REPORT

PREPARED BY HEMSON FOR THE CITY OF DRYDEN

ASSET MANAGEMENT PLAN

June 14th, 2024

HEMSON

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Contents

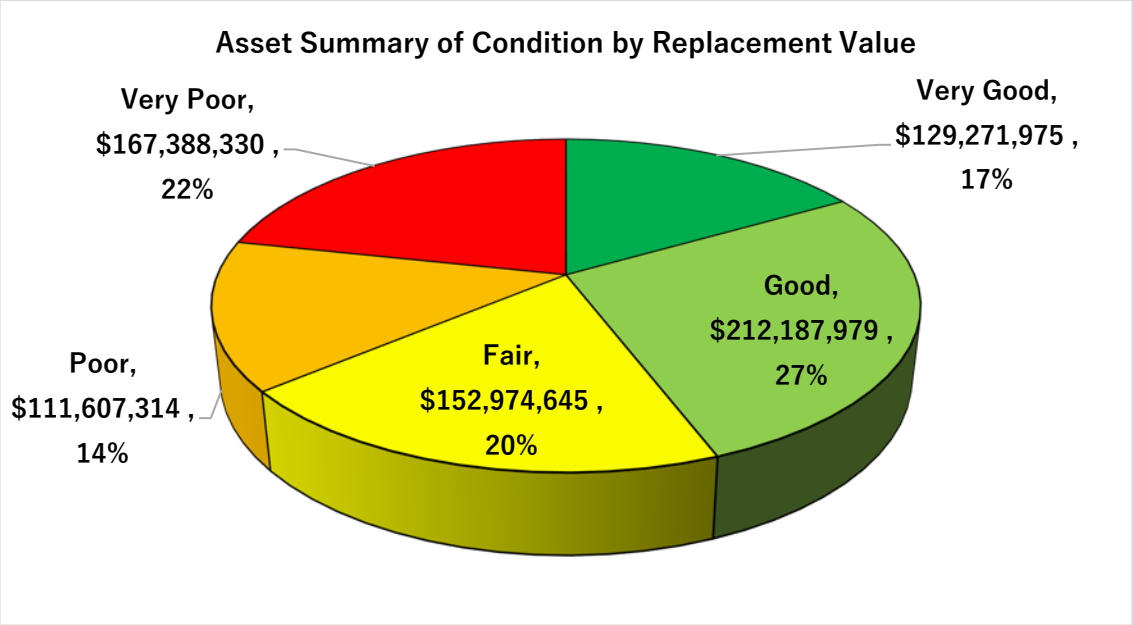
EXECUTIVE SUMMARY

The following summarizes the findings of the City of Dryden's Asset Management Plan (2023 Plan). The 2023 Plan follows the format set out in the *Building Together: Guide for Municipal Asset Management Plans* and it has also been developed to be consistent with the requirements of *Ontario Regulation 588/17 Asset Management Planning for Municipal Infrastructure* (*Ontario Regulation 588/17*) with consideration to the City's Asset Management Policy. This 2023 Plan defines the current levels of service for all core and non-core assets in compliance with the asset management regulation.

The 2023 Plan incorporates all assets that the City is responsible for to provide a comprehensive overview. All figures are in constant 2023 dollars and should be adjusted annually to account for the effects of inflation.

A. STATE OF LOCAL INFRASTRUCTURE

- The City's infrastructure has an estimated total replacement value of $773.4 million.
    - Roads represent $213.1 million (27.6%), and bridges represents $10.4 million (1.3%) of the total value;
    - Buildings (excluding the Water and Wastewater Treatment Plants) total $87.3 million and represent 11.3% of the total;
    - The remaining tax supported assets represent $48.0 million (6.2%); and
    - Engineered infrastructure related to water, storm, and sewer assets accounts for approximately $414.6 million (53.6%).
- Overall, the City's assets are considered to be in "Fair" condition.
    - Of the total asset value, about 44% or $341.5 million of the City's assets are considered to be in "Good" or "Very Good" condition.
    - Conversely, about 36% or $279.0 million of infrastructure is considered to be in "Poor" to "Very Poor" condition.
    - The remaining 20% ($153.0 million) of the assets are considered to be in "Fair" condition.



B. LEVEL OF SERVICE

- The City's current levels of service have been defined based on the condition of assets and the measures required as per *Ontario Regulation 588/17*:
    - Overall the City's asset base is considered to be in Fair condition.
    - The City's bridges and buildings are in good condition.
    - The City's machinery and equipment, as well as land improvements, are in poor condition.
    - The City's vehicles are in Fair condition overall.
    - Additional level of service measures that are required per *Ontario Regulation 588/17* are discussed in Section 3.

C. FINANCING STRATEGY

- The analysis indicates a spending need of about $758.4 million for tax supported assets and $538.2 million for rate supported assets – these figures represent the cumulative 40-year investment needs across all service areas for the various lifecycle activities identified in this plan.

- It is unrealistic in the current fiscal context to expect the City to fully address the infrastructure deficit in the short-medium term;

- Two financing strategies were developed to determine what capital contributions would be required to meet asset replacement needs (Note: in any given year, actual capital expenditures may be greater or less than the noted capital contributions as reserves are assumed to accommodate variances between the contributions and actual expenditures);

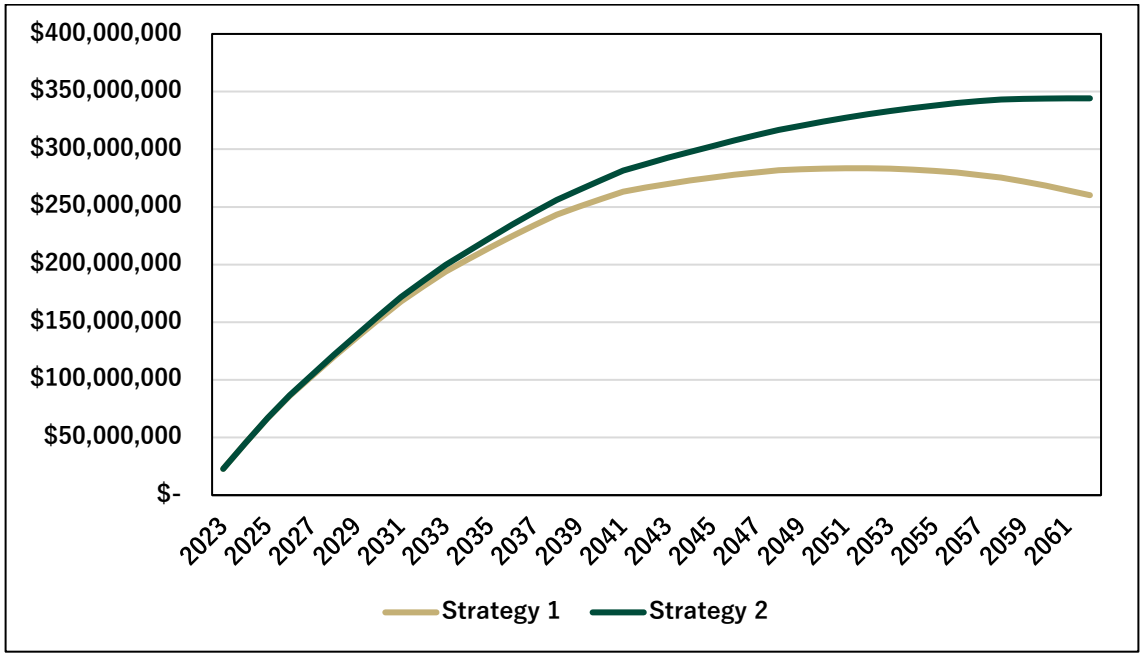
- Please note, the increases calculated would be in addition to the 2023 budgeted funding identified and should be adjusted annually to account for the effects of inflation. The Financing Strategy section of this 2023 AMP provides further details on each strategy.

