

MAY 2025

VERSION 2.0

Library Services Asset Management Plan



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Introduction

1.1 BACKGROUND

Ontario Regulation 588/17: Asset Management Planning for Municipal Infrastructure (Sections 5 and 6) requires all municipalities to prepare asset management plans for all their assets. The purpose of this legislation is to have municipalities demonstrate they can maintain their assets, balancing affordability, risk, and service levels over the next 10 years.

To meet the provincial requirements, the City has created this latest version of its Library Services Asset Management Plan. It reports the current state of the assets, target and expected levels of service, strategies and activities applied by the City and Ottawa Public Library (OPL), historical and forecasted financial details, risks and non-financial strategies, and potential improvement actions. It is a strategic document that provides a snapshot of current conditions and establishes a basis for future asset management planning and decision making.

1.2 SUPPORT FOR CITY GOALS

This Asset Management Plan supports Ottawa Public Library's 2023-2028 Strategic Plan and actions required so that OPL remains client-focused and responsive to community needs. The Strategic Plan outlines the following directions and priorities:

- Redesign the Library Experience.
- Build Organizational Capacity.
- Demonstrate the Value of OPL.

The City and the OPL Board have an array of strategic, long-term planning documents and the Library Services AMP is aligned with the plans, policies and other strategic documents that address Library Services, including the Ottawa Public Library Financial Framework, the Ottawa Public Library Service Delivery Framework 2022, and the Ottawa Public Library Facilities Framework 2022.



1.3 ASSET CLASSES AND TYPES

The regulation requires that for each asset category a summary of the assets is provided. The Library Services Asset Management Plan includes assets that support the delivery of collections, expertise, programs, spaces, and tools through three channels: facilities, virtual (e.g., website), and mobile (e.g., bookmobiles, home delivery service, etc.).

Library Services Asset Classes and Types

Library Collection

- Audio Visual
- Print Resources
- Miscellaneous Library Collection

Library Facilities

- Library Materials Centre
- Library Branch Components¹
- Library Branches

Library Fleet

- Bookmobile Fleet
- Other Library Fleet

The Asset Management Plan does not include electronic assets that the City or OPL do not own, such as eBooks.

¹: Library Branch Components includes automated material handling systems, Imagine / Creative Spaces, induction bins, kiosks, library equipment, and security technology.



State of Local Infrastructure

The regulation requires that for each asset category a summary of the replacement costs, average age of the assets, information available on the condition and a description of the municipality's approach to assessing condition is provided. The values in this section are based on asset data from January 2023.

2.1 ASSET INVENTORY AND VALUATION

The total replacement cost of Library Services assets is approximately \$214 million as summarized in the table below.

Library Services Asset Inventory and Replacement Cost

Asset Class	Inventory	Replacement Cost (millions; 2023\$)
Library Collection	1,549,593	\$37
Library Facilities (branches ^{2,3} , materials centre and building components) ⁴	365	\$174
Library Fleet	9	\$2

2: Library branches located in a facility shared with another service are captured in the Asset Management Plan for that service (e.g., a library branch co-located with a recreation complex is captured in the Recreation and Cultural Services Asset Management Plan).

3: Library Facilities includes five library branches owned by the Ottawa Public Library Board.

4: The new Central branch at Ādisōke has not been included within the inventory as this facility is not currently an asset. The facility will be captured in a future version of the Asset Management Plan.

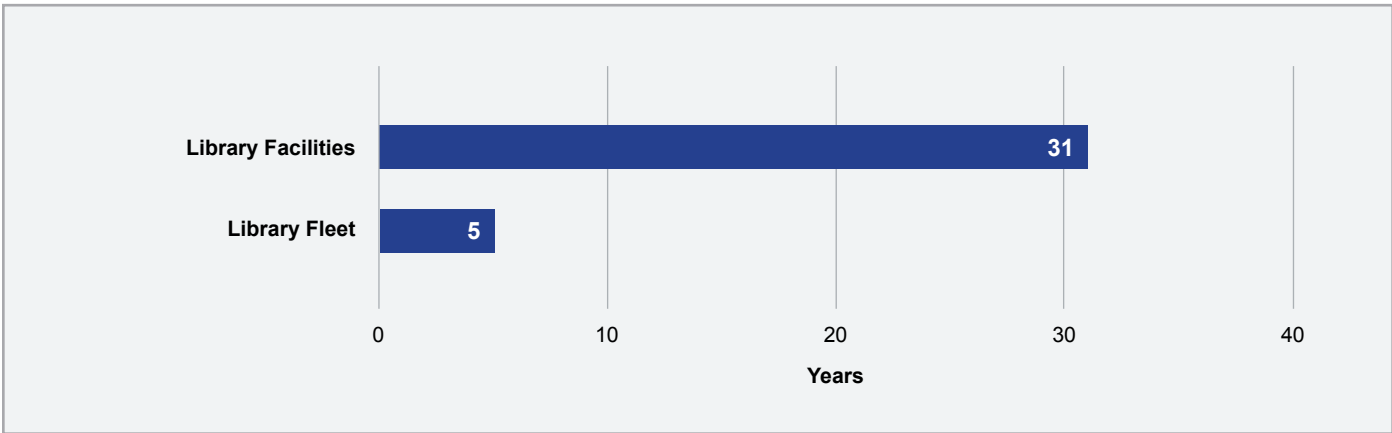
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2.2 ASSET AGE AND CONDITION

The age of an asset gives a sense of how close it is to the end of its service life and what renewal interventions may be appropriate. The average age of Library Services assets is shown in the figure below.

Average Age of Library Services Assets⁵



The City/OPL uses a range of techniques and solutions to collect and assess condition data, and at various frequencies, which is summarized in the following table.

Condition Data Collection Methods for Library Services Assets

Asset Class	Condition Data Collection Technique	Frequency
Library Collection	Age-based	Annually
Library Materials Centre	Building Condition Audit	10 years
Library Branches	Building Condition Audit	10 years
Library Branch Components	Age-based	Annually
Library Fleet	Inspection and maintenance	6 months and original equipment manufacturer maintenance schedule

⁵: Age data was not available for Library Collection.



