may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. TTC will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.

City of Toronto

2024 Corporate Asset Management Plan

APPENDIX H

Service Summary – Utilities

1.0 Utilities

1.1 Summary

Utilities at the City of Toronto consist of several subservice areas, including:

- Drinking Water Treatment and Supply,
- Wastewater Collection and Treatment
- Stormwater Management; and,
- Solid Waste Management.

The first three subservice utility areas are managed by the Toronto Water Division. Several of the assets in these subservice areas are not included within the scope of this Corporate AMP, as they were covered in the City's 2021 Core Infrastructure AMP in alignment with the requirements for O. Reg. 588/17. The reporting for these subservice utility areas encompass Toronto Water's centralized services including yards, labs, and laboratory equipment (and fleet assets which are captured within the Fleet Services sub-service).

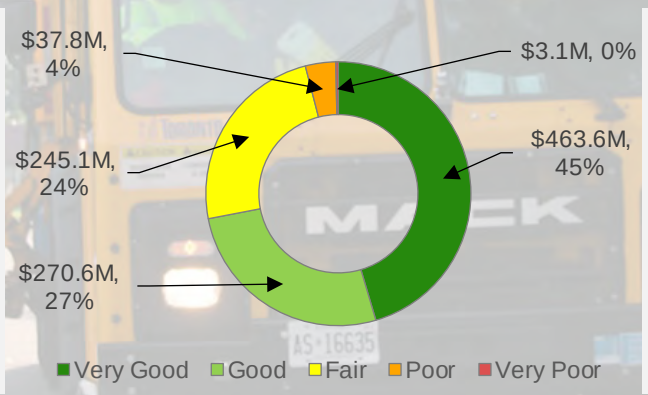
The Solid Waste subservice utility area is managed by the City's Solid Waste Management Services (SWMs) Division that is responsible for collecting, transporting, processing, and disposing of municipal and some private sector solid waste.

The total replacement value of this asset portfolio within the scope of this AMP is $1.02 billion. Please note that this value only includes assets within the scope of this 2024 AMP, and not those that were reported in the City's 2021 AMP. A summary of the replacement value and performance of the assets within this service area and the associated asset hierarchy are provided below.

$1,020.3M
Replacement Value

Good
Overall Performance

$26.1M
Annual Cost to Maintain LOS



Data
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Maturity
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Completeness
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Confidence

Figure 1-1 Summary of Utilities Assets.

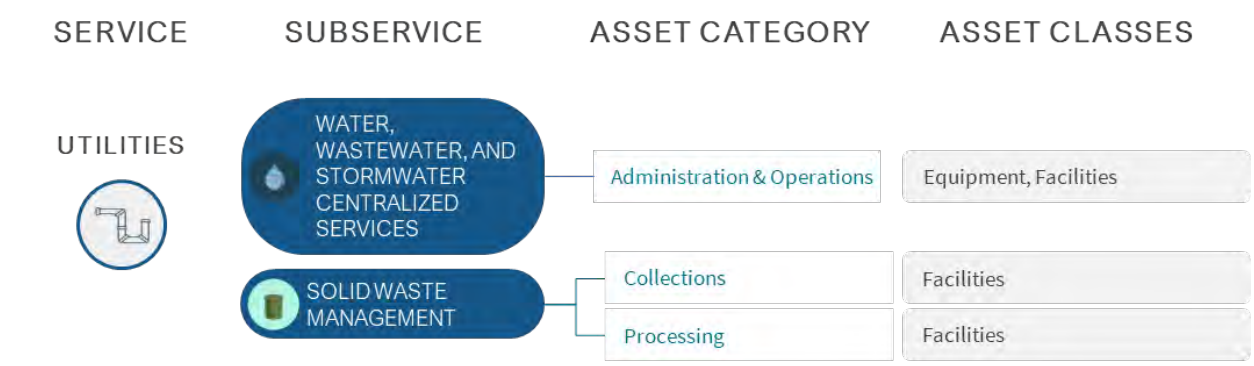


Figure 1-2 Utilities Asset Hierarchy.