- Furthermore, the funding sources only include known and confirmed funding sources. As a result, only federal gas tax (CCBF) and OCIF funding streams are captured in the revenue analysis moving forward. If the City is successful in continuing to receive one-time funding for specific projects as well as regular NOHFC funding, this money would advance the asset management program to reduce the infrastructure deficit earlier.

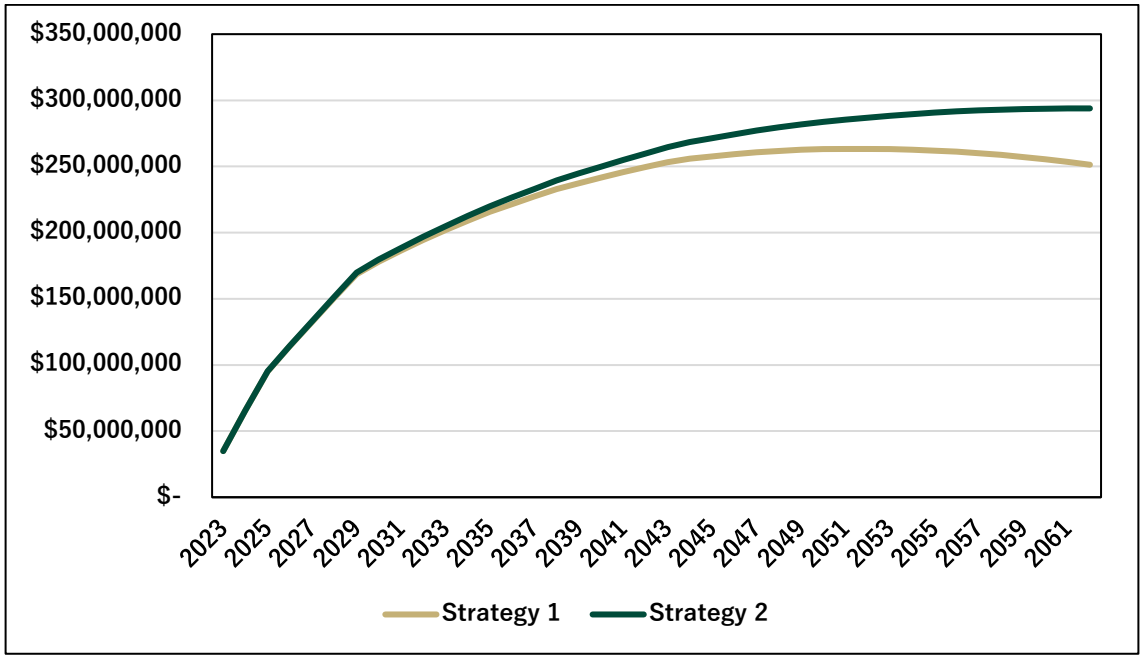
Summary of Financing Strategies		
Financing Strategy	**Tax Supported Strategy Parameters**	**Rate Supported Strategy Parameters**
Strategy 1 **Close in-year Funding Gap by 2052**	▪ Increase annual capital contributions by approximately $286,500 per year.	▪ Increase annual capital contributions by approximately $187,250 per year.
Strategy 2 **Close in-year Funding Gap by 2062**	▪ Increase annual capital contributions by approximately $179,000 per year.	▪ Increase annual capital contributions by approximately $132,800 per year.

- Of the two financing strategies identified for both tax and rate supported assets, strategy 2 poses the greatest risk to the City as the infrastructure deficit continues to grow to 2062. Strategy 1 demonstrate the infrastructure deficit being controlled over the planning period. Detailed tables of each strategy are provided in Appendix D; however, the tax and rate supported cumulative infrastructure gap is summarized in the graphs below.

Infrastructure Deficit Comparison for Tax Supported Assets ($2023)



Infrastructure Deficit Comparison for Rate Supported Assets ($2023)



1. INTRODUCTION

The City of Dryden's 2023 Asset Management Plan (2023 Plan) provides the City with a tool to assist in capital financing decisions. The Plan covers all municipal assets: Stormwater, bridges, roads, sidewalks, streetlighting, traffic signals, land improvements, buildings, machinery and equipment, vehicles, water infrastructure, and sewer infrastructure.

The 2023 Plan follows the format set out by the Ministry of Infrastructure through the Building Together: Guide for Municipal Asset Management Plans and it has also been developed to be consistent with the requirements of *Ontario Regulation 588/17* Asset Management Planning for Municipal Infrastructure. All figures reported in this 2023 Plan are in constant 2023 dollars and therefore should be adjusted annually to account for the effects of inflation.

An Excel based asset management financial model has been developed as part of the 2023 Plan. The model contains the City's asset inventory and it is intended to be updated on a regular basis to inform future capital investment decisions. The model contains the information required to update the State of the Local Infrastructure Report Cards presented in Appendix B, which can be reproduced annually to help Council and the public understand the state of assets and overall funding levels.

A. ASSET MANAGEMENT OVERVIEW

Well-managed public infrastructure is vital to the prosperity and quality of life of communities. Given the range and scope of services provided, Ontario municipalities have a special responsibility in ensuring that infrastructure is planned, built, and maintained in a sustainable way. A detailed asset management plan is essential to carry out this responsibility. Asset management has several benefits, including:

- The City can make informed and traceable decisions;
- The City has the opportunity to coordinate and plan accordingly by taking a risk-based approach to asset management;
- Higher customer satisfaction is possible;
- Documents a funding plan and strategy to manage infrastructure; and
- Demonstrates compliance with regulations and legislation.

Asset management is an ongoing practice in the City of Dryden. Council and staff have applied sound asset management principles to maintain records on tangible capital assets, monitor asset performance, and plan for infrastructure acquisition, repair, rehabilitation, and replacement over the long-term.

The purpose of the 2023 Plan is to build on existing practices by identifying how best to manage municipal infrastructure over the planning period to 2062. A strategy for maintaining infrastructure so that existing service levels are maintained is an important element. Ultimately, the 2023 Plan will provide Council with information that can guide sustainable infrastructure investment decisions.

