

# Staff Report



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To	<b>Committee of the Whole</b>
Service Area	Infrastructure, Development and Enterprise Services
Date	Monday, November 2, 2020
Subject	<b>2020 Corporate Asset Management Plan and Progress Report</b>

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## Recommendation

1. That the 2020 Corporate Asset Management Plan dated November 2, 2020 be approved.
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## Executive Summary

### Purpose of Report

The purpose of this report is to seek Council approval of the updated Corporate Asset Management Plan and report on implementation progress of the Corporate Asset Management Program and Asset Management Policy objectives.

### Key Findings

Over the past 4 years, there has been significant progress in the asset management program, and the City is positioned to move from a core to an advanced rating by 2024.

As the Corporate Asset Management Program matures, confidence in the data continues to improve which improves the accuracy of calculations including the City's backlog and sustainable funding targets. Based on current data and knowledge, the backlog is estimated to be \$289M.

This Plan confirms that the City's long-term Infrastructure Renewal Funding Strategy is successful and should continue. Further, the results highlight a need to focus on addressing the increasing staff resource requirements to deliver a growing capital plan.

The consistent use of asset management guidelines and principles, with an effort placed on continuous improvement, will lead to an optimized balance between asset performance and asset risks, creating real value for the City of Guelph and its citizens.

### Financial Implications

This report includes no specific financial requests. The implications of approving the updated Plan requires continued investment in both capital and operating budgets to ensure funding is available to carry out required maintenance, renewal and replacement of assets. In the long-term, implementation of comprehensive asset

management processes and practices will result in the optimization of both capital and operating financial investments.

This Plan confirms that the City's long-term Infrastructure Renewal Funding Strategy is successful and should continue. The goal to increase capital infrastructure funding to the sustainable targets over the long-term will mean a reduction in the infrastructure backlog and mitigation of the increasing risk of failing infrastructure assets and service delivery interruption.

While annual sustainable funding targets corporately increased moderately, (increase from \$114 million to \$124 million, or 8%), a notable shift from previous understanding is that Water Services is no longer sustainable, while Wastewater Services is much closer to reaching this funding milestone. For this reason, Council will see the capital strategy adjusted as part of the 2021-2024 Budget. Further refinements in Stormwater and Parking Services models will be included in the future financial model updates expected in 2021 and 2022/2023, respectively. The tax supported sustainability target remained consistent with past estimates.

This Plan update and refinement of funding strategies is reflective of the increasing maturity of the City's asset management practices, and specifically of our ability to identify, gather and use condition data to drive financial decisions.

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## **Report**

### **Introduction**

The City of Guelph contributes to a high quality of life for the community by providing diverse services including recreation, culture, drinking water, wastewater treatment, stormwater drainage, garbage collection, public transit, transportation networks, and emergency services. If all of the assets that support these services were to be replaced today it would cost \$4.39 billion dollars, or about \$31,000 dollars per Guelph resident. The Corporate Asset Management Plan (The Plan) outlines the processes and practices in place to achieve the maximum value from the City's assets and ensure the delivery of City services for the foreseeable future.