1.2 Water, Wastewater, Stormwater Centralized Services

Water, Wastewater and Stormwater Centralized Services are supporting services, that are related to three of the primary utilities that are provided to the community: the Water, Wastewater and Stormwater Utilities. The Water, Wastewater and Stormwater Centralized services support the primary service delivery from these other utilities. These support services fall under the responsibility of Toronto Water Division, which is responsible for all aspects of drinking water treatment and supply, wastewater collection and treatment, and stormwater management.

Note that the primary assets for service delivery within the Water, Wastewater and Stormwater utilities were reported in City's 2021 Core Infrastructure Asset Management Plan. This AMP only addresses service support infrastructure: yards, labs, and lab equipment.

Service Statement

Centralized Services support the delivery of water, wastewater, and stormwater services to ensure that they can be provided to the community in a safe, reliable, and environmentally sustainable manner.

Asset Breakdown

ADMINISTRATION AND OPERATIONS

Facilities

Includes service support facilities such as laboratories and yards.

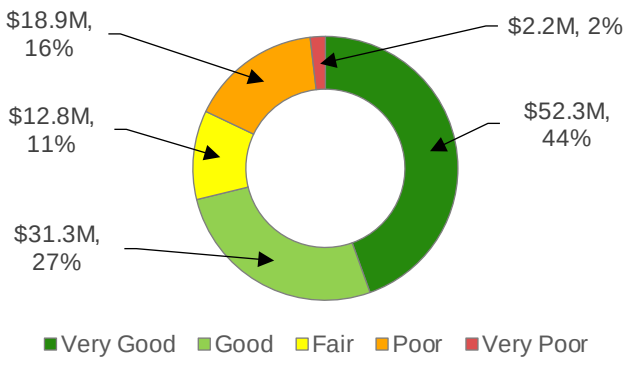
Equipment

Includes laboratory equipment.

$117.5M
Replacement Value

Good
Overall Performance

$0.9M
Annual Cost to Maintain LOS



Data
B
Maturity

A
Completeness

B
Confidence

Figure 1-3 Water, Wastewater, and Stormwater Centralized Services Summary of Assets.

1.2.1 State of Infrastructure

1.2.1.1 Asset Summary

Table 1-1 Water, Wastewater, and Stormwater Centralized Services Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Administration and Operations	Equipment	189 Assets	$2.908	Fair	16	17
Administration and Operations	Facilities	13 Buildings	$114.612	Good	49	100

1.2.1.2 Asset Performance

1.2.1.2.1 Condition Assessments

Table 1-2 Water, Wastewater, and Stormwater Centralized Services Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities	Facility Condition Index (FCI)	Building performance assessments (BCAs) are completed with a planned cycle of 5 years to understand asset needs within a building. Asset needs make up the FCI in relation to the facility's replacement value.
Equipment	Life Consumed	Performance is not measured. performance has been estimated based on asset age and estimated service life.

1.2.1.2.2 Performance Rating

Table 1-3 Water, Wastewater, and Stormwater Centralized Services Performance Category Mapping.

Performance Category	Facilities (FCI)	Equipment (Life Consumed)
Very Good	0% to 3%	0% to 33%
Good	3% to 5%	33% to 67%
Fair	5% to 10%	67% to 100%
Poor	10% to 30%	100% to 133%
Very Poor	>30%	>133%

1.2.2 Levels of Service

Table 1-3 Water, Wastewater, and Stormwater Centralized Services Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable, Safe	Yards are located to provide adequate distribution of services across the City and do not provide a safety concern to adjacent neighborhood.	The City maintains its yards in a state of good repair to ensure that it can service its infrastructure to continue providing reliable water, wastewater and stormwater services to the community.
	Labs provide organic, inorganic, and microbiological testing services for Toronto Water, and testing on request for Toronto and Region Conservation Authority (TRCA), Solid Waste, Children's Services, and Public Health.	The City maintains its labs and equipment in a state of good repair to ensure that testing can be completed in a timely manner to support the water, wastewater and stormwater services. The City monitors testing turn around time to ensure that it is achieving a high quality of service.
	Pollution to the environment is adequately controlled (Labs).	The City's enacts a number of measures to ensure that pollution to the environment is controlled. It ensures that hazardous waste is controlled and properly removed, as well as that any gaseous materials released into the environment from labs are also controlled. Refer to the technical levels of service below for additional details.