Based on condition data, supplemented by subject matter expert knowledge and professional judgment, the condition of assets is rated on a scale from “Very Good” to “Very Poor” as shown in the table below.

Five-point Scale for Library Services Asset Condition

Rating	Rating Description	Facility Condition Index (FCI) ⁶	Life Consumed	Life Remaining
		(Library Materials Centres, Library Branches)	(Library Branch Components)	(Library Fleet)
Very Good	Sound Physical Condition No short-term failure risk and no work required	< 0.02	< 25%	>75%
Good	Adequate for Now Acceptable, generally in mid stage of expected service life	0.02 – 0.05	26% – 50%	51% – 75%
Fair	Requires Attention Signs of deterioration, requires attention, some elements exhibit deficiencies	0.05 – 0.15	51% – 75%	26% – 50%
Poor	Increasing Potential of Affecting Service Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	0.15 – 0.30	76% – 100%	0% – 25%
Very Poor	Unfit for Sustained Service (built infrastructure) / Nearing End of Life (fleet) Near or beyond expected service life, widespread signs of advanced deterioration, some built assets may be unusable	> 0.30	> 100%	<0% (outside of lifecycle)

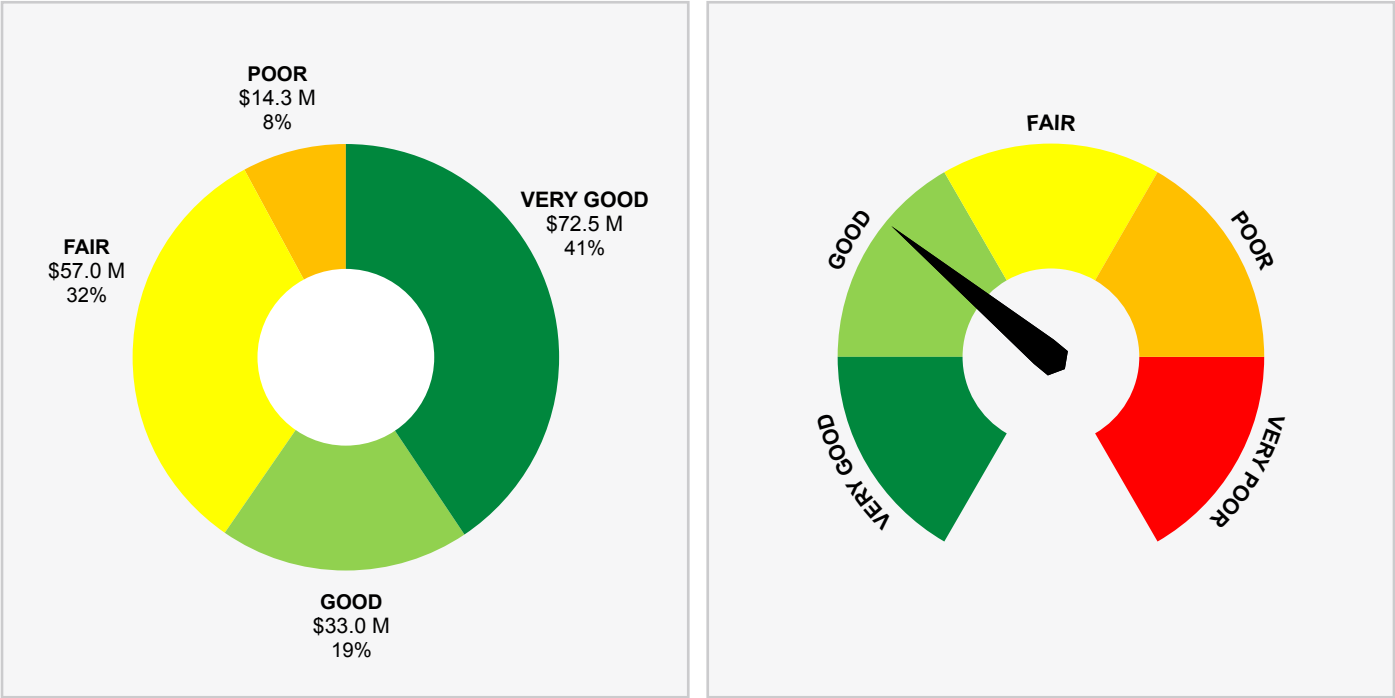
6: Where FCI = 0, or no deferred maintenance is reported, or required maintenance is reported but has not yet been deferred, condition is reported based on typical useful life consumed as follows:

Condition	Very Good	Good	Fair	Poor	Very Poor
Typical Useful Life Consumed	< 40%	40% – 70%	70% – 90%	90% – 100%	≥ 100%

