



**City of
Peterborough**

To: Members of the General Committee

**From: Michael Papadacos
Interim Commissioner, Infrastructure and Planning Services**

Meeting Date: May 2, 2022

Subject: 2021 Asset Management Plan, Report IPSIM22-011

Purpose

A report to update and approve the City of Peterborough's Asset Management Plan.

Recommendations

That Council approve the recommendations outlined in Report IPSIM22-011 dated May 2, 2022, of the Interim Commissioner of Infrastructure and Planning Services as follows:

- a) That the 2021 City of Peterborough Asset Management Plan be approved; and
- b) That the contract Infrastructure and Asset Geospatial Technologist position, currently funded through Capital, be made permanent and be funded through Geomatics/Mapping Operating Budget in the 2023 Budget process.

Budget and Financial Implications

Accepting the updated Asset Management Plan (the Plan) does not inherently create budget implications, however it will begin to assist in the decision-making process in upcoming budgets. Examples of this include the Council endorsed Stormwater Protection Fee (USEC17-001 and as amended through USEC17-026) in which a phased-in 10-year financing strategy was implemented to gradually fund Stormwater assets and lifecycle activities in most need (\$620,000/year for a total annual amount of \$6.2M after phase-in). The implementation of a similar 10-year phase in of \$350,000/year to gradually fund an additional annual amount of \$3.5M in sanitary funding through increases in the sanitary surcharge, and the approved increase of the future road pavement capital and operating budget funding (Roads Needs Study Report USEC14-005) to address road assets in most need and stabilize average road asset conditions.

The province has indicated that a Council approved asset management plan that is compliant with O.Reg. 588/17 – Asset Management Planning for Municipal Infrastructure is required to be eligible for provincial funding and grant opportunities.

The permanent Infrastructure and Asset Geospatial Technologist position will require additional funding of \$83,144 in the 2023 Operating budget.

Background

What is Asset Management?

Asset management is defined by the International Organization for Standardization (ISO) as the “coordinated activity of an organization to realize value from assets”. It is an ongoing process of making the best possible decisions regarding the construction, operation, maintenance, renewal, replacement, and disposal of assets. Asset management helps us put rigour and structure around the information we use to make strategic decisions.

The complete Asset Management Plan, appendices, and attachments can be viewed at the following links:

[Asset Management Plan](#)

[Appendices A to D](#)

[Attachments 1 to 11](#)

What is an Asset Management Plan?

The Plan is often a place to start the conversation about values and what is important to Stakeholders. It is about communicating available options and alternatives, risks and service impacts, and the willingness to pay to deliver services.

Furthermore, the Plan **is**:

- A living document, based on currently available information that will improve year over year.
- A report used to communicate the City's state of infrastructure assets and the estimated lifecycle expenditures required to sustain those assets.
- Reports Levels of Service, performance measures, trends, risk.
- A reference for Council, managers, and staff for informed and critical decision making by using asset and service information as evidence.
- A long-term planning guide. It is intended to be used as a means of guiding investment decisions to achieve long-term asset sustainability.
- Intended to inform the budget. It reports how much we will need to spend, when we should anticipate spending and what the impacts are if we do not spend it.
- Required to fulfill regulatory and/or provincial requirements to access funding grants.

The Plan **is not**:

- A static document – it will be updated regularly.
- A list of asset defects.
- A stand-alone document – it is an aggregating report that pulls from what is existing. It seeks to integrate and align.
- An accounting exercise, TCA exercise, or long-term financial plan (LTFP).
- Meant to impose how to manage assets or how to provide services – this comes from individual Service Areas. The Plan communicates how the City is doing it or desires to do it.
- Instructions on how to eliminate risks and the financial shortfall. We cannot eliminate them entirely, only manage them.
- Directives on *how* the City will fund the budget and where to get revenue. The Plan highlights what we need, when we need it, and current funding sources available.

Benefit of Asset Management to the Community

Stakeholders want safe, reliable, and sustainable services delivered in a predictable and cost-effective manner. The asset management process formalizes existing management practices and provides sound information to help us determine how to best invest in assets. This is so Stakeholders can continue to receive services and amenities that contribute to their quality of life, and that they can receive the value of those services without disruption. Asset management can help reduce the risk of service disruptions and poor-quality services. It is a system that helps:

- Maintain the delivery of services
- Plan for the future
- Manage risk
- Invest responsibly by making informed decisions

Asset Management and Council Role

Council plays a key role in establishing strategic direction and the level of service that will be delivered to Stakeholders. These should all consider Stakeholder expectations, legislative requirements, and available resources.

To support Council's role in making informed decisions, sound asset information is needed. This information is required to be able to answer the following questions regarding City assets:

- Performance: What level of service do the assets currently provide?
- Risk: What is the likelihood and consequence of asset failure? What are the service risks without sufficient funding?
- Cost: What funding level is required to maintain or change the current level of service being provided?

Through engagement with City staff and leveraging the information in the Plan, Council will be able to set the direction to deliver safe and sustainable services in a predictable and cost-effective manner.