Table 1-4 Water, Wastewater, and Stormwater Centralized Services Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable; Safe	Percentage of assets in fair or better performance.	Facilities (Yards and Labs)	82.6%
		Equipment	62.0%
	Average FCI (Target is 25% or less).	Yards	5.9%
	Percentage of analyses completed within 14 days.	Lab equipment	94%
Environmentally Sustainable	Percentage of hazardous waste removed by certified professionals.	Facilities (Labs)	100%
	Percentage of fumehoods with functional carbon filters.	Facilities (Labs)	100%

1.2.3 Lifecycle Management Activities

The Water, Wastewater, and Stormwater Centralized Services assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.2.4 Climate Change

Actions taken by Water, Wastewater, and Stormwater Centralized Services to combat Climate Change include:

- The TransformTO Net Zero Strategy aims to reduce community-wide greenhouse gas emissions in Toronto to net zero by 2040.
- The 2024 Budget introduced a new “Carbon Accountability” system of tracking a reporting on the GHG impact of the City’s annual budget proposals, both capital and operating.
- The Resilience Strategy sets out a vision, goals and actions to help Toronto survive, adapt and thrive in the face of climate change and other challenges.

1.2.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $1.0 million results in the performance forecast illustrated in Figure 1-4. Under this scenario, the percentage of assets in fair or better performance increases from 82% to 84% over the 10-year forecast period, which represents a slight increase to service levels solely from the perspective of condition ranking applying a linear deterioration model. The lab equipment will also continue to meet current LOS for completing lab analyses.

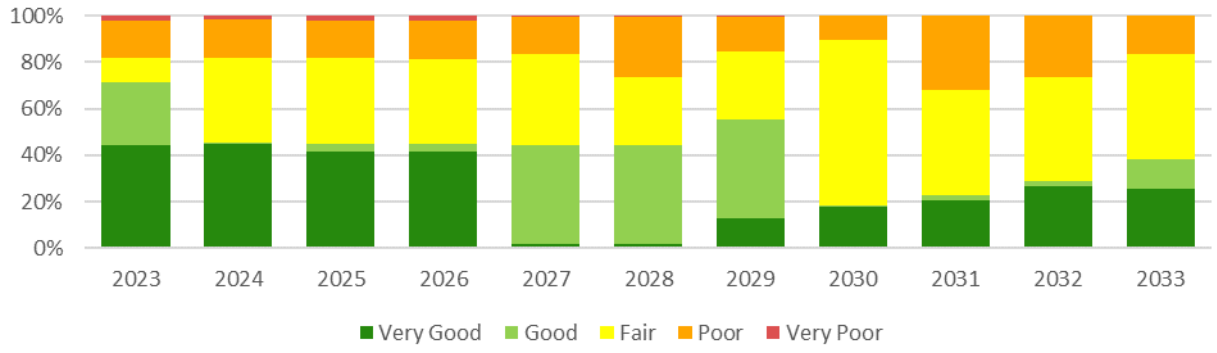


Figure 1-4 Water, Wastewater, and Stormwater Centralized Services Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 82% assets in fair or better performance was estimated to be $0.9 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-5 and aligns with the current planned budget.