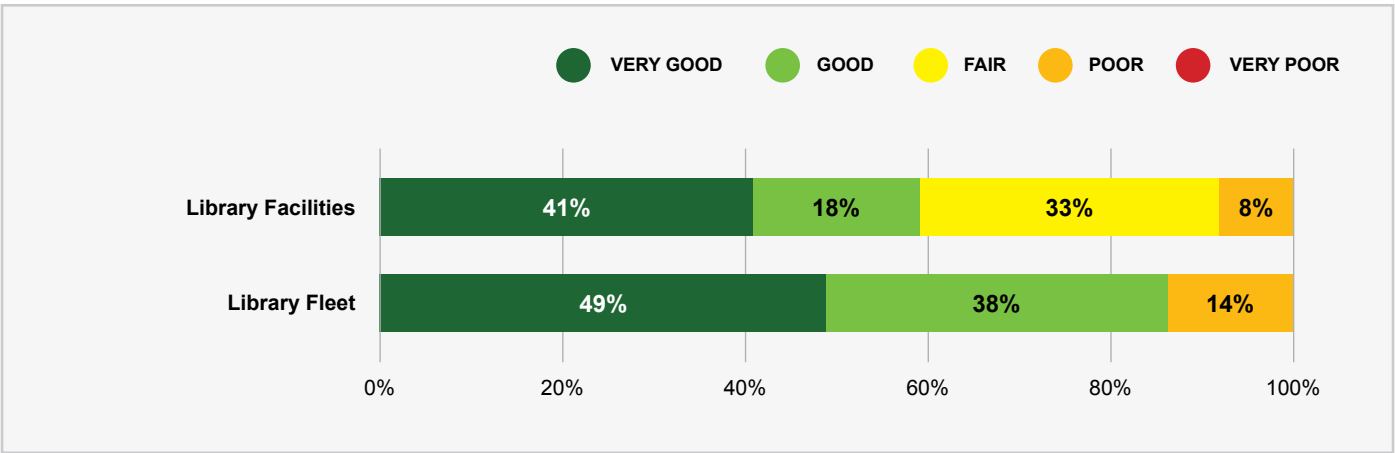


The overall condition rating for Library Services assets is Good and a breakdown for the various asset classes is shown in the figures below. Condition distribution percentages are weighted based on replacement cost.

Overall Condition Profile of Library Services Assets



Condition Profile of Library Services Assets⁷



⁷: Condition data was unavailable or incomplete for Library Collection.



Levels of Service

3.1 LEVEL OF SERVICE CONTEXT

The City's/OPL's assets exist to deliver service to clients. Levels of service measure the actual service delivered so that decisions can be made about the assets based on the service that they provide rather than simply on their condition. The regulation requires that the Asset Management Plan includes for each asset category the levels of service that the municipality proposes to provide for each of the 10 years following the year in which the plan is published.

The Library Services Asset Management Plan establishes level of service measures and reports the current levels of service being provided. The measures align with City/OPL goals and recognize that Library Services assets should be managed in a way that:

- Provides adequate library capacity and accessibility to the population served.
- Reduces emissions associated with the City's operations and facilities.
- Increases resiliency to extreme weather and changing climate conditions.
- Provides accessible facilities.
- Provides service when scheduled.
- Maintains assets in a state of good repair.
- Provides sustainable and affordable services over the long-term.

3.2 HISTORICAL AND CURRENT LEVELS OF SERVICE

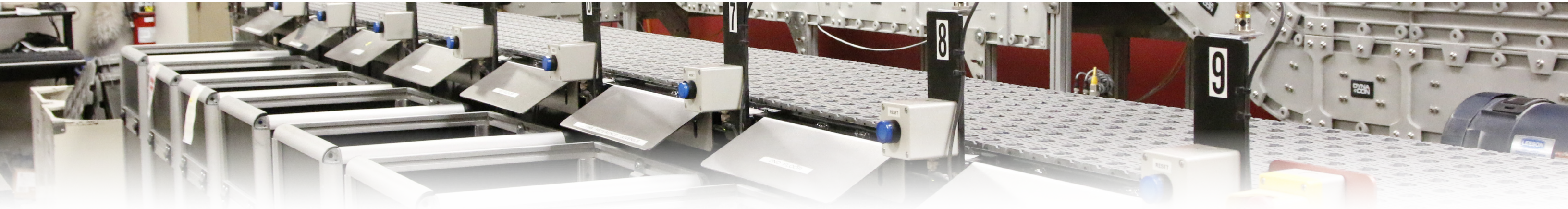
The levels of service measures for Library Services are shown in the table below. The performance reported includes:

- Historical performance, showing the service levels reported in the previous version of the Asset Management Plan.
- Current performance, showing the service levels being provided based on the latest available information.



Levels of Service for Library Services

Service Attribute	Community Level of Service	Technical Level of Service	Historical Performance (2022)	Current Performance (2023)
Capacity and use	Provide adequate library capacity and accessibility to population served	Total library space per capita (sq. ft.)	0.43	0.42
		Physical collection size per capita	1.39	1.47
		Average distance to the closest library branch	3.25km	3.25km
Function	Reduce emissions associated with the City's operations and facilities	Annual GHG emissions from Library buildings per thousand square feet (tonnes CO ₂ e)	5.9 t/1,000 sq. ft.	5.9 t/1,000 sq. ft.
		Annual GHG emissions from Library fleet (tonnes CO ₂ e)	90 t	89 t
	Increase resiliency to extreme weather and changing climate conditions	Percent of facilities with backup power for critical building systems	4%	10%
	Provide accessible facilities	Percent of facilities with accessibility audit completed	85%	85%
Reliability	Provide service when scheduled	Percent of scheduled hours of service that were delivered (Bookmobile)	94.1%	90.6%
	Maintain assets in a state of good repair	Facility Condition Index	0.08	0.08
		Percent of Library Branch Components in fair or better condition	50%	50%
		Percent of Library fleet assets in fair or better condition	87%	87%
Affordability	Provide sustainable and affordable services over the long-term	Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library Facilities	Not reported	1.1%
		Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library Branch Components	Not reported	5.8%
		Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library fleet	Not reported	17.7%



Asset Management Strategy

4.1 PRACTICES, PROCEDURES AND TOOLS

The regulation requires that the Asset Management Plan defines a lifecycle management strategy with respect to the assets in each asset category for the 10-year period. One of the key objectives of asset management is to recognize the objectives of the City/OPL and align them with the City's and OPL's long term financial plans. This will allow Council to make informed decisions and provide clear direction to staff on how to balance service levels, risks, and costs.



The City has well-established practices to assess the risk of not meeting community and technical level of service standards and to determine the lowest lifecycle cost activities to reduce the risks to acceptable levels and the associated costs of undertaking them. The Asset Management Plan provides the needs forecast associated with achieving target levels of service and compares it to the planned budget to determine service area gaps or surpluses.