Next Steps

With the next iteration of the Plan (due July 1, 2024), updates will be made to add all non-core assets and will include information in accordance with O.Reg. 588/17, such as levels of service and costs to deliver current levels of service.

To ensure successful delivery of the overall asset management roadmap and meet all legislated requirements, the key focus in the short-term (1-5 years) will be:

- Committing necessary resources.
- Improving staff, Council and other Stakeholder's overall understanding of asset management.
- Working collaboratively across Service Areas.
- Improving data accuracy and confidence, such as through more robust condition assessment protocols across all Service Areas.
- Creating policies and procedures related to asset management and the City's approved asset management roadmap.
- Creating better alignment and integration of the Plan with the City's financial strategies and planning.

Key focus over the long-term (6+ years) involves maintaining momentum and awareness around asset management. This includes regularly monitoring the progress of the Plan and providing annual updates to Council.

Moving forward, City staff are working on developing a workplan to continually advance asset management planning activities in line with best practices and regulatory requirements. It is expected that future anticipated workload will increase when all

phases of O.Reg 588/17: Asset Management Planning for Municipal Infrastructure are in place.

Options for mitigating increased workload pressures and responsibilities incurred will need to be explored, such as the acquisition of additional staff and/or consulting services and will be presented as part of future budgets. Currently, there is one Infrastructure and Asset Geospatial Technologist position within the Geomatics/Mapping Division to support asset management related workloads. However, it is a contract position (extended 12 months through CAO approved Report IPSIM22-001) that will only temporarily address the significant challenges of managing infrastructure assets and assist with integrated infrastructure management planning, especially asset management compliance. Although this position will assist with movement towards successful asset management and planning of City geospatial infrastructure in the short-term, it will not be able to provide the necessary ongoing support and continued growth of asset management and infrastructure data management. To be successful in the long-term, this will require a permanent position.

Summary

The Plan is a living document based on currently available information and will evolve with improvements made in future iterations. The Plan combines state of infrastructure, levels of service, asset management strategies, risk, future demands and emerging challenges and the financial summary. The Plan will play a significant role in understanding current and proposed services being delivered, the costs to deliver them and the financial strategy to fund the necessary expenditures to achieve proposed levels of service. The Plan also seeks to help prioritize capital projects and serve as an overarching guiding document for decision making processes.

This Plan is compliant with Phase 1 of the Province's asset management planning regulatory requirements (O.Reg. 588/17).

The Plan has had to make several assumptions to come to the conclusions drawn within. In making these assumptions, actions are being reviewed to help improve future iterations and reduce the number of assumptions.

Submitted by,

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Attachment:

Appendix A – Asset Management Plan Executive Summary

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Executive Summary

Overview

This asset management plan (the Plan) supports and promotes evidence-based decision making and the development of strategies to extend the lifecycle of assets while maintaining services and reducing risks. The Plan benefits the City of Peterborough (the City) by looking to the future and identifying the best places to invest limited dollars to provide the greatest benefit to residents, visitors, and businesses.

The Plan reviews the growth and demand that the City is expected to meet based on the Province's "Places to Grow" growth plan for the Greater Golden Horseshoe. Peterborough currently acts as a gateway to the cottage communities, a commuter area to and from the GTA and a young adult hub due to post secondary institutions. These features are expected to draw more people to the City in the next 20 years. The expected growth has real implications on how the City will develop and maintain its asset base.

Asset management requires an understanding of what the City owns, what services the City will deliver and how the City will deliver it. To do this the Plan will review the current state of the infrastructure, the levels of service (LoS) delivered, the strategies used to manage assets, an assessment of levels of risk, and the funding sources used to finance these strategies. This Plan is a living document and is intended to be monitored annually with full updates every five years. This Plan includes the following eleven (11) service areas:

- Roads & Related assets
- Stormwater
- Wastewater
- Transit
- Solid Waste Management
- Social Housing
- Recreation
- Airport
- Urban Forest
- Social Services – Day Care
- Arts, Culture & Heritage

Service areas may be added or removed with future iterations of the Plan to ensure alignment with other City approved strategies or plans. Remaining service areas and proposed timelines that are to be added to the Plan include:

- Public Works (2024)
- Emergency Services – incl. Police and Fire Services (2024)
- Information Technology Services (2024)
- Administration (2024)

Incorporating green infrastructure assets, including natural assets, into asset management plans is relatively new for many municipalities. The City of Peterborough incorporates some enhanced green infrastructure assets into the existing Plan (e.g., wet/dry stormwater ponds, street trees), however the co-benefits and services provided through an 'ecosystem' lens is not fully developed. Staff are currently working on updating the green/natural asset inventory which will assist in defining processes and methodologies for identification of assets, ownership boundaries, service(s) provided, condition, valuation (replacement cost vs. restoration costs) and risk management.

Plan Purpose

The asset management plan provides a means of guiding investment decisions to meet key strategic and operational goals. It communicates how the City's assets will be managed to achieve established service levels and targets. The Plan sets the foundation for making informed decisions and prioritizing investments by using asset data and service level objectives as evidence.