B. ONTARIO'S ASSET MANAGEMENT REGULATION (*ONTARIO REGULATION 588/17*)

In 2015, the Province of Ontario established the Infrastructure for Jobs and Prosperity Act. The purpose of this Act is to establish mechanisms to encourage principled, evidence-based and strategic long-term infrastructure planning that supports job creation and training opportunities, economic growth, protection of the environment, and incorporate design excellence into infrastructure planning.

In December 2017, *Ontario Regulation 588/17* Asset Management Planning for Municipal Infrastructure was passed under the Infrastructure for Jobs and Prosperity Act. The regulation requires municipalities to develop a Strategic Asset Management Policy, which will help municipalities document the relationship between their Asset Management Plan and existing policies and practices as well as provide guidance for future capital investment decisions. City Council approved the Asset Management Policy in 2019.

The regulations also contain more specific requirements on the type of analyses municipal asset management plans should include. The aim is to provide guidance to municipalities so that asset management plans are more consistent across the Province. Furthermore, in March 2021 the Province amended the regulation to extend the regulatory timelines by one year. Table 1 provides a summary of the key regulatory timelines as outlined by Regulation 588/17 and where the City currently stands in the timeline.

Table 1 *Ontario Regulation 588/17* Timeline		
Regulation Timeline	**Requirement**	**Progress**
July 1, 2019	▪ Municipalities shall prepare their first strategic asset management policy. ▪ Municipalities shall review, and if necessary, update the policy every 5 years.	▪ City Council approved the Asset Management Policy in 2019. ▪ The next review is expected in 2024, although earlier reviews are encouraged whenever a change in policy directives occurs.
July 1, 2022	▪ Every city shall prepare an asset management plan in respect of its core municipal infrastructure assets. ▪ The current levels of service must be defined for all core assets.	▪ This 2023 Plan has incorporated the information from the City's asset inventory. The inventory has incorporated condition data for the engineered services of roads, bridges, stormwater, water and sewer. ▪ Current level of service measures have been identified through this plan, with the City expecting to develop other metrics on an ongoing basis. ▪ It is expected that service level data continue to be monitored and refined over the long-term.
July 1, 2024	▪ Every city shall prepare an asset management plan in respect of all other municipal infrastructure assets. ▪ The current levels of service must be defined for all other municipal assets	▪ This 2023 Plan has incorporated non-core assets contained in the City's inventory. Some of these assets include condition assessments based on internal staff reviews. ▪ Current level of service measures have been identified through this plan, with the City expecting to develop other metrics on an ongoing basis.
July 1, 2025	▪ Municipalities must establish proposed levels of service for a minimum of 10 years. ▪ A lifecycle management and financial strategy that covers a minimum of 10 years.	▪ The City is expecting to further develop their asset management program to establish the proposed levels of service and a financial plan to achieve the proposed levels of service moving forward. ▪ The proposed levels of service will be established through consultation with Council and the public in a subsequent update of this 2023 Plan.

C. ASSET MANAGEMENT PLAN STRUCTURE

The 2023 Plan is developed to be consistent with the structure recommended through the *2013 Building Together: Guide for Municipal Asset Management Plans*. At the same time, it has been developed to meet the requirements of *Ontario Regulation 588/17*. Table 2 below provides a guide to the sections of the 2023 Plan.

Table 2
Guide to the 2022 Asset Management Plan

Section	Requirement
Section 2 - State of Local Infrastructure	Summarizes the state of the City's infrastructure with reference to infrastructure quantity and quality. Additional details are provided in Appendix B.
Section 3 - Level of Service	A summary of the current levels of service is presented as well as recommendations on additional metrics the City can look to track in the future.
Section 4 - Asset Management Strategy	Sets out several strategies that will assist the City in maintaining assets so that current service levels are maintained. This section also includes a risk analysis of City assets. Additional details are provided in Appendix C.
Section 5 - Financing Strategy	Establishes how asset management can be delivered in a financially sustainable way for both tax and utility rate supported services. Additional details are provided in Appendix D.
Section 6 – Continuous Improvements and Updates	Provides key recommendations on how to administer the 2023 Plan and keep it up to date.
Section 7 - Conclusions and Recommendations	Provides recommendations based on the analysis undertaken.

Please refer to Appendix A for a list of definitions for commonly used terms throughout this 2023 Asset Management Plan.

2. STATE OF LOCAL INFRASTRUCTURE

This section provides a summary of the City's assets with reference to asset quantity and quality. Some assets have condition ratings based on a blended approach of staff or outsourced inspections and remaining useful life. These assets include buildings, bridges, road surfaces, road bases, sidewalks, sewer mains, sewer manholes. The remainder of assets have had a condition assigned based on the useful life of the asset relative to its age. Useful life assumptions for the assets considered under this 2023 Plan were acquired from depreciation periods where available, the opinion of City staff, and benchmark values obtained from comparable municipalities. Detailed technical information on the asset inventory, remaining useful life and conditions for each asset category is provided in Appendix B.

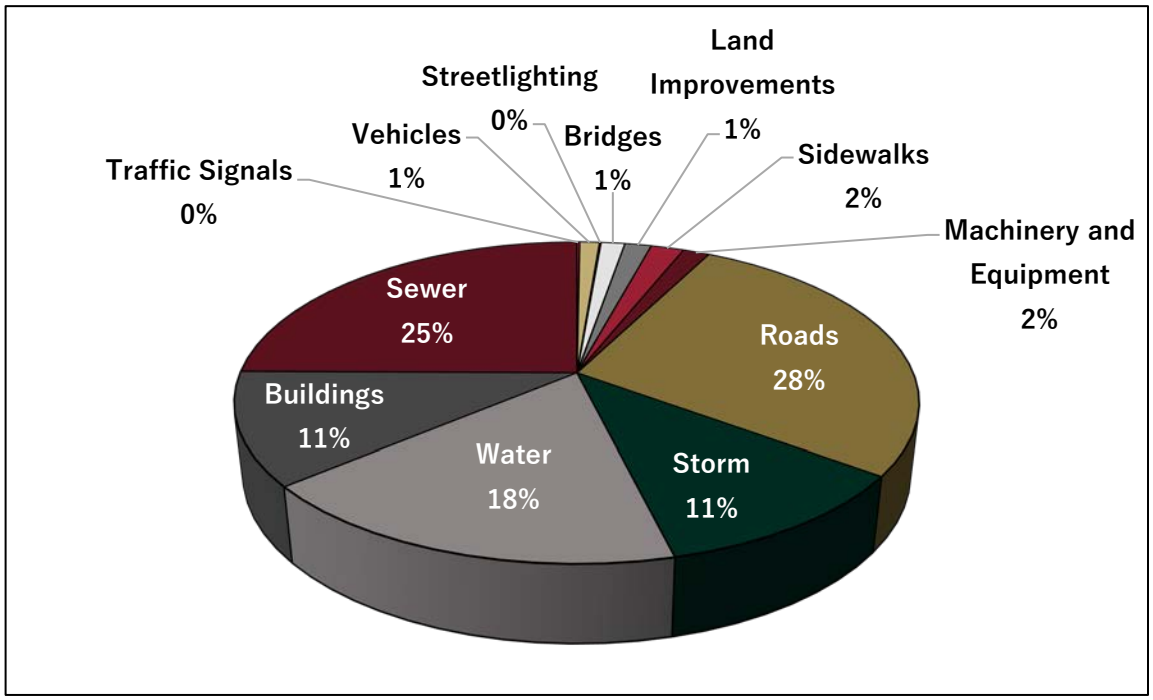
A. REPLACEMENT COST OF INFRASTUCTURE

The replacement cost for all City assets considered in the 2023 Plan is estimated at $773.4 million (represented in constant 2023 dollars). The largest share is related to roads and accounts for about $213.1 million (27.6%) of the total replacement cost. The next highest share is the wastewater assets at $192.3 million (24.9%) and water assets at a total of $136.8 million (17.7%). Buildings represent a total of at $87.3 million (11.3%), and stormwater assets at $85.6 million (11.1%).