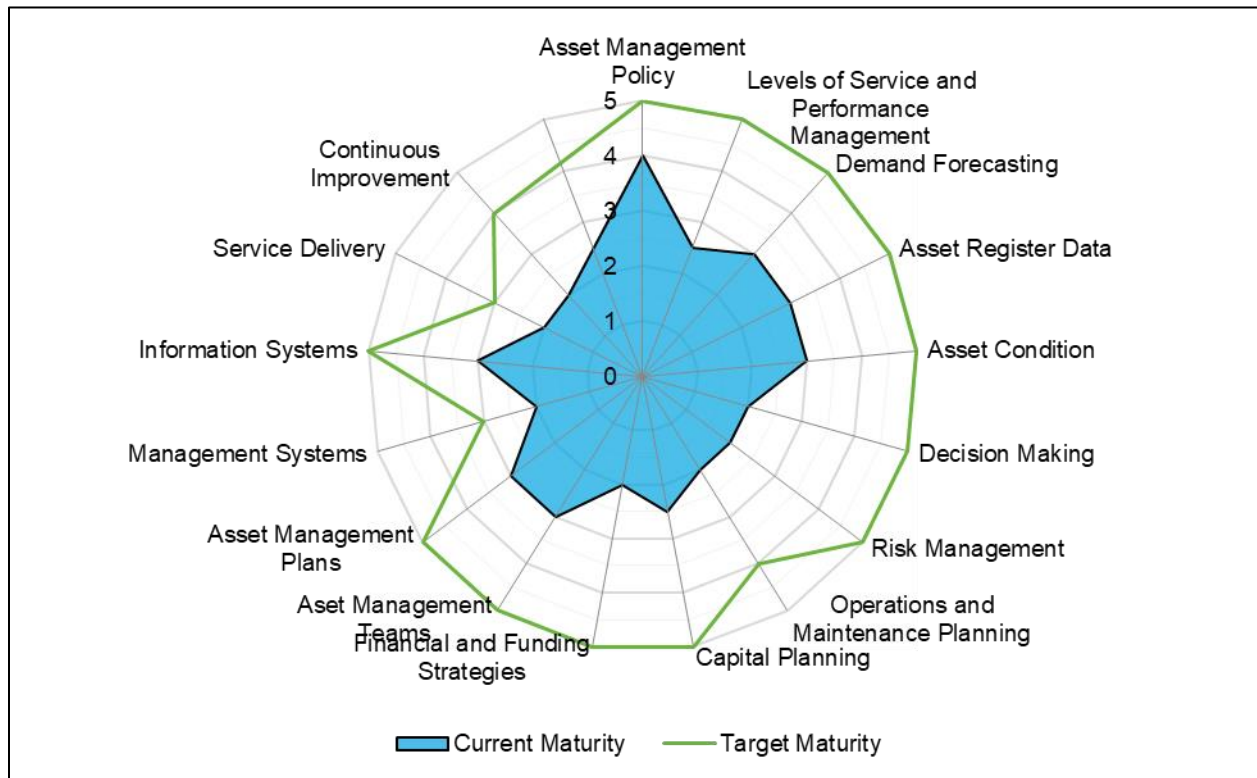
The City of Guelph has been managing assets in a way that balances levels of service, risk, and cost effectiveness throughout the entire asset lifecycle. The City has adopted effective and comprehensive asset management strategies across the organization and supports the long-term sustainability and efficiency while maintaining levels of service. Refer to the [Corporate Asset Management Plan](#) for more details.

### **Asset Management Program Progress**

One of the goals of the first Asset Management Plan (2016) was to establish a baseline of asset management practices to inform a work plan for continuous improvement of the asset management program into the future. In 2019, an updated maturity assessment was completed to evaluate progress against the 2016 baseline. In 2016, the maturity rating at the City was "basic" (2.6 out of 5). The work since 2017 has moved the City forward, resulting in the overall rating being in the "core" category (3.6 out of 5). As the program continues to mature, a work plan has been developed to move the City to "Advanced" categories in time for the next Asset Management Plan update in 2024 (which would be a maturity rating of 4.6

out of 5). Figure 1 presents a depiction on the maturity levels of the practice by category.

Figure 1: Asset Management Maturity Illustration



The City of Guelph is already viewed in the industry as very strong within Asset Management as the City has surpassed the Ontario Regulations, have integrated asset management into the Capital Budget, created innovative tools to report prioritization data, presented at various conferences and are continuously approached by various other municipalities to share our developments.

In 2019 and 2020, a number of initiatives were implemented which solidified the City's maturing direction of having the asset management plan inform capital budgeting and long-term sustainable planning, which included:

- Staff developed a ten-year fully funded capital forecast that was informed by the asset management outcomes. The internal funding allocation methodology used in the development of the 2021-2030 Capital Budget and Forecast is based on the sustainable funding requirements identified in the corporate asset management plan.
- Performance forecasts were provided for each program of work to illustrate the impacts of forecasted funding levels on the infrastructure performance.