The Plan also:

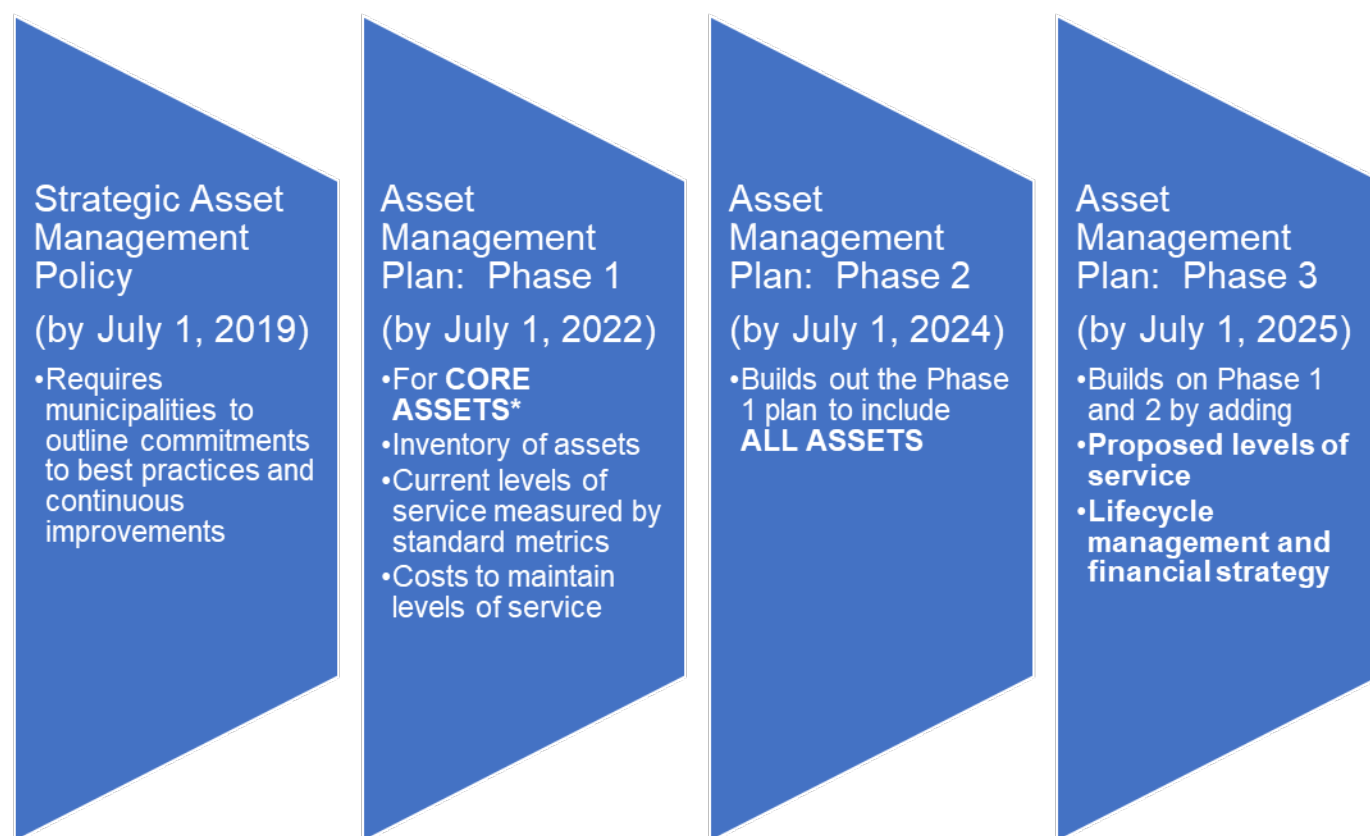
- Reports Council and stakeholder expectations related to asset management
- Provides as a reference for Council, Commissioners, Managers, and other City staff, the asset lifecycle activities currently in place to deliver services (operation, maintenance, rehabilitation, replacement, disposal, etc.) and the levels of service with current performance.
- Provides the planned approach to maintain assets in accordance with service level provisions, and the financial impacts to provide these services
- Allows the City to meet legislative asset management reporting requirements

The City will continue to apply asset management principals and develop a comprehensive asset management plan. This Plan will seek to prioritize investments over a 25-year period with major updates every five years.

Regulatory Asset Management Requirements

On December 27, 2017, under the **Infrastructure for Jobs and Prosperity Act, 2015**, the Province enacted Ontario Regulation 588/17, Asset Management Planning for Municipal Infrastructure. The regulation sets forth the following timelines:

Figure E1: Ontario Regulation 588/17 Requirements and Timeline



*Core assets are roads, bridges, stormwater and wastewater assets

The regulation also requires that every municipality's asset management plan be reviewed and approved by the municipal council.

In 2016, the City's Asset Management Policy and Procedure was approved by Council (Report USEC16-021) and complies with the regulation's requirements for the strategic asset management policy, as shown in Figure E1 above.

The intention of the regulation is not only to implement best practice asset management throughout the municipal sector but to also help municipalities better understand what services need to be supported over the long term. It focuses on levels of service and integrating lifecycle management, risk, and financial management to maximize the value on investments and return on ratepayers' dollars.