The various lifecycle activities are delivered by different parts of the organization. The asset management process is an opportunity to take a holistic view of the asset lifecycle and identify any assets that would benefit from coordinated implementation of lifecycle strategies. It is important that each type of asset has an appropriate blend of activities across its lifecycle and that staff interacting with the assets understand the interrelations between the various activities and their impact on cost, risk and service level.

4.2 GROWTH, ENHANCEMENT AND RENEWAL

In developing the Asset Management Plan, a preliminary estimate was prepared of the cost of achieving the target levels of service. The estimate is based on 2024 data and includes forecasts of:

- Growth needs based on the Development Charges Background Study (March 2024), required to serve the city's growing population.
- Enhancement needs based on accessibility audits and building condition assessments, and input from subject matter experts, which are required to improve services, meet new or updated standards, or address accessibility.
- Renewal needs identified for facilities based on building condition audits and forecasted lifecycle renewal needs for fleet and library branch components, required to maintain assets in a state of good repair. These activities include major repairs, rehabilitation and replacement.



Ottawa's population is expected to increase to 1.4 million people by 2046, a significant increase of 40% since 2018, as summarized in the table below. This growth will put pressure on existing assets and services, and may require new or expanded assets to meet growing needs.

City of Ottawa Population Projections for 2046

	2046 Projection	Growth since 2018
Population	1,409,650	402,150
Private Households	590,600	194,800
Jobs	827,000	189,500

Source: New Official Plan report to Council (ACS2021-PIE-EDP-0036), October 2021

The table below summarizes the future growth, enhancement, and renewal needs forecast for Library Services assets.

Growth, Enhancement and Renewal Needs Forecast for Library Services

	10 Year Needs (millions; 2024\$)			
Asset Class	Growth	Enhancement	Renewal	Total
Library Collection	\$9.0	Not applicable	Not applicable	\$9.0
Library Facilities	\$48.8 ⁸	\$8.7 ⁹	\$30.2	\$87.7
Library Fleet	Not available ¹⁰	Not available ¹⁰	\$5.2	\$5.2
Total	\$57.8	\$8.7	\$35.3	\$101.9

Totals may not sum exactly due to rounding.

8: The growth need shown for Library Facilities is based on needs identified in the DC Background Study. A separate analysis by OPL indicated that an additional \$75 million may be needed to meet the target of 0.5 square feet of library space per capita.

9: It is important to acknowledge that this iteration of the Asset Management Plan does not address the legacy gaps as described in the OPL Facilities Framework, Prioritization Matrix. The legacy gaps identified within the Facilities Framework will be presented as enhancements in a future iteration of the Asset Management Plan, upon OPL Board approval of the Library Facilities Master Plan.

10: Growth and enhancement needs for Library Fleet assets will be included in a future version of the Asset Management Plan, pending completion of the OPL Mobile Framework.



As per the regulation, asset management planning also needs to consider the City’s Climate Change Master Plan goals for both mitigation strategies to slow climate change impacts, such as reducing greenhouse gas emissions, and adaptation strategies to reduce negative impacts associated with existing and future climate change. The Asset Management Plan estimates the additional future costs due to climate change shown in the table below. These are preliminary estimates based on the latest information available, which will be refined over time.

Estimated Additional Future Costs Due to Climate Change for Library Services

Additional Costs Due to Climate Change	Estimated 10 year Total Additional Cost (millions; 2024\$)
Increased operations and maintenance costs due to gradual, long-term impacts of climate change ¹¹	\$1.7
Increased capital renewal costs due to gradual, long-term impacts of climate change ¹²	\$1.8
Increased operations and maintenance costs due to extreme weather events ¹³	\$0.05
Increased capital costs to implement climate change mitigation actions including municipal fleet electrification and building retrofits ¹⁴	\$10.5
Total	\$14.1

The estimates do not capture damage to capital infrastructure due to catastrophic/extreme weather events (e.g., tornadoes); increased capital renewal needs due to accelerated asset deterioration; increased growth costs to meet climate change requirements; increased capital renewal costs for assets other than buildings (such as fleet and equipment); and gradual, long-term impacts due to climate hazards other than extreme heat, extreme rainfall, and freeze-thaw cycles.

11: Estimated costs due to gradual, long-term impacts of climate change are based on the Financial Accountability Office of Ontario’s [“Costing Climate Impacts to Public Infrastructure”](#) study.
12: Ibid.
13: Estimated operations and maintenance costs due to extreme weather events are based on historical City financial data and Task Force on Climate-Related Financial Disclosures (TCFD) reporting for recent significant weather events.
14: Estimated capital costs to implement climate change mitigation actions are based on the Energy Evolution study (2020) and subsequent detailed studies such as the Green Fleet Strategy.



4.3 OPERATIONS AND MAINTENANCE

Operations strategies are developed to deliver the services and involve consumption of resources such as human resources, energy, chemicals and materials. Maintenance strategies are the regular ongoing activities necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again.

New assets acquired or constructed by the City/OPL due to growth will incur additional future operations and maintenance costs beyond current expenditures. It is crucial for the City/OPL to evaluate these prospective costs and their affordability when making decisions regarding new asset acquisition or construction.



Financing Strategy

The regulation requires that the Asset Management Plan defines a financial strategy with respect to the assets in each asset category for the 10-year period. The City continues to invest responsibly in maintaining infrastructure and has been increasing its capital investments to align with long-range financial plans. Funding targets recommended in the 2017 Comprehensive Asset Management Program were focused on maintaining critical infrastructure in a state of good repair. There will be a need to update the long-range financial plans once new service levels are defined to ensure financial sustainability.

5.1 EXPENDITURE HISTORY

For information on historical operating and capital expenditures, refer to the City's historical annual budget documents. Additional financial details can be found within OPL's annual budget documents. Note that historical budget values function as estimates for expenditures, and actual spending may differ from the budgeted amounts shown.

5.2 EXPENDITURE FORECAST

Over the next 10 years, the City will continue investing in infrastructure to support operational expenses, respond to renewal needs, serve growth, and provide enhancements. The planned operating budget is based on Financial Service's 2024 operating budget forecast for Library Services, and the planned capital budget is based on the City's and OPL's 2024 10-year capital budget forecast.