As work continues on the Corporate Asset Management Program and the program matures to an advanced rating, the level of sophistication and detail in both the funding allocation and project optimization is expected to increase, and the integration between asset management planning and capital budgeting will be strengthened. Overall, this will help ensure the best possible decisions are being made regarding the City's assets, based on evidence-based business cases and long-term financial forecasts that support sustainability. For more details about the

Asset Management Program, please see Attachment-1 2020-2024 Asset Management Work Plan Initiatives.

## **2020 Corporate Asset Management Plan**

The 2020 Corporate Asset Management Plan is a strategic document that states how the City's assets are to be managed over a period of time. The Plan describes the characteristics and condition of infrastructure assets, the level of service (LOS) expected from them, planned actions to ensure the assets are providing the expected LOS, and financing strategies to implement the planned actions. The following sections provide a summary of the key components of the Plan. The full [Corporate Asset Management Plan](#) is available online.

### **Duration and Updates to the Plan**

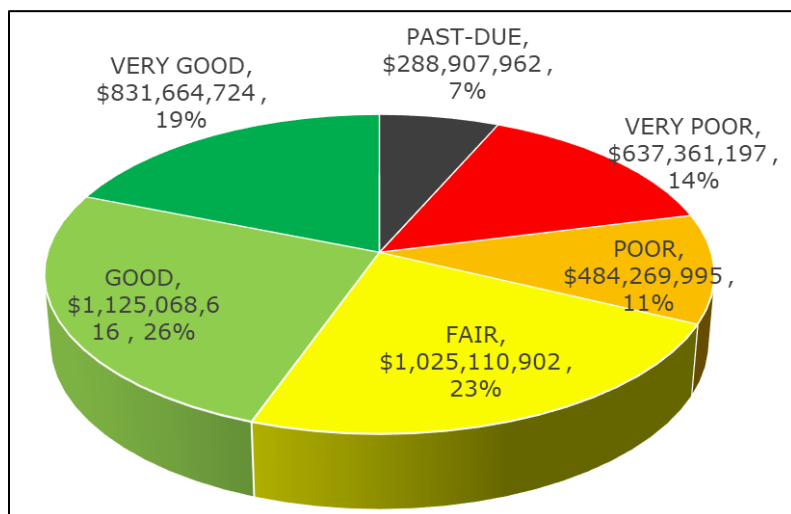
A 25-year asset renewal outlook is used to capture the full lifecycle of the assets when identifying the timing of asset replacement and rehabilitation requirements, and associated costs in correlation with the City's 25-year capital forecast. In the previous Asset Management Plan, a 100-year timeframe was used. However, through the update of the Asset Management Plan the City has decided to align with the Capital Budget program by using a 25-year timeframe.

This Asset Management Plan will be updated annually, with a full re-evaluation at least every four years, or following the update of the City's Corporate Strategic Plan.

### **State of the Assets**

The state of the assets section provides a quantitative assessment of the asset portfolio in terms of overall replacement value and estimated remaining life. The chart in Figure 2 presents the breakdown of the condition of the City asset inventory according to the replacement value of the assets. The condition of the assets is fairly evenly split among the different condition levels. Slightly more than 44% of the assets are rated in "good" or "very good" condition while about 32% are rated in less than "fair". This is a good distribution; the lack of a large percentage of the assets "very poor" or "poor" condition indicates that regular activities have been occurring to keep the asset base in an overall beneficial and functional condition. The implication is that within the next 1-10 years those assets may require either replacement or significant rehabilitation to ensure their continued long-term function. This will be addressed within the Capital Budget Forecast.

Figure 2: City of Guelph's Assets by Condition



## Desired Levels of Service

One of the objectives of asset management planning is to ensure that the performance and service provided by the assets meet the needs and expectations of the community.