Elements of the Plan

The 2021 Asset Management Plan provides details about the City's infrastructure (as of year-end 2019), estimated at a total replacement value of \$5.4 billion and contains the following sections:

- Executive Summary
- Introduction
- Levels of Service
- State of Infrastructure
- Asset Management Strategies
- Financial Summary
- Plan Improvement and Monitoring
- Conclusion

Individual Service Area Attachments 1 through to 11 are included as part of this Plan in Section 9.0 – Service Area Attachments. The attachments contain detailed information specific to the asset inventory, replacement costs, age, remaining useful life, condition ratings, current levels of service, asset management lifecycle strategies and risk strategies.

Attachments 1 through to 11 contain specific service area details for the following types of strategies:

- Non-infrastructure solutions
- Maintenance Activities
- Renewal/Rehabilitation
- Replacement
- Disposals/Abandonment
- Expansion Programs
- Future Strategies

City staff will continue to refine asset management strategies and associated costs to meet the new provincial asset management reporting requirements set forth in O. Reg 588/17.

The Plan's format aligns with the provincial "Building Together: Guide for Municipal Asset Management Plans". The Plan is also consistent with:

- Ontario Infrastructure for Jobs and Prosperity Act, 2015
- Development Charges Act, 1997 (Consolidated 2019)
- Requirements for the recording of Tangible Capital Assets (TCA)
- The City's TCA Policy

Asset Management and Climate Change

The City applies several strategies to acquire, maintain, improve assets in a sustainable and effective manner. This is important as municipalities face increasing challenges with managing aging public assets in the face of increasing uncertainty from risks, including those related to the impacts of climate change.

The City is committed to considering climate change when planning asset lifecycle activities (e.g., design, maintenance, renewal, replacement, etc.) and is an important criterion in the decision-making framework. Climate change is also taken into consideration when developing of proposed budgets and forecasts, when assigning useful lives and current replacement costs of assets (for asset management planning purposes), and in the risk management plan.

Levels of Service

1. Overview

The City's core purpose is to provide services to stakeholders. Establishing levels of service (LoS) and tracking over time is essential to measuring the success of service delivery and asset management strategies.

When establishing levels of service, the following are taken into consideration:

- Protecting and upholding public safety
- Protecting the environment
- Regulated/legislated requirements
- Stakeholder expectations
- Vulnerabilities and mitigation approaches to impacts of climate change
- Level of service information provided in approved plans and studies (e.g., 2016 City of Peterborough Asset Management Plan, Official Plan (November 2021), Municipal Parks and Open Space Study (2019), Greater Peterborough Area Climate Change Action Plan (2016).

Levels of service reflect how the City delivers services from the perspective of the service user (Stakeholder LoS) and from the perspective of service delivery (Technical LoS). This section of the Plan includes information on current levels of service (both Stakeholder and Technical), performance measures, and trends in service delivery.

In this iteration of the Plan, performance measures and targets are set to current levels of service and will document performance trends against those measures. At a minimum, legislated/regulatory levels of service will be reported and tracked as part of the levels of service review.

Proposed levels of service (which may or may not differ from current levels of service), will be discussed in future Plans and reported prior to the July 1, 2025 deadline as prescribed in the asset management planning regulation O.Reg. 588/17.

2. Summary of Current Performance

The City currently meets all regulatory/legislated requirements relating to provision of services. Performance compared to service areas previously reported in the 2016 Asset Management Plan is mostly neutral but also indicates there were improvements made towards achieving targets in some service areas.

Detailed information about service area levels of service and current performance can be found in Section 9.0 – Service Area Attachments of the Asset Management Plan.

The State of the City's Infrastructure

The State of Infrastructure summarizes the quantity of assets in data inventories, provides a replacement cost valuation of the assets, and summarizes the overall condition of each asset or asset class.

This Plan seeks to answer the following questions of asset management pertaining to City infrastructure:

- What does the City own?
- What is it worth?
- How old is it and what is the remaining useful life?
- What is its condition?
- What is the risk rating? (i.e., risk impact should the asset fail)

1. What do we own?

A consolidated list of assets included in the Plan can be found in Appendix A – Assets Included in the Plan.

2. What is it worth?

The 2021 Plan currently includes 11 of 15 service areas with an estimated asset replacement value of \$5.4 billion. The remaining service areas, as identified in the Overview section above, will be reported in the 2024 Plan. The highest valued service areas are Wastewater (\$1.68 billion), Roads & Related Assets (\$1.64 billion), and Stormwater (\$1.31 billion). Figure E2 and Table E1 below summarizes the total asset replacement value by service area.