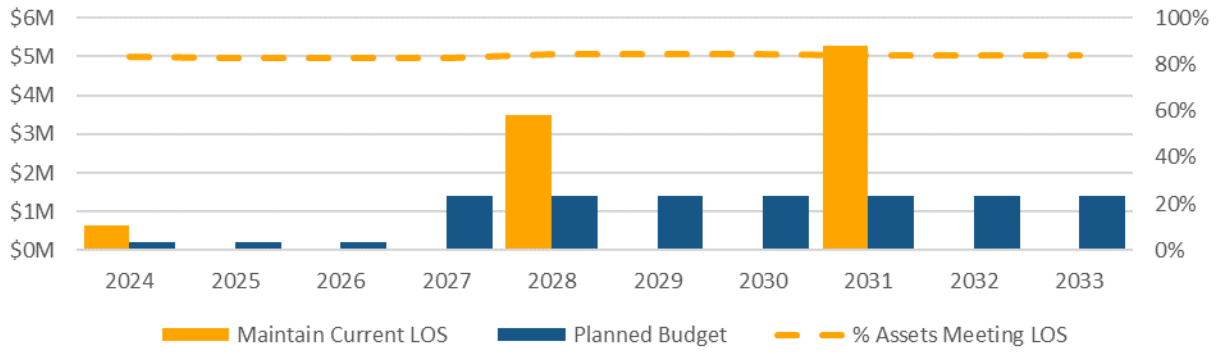


Figure 1-5 Water, Wastewater, and Stormwater Centralized Services Expenditure Forecast for Maintaining Current LOS.

1.2.6 Full Lifecycle Investment Forecast

The forecasting results for both scenarios are presented in Table 1-5 and Figure 1-6. Figure 1-6 illustrates a bar graph of forecasted expenditures for the maintain current LOS scenario. The bars in this figure are colour coded by lifecycle activity. In addition to the bar graph, solid and dashed lines on the figure illustrate the equivalent annual investments for both scenarios. The figure illustrates current planned investments are sufficient to continue to maintain current levels of service over the next 10-years.

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP.

Table 1-5 Water, Wastewater, and Stormwater Centralized Services Average Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$0.000	$0.000
State of Good Repair	$1.049	$0.940
Service Improvement	$5.432	$5.432
Growth Related	$0.000	$0.000
Operating	$0.000	$0.000
Total Expenditures	**$6.481**	**$6.371**
Infrastructure Gap		**$0**

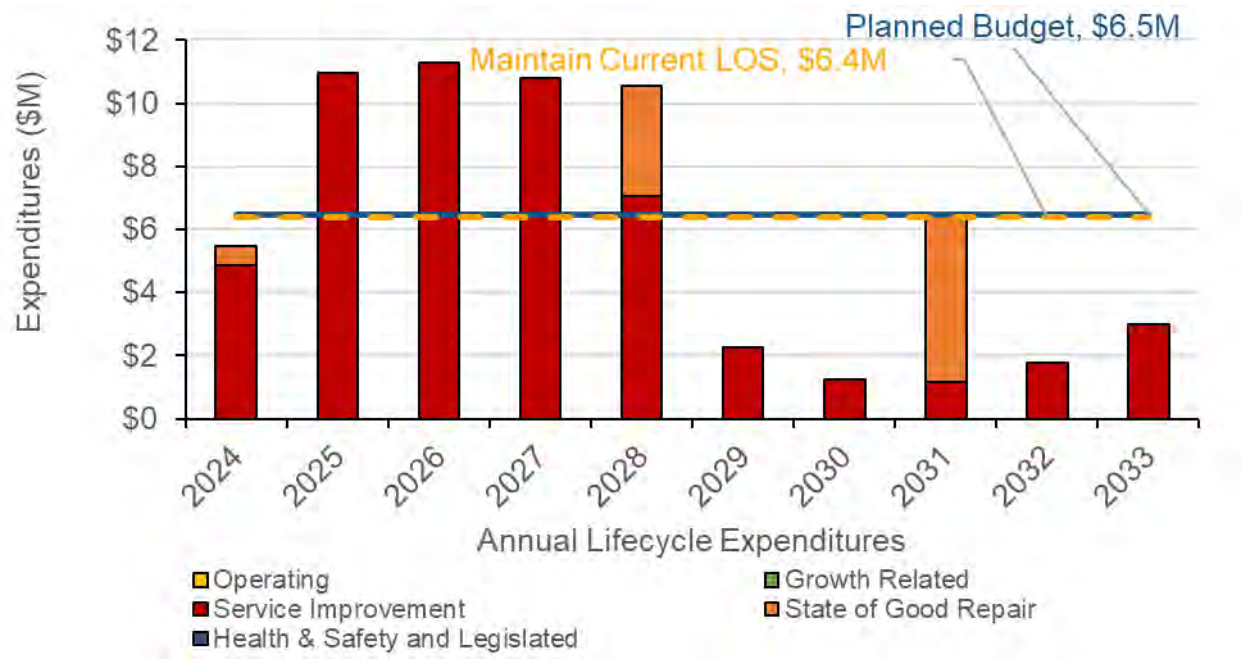


Figure 1-6 Water, Wastewater, and Stormwater Centralized Services Scenario Comparison.