Beginning in 2020, the City is undertaking several key initiatives to define LOS over the long-term. The vision is for the City to establish key LOS requirements and better understand the relationship between the LOS and costs to provide the service. As Asset Management continues to mature, City staff will be developing community-driven LOS for all business areas through development of the core asset management plans. Tools and techniques will be developed to model LOS by the next major Plan update in 2024.

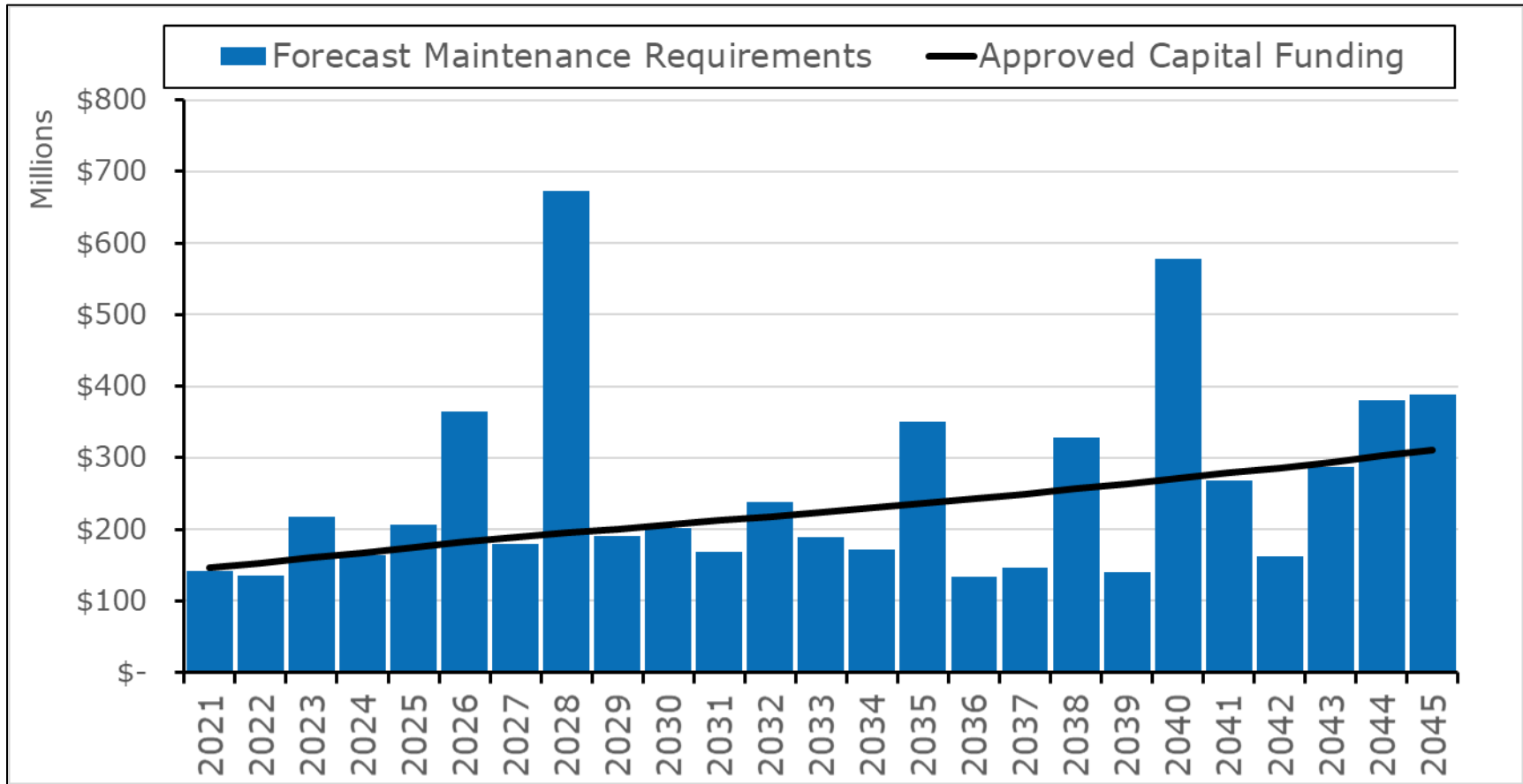
## Financing Strategy

The Plan supports the City's long-term financial strategies through determining the estimated backlog and setting sustainable funding targets by service.