Figure E2: Asset Replacement Value by Service Area

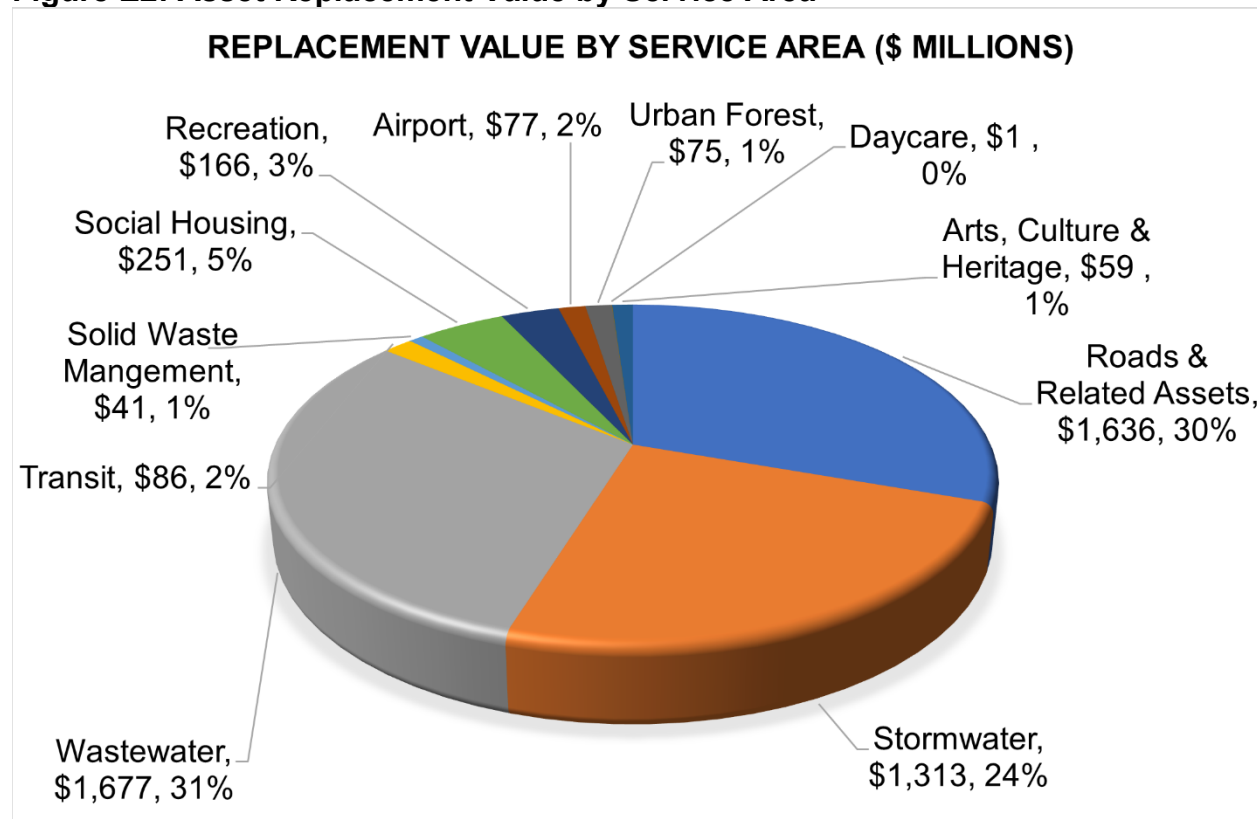


Table E1: Total Asset Replacement Value by Service Area

Service Area	2019 Replacement Value (\$millions)
Wastewater	\$1,677
Roads & Related Assets	\$1,636
Stormwater	\$1,313
Social Housing	\$251
Recreation	\$167
Transit	\$86
Airport	\$77
Urban Forest	\$75
Arts, Culture & Heritage	\$59
Solid Waste Management	\$41
Social Services - Daycare	\$1
Public Works	TBD - anticipated in 2024
Emergency Services	TBD - anticipated in 2024
Peterborough Technology Services	TBD - anticipated in 2024
Administration	TBD - anticipated in 2024
*Total Asset Replacement Value	\$5,383

*May not add due to rounding

3. **What is the Age and Remaining Useful Life?**

A requirement of asset management planning is determining the remaining useful life of an asset based on generally accepted life spans for a given asset. It is important to note, that the age profiles are strictly based on the calculated age of the assets unless otherwise noted. The original useful life span of a given asset can be extended through maintenance and betterments. This process can extend the asset's ability to deliver a service beyond its original life span.

Service area age and remaining useful life details can be found within the respective service area attachment in Section 9.0 of this Plan.