1.2.7 Conclusion

Valued at $117.5 million, the City's Water, Wastewater, and Stormwater Centralized Services assets are overall in good performance. Under current planned funding of $1.0 million, service levels are anticipated to increase over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. As the City continues to refine its records and representation of assets, lifecycle activities, and levels of service, the resources necessary for achieving and maintaining target levels of service will be clarified and quantified. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analyses through the 2025 regulatory requirement, and in future iterations of the AMP to capture the full lifecycle investment need.

1.3 Solid Waste Management

Toronto Solid Waste Management Services Division is responsible for collecting, transporting, processing, and disposing of municipal and some private sector solid waste, including garbage, recyclables, organics, yard waste, electronics and household hazardous waste. The Division manages three collections yards, one maintenance yard, seven transfer stations, six household hazardous waste depots, two organics processing facilities, Green Lane Landfill and 160 former landfills.

Service Statement

Provide a safe, efficient, and reliable waste management program that supports city beautification and environmental sustainability, while developing staff and creating a culture of service excellence, planning for the future and advocating for the best interests of Toronto.

Asset Breakdown

COLLECTIONS

Facilities

Includes sites and associated buildings within Ingram, Yonge and Bermondsey Collection Yards.

PROCESSING

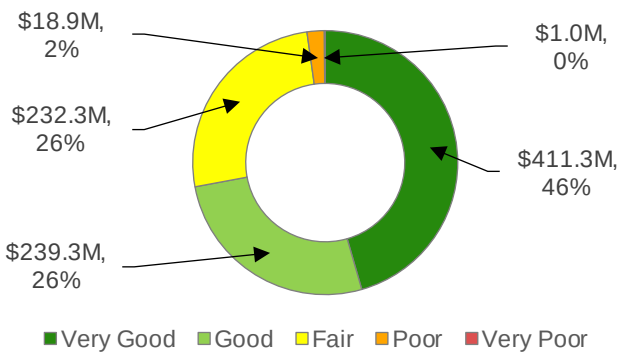
Facilities

Includes active landfill, closed landfill operations, organics processing facilities, transfer stations and all associated buildings and site works.

$902.8M
Replacement Value

Good
Overall Performance

$25.2M
Annual Cost to Maintain LOS



Data
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Maturity
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Completeness
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Confidence

Figure 1-7 Solid Waste Management Summary of Assets.

1.3.1 State of Infrastructure

1.3.1.1 Asset Summary

Table 1-6 Solid Waste Management Inventory and Valuation.

Asset Category	Asset Class	Quantity	Replacement Value ($M)	Average Performance	Average Age	Average ESL
Collections	Facilities	3 Facilities (Yards)	$63.388	Good	34	52
Processing	Facilities	13 Facilities (Sites)	$839.423	Good	24	46

1.3.1.2 Asset Performance

1.3.1.2.1 Condition Assessments

Table 1-7 Solid Waste Management Condition Assessment Approaches.

Asset Class	Condition Rating Metric	Approach to Assessing Condition
Facilities (Elements)	Remaining Life	Building performance assessments (BCA) are completed with a planned cycle of 5 years to understand asset needs within a building. Data is collected at the element level, and each element is assigned a performance rating and remaining life, based on the assessor's observations.

1.3.1.2.2 Performance Rating

Table 1-8 Solid Waste Management Performance Category Mapping.

Performance Category	Facilities (Elements) (Remaining Life)
Very Good	100% to 67%
Good	67% to 33%
Fair	33% to 0%
Poor	0% to -33%
Very Poor	<-33%

1.3.2 Levels of Service

Table 1-9 Solid Waste Management Customer Levels of Service.