Budget Forecast for Library Services

Component	Budget Forecast (millions; 2024\$)										
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Operating Budget ¹⁵	\$58.9	\$60.7	\$62.6	\$64.6	\$66.7	\$68.9	\$71.2	\$73.6	\$76.2	\$78.8	\$682.2
Capital Budget – Growth	\$3.6	\$3.6	\$6.1	\$2.1	\$3.6	\$2.3	\$2.1	\$2.6	\$5.4	\$2.1	\$33.2
Capital Budget – Enhancement	\$0.1	\$0.8	\$0.1	\$0.6	\$0.1	\$0.1	\$0.4	\$0.1	\$0.1	\$0.1	\$2.6
Capital Budget – Renewal	\$3.3	\$1.7	\$2.5	\$2.9	\$1.9	\$2.7	\$3.4	\$2.7	\$2.8	\$3.4	\$27.4

Totals may not sum exactly due to rounding.

15: Values shown are net operating budget requirement after expenditure recoveries and revenues.



Funding Analysis

The regulation requires that an identification of the annual funding projected to be available to undertake lifecycle activities is summarized in the Asset Management Plan. If, based on the funding projected to be available, the municipality identifies a service area shortfall for the lifecycle activities identified, the regulation requires an explanation of how the municipality will manage the risks associated with not undertaking any of the lifecycle activities needed.

The future capital funding needs are compared to planned budgets in order to identify potential service area shortfalls (or “gaps”), the risks to service that could result, and possible strategies to mitigate them.



6.1 SERVICE AREA GAP

An Asset Management Plan provides a forecast of where the City will be in 10 years with respect to some service level targets based on historic decisions on how the City invests in and manages assets. The service area gap is the difference between the forecasted capital investment needs and the investment that the City has budgeted. As a result, service area gaps can and will change as a result of future changes to policy, master plans, population, service delivery, asset inventory, or investment by the City and other orders of government. Over the next 10 years, the total needs for Library Services assets exceeds the planned budget, leading to a service area gap. The forecasted investment needs, planned budgets, and service area gaps are summarized in the table and figure below.

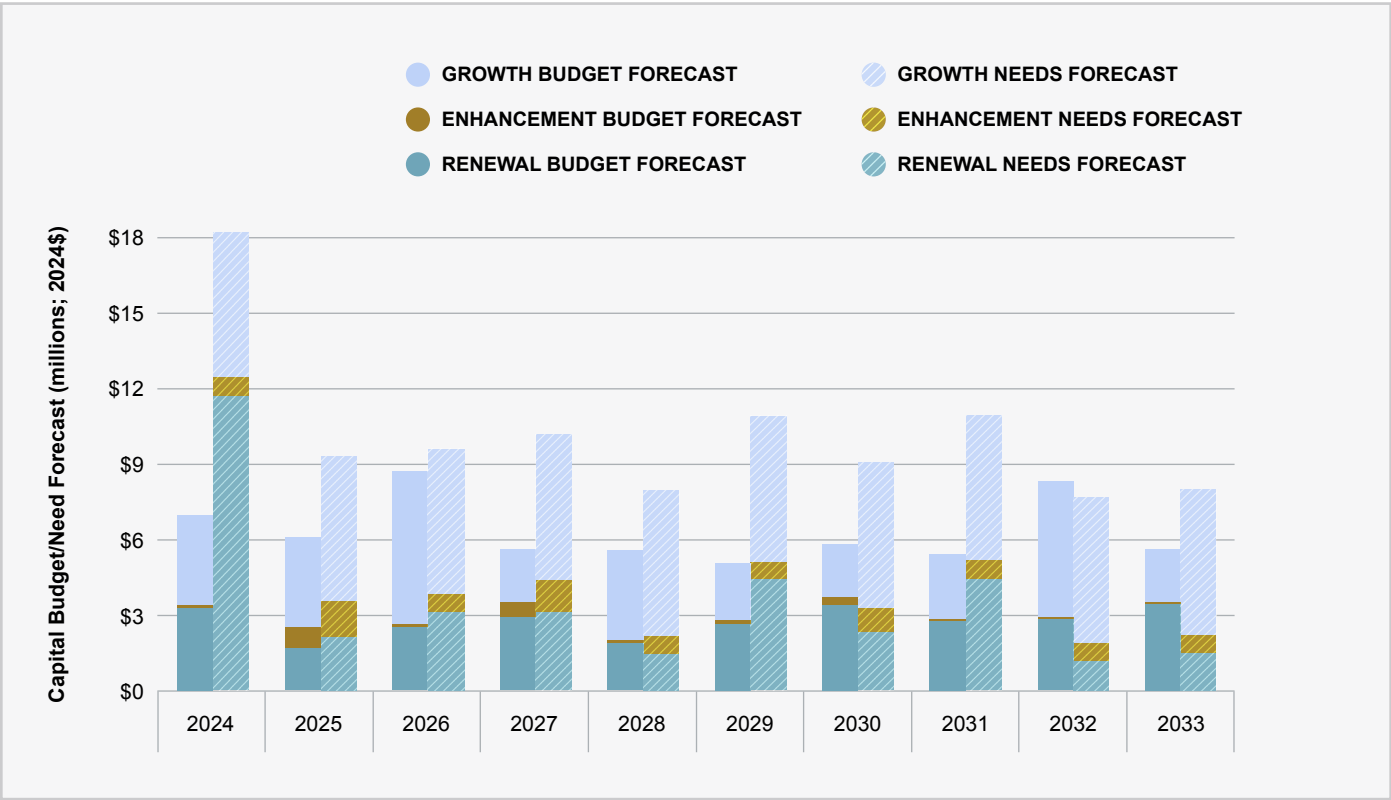
Capital Service Area Gap for Library Services