4. **What is the Condition?**

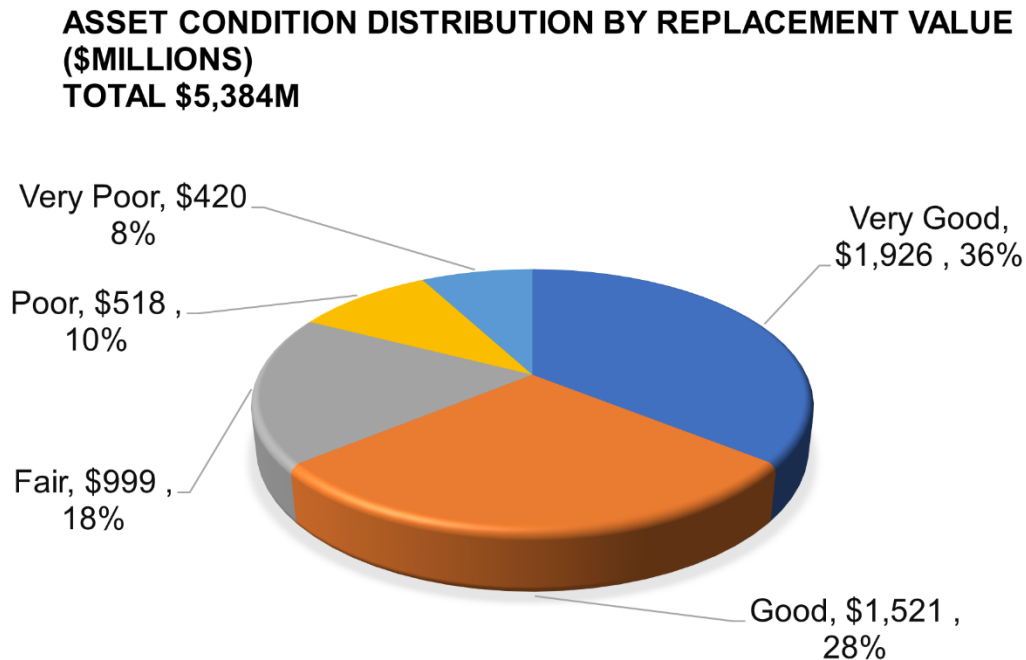
The state of the City's assets is a snapshot in time and uses a blend of age-based data and observed data. Based on the total asset replacement value, approximately 82% (4.4 billion) of the City's assets are considered to be in fair condition or better.

The City significantly invests in ongoing capital programs to maintain existing assets in acceptable condition and to deliver services at sustainable levels. Some of the capital programs planned over the 10-year forecast include a collector and local streets pavement preservation program with a total project cost estimated at \$50.6 million, an underground storm and sanitary pipe CCTV inspection program with an estimated total project cost of \$22 million, a fleet and equipment replacement program with a total cost estimated at \$30 million and a sidewalk reconstruction program with an estimated total project cost of \$15.1 million. Without these ongoing investments, it would be expected that levels of service would notably decrease over the long-term, exposure to risk would increase along with increased asset treatment costs.

Figure E3 below shows the distributed condition ratings and total replacement values of City owned assets included in this 2021 Plan.

Where assets may be rated poor or very poor (approximately \$938 million or 18% of the City's total asset replacement value), the City ensures that these assets will not represent a hazard or pose a health and safety risk. Generally, these are assets that may not be performing as intended. For example, a road segment considered to be in very poor condition would typically require significant resurfacing treatment or asphalt replacement. This does not mean the road is 'unsafe' for use, it means the road is not providing the same level of service and ride quality as a road rated in fair condition would provide.

Figure E3: Overall Distributed Asset Conditions and Replacement Value



As noted above, an estimated 18% of assets with a replacement value of \$938 million are in poor to very poor condition. To maintain established service levels and achieve performance targets, significant investments within the next decade will be needed to avoid further deterioration and/or possible service disruptions.

It is also important to understand that without applying the right treatment at the right time, options typically become more costly. Where lower cost treatments, such as road resurfacing, would significantly improve road surface conditions, not applying this treatment soon enough would result in requiring full asphalt replacement, and at a higher cost. Lifecycle activities, including treatment options are further discussed within individual service area attachments.

5. What is the Risk Rating?

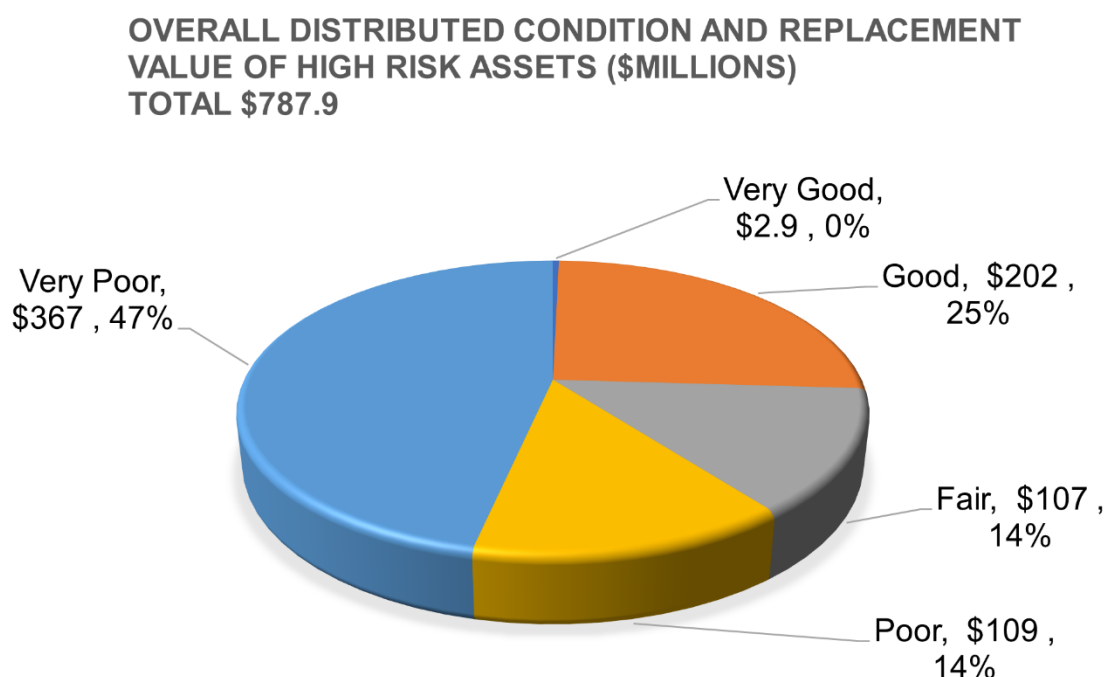
The City has used a risk rating methodology to assign a risk score to each asset included in the asset management plan. The risk ratings are composed of two factors: asset condition and consequence of failure. The asset condition informs the likelihood that an asset will fail, and the consequence of failure informs the impact resulting from the failure. In addition to the asset condition, other asset information, such as size and material, was considered when assigning a risk score where possible. The consequence of failure of an asset is assessed on a 5-point scale that evaluates the impacts on the environment, society, finances, and reputation. It is important to understand that high-risk assets are those with high consequence of failure **and** high likelihood of failure (where likelihood is based on asset condition).