Service Attributes	Customer Levels of Service	Current Performance
Reliable	Solid waste services are reliable, accessible and safe for customers.	SWMS ensures that assets are maintained in a state of good repair so that its solid waste facilities are open and available to receiving waste, and that all closed facilities (i.e. closed landfills) are regularly maintained and operating efficiently.
	Solid waste services have sufficient operating capacity to meet processing demands.	SWMS ensures that all facilities are designed with the appropriate capacity to meet demands.
Environmentally Sustainable	Solid waste services protect the environment and community while meeting operational requirements and limiting operational environmental impacts.	SWMS ensures that its facilities and processing systems are in compliance with all environmental compliance approvals (ECA) requirements and other regulations as required.
Community Stewardship	Solid waste services protect the community while meeting operational requirements.	SWMS monitors complaints received by the community and actively tracks their resolution. They have complaints recording procedures and response plans as per ECA and ensure that they adhere to all ECA procedures.

Table 1-10 Solid Waste Management Technical Levels of Service.

Service Attributes	Technical Levels of Service	Asset Class	Current Performance
Reliable	Percentage of assets in fair or better performance.	Facilities	97%
	Percentage uptime of critical assets (e.g. mechanical processing equipment and assets with direct support functions).in organics processing facilities.	Facilities	>90%
Environmentally Sustainable	Percentage of assets and services that comply with industry and environmental regulations.	All	100%
Community Stewardship	Adherence to Complaints Recording Procedure and Response Plan as per ECA for all received complaints from the public.	N/A	100%

1.3.3 Lifecycle Management Strategy

Solid Waste Management assets follow the overall lifecycle activities described in Section 8.0 (Table 8-1) of the AMP.

1.3.4 Climate Change

Transform TO is the City's climate action strategy aimed at reducing greenhouse gas (GHG) emissions and transitioning to a low-carbon, resilient city. The City's Solid Waste Management System (SWMS) plays a vital role in achieving these goals, as waste disposal, building and equipment energy requirements, and collection and transport of waste contribute to GHG emissions.

Priority actions regarding the City's SWMS climate action strategy include:

1) **Waste Diversion:** SWMS is undertaking several waste diversion strategies to reduce the need for landfill disposal and to minimize associated GHG emissions. Few of these initiatives include:
   - Undertaking public education campaigns to promote the use of the Green Bin and emphasizing the importance of proper waste sorting practices, while also continuing to provide Green Bins in parks with dog off-leash areas City-wide.
   - Implementation of Reducing Single-Use Program to help businesses eliminate the unnecessary use of single-use and takeaway items and support of stakeholder engagement via webinars.
   - Promotion and implementation of circular economy principles by launching a Circular Economy E-Updates Newsletter, engaging the development of a multi-year Circular Economy Road Map, and establishing an Internal Governance model to facilitate divisional co-creation and leadership in project advancement.
2) **Renewable Energy and Efficient Technology:** SWMS is implementing renewable energy generation technologies to help offset emissions and contribute to Toronto's renewable energy targets. One such initiative includes the generation of renewable natural gas (RNG) through the capture and utilization of biogas generated from organics processing facilities and landfill gas from City's landfills. SWMS is also working towards shifting away from carbon-based fuel to renewable energy sources for building and process equipment where feasible. These aspects are being factored in procurement of new assets and implementation of rehabilitation projects.
3) **Zero Emission Vehicles:** SWMS has been transitioning from diesel powered trucks to quieter and more environmentally friendly natural gas-powered trucks since 2010, when the first small scale pilot hit the road. To support the move away from diesel, the City also constructed compressed natural gas (CNG) fueling stations on SWMS sites to support the natural gas-powered fleet operations. In addition, where feasible, SWMS is transitioning its fleet to sustainable, climate resilient, net zero operations through the procurement of electric vehicles and installation of charging stations.
4) **Toronto Green Standard (TGS) v4 and Corporate Real Estate Management (CREM) Net Zero Carbon Plan:** Adherence to TGS v4 will allow for tracking of embodied carbon emissions and emphasize on zero-emission buildings, while the Net Zero Carbon plan focuses on reducing facility-related emissions. SWMS is currently working on integrating the Toronto Green Standard v4 and the CREM Net Zero Carbon Plan into its operations and capital projects, aligning with the City's commitment to reducing greenhouse gas emissions and achieving net zero by 2050. SWMS is working on implementing these standards into new constructions and rehabilitation projects, where feasible, to contribute effectively to the City's sustainability goals.