Asset Class	10 Year Need (millions; 2024\$)	10 Year Funding (millions; 2024\$)	10 Year Gap (millions; 2024\$)
Growth			
Library Collection	\$9.0	\$8.2	(\$0.8)
Library Facilities	\$48.8	\$25.0	(\$23.8)
Library Fleet	Not Available	\$0.0	\$0.0
Growth Total	\$57.8	\$33.2	(\$24.6)
Enhancement			
Library Collection	Not Applicable	\$0.0	\$0.0
Library Facilities	\$8.7	\$2.6	(\$6.1)
Library Fleet	Not Available	\$0.0	\$0.0
Enhancement Total	\$8.7	\$2.6	(\$6.1)
Renewal			
Library Collection	Not Applicable	\$0.0	\$0.0
Library Facilities	\$30.2	\$23.2	(\$7.0)
Library Fleet	\$5.2	\$4.2	(\$1.0)
Renewal Total	\$35.3	\$27.4	(\$8.0)
Grand Total	\$101.8	\$63.2	(\$38.6)

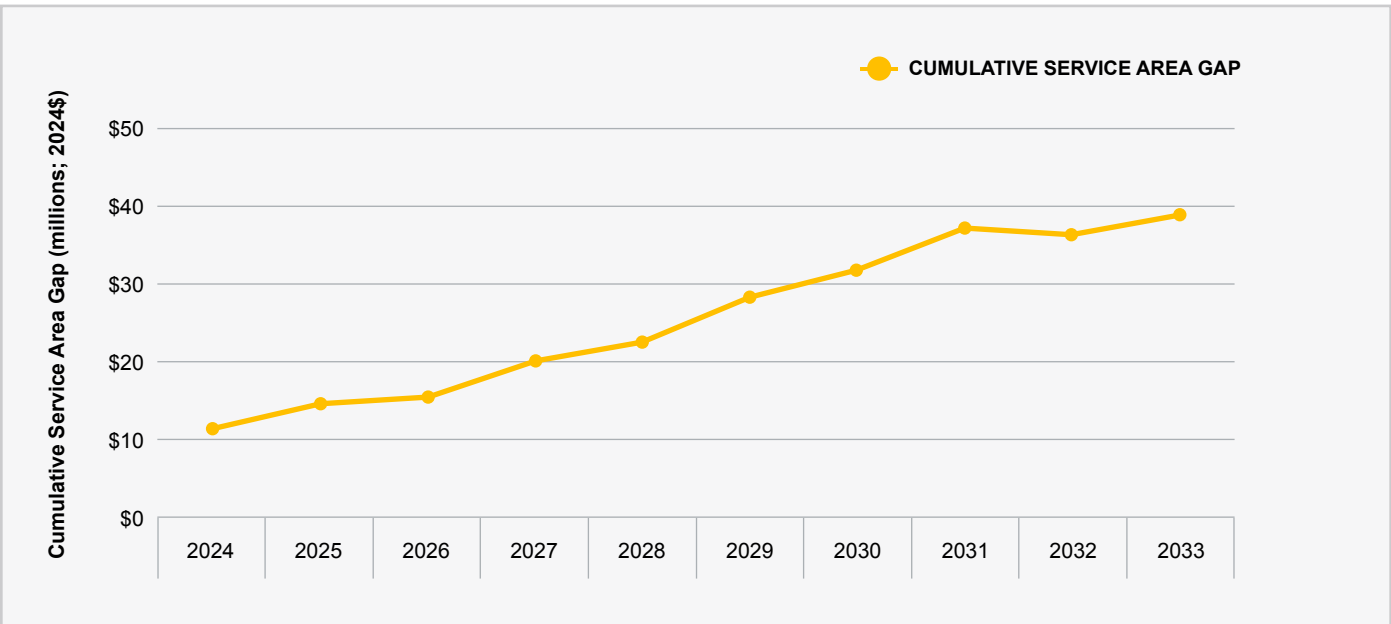
Totals may not sum exactly due to rounding.



Capital Budget and Capital Needs Forecast for Library Services



Cumulative Capital Service Area Gap for Library Services



The above capital service area gap does not include the estimated additional future costs due to climate change outlined in Section 4.2. The City has planned dedicated funding over the next 10 years to support climate change needs through the Climate Change Master Plan and annual GHG and Emissions program. The funding supports not only library services, but all other services provided by the City. The climate change capital funding needs identified for the various City services and the total planned capital funding for climate change initiatives are summarized in the table below. These are preliminary estimates that are being refined and prioritized through various initiatives, but they give a sense of the order-of-magnitude of future planned budget and potential needs. These estimates do not include infrastructure repair or replacement costs for extreme weather events such as tornadoes, riverine flooding or ice storms. The analysis does not capture funding from external sources such as other levels of government. Capital funding will need to be integrated across departmental budgets.

The analysis is based on the City’s 2024 ten-year capital budget forecast. It is important to note that the 2024 funding forecast shown is \$155 million higher than the final approved 2025 budget forecast, which allocates \$91.2 million over 10 years (versus \$246.4 million as shown in the table).

Estimated Future Climate Change Capital Budgets and Capital Needs for All City Services¹⁶

	10 Year Need (millions; 2024\$)	10 Year Funding (millions; 2024\$)	10 Year Gap (millions; 2024\$)
Climate Change	\$1,700	\$246.4	(\$1,453.6)

6.2 EXPECTED AND TARGET LEVELS OF SERVICE

For levels of service, the City/OPL have established performance targets as well as anticipated performance. These metrics can be compared to assess the alignment between expected and target performance. The table below includes:

- Current performance, showing the service levels being provided based on the latest available information.
- Arrows to show whether the measure is expected to trend upward, downward, or remain relatively stable, with colours to show whether that trend is positive (green) or negative (red) relative to the target level of service.
- Expected performance, showing the service levels expected to be achieved based on the planned budget.
- Target performance, showing the target level of service based on OPL Board/City Council direction (as applicable), and OPL or City policy, strategy or master plan, or other reference.