The other asset categories in the City's asset portfolio make up the remaining $58.3 million (7.5%). These are made up of $14.4 million (1.9%) for sidewalks, $11.6 million (1.5%) for machinery and equipment, $11.6 million (1.5%) for land improvements, $10.4 million (1.3%) for bridges, $8.6 million (1.1%) for vehicles, $1.2 million (0.2%) for traffic signals, and approximately $700,000 (0.1%) for street lighting.

The replacement costs have been developed based on historical information maintained by staff in the asset inventory, costs in recent engineering studies, and recent benchmark costs from comparable municipalities. Where information was not available, historical acquisition costs were inflated to current 2023 dollars at a rate of 2%. Detailed replacement cost for each asset category is provided in Appendix B.

Figure 1 – Summary of Assets by Total Replacement Values (%)



B. SUMMARY OF STATE OF LOCAL INFRASTRUCTURE

Table 3 provides a summary of the state of local infrastructure for all asset categories considered in this study which is valued at $773.4 million. The weighted remaining useful life (WRUL) and weighted average condition (WAC) for each asset category has been derived relative to the replacement value of each asset. Detailed information is provided in Appendix B. The table illustrates several key findings:

- **Weighted Remaining Useful Life:** the WRUL of the City's assets is approximately 25 years.
- **Weighted Condition:** Overall, the City's assets are determined to be in Fair condition. Streetlights and Traffic Signals are maintained in Very Good condition. Bridges are maintained in Good condition. Sewer assets, Storm assets, Road Surfaces, Road Bases, Vehicles, and Buildings are in Fair condition, while machinery and equipment, land improvements, sidewalks, and water assets are in Poor Condition. Please note, many of the assets in "poor" condition are based on the age of the asset relative to the useful life.

Table 3 –Summary of the State of the Local Infrastructure

Summary State of Local Infrastructure								
		Weighted Average						
Asset Type	Replacement Cost ($2023)	Years of Useful Life	Age	Remaining Useful Life	Condition		Risk	
Buildings	$ 87,303,436	50	43	7	Fair	3	Moderate	8
Machinery and Equipment	$ 11,562,968	11	9	2	Poor	4	Moderate	9
Land Improvements	$ 11,561,540	25	19	6	Poor	4	Moderate	9
Vehicles	$ 8,585,687	17	13	4	Fair	3	Low	6
Transportation: Bridges	$ 10,368,133	50	25	25	Good	2	High	10
Transportation: Road Surfaces	$ 76,089,896	50	30	20	Fair	3	High	11
Transportation: Road Base	$ 137,050,515	100	29	71	Fair	3	Very Low	3
Transportation: Sidewalks	$ 14,353,281	50	30	20	Poor	4	Low	7
Transportation: Streetlighting	$ 692,200	50	6	44	Very Good	1	Very Low	2
Transportation: Traffic Signals	$ 1,220,569	40	1	39	Very Good	1	Very Low	2
Sewer	$ 192,252,274	55	44	10	Fair	3	Moderate	8
Storm	$ 85,580,552	69	39	30	Fair	3	Low	6
Water	$ 136,809,192	63	48	16	Poor	4	Low	13
Total	**$ 773,430,243**	**63**	**38**	**25**	**Fair**	**3**	**Moderate**	**8**

C. CONDITION ASSESSMENTS

Consistent with the Canadian National Infrastructure Report Card, as well as other major organization and institution reporting formats, a five-point rating scale was used to assign a condition to all assets. This methodology provides a standard and easy to understand way of reporting on the condition of assets. Table 4 summarizes the assumed parameters.

Table 4
Condition Assessment Parameters

Condition Rating	Definition
Very Good	▪ Well maintained, good condition, new or recently rehabilitated asset.
Good	▪ Good condition, few elements of the assets exhibit existing deficiencies.
Fair	▪ Some elements exhibit significant deficiencies. Asset requires attention.
Poor	▪ A large portion of the system exhibits significant deficiencies. Asset mostly below standard and approaching end of service life.
Very Poor	▪ Widespread signs of deterioration, some assets may be unusable. Service is affected.

Assets were categorized in the 5-tier rating system on an asset-by-asset basis. Three approaches have been utilized for the assets considered in this asset management plan.

1. Condition rating systems based on engineered metrics and professional standards. For example, Facility Condition Index for buildings, Pavement Condition Index for roads or professional mechanic inspections for vehicles. These metrics can then be translated into a 5-tier rating system. The city should continually update the conditions in the asset inventory to reflect changes in conditions or when assets are replaced.

    a. Condition assessments for the roads, bridges and some buildings are based on the engineered assessments developed through independent studies such as: 2020 Streetscan Pavement Condition Survey, Bridge OSIM Report, and the Buildings Condition Assessment. These conditions were adapted to the 5-tier system where appropriate.

2. Estimates based on expert staff opinion. This approach is important where there is low confidence that the age and useful life is representative of an assets condition. This method has already been used for a series of assets in this 2023 AMP and should continue to be utilized and expanded to more assets moving forward.

3. Estimates based on age and the remaining useful life of the asset. This was used for all assets, which the City was not able to provide a condition assessment based on existing knowledge or inspection, or where the assessed condition was dated and no longer reflective of the actual condition of the asset. It is the intention that the City move towards a condition assessment methodology using approach 1 and 2 as needed. With this said, this methodology is suitable for lower valued assets that have a shorter useful life.

3. LEVEL OF SERVICE

Asset management decisions must be made with reference to the level of service planned for by the City. Current service levels in Dryden have been developed based on a combination of internal asset management practices, community expectations, statutory requirements, and industry operation and safety standards. Typically, the level of asset investment made by the City in any one year has been determined by funding availability. That said, the City has in the past been responsive to repair needs to address immediate environmental or health risks. The City has therefore done a good job in assessing and maintaining levels of service.

The community expects that services be delivered in a cost effective and efficient way. Generally, community expectations revolve around the City's accessibility of "soft" services (e.g. recreation facilities; libraries; fire stations) within neighbourhoods. However, safety and performance are also important for core services such as roads, stormwater, water, and sewer infrastructure.