1.3.5 State of Good Repair Performance and Investment Forecasts

The forecasting analysis focused on the asset renewal (or state of good repair) needs where the current LOS was defined as a percentage of assets in fair or better performance. Based on the current planned budget, the average annual renewal investment of $27.9 million results in the performance forecast illustrated in Figure 1-8. Under this scenario, the percentage of assets in fair or better performance increases from 97% to 100% by the end of the 10-year forecast period, which represents an increase to service levels.

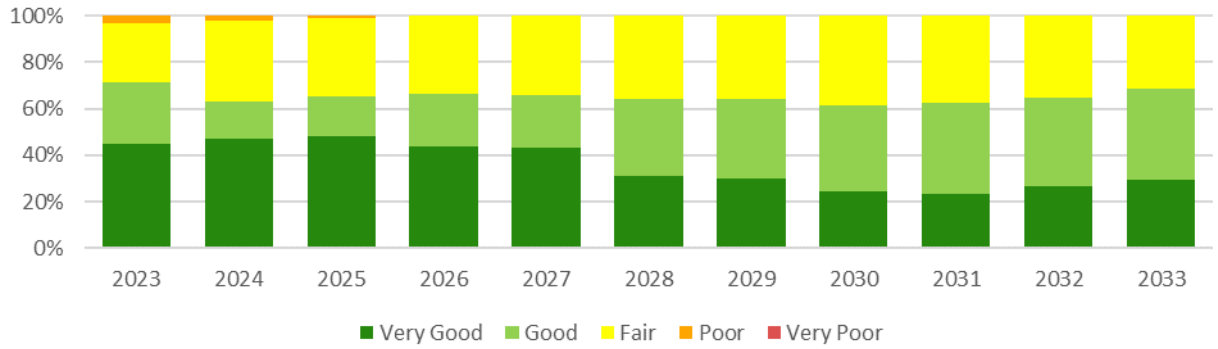

Figure 1-8 Solid Waste Management Performance Forecast for Current Budget.

The renewal costs required to maintain the existing service levels of 97% of assets in fair or better performance was determined to be $25.2 million annually over a 10-year period and resulted in the expenditure forecast illustrated in Figure 1-9.

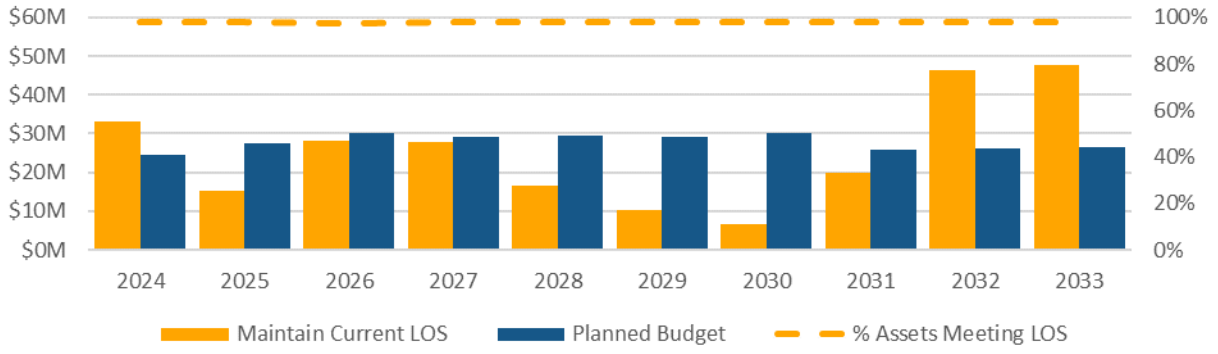

Figure 1-9 Solid Waste Management Expenditure Forecast for Maintaining Current LOS.

1.3.6 Full Lifecycle Investment Forecast

The following table and figure illustrate the full lifecycle investment forecasts, as described in detail in Subsection 11.3 of the AMP. This table and figure illustrate the current planned investments are sufficient to continue to maintain and exceed current levels of service over the next 10 years. The variance between the SOGR Planned Budget and the cost to maintain current LOS is due to the timing between when the Solid Waste Management Services Division's tactical AMP was prepared and when the 2024-2033 Capital Plan was developed.