The Corporate Asset Management Plan utilizes a 25-year forecast of replacement needs based on asset condition to establish the sustainable annual funding targets. These targets are used to allocate available tax funding equitably amongst the various services and asset groups, allowing each service to plan using a reliable source of funding. Capital plan decisions are based on evaluating asset condition, level of service and risk of deferral, ensuring that available funds are used most effectively.

Figure 3 represents the 25 year financial forecast that illustrates the City's requirements for maintenance, growth and renewal against the projected level of available funding for all three. As the graph demonstrates, required funding in the first 15 years is higher each year than available funding, resulting in critical project deferral decisions. This deferral may increase annual maintenance costs above current projected levels requiring additional investment in these activities to ensure continued operation of assets. As the City reaches the later years of the forecast funding will allow for some catchup on deferred projects, however, funding does not cross the average level until 2042, meaning that the backlog by that time will have increased and it will take time to bring assets back to a state of good repair.

Figure 3: 25-Year Financial Forecast



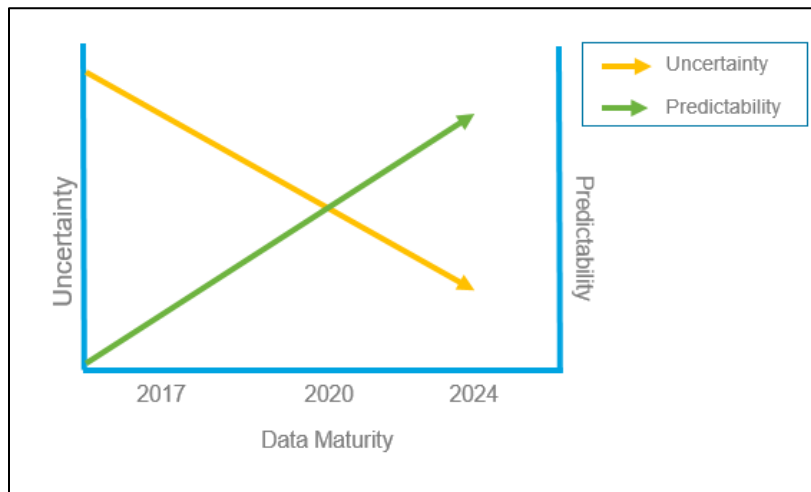
The Plan has been fully integrated into the capital budgeting process to ensure it aligns with asset replacements, maintenance, renewal and growth.

## Infrastructure Backlog

The infrastructure backlog represents the assets that have exceeded their service life based on a condition inspections. Since the Corporate Asset Management Program began in 2016, the program has been continuously maturing through increasing asset inventory and condition data. In 2017, the backlog was calculated using the best information available, which was the assets expected lifespan based on the asset installation date. In 2020, the City has more mature data for majority of assets and has calculated the backlog values based upon actual condition data. For the assets that have not been reviewed through a complete inventory and condition assessment, the expected life span was the target used to calculate the backlog value. Using this updated and improved methodology, the replacement value of the backlog is now calculated at \$289 million, a decrease of \$201 million.

As the City's Asset Management program continues to mature, the data confidence will increase, this is illustrated in Figure 4, which represents how the maturity in data will continue to improve the backlog values. Once the Plan reached an Advanced Maturity the City will see a decrease in backlog changes per update.