Developing levels of service and tracking over time is essential to measuring the success of service delivery and the asset management strategy overall. This section outlines current levels of service as they relate to the requirements outlined in *Ontario Regulation 588/17*.

A. CURRENT LEVELS OF SERVICE

The City has determined the current levels of service through the analysis and model developed in this 2023 Plan. The current level of service measures for each asset category are summarized in Table 5. It is noted that the information in Table 5 represents a blended approach of levels of service and performance measures which represent the best available information at this time:

- **Weighted Condition:** the condition of the City's assets are determined to be in Fair condition overall. The City's buildings and Vehicles are in Fair condition. Machinery and Equipment, as well as Land Improvements are in Poor condition. Bridges are in Good condition. Some of these conditions have been determined using an age-based methodology based on the asset useful life. While these assets are at the end of their estimated useful life, they continue to function appropriately.

  It is important to note that assets in Fair condition may transition into the Poor or Very Poor category in the near future and may require attention in the short to medium term, if proper asset maintenance and rehabilitation is not achieved. It will

be important for the City to determine which assets in the Fair category should be prioritized to ensure that current levels of service do not decline.

Finally, it is important to note *that Ontario Regulation 588/17* includes a prescribed set of level of service measures. Table 5 includes these level of service measures as required in the regulation, a brief summary is provided below:

- **Roads:** Out of a 100-rating scale, the average pavement condition index value of the roads is 60.19 (or Fair condition).
- **Bridges:** Out of a 100-rating scale, the average bridge condition index value of the bridges is 69.25 (or Good condition). One bridge in Dryden (13% of all bridges) has a load restriction of 5,000 pounds; the Hwy 17 Swanson Creek Pedestrian Bridge.
- **Storm System:** It is assumed that the current system is resilient to 5-year and 100-year storms based on a review of the asset condition and remaining useful life.
- **Water System:** The City ensures the water system operates in a safe and efficient manner and provides for clean drinking water to residents that exceeds standards. There were 6 Watermain breaks occurred in 2022 and the City has issued some boil water advisory notices in recent years.
- **Sewer System:** The City ensures the sewer system operates in a safe and efficient manner and meets all Provincial regulatory requirements. There were 10 instances which wastewater mains were backed up in 2022.

B. COSTS TO MAINTAIN CURRENT LEVELS OF SERVICE

The City undergoes reviews of the levels of service and services it provides on an annual basis through the budget process. Therefore, the City considers the short-term implications of any changes in the level of service with consideration to the availability of funds and impacts to residents through the tax and water/wastewater rates. The AMP considers the longer term costs of maintaining levels of service over a 40-year period. To do so the financing strategy considers three financing strategy scenarios which are discussed further in Section 5.

Table 5
City of Dryden
Level of Service Tracker

Asset Category	Value to Residents	Corporate Level of Service/Objective	Community Level of Service (as per O. Reg. 588/17)	Description of TLOS Measure	Source of Information	Current LOS
Buildings	Reliability	Providing reliable buildings.	That City-run facilities are reliable, available for the providence of service, and kept in good state of repair.	Average weighted condition assessment ("Very Poor" to "Very good")	AMP	**Fair**
				% of assets at or above "Good" or "Very Good" condition	AMP	49%
				% of assets beyond their useful life	AMP	16%
Machinery and Equipment	Reliability	Providing reliable equipment.	That City-owned equipment is reliable, available for the providence of service, and kept in good state of repair.	Average weighted condition assessment ("Very Poor" to "Very good")	AMP	**Poor**
				% of assets at or above "Good" or "Very Good" condition	AMP	2%
				% of assets beyond their useful life	AMP	
Land Improveme	Reliability	Providing reliable land improvements.	That land improvements are kept in good state of repair.	Average weighted condition assessment ("Very Poor" to "Very good")	AMP	**Poor**
				% of assets at or above "Good" or "Very Good" condition	AMP	11%
				% of assets beyond their useful life	AMP	9%
Vehicles	Reliability	Providing reliable vehicles.	That City-owned fleet is reliable, available for the providence of service, and kept in good state of repair.	Average weighted condition assessment ("Very Poor" to "Very good")	AMP	**Fair**
				% of assets at or above "Good" or "Very Good" condition	AMP	32%
				% of assets beyond their useful life	AMP	38%
Bridges	Legislative	To meet reporting requirements of O. Reg. 588/17	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).	Percentage of bridges in the municipality with loading or dimensional restrictions (O. Reg. 588/17).	OSIM Report	13%
			That bridges are safe and maintained in a good state of repair.	For bridges in the municipality, the average bridge condition index value (O. Reg. 588/17).	Condition Assessment (City Data Set)	69.25
		Providing a reliable bridge.	Bridges are maintained in good repair and are safe to use.	Average weighted condition assessment ("Very Poor" to "Very good")	AMP	**Good**
				% of assets at or above "Good" or "Very Good" condition	AMP	90%
				% of assets beyond their useful life	AMP	0%
Roads	Legislative	To meet reporting requirements of O. Reg. 588/17	Description of the road network in the municipality and its level of connectivity.	Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality (O. Reg. 588/17).	AMP	1.41
				Length of Arterial roads as a percentage of all roads	AMP	18%
				Length of Collector Roads as a percentage of all roads	AMP	30%
				Length of Local Roads as a percentage of all roads	AMP	51%
			Descriptions that illustrate the different levels of road class pavement condition.	For paved roads in the municipality, the average pavement condition index value (O. Reg. 588/17).	Condition Assessment (City Data Set)	60.19
				For unpaved roads in the municipality, the average surface condition (O. Reg. 588/17).	Condition Assessment (City Data Set)	60.19
Sewer	Legislative	To meet reporting requirements of O. Reg. 588/17	That wastewater servicing is available to residents and businesses.	Percentage of properties connected to the municipal wastewater system.	Drinking water system annual report & Census information (water	73%
			That the wastewater infrastructure function as intended, has minimized environmental effects, and prevents waste from being backed up into homes or discharged into beaches or habitable areas.	The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system.	Review of City information	< 0.00037
				The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.	FIR	0.0038
				The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system.	Review of City information	0%
Storm	Legislative	To meet reporting requirements of O. Reg. 588/17	That the stormwater management infrastructure is resilient and prevents residents properties from flooding.	Percentage of properties in municipality resilient to a 100-year storm.		100%
				Percentage of the municipal stormwater management system resilient to a 5-year storm.	AMP - Based on % of Infrastructure that is not overdue for replacement	99%
Water	Legislative	To meet reporting requirements of O. Reg. 588/17	That water servicing is available to residents and businesses.	Percentage of properties connected to the municipal water system.	Drinking water system annual report & Census information	73%
			That the water servicing is available to emergency responders in the event of a fire.	Percentage of properties where fire flow is available.		100%
			That the drinking water system provides safe water for residents to use and is kept in a condition that acheives a high standard of reliability.	The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system.		0.001
				The number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system.	FIR	0.0023

4. Asset Management Strategy

This section sets out an action plan that will assist the City in maintaining assets so that current service levels are maintained. The asset management strategy relates to a set of actions that, taken together, has the lowest total cost to maintain assets in a state of good repair as defined in the Building Together: Guide for Municipal Asset Management Plans.