Table 1-11 Solid Waste Management Annual Expenditures by Lifecycle Activity ($ millions).

Lifecycle Activity	Planned Budget	Maintain Current LOS
Health & Safety and Legislated	$72.446	$72.446
State of Good Repair	$27.873	$25.205
Service Improvement	$16.989	$16.989
Growth Related	$19.649	$19.649
Operating	$472.766	$472.766
Total Expenditures	**$609.723**	**$607.055**
Infrastructure Gap		**$0**

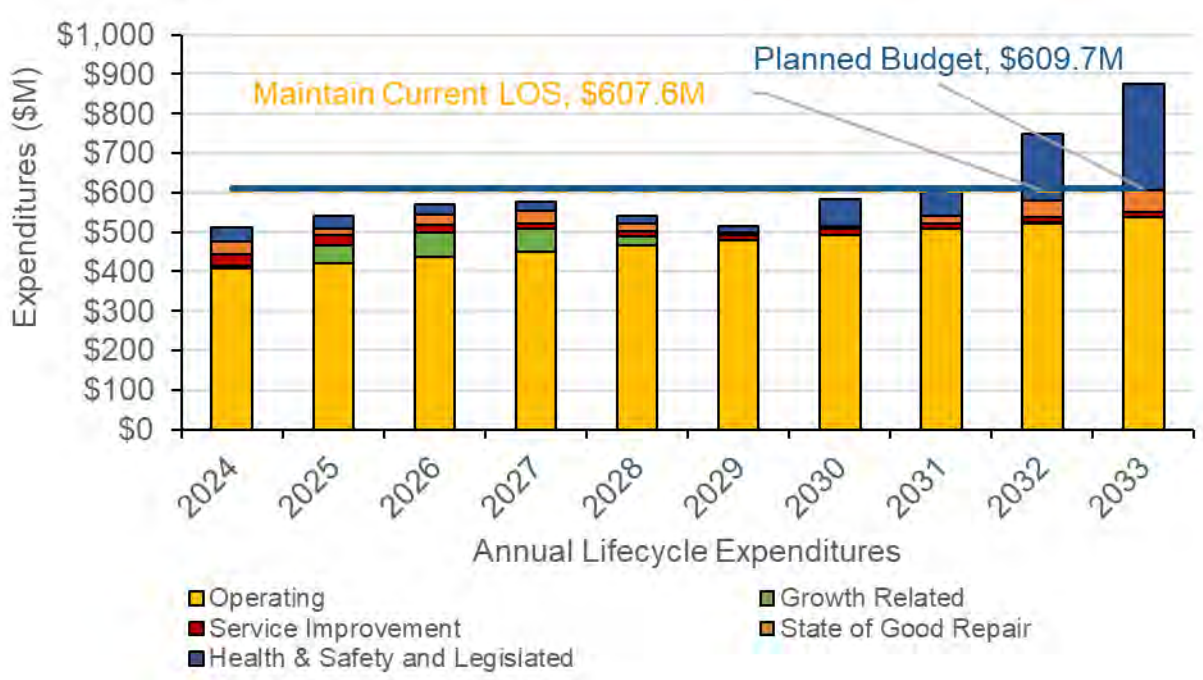

Figure 1-10 Solid Waste Management Scenario Comparison.

1.3.7 Conclusion

Valued at $902.8 million, the City's Solid Waste management assets are overall in good performance. Data maturity is high, indicating confidence in this value. Inventory data was detailed and was comprised of element level data that was obtained and updated through a regular performance assessment process. Under current planned funding of $27.9 million, service levels are anticipated to increase over the next 10-years and therefore, an infrastructure gap between planned investments and the cost to maintain current service levels was not identified.

As noted in the Asset Management Plan Overview, this AMP focused on identifying the SOGR or renewal need for infrastructure investments to continue providing current service levels. The City may be experiencing investment gaps from the other lifecycle activities and should work towards quantifying the true cost to maintain current LOS as a whole. This will allow for better alignment of planned budgets to the lifecycle activities articulated in this AMP. The City will continue this work and analysis through the 2025 regulatory requirement, that can be included in future iterations of the AMP to capture the full lifecycle investment need.