Figure 4: Data Maturity Impact on Estimated Backlog



## Sustainable Funding Targets

Since 2017, the City has been using Asset Management Data to inform sustainable capital renewal funding levels. The sustainable targets focus on supporting the renewal and replacement of assets; they do not include maintenance or growth funding requirements. Maintenance and growth are assumed to be at stable levels currently, however future work will focus on better understanding optimal investment relative to current investment.

The target sustainable funding, which includes annual operating transfers to capital renewal reserve funds for tax and non-tax services as well as reliable annual funding from other levels of government, specifically Federal and Provincial Gas Tax Funding programs, has increased by 8%. This is due to a better understanding of inventories and expected useful life of assets.

For tax funded areas, the progress made since 2017 through annual increases in capital funding remains in line with the new estimates. Based on this update, continuation on the plan laid out in 2017 will see sustainable tax funding levels by approximately 2037, which remains in line with prior estimates.

Through the current update, the non-tax funded services (Parking, Stormwater, Wastewater and Water Services) saw significant changes in their respective annual sustainable funding levels. Parking and Wastewater estimates have decreased 58% and 30% respectively, while Stormwater and Water have increased 76% and 69% respectively. In total, the non-tax target has increased, reflecting that future infrastructure renewal budgets will focus funding increases on the services which have the highest need as presented in Table 1.

Table 1: Sustainability Funding Comparison 2017 to 2020

Funding Type	2017 Estimated Sustainable Funding Target	2020 Estimated Sustainable Funding Target	% Change
Tax	62,871,000	63,200,500	0.5%
Parking	2,500,000	1,058,900	-58%
Stormwater*	11,100,000	19,576,800	+76%
Wastewater	24,600,000	17,305,200	-30%
Water	13,400,000	22,614,900	+69%
Total	114,471,000	123,756,300	8%

\*Stormwater target was updated in the 2019 budget due to revised inventories since 2017.

## Infrastructure Gap

The infrastructure gap is the difference between the funding needed in a given year to build, maintain, repair and replace infrastructure and the amount of funding available. Once sustainable funding is reached and asset data is fully matured, the value of the backlog will remain constant, and then start to decline over-time. The sustainable funding level estimate is based on the 25 year average replacement cost of all assets currently in place. The replacement costs and timelines were established by the initial Corporate Asset Management Plan using available data, industry best practices and some investigation of current state.

The current tax supported infrastructure renewal strategy was introduced in 2017 to move the City towards sustainable funding over a planned 10 year implementation phase. Through the first four years of the strategy the increase in annual tax funding directed to infrastructure renewal is \$7.5 million with a cumulative amount of \$19.1 million.

Through the maturity of the City's asset data, the estimated backlog has decreased. However, this does not mean the City is funding capital at a sustainable level. The asset management program indicates that the City's Infrastructure Renewal



Funding Strategy is successful and that this should continue to be a priority focus for financial investment.

## **Project Management Capacity**

The City has taken steps to increase funding towards sustainability to ensure infrastructure renewal projects are able to be funded over the 25 year horizon. However, as the Capital Budget/funding levels have been growing, the unspent capital budget figure has also been increasing. This trend, coupled with the Plan's identified need to increase Capital Budgets, will mean increasing the City's capacity to deliver projects from a staffing perspective. Without an increase in staffing resources, unspent capital will likely continue to grow, or Capital Budgets will need to be reduced. Without executing an increasingly large capital plan, aged assets will begin to fail, causing significant concern to service continuity and community safety. Staff are developing a strategy to address these resourcing concerns, which will be brought to Council during 2021.

## **COVID Impacts**

The beginning of the COVID-19 pandemic coincided with the beginning of the preparation of the Plan in the spring of 2020.

The effects of the COVID-19 pandemic may result in physical changes to some assets, but as of this writing the full extent of any required changes are unknown and will need to be identified through future iterations of the Plan.

## **Conclusion**

The City has established itself as an industry leader in asset management practices. Over the past 4 years, there has been significant progress in the Asset Management program, and the program is positioned to move from a core to an advanced rating by 2024.