The asset management strategy includes current practices and potential future practices related to non-infrastructure solutions, maintenance activities, renewal/rehabilitation, disposal, and expansion activities. The final component of this section includes a risk analysis, which can be used to assist Municipal staff and Council measure and manage risks to assets to maintain current levels of service.

A. OVERVIEW OF FULL LIFE-CYCLE COST MODEL

As part of the Asset Management Plan, the City, along with Hemson, have identified the total full life cycle costs of an asset that corresponds to the requirements of the regulation. This would entail a cost estimation throughout the assets life including planning, design, construction, acquisition, operation, maintenance, renewal (and disposal). In addition, the analysis also takes into consideration the inclusion of expansion related infrastructure into the lifecycle management strategy. This approach ensures that the additional lifecycle costs associated with newly constructed/acquired assets are accounted for in the long-term forecast.

A “lifecycle management approach” in asset management planning not only includes estimating future lifecycle costs, but also embeds the process of monitoring how the asset performs over its life while providing affordable services.

These lifecycle activities can be segmented into six (6) categories: non-infrastructure solutions, operations/maintenance, renewal/rehabilitation, replacement, disposal, and expansion activities. While this AMP looks to address the various cost elements, it is important to recognize that as the maturity level increases, the costs associated with each lifecycle activity will strengthen and improve the expenditure outlook. The table below provides a description of each lifecycle category and the specific approach used to forecast expenditures in this AMP.

Table 6 Overview of the Full Life Cycle Cost Activities and AMP Approach		
Category	**Description**	**AMP Approach**
Non-Infrastructure Solutions	▪ Actions or policies that can lower costs or extend asset life (e.g., better integrated infrastructure planning and land use planning, demand management, insurance, process optimization, managed failures, etc.).	▪ A general provision of $50,000 per annum is included associated to asset management related costs such as studies or staff costs to undertake AMP analysis.
Operating & Maintenance Activities	▪ Servicing assets on a regular basis in order to fully realize the original service potential. Maintenance will not extend the life of an asset or add to its value. Not performing regular maintenance may reduce an asset's useful life.	▪ Based on a review of 2023 budget by service area. ▪ In most instances, does not include general or non-asset related operating costs associated with the new asset acquisition (example: new staff to carry out programming in a new facility). ▪ Annual capital related maintenance activities of $3.34 million per annum for tax supported assets and $1.25 million for rate supported assets is included in the analysis moving forward. ▪ These figures are based on 2023 budget and is deemed appropriate to use in the forecast moving forward as it generally represents the costs from previous year's budgets.
Renewal/ Rehabilitation Activities	▪ Mostly associated to significant repairs designed to extend the useful life of an asset. These types of activities are typically done at key points in the lifecycle of an asset to ensure the asset reaches it designed useful life.	▪ Renewal expenditures calculated based on renewal activities from 2023 budget.

Table 6 Overview of the Full Life Cycle Cost Activities and AMP Approach		
Category	**Description**	**AMP Approach**
Replacement Activities	▪ Activities that are expected to occur once an asset has reached the end of its useful life and renewal/ rehabilitation is no longer an option.	• Incorporating the average annual investment required to replace assets when they reach the end of their useful life (age/condition/risk replacement schedule).
Disposal Activities	▪ The activities associated with disposing of an asset once it has reached the end of its useful life, or is otherwise no longer needed. Typically, disposal costs are accounted under replacement activities. Some assets, such as landfills, may have perpetual maintenance costs.	▪ Analysis assumes any costs associated with "disposal" is included for in the replacement value and captured in the capital replacement requirements.
Expansion Activities	▪ Planned activities required to extend or expand municipal services to accommodate the demands of growth.	▪ As the city adds new capital, the asset management related expense is included for in the calculation of the funding need. ▪ This information was derived directly from the 2023 Budget.

It should be noted that the City undertakes all the activities described above, however, the City's budget generally accounts for these expenditures in different categories. Specific asset management strategies based on existing practices in the City are documented in Appendix C. It is recommended that the City continue to track the asset management activities required to continue to maintain levels of service.

B. RISK ANALYSIS

It is important to assess the risk associated with each asset and the likelihood of asset failure. Asset failure can occur as the asset reaches its limits and can jeopardize public/environmental safety. In addition, certain assets have a greater consequence of failure than others. A risk matrix can help prioritize which assets should be repaired/replaced, even those which the City has already identified to be in Poor or Very Poor condition. The evaluation rating is then linked to the condition assessment parameter discussed in Section II. The formula to determine asset risk is as follows:

(Probability of Failure) X (Consequence of Failure) = (Risk Rating)

Each of the components of the Risk Rating methodology is defined as follows:

- **Probability of Failure:** is directly linked to the condition of an asset. For example, an asset in Very Poor condition would have the probability of asset failure in the short term be high. This type of asset may be near the end of its useful life or has deteriorated significantly. Conversely it would be considered rare for an asset to fail in the short term if it is considered to be in Good or Very Good condition. Table 7 below outlines the definition of probability of failure used for the City's assets.

Table 7
Probability of Failure

Condition	Probability of Failure	Description
Very Good	1	Rare
Good	2	Unlikely
Fair	3	Possible
Poor	4	Likely
Very Poor	5	Almost Certain

Note: Definitions are based on the MFOA Asset Management Framework.

Consequence of Failure: refers to the impact on the City if an asset were to fail. The consequence of failure has been determined separately for each asset category, as the impact to the City differs greatly by asset type. For example, if a fire emergency vehicle was not available for service, the potential impact could be severe compared to a vehicle used for administrative purposes. For the purposes of this analysis, assets were assigned a consequence of failure based on an assessment of the relative importance of the asset. Table 8 below outlines the definition of consequence of failure used for the City's assets. The consequence of failure, rated on a 1-5 scale, was weighted relative to each category in Table 8 depending on how impactful the consequence may be to the City.

Table 8
Consequence of Failure

Consequence of Failure	Description
1 - Insignificant	No impact to operations.
2 - Minor	Minor impact to operations, all major operations can continue to function.
3 - Moderate	Moderate impact to operations some critical operations may need to stop functioning temporarily.
4 - Major	Major operations seize and some damage control necessary.
5 - Significant	All operations seize to function and major damage control is necessary.

Note: The consequence of failure was developed based on the description of assets.

- **Risk Rating:** categorizes assets based on the level of risk to the City. The risk rating provides a guide to prioritize assets by determining which assets require attention first and which capital works can be deferred. Higher risk assets should be prioritized for attention in the short term by determining which of the lifecycle actions is required to be performed on the asset (see Appendix C). Table 9 below provides a summary of the risk matrix.