¹⁶: The estimates exclude Solid Waste and Transit services because all financial analysis for these services is captured in the respective Long Range Financial Plan.



Expected and Target Levels of Service for Library Services

Service Attribute	Community Level of Service	Technical Level of Service	Current Performance (2023)	Trend (2024 2033)	Expected Performance (2033)	Target Performance (2033)	Source for Target
Capacity and use	Provide adequate library capacity and accessibility to population served	Total library space per capita (sq. ft.)	0.42	➡	0.42	0.5	OPL Facilities Framework
		Physical collection size per capita	1.47	⬇	1.32	1.4	OPL staff
		Average distance to the closest library branch	3.25km	Not available		Urban: 3km Rural: 15km	OPL Facilities Framework
Function	Reduce emissions associated with the City's operations and facilities	Annual GHG emissions from Library buildings per thousand square feet (tonnes CO ₂ e)	5.9 t/1,000 sq. ft.	⬇ ¹⁷	Decrease ¹⁷	3.4 t/1,000 sq. ft.	Climate Change Master Plan
		Annual GHG emissions from Library fleet (tonnes CO ₂ e)	89 t	Refer to Green Fleet Strategy		Refer to Green Fleet Strategy	
	Increase resiliency to extreme weather and changing climate conditions	Percent of facilities with backup power for critical building systems	10%	⬆	Increase	No set target	
	Provide accessible facilities	Percent of facilities with accessibility audit completed	85%	⬆	Approximately 20 accessibility audits per year across all services	No set target	
Reliability	Provide service when scheduled	Percent of scheduled hours of service that were delivered (Bookmobile)	90.6%	➡	Approximately 99.5%	95%	OPL staff
	Maintain assets in a state of good repair	Facility Condition Index	0.08	⬆	0.12	0.01	Lifecycle modelling
		Percent of Library Branch Components in fair or better condition	50%	⬇	10-year average 43%	10-year average 72%	Lifecycle modelling
		Percent of Library Fleet assets in fair or better condition	87%	➡	86%	97%	Lifecycle modelling
Affordability	Provide sustainable and affordable services over the long-term	Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library facilities	1.1%	Not applicable		1.3%	Lifecycle modelling
		Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library Branch Components	5.8%	Not applicable		9.6%	Lifecycle modelling
		Asset renewal funding ratio (renewal funding as a share of replacement cost) for Library fleet	17.7%	Not applicable		21.5%	Lifecycle modelling

⬆ Positive upward trend

⬆ Negative upward trend

⬇ Positive downward trend

⬇ Negative downward trend

➡ Positive stable trend

➡ Negative stable trend

17: Emissions are expected to trend downward, however planned funding levels are not expected to be sufficient to reach 2030 and 2040 GHG emissions reduction targets.

6.3 RISK MANAGEMENT

The City applies a risk-based approach to prioritizing asset renewals. The risk assessment frameworks and methods vary across the different types of assets but are generally based on the importance of each asset in terms of service delivery/continuity and the number of users who could be impacted.

Ontario Regulation 588/17 requires an analysis of the risks associated with the proposed levels of service and implementation of the Asset Management Plan. These key risks and how the City mitigates the most critical risks are summarized in the tables below.

Key Risks and Risk Mitigation for Levels of Service

Risk area ¹⁸	Potential Impacts	City Response
Funding for Growth	Underfunding may reduce ability to build new infrastructure to support growth in a timely fashion. This could put increased demand on existing infrastructure, reduced redundancy, higher reactive repair costs, and delayed development.	The City and OPL regularly update the master plans and Development Charges By-law that address growth funding needs. Increased growth needs can be incorporated into these updates, and into future updates of the Asset Management Plan.
Lifecycle Renewal Funding	Delays in renewal activities could impact service reliability and increase long-term costs (including operations and maintenance costs).	The City and OPL prioritize capital projects by assessing the condition of infrastructure assets, using a risk-based approach to evaluate the potential impact on service levels, and coordinating with other projects to minimize disruptions. This structured approach prioritizes critical assets and within affordability constraints

¹⁸: As per section 6 of Ontario Regulation 588/17: the Asset Management Plan shall identify the risks associated with the options for which lifecycle activities could potentially be undertaken to achieve the proposed levels of service as well as the risks associated with those options to the long term sustainability of the municipality.



Key Risks to Levels of Service	Potential Consequences	Response
Operations & Maintenance Funding	Underfunding may reduce service reliability and increase emergency repairs.	Operating budget allocations are optimized such that funds are directed towards essential operations, emphasize preventive measures to maintain service levels, and consider public feedback to align with community needs and within affordability constraints.
Climate Change Mitigation & Resilience	Deferral of climate-related initiatives may hinder adaptation, result in service disruptions increase long-term costs, and put pressure on existing budgets, and risk missing emission reduction targets.	The Climate Change Master Plan (CCMP) and its supporting strategies provide direction for prioritizing climate investments in both mitigation and adaptation. The CCMP also identifies the need to apply a climate lens to asset management and capital projects, including through departmental capital planning and prioritization processes. Implementation of the CCMP and its supporting plans is a shared responsibility across all departments. The response to the 2024 CCMP audit will provide further direction on priorities.
Rising Asset Replacement Costs	Higher costs may lead to project delays and increased financial pressure. Less projects could be completed with the same amount of money.	The City and OPL use comprehensive asset management, emphasizing preventive maintenance, and prioritize investments based on risk and within affordability constraints. They also conduct long-term financial planning and explore innovative solutions to reduce costs and enhance service delivery.