The value of high-risk assets in this Plan is an estimated \$788 million (15% of total City asset replacement value).

Of the \$788 million, an estimated asset replacement value of \$476 million are rated poor and very poor, with \$456 million (96% of total asset value in poor and very poor condition) being Roads and Related, Stormwater, and Wastewater assets.

Figure E4 below shows the overall distribution of high-risk assets by condition and replacement value.

Figure E4: Distributed Condition and Replacement Value of High-Risk Assets



Currently, the majority of the City's assets in poor or worse condition are within the Roads & Related Assets, Wastewater, and Stormwater service areas. It is these high-risk assets that are most critical to service delivery and should be prioritized. Where asset conditions continue to deteriorate, the risks to service delivery increases. With adequate investment levels, risk exposure is minimized, and the probability of service interruptions are lowered. Currently, the Roads & Related Assets, Wastewater, and Stormwater service areas comprise of the largest portion (by replacement value) of high-risk assets in poor or worse condition. The City seeks to prioritize high-risk asset investment needs whenever feasible.

Future Demand and Emerging Challenges

There are several factors, challenges and trends that influence demand. Also known as demand drivers, these can significantly impact the services delivered by the City of Peterborough. Some examples of demand drivers include (but are not limited to):

- Changing population
- Changing demographics
- Stakeholder service priorities
- Aging assets
- Climate Change
- Legislation/Regulation
- Changing technologies
- Land use planning

Understanding the drivers and challenges that impact levels of service is a key step in forecasting and managing demand. Demand drivers may change the City's requirements for acquisition, operation, maintenance, renewal, or disposal of assets. Demand drivers impact the type of services that are delivered in which directly impacts the type of assets needed to deliver these services. The City reviews demand drivers through various strategic planning studies, development charges studies, etc. and considers options on how demand drivers will be affordably managed.

Some options (other than the acquisition/construction of new assets) that may be considered to manage demand include (but are not limited to):

- Sharing of services with other local boards, agencies and municipalities
- User fees/pricing
- Service hours of operation
- Restrictions of use (e.g., seasonal use of bridges or roads)
- Incentives for services (e.g., on/off peak times service charges for parking)
- Awareness/education to efficiently and effectively use services the City provides (e.g., plans that inform on stormwater management, energy reduction strategies, GHG reduction strategies)
- Provision of alternative services (e.g., encouragement of using public transit or other methods identified in transportation demand management studies)

It is also important to understand demand drivers and the potential risks they may pose, e.g., climate change. Effects of climate change poses significant risks to both assets and the services they provide and will need to be managed and monitored by the City regularly. High level risks and associated impacts to the City's ability to effectively deliver services are discussed within the individual Service Area Attachments. The City is working towards developing an Integrated Infrastructure Risk Management Plan in which the identification and management strategies of demand drivers and associated risks are better understood and documented.

Financial Summary

Asset funding is often a complex process drawing from several revenue sources. The funding for the City's programs strives to maximize the use of external funding to limit the burden on taxpayers and ratepayers. However, ageing assets and population demographic changes will create a need to replace and expand the current asset base and requires adequate funding.

What is the Financial Shortfall?

The financial shortfall represents the unavailable funding for the renewal of assets required to deliver current levels of service. Where a shortfall is identified, management strategies to balance service levels, costs and risks will be considered by staff and Council and incorporated into future plans when possible.

In this Plan, renewal investment needs are the estimated dollars required for the replacement of an asset at the end of its expected life with an asset providing a similar level of service. Renewal needs identified may vary as future iterations of the Plan discuss proposed levels of service targets.