Table 9
Risk Matrix

Evaluation Rating		Consequence of failure					Color Code
		1	2	3	4	5	
Probability of Failure	1	1	2	3	4	5	Very Low Risk
	2	2	4	6	8	10	Low Risk
	3	3	6	9	12	15	Moderate Risk
	4	4	8	12	16	20	High Risk
	5	5	10	15	20	25	Very High Risk

Table 10 presents the findings of the risk analysis and illustrates the City's assets rated from low to high risk. The city has a mix of different assets possessing different assessed risks. Bridges and Road Surfaces are identified as being "High" risk due to the high consequence of failure for these asset categories, despite the fact that most of these assets are in "Good" and "Fair" condition overall. Buildings and Sewer asset have been labeled "Moderate" risk due to them being in "Fair" condition and having a moderate to high consequence of failure. Even though Machinery and Equipment and Land Improvements have a lower consequence of failure, they have also been labeled "Moderate" risk assets, since they are in poor condition. The remaining "Low" and "Very Low" risk categories include Vehicles, Road Bases, Sidewalks, Streetlighting, Traffic Signals, Storm, and Water assets, which have been reported from Fair to Very Good condition, meaning there is a fairly low probability of failure and the consequence of failure has been deemed to be relatively low compared to the other asset categories mentioned above.

The risk of each asset and asset category has been determined with reference to the parameters outlined in Table 9 above. It is important to note, that the City will need to continue regular maintenance activities and capital works moving forward to maintain current levels of service – this ensures assets do not further deteriorate posing greater risk to the City.

Table 10 Summary Risk Assessment			
Asset Type	**Replacement Cost ($2023)**	**Risk (Weighted Average)**	
Buildings	$ 87,303,436	**Moderate**	8
Machinery and Equipment	$ 11,562,968	**Moderate**	9
Land Improvements	$ 11,561,540	**Moderate**	9
Vehicles	$ 8,585,687	**Low**	6
Transportation: Bridges	$ 10,368,133	**High**	10
Transportation: Road Surfaces	$ 76,089,896	**High**	11
Transportation: Road Base	$ 137,050,515	**Very Low**	3
Transportation: Sidewalks	$ 14,353,281	**Low**	7
Transportation: Streetlighting	$ 692,200	**Very Low**	2
Transportation: Traffic Signals	$ 1,220,569	**Very Low**	2
Sewer	$ 192,252,274	**Moderate**	8
Storm	$ 85,580,552	**Low**	6
Water	$ 136,809,192	**Low**	13
Total	**$ 773,430,243**	**Moderate**	**8**

It is important to recognize the risk associated with the City's ability to deliver the plan while recognizing that any deviation may affect the overall ability to deliver service. Table 11 below provides a summary of the identified risks, potential impacts and mitigating actions associated with the asset management program.

Table 11 Risk Associated to the Plan		
Identified Risk	**Potential Impact**	**Mitigating Action**
Failed Infrastructure	▪ Delivery of service ▪ Asset and equipment damage	▪ Repair and rehabilitate as necessary ▪ Increase investment
Inadequate funding	▪ Delivery of service ▪ Increased risk of failure ▪ Shorten asset life ▪ Defer funding to future generations	▪ Reductions of service ▪ Find additional revenue sources
Regulatory Requirements	▪ Non-compliance ▪ Mandatory investments ▪ Increased costs	▪ Find additional revenue sources ▪ Lobby actions

Table 11 Risk Associated to the Plan		
Identified Risk	**Potential Impact**	**Mitigating Action**
Plan is not followed or not undertaking required lifecycle activities	▪ Shorten asset life ▪ Inefficient investments ▪ Prioritization process failure ▪ Failure to deliver service	▪ Monitor and review ▪ Create asset management network ▪ Implement processes ▪ Investigate alternative lifecycle management options

C. CLIMATE CHANGE INTEGRATION

The management of a municipal assets plays a fundamental role in the delivery of services, which depends on the infrastructure available to deliver the service. Corporate asset management in municipalities largely relates to the management of existing assets to keep them in a state of good repair while planning for future repair and/or replacement of their assets across all service areas. Impacts of climate change are already being experienced around the world, including Canada. It is important for municipalities to begin considering and planning for future climates to ensure the delivery of services, especially as it pertains to the maintenance of key municipal infrastructure. As per *Ontario Regulation 588/17* s3(5), municipalities must include a commitment in their asset management planning to address the vulnerabilities of climate change with respect to operations, levels of service and lifecycle management. There must also be consideration for anticipated costs, mitigation and adaptation approaches and disaster planning to meet all regulatory requirements in Ontario municipal asset management.

Expected climate change impacts include hotter, drier summers, warmer winters with increased precipitation, increased frequency and intensity of storms and increased intensity of extreme winds. These changes in climate will likely lead to increased risks associated with flooding, heatwaves, risk of infrastructure damage, health and safety of residents, the alteration or loss of habitats, etc.

Many of these risks are associated with municipal assets and may impact the levels of service. Climate change mitigation and adaptation planning is an important step for municipalities to take to begin managing risks associated with climate change. Therefore, the City is taking steps towards the integration of climate change considerations into their asset management planning framework moving forward.

The table below considers municipal owned and operated assets, although, regional critical infrastructure related to roads or public health may also be impacted by the noted hazards. Table 11 provides a risk summary at this time for information purposes to help further propel climate change integration with asset management, although, recognizing the full utilization would still need to be applied and understood at the staff level. In asset management terms, this table shows the big picture effects that climate change hazards may have on the LOS for various service areas. The specific climate change impacts on LOS by service are to be developed further as part of upcoming Asset Management Plans.

Through further understanding of the anticipated extent of climate change events, climate change adaptation projects at the City will provide additional parameters as to the likelihood and severity of events. At its most simplistic form, the table below provides a range from a "rare" occurrence to "almost certain". A rare occurrence could be correlated to falling into the tenth percentile of probability, with an almost certain occurrence falling into the ninetieth percentile of probability.

Table 12 - Framework for Climate Change Integration with Risk

Hazards / Risks	Likelihood	Consequence	
		Service Area	Possible Critical Infrastructure Failure / Service Impacts
Freezing Rain / Ice Storm	Almost certain	▪ Roads ▪ Stormwater	▪ Reduced road and bridge conditions, potential for closures ▪ Potential for increased flooding of stormwater infrastructure ▪ Transit delays due to poor road and bridge conditions
Extreme Temperatures – Cold Wave	Almost certain	▪ Parks & Recreation ▪ Facilities ▪ Water ▪ Sewer	▪ Closures of outdoor amenities due to extreme weather conditions ▪ Increased strain on indoor heating systems leading to reduced service life and functionality of components and systems

Hazards / Risks	Likelihood	Consequence	
		Service Area	Possible Critical Infrastructure Failure / Service Impacts
Tornado	Rare	▪ All Services	▪ Potential damage to various municipal assets due to high winds
Intense Rain	Almost certain	▪ Transportation ▪ Stormwater	▪ Flooding of bridges and roadways leading to closures ▪ Potential capacity of storm sewer systems exceeded frequently, leading to property damage ▪ Disruptions to service due to flooding of roads, leading to decreased levels of service
Flood – Urban	Likely	▪ Transportation ▪ Stormwater ▪ Parks ▪ Wastewater	▪ Flooding of bridges and roadways leading to closures ▪ Potential capacity of storm sewer systems exceeded frequently leading to property damage ▪ Disruptions to service due to flooding of roads, leading to decreased levels of service ▪ Flooding of Parks leading to closures and reduced levels of service
Extreme Temperatures – Heat Wave	Likely	▪ Parks & Recreation ▪ Facilities	▪ Potential closure/reduce used of outdoor amenities due to high temperatures (reduced levels of service). Lost habitats leading to reduced environmental diversity. ▪ Increased strain on indoor cooling systems leading to reduced service life and functionality of components and systems