Key Risks to Levels of Service	Potential Consequences	Response
Fleet Maintenance & Electrification	Higher maintenance costs or insufficient electrical infrastructure could affect fleet reliability and emergency response.	The Green Fleet Strategy recommends an approach that ensures the City has adequate infrastructure in place as it moves forward with vehicle electrification. The strategy recommends proactively developing energy supply and refueling infrastructure ahead of electrification as well as initiating building-level upgrades and civil infrastructure upgrades prior to the purchase of electric vehicles.
Availability of Electric Vehicles Suited to Service Needs	May require phased adoption or interim solutions, which could influence the pace of emissions reductions.	The Green Fleet Strategy recommends a periodic review of zero-emission vehicle technologies to ensure that the strategy remains aligned with market developments and technological advancements. The goal is to adapt the strategy based on the availability and feasibility of options, ensuring the City and OPL can achieve their fleet emissions targets.
Extreme Weather Impacts	More frequent events may damage assets, disrupt services, and increase maintenance needs.	Climate Ready Ottawa – the City’s draft climate resiliency strategy – is a long-term strategy and implementation plan that will guide City-wide action and investment to prepare for a much warmer, wetter and unpredictable climate. It includes conducting climate risk assessments for critical infrastructure to prioritize investments and actions. Insurance and City reserves are also available for unplanned costs due to extreme weather.



Key Risks to Levels of Service	Potential Consequences	Response
Operational Pressures from Climate Change	Increased demands on staff and resources may affect other service delivery or increase costs.	Climate Ready Ottawa considers future increased operating budget needs due to climate change by guiding long-term action and investment to ensure the city's resilience by 2050. Implementation of priority Energy Evolution projects may result in increases or decreases to operating budgets. Changes in operating budget pressures are considered annually as part of the budget process for specific projects and programs.
Non-Urgent Regulatory & Equity Needs	Delays may impact inclusivity, accessibility, and workplace suitability. Workforce pressures may impact staff retention and morale, which can affect continuity and capacity for emergency response.	The City strives to ensure that critical needs are met and within affordability constraints by prioritizing essential needs and services, seeking grants and partnerships, improving efficiency, engaging with the community, and conducting long-term financial planning. Accessibility and equity upgrades will be prioritized based on identified needs and risks.
Staffing Resources and Capacity	Service delivery and project timelines may need to be adjusted to align with available resources, presenting opportunities to enhance efficiency and prioritize high-impact initiatives.	The City and OPL regularly update the master plans and Development Charges By-law that address growth funding needs. Increased growth needs can be incorporated into these updates, and into future updates of the Asset Management Plan.



Key Risks and Risk Mitigation for Asset Management Plan Implementation

Key Risks to Asset Management Plan Implementation	Response
Population forecasts may change.	Changes to population forecasts will impact the growth needs forecasts, which will be reviewed and updated at least every 5 years as part of the Asset Management Plan update. Key issues can be identified as part of the annual review of the City's progress in implementing the asset management plan and in the "Asset Management Implications" section of individual reports to Council.
Future approved budgets may vary from the planned budgets assumed in the Asset Management Plan financial analysis.	The Asset Management Plan will be updated at least every 5 years, including an updated budget analysis. This will allow for a reassessment of future needs, expected levels of service, and risk. Key impacts due to budget changes can be addressed in the annual review of the City's progress in implementing the asset management plan and in the "Asset Management Implications" section of individual reports to Council.
Council may take on more assets than planned in the Asset Management Plan.	Additional assets will most impact the operations and renewal forecast. Key impacts can be addressed annually as part of the review of the City's progress in implementing the Asset Management Plan and in the "Asset Management Implications" section of individual reports to Council.
Council or changes in legislation/regulation may mandate higher/different target service levels.	Higher or different proposed service levels will impact spending needs which could result in a need to consider alternative approaches to service delivery, increases in revenue to support increased service levels, or a shifting of funding that re-prioritizes service levels and possibly increases risk in other areas. This will be reviewed and updated at least every 5 years as part of the Asset Management Plan update. As indicated above, key impacts can be addressed annually as part of the review of the City's progress in implementing the Asset Management Plan and in the "Asset Management Implications" section of individual reports to Council.



Key Risks to Asset Management Plan Implementation	Response
Changes in asset or financial data, which may affect the findings presented in the Asset Management Plan.	Changes in the data used to produce the Asset Management Plan will be reflected in the Asset Management Plan update at least every 5 years. As indicated above, key impacts can be addressed annually as part of the review of the City's progress in implementing the asset management plan and in the "Asset Management Implications" section of individual reports to Council.

6.4 NON-FINANCIAL STRATEGIES

Given that planned budgets are not expected to be sufficient to fully fund all forecasted asset lifecycle needs, alternative methods must be employed to mitigate the risks associated with underfunding. A variety of non-financial strategies exist or can be implemented to address this issue, including:

- Increasing Library space by co-locating with other facilities to take advantage of economies of scale.
- Increasing Library collections by getting first review of donated items and advocacy for fair eBook pricing.
- Supporting capacity of the bookmobile system by improved fleet management, staff cross-training, and moving from procurement to rent/lease models.
- Monitoring facility condition through continued building inspection and implementing the facility retirement rationalization policy.
- Improving building standards to reduce future GHG emissions.
- Generate additional sources of revenue, such as pursuing energy service and partnership agreements.

Any new strategies may have impacts on residents and services, and should be subject to further study prior to being pursued.



Improvement Plan

The regulation requires that the Asset Management Plan demonstrate the municipality's approach to continuous improvement and adoption of appropriate practices regarding asset management planning. Based on the snapshot of current conditions and existing plans presented in this Asset Management Plan, areas of potential improvement include:

- Continue to address data gaps, data management, and record keeping
- Update cost estimates
- Review, track and report levels of service
- Improve and expand needs forecasts, financial forecasts and funding analysis
- Continue populating expected level of service projections
- Further integrate climate change mitigation and adaptation
- Expand the application of an equity and inclusion lens

The Asset Management Plan will be reviewed and updated on a regular basis and over time these improvements will be reflected in future versions of the Plan.



MORE INFORMATION

For more information about the Asset Management Plan, and the background information and reports upon which it is based, please visit ottawa.ca or contact the City of Ottawa Asset Management Service.