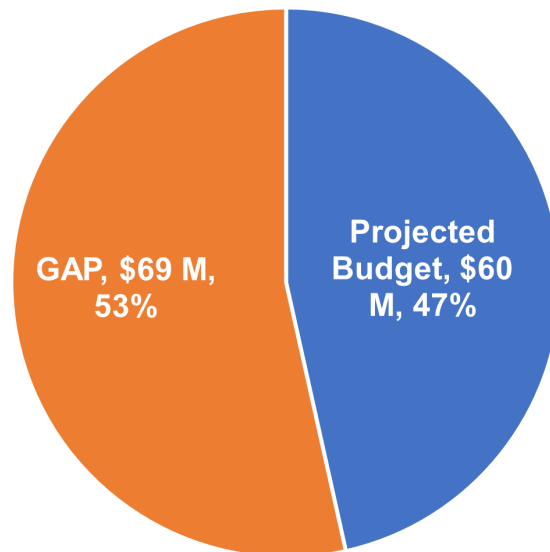
The projected renewal budget is the estimated forecasted expenditure on renewal activities over the 10-year planning period. With the assumption that there will not be any significant impacts to revenue sources, the average of the City's historical three-year approved capital budget (gross expenditures) will be used as the projected renewal budget and to calculate the financial shortfall. The projected budget represents the current levels of funding being provided for the service areas reported in this Plan.

The emphasis of the asset management plan is to communicate the consequences and risks that the shortfall may have on the services provided so that decision making is informed

For the service areas reported in this Plan, the 2021 renewal needs for existing assets and needs related to growth demands is an estimated \$128.8 million. The projected budget (estimate for forecasted expenditure) is \$59.7 million, leaving a shortfall of \$69.1 million (as shown in Figure E5 below). With the City expected to experience increased demands such as growth, increased extreme weather events and growing asset inventories etc., without intervention, levels of service are likely to decrease over the long-term planning period.

Figure E5: 2021 Financial Shortfall

Renewal Needs and Funding Gap
Total Renewal Needs: \$129M



The City is currently implementing a variety of strategies to effectively address the increasing capital investment needs and the financial shortfall. Some of the key strategies include:

- A Debt Management Policy and Capital Financing Plan to assist in financing capital works as presented in Report CPFS12-011 Debt Management and Capital Financing Plan, (April 4, 2012) and amended through Report CLSFS21-024 (July 2, 2021)
- Implementation of the City's approved Asset Management Policy and Procedure and Asset Management Plan which together provide guidance for capital budget planning through asset management principles
- Review current levels of service for all service areas. Council approved metrics that measure the expected performance of delivering levels of service will influence prioritization of investments during the budget deliberation process.
- Expand on the use of the existing multi-criteria analysis technique for prioritizing capital projects for all service areas. The analysis technique is intended to consider a range of qualitative and quantitative criteria and reflect the social, cultural, economic, and environmental characteristics of the project's purpose. This process provides transparency to critical/high priority investments and will support planning capital investments with the greatest cost benefit while balancing an acceptable level of risk.
- Analyze and weigh benefits of maximizing existing revenue sources vs. the provision of current service levels. The City's ability to afford the current service levels will need to be examined in more detail to ensure sustainability or, if

necessary, a reduction in service levels is the more achievable option to avoid increases in user fees or increased property taxes.

Managing the Risks

Some of the overarching service area risks associated with the City's ability to deliver established service levels include:

- Insufficient funding levels
- Insufficient staffing and resources to implement lifecycle strategies
- Asset deterioration assessments/models are underestimated/miscalculated
- External/environmental factors such as climate change effects (more severe weather instances, increased demands due to growth)
- Acquisition of new assets

Impacts associated with above risks include:

- Further/accelerated asset deterioration
- Increased backlog of work
- Service interruptions due to poor asset conditions
- Increased treatment costs
- Changes to the level/degree of required asset treatment, requiring increased resources/costs (maintenance now needing replacement)
- Planned budget/needs forecast not reflective of actual asset needs
- Additional assets/expansion of services required
- Reputation/image negatively affected

Staff are working on developing a more detailed risk register in which risk identification, risk impacts, risk treatment plan and costs, and residual risk ratings will be documented in the asset management plan.

Next Steps

- The City is collaboratively working towards refining its asset management practices as well as aligning them with the ISO 55000 series of standards. Additionally, the City will work towards ensuring reporting requirements set forth in the new provincial regulation O. Reg 588/17 *Asset Management Planning for Municipal Infrastructure* are satisfied by the stipulated timelines.
- Staff will consult with the community to refine and evaluate Levels of Service and associated costs.
- Expand the asset management plan to other asset classes and align with operations and maintenance data.
- Complete standardized condition assessments of assets currently without inspected condition and regularly update existing assessments.
- Develop comprehensive LoS Policy and Procedure.

- Develop Asset Risk Management Policy and Procedures, which will improve probability assumptions used to determine risk ratings and implementing consequence rating system procedures that are data driven
- Enhance considerations of Climate Change and Sustainability risks
- Improve the Optimized Decision-Making process including a policy and procedure.
- Use the Plan to drive capital investment priorities.
- Monitor progress of strategies and recommendations from AMP.