As the City matures the Asset Management Program, improvements continue in the confidence of data, which improves the accuracy of calculations including the City's backlog and sustainable funding targets. Based on current calculations, the backlog is \$289M, which solidifies that the City needs to continue executing the long-term capital financial strategies with a new focus on addressing the increasing staff resource requirements to deliver a growing capital plan.

This Plan presents a continuous improvement program in terms of two components:

1. Actions related to improving future asset management plans; and,
2. Actions to advance the City's overall asset management capabilities

The consistent use of asset management guidelines and principles, with an effort placed on continuous improvement, will lead to an optimized balance between asset performance and asset risks, creating real value for the City of Guelph and its citizens.

## **Financial Implications**

This report includes no specific financial requests, the implications of approving the updated Plan requires continued investment in both capital and operating budgets to ensure funding is available to carry out required maintenance, renewal and replacement of assets. In the long-term, implementation of comprehensive asset

management processes and practices will result in the optimization of both capital and operating financial investments.

This Plan confirms that the City should continue to support both tax supported and non-tax supported Infrastructure Renewal Strategies to reach sustainable funding. Without this, the backlog will grow, increasing risk of failing infrastructure assets and service delivery interruption.

While annual sustainable funding targets corporately overall have increased moderately (increase from \$114 million to \$124 million, or 8%), a notable shift from previous understanding is that Water Services is no longer sustainable, while Wastewater Services is much closer to meeting this funding milestone. For this reason, Council will see the capital strategy adjusted as part of the 2021-2024 Budget. Further refinements in Stormwater and Parking models will be included in the next financial model update expected in 2021 and 2022/2023, respectively.

Corporately the infrastructure backlog has been reduced by \$201 million, and further analysis shows there is a significant shift in where the backlog exists in the City. The tax and Stormwater, Wastewater and Parking Services saw decreases in backlog in the range of 40% to 80%; Water Services has seen an increase in backlog of over 100%. This further supports the updated Water Services capital strategy in the 2021-2024 Budget.

This Plan update and refinement of funding strategies is reflective of the increasing maturity of the City's asset management practices, and specifically of our ability to identify, gather and use condition data to drive financial decisions.

## **Consultations**

Consultation and communication are key elements of the planned corporate asset management initiatives. Since 2016, an Asset Management Steering Committee was established and continues to meet bi-annually for consultation throughout the organization. As the Asset Management Program matures, there will be future opportunity for external community engagement to discuss the plans that are in development. A detailed communication and consultation plan for community engagement is in development and will be valuable when we seek Council decision on defining the desired levels of service. The Asset Management Policy also outlines annual reporting to Council on the Corporate Asset Management progress by the second quarter of each year.

A City-wide Asset Management Steering Committee meets every six months to make key decisions and coordinate efforts related to the Asset Management program. In addition to internal communication and regular reporting to Council, an Asset Management page on the City's website has been created and can be accessed at <http://www.guelph.ca/assets>. The webpage provides an overview of asset management fundamentals, and collates asset management documentation such as staff reports, the asset management policy, asset management plans, and other related documents.

## **Strategic Plan Alignment**

### **Working Together for our future**

The Asset Management Plan aligns with developing a long-term financial and resource strategy focused on affordably achieving the following:

- Maintaining our delivery of core services,
- Clarifying the service levels the City delivers to the Community,
- Establishing a multi-year budgeting and planning processes, and
- Exploring new funding options, service delivery models and partnerships to ease taxes for residents and businesses

### **Building Our Future**

The City's goal is to maintain existing community assets and secure new ones. This is one of the main components of asset management, alongside looking at areas for growth to expand our community by:

- Managing existing infrastructure,
- Continuing to develop new assets that respond to Guelph's growing and changing social, economic and environmental needs, and
- Supporting the development of new assets through advocacy and policy work

### **Attachments**

Attachment-1 2020-2024 Asset Management Work Plan Initiatives

### **Departmental Approval**

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