Hazards / Risks	Likelihood	Consequence	
		Service Area	Possible Critical Infrastructure Failure / Service Impacts
Windstorm	Likely	▪ Parks & Recreation ▪ Facilities	▪ Closure of outdoor assets due to potential hazards for residents ▪ Increased strain on facility assets leading to potential damages and reduced service life and functionality of components and systems

Source: https://www.assetmanagementbc.ca/wp-content/uploads/Climate-Change-and-Asset-Management.pdf

5. FINANCING STRATEGY

The City has continually contributed to capital over the past few years for both tax funded and rate funded services. In order to continue to maintain levels of service, the City will need to monitor funding levels over the next few years.

This section of the 2023 Plan is intended to help the City build on the existing asset management practices already in place. The financing strategies presented provide the City with feasible options to increase capital funding in a sustainable manner to maintain service levels.

A. OPERATING BUDGET EXPENDITURES

The City has historically set aside funds to maintain its capital assets in a state of good repair. This has meant that sufficient funds have typically been available to deal with immediate and critical asset repair and rehabilitation needs. Overall, the City has aimed to increase its operational and capital budget expenditures to maintain assets and fund capital asset repair and replacement over the past few years, although, the COVID pandemic has somewhat strained resources and limited the ability to increase the amount of funding dedicated to asset maintenance.

In addition to the effects of the COVID pandemic, the effects of inflation and inadequate levy increases to match inflation have resulted in a decreased ability to fund asset maintenance. It is anticipated that the City's operating expenditures will be adjusted annually, at minimum, to account for the effects of inflation. Although, if additional asset management strategies are adopted by the City, annual costs could exceed regular inflationary adjustments. Using the 2023 budget as the basis, the analysis used in the financing strategy assumes about $3.34 million per annum is related to asset operations and maintenance for tax supported assets and $1.25 million for rate supported assets.

As the city continue to mature its asset management program, it is expected that service level adjustments and costs associated can be monitored to determine the outcomes of achieving desired levels of services.

B. CAPITAL REPLACEMENT SCHEDULE

The 2023 Plan includes an estimate of the timing for replacement of all assets. Using the risk assessment discussed in Section 4, a schedule for the replacement of assets has been developed on an asset by asset basis. Assets with a higher risk rating are prioritized earlier in the schedule to reflect a higher priority, while assets with lower risk ratings are moved

further out into the future forecast to reflect a more "smoothed" expenditure outlook. The timing is based on a percentage of the useful life of the asset. Table 13 below provides a summary of the risk thresholds used to calculate timing of replacement needs.

Table 13
Risk Thresholds for Asset Life Extension

Percentage of Useful Life					Color Code
100%	80%	60%	40%	20%	Very Low Risk
80%	65%	50%	30%	16%	Low Risk
60%	50%	35%	25%	10%	Moderate Risk
40%	30%	25%	15%	2%	High Risk
20%	16%	10%	2%	0%	Very High Risk

1. Tax Supported Assets

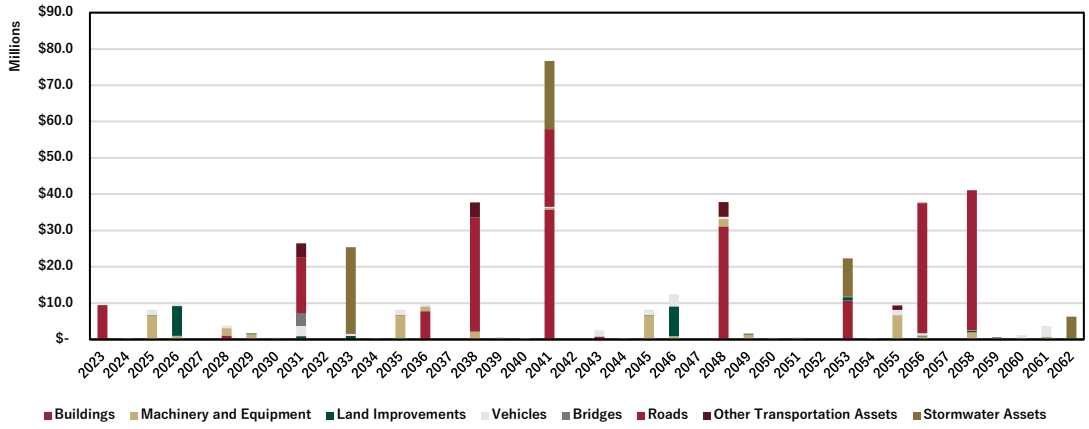
Figure 2 sets out the schedule of replacement of assets, to maintain current levels of service for the tax supported assets considered in the 2023 Plan. Over the 40-year period, to 2062, the select tax supported repair and replacement program totals about $406.71 million. The average yearly expenditure related to these assets amount to approximately $10.17 million per year.

Some larger valued assets have been identified over the short-term (next five years) to require repair or replacement, in particular some major replacement projects include:

- **Buildings:** For the next 5-year period (2023-2027), our analysis has identified a replacement need of approximately $133,000 for assets at or beyond their useful lives.
- **Machinery & Equipment:** The 5-year period (2023-2027) identified a replacement cost of $8.00 million. This includes replacement of various recreational equipment, a grader, a loader, a plow, computer software and equipment, and some other low-cost items.
- **Land Improvements:** A replacement cost of $8.19 million in the 5-year period (2023-2027) for land improvements has been identified due the Dryden Airport runway, which was installed in 2005, expected to reach the end of it's 20-year useful life**.**
- **Vehicles:** The 5-year period (2023-2027) has identified replacement of $2.31 million of fleet assets, since many of the vehicles have been identified as being beyond their useful lives.
- **Bridges:** The most recent OSIM report shows that bridges are in good condition overall. No replacements are expected to occur in the 5-year period from 2023 to 2027.

- **Roads:** The 5-year period (2023-2027) has identified replacement of $9.36 million for immediate replacement of Langlands Dr. (which has been completed as of the end of 2023), Harris Cr. (which is expected to be completed in 2024), and Sandy Beach Road due to very low PCI assessments. No urban arterial roads are expected to need replacement in the next 5 years.
- **Other Transportation Assets:** Majority of assets were replaced in the last 10 years. As a result, there are no replacements are forecast to occur in the 5-year period from 2023 to 2027.
- **Stormwater Assets:** No Stormwater assets have been identified as due for replacement within the 2023-2027 period.

Figure 2
Replacement Schedule (Risk Based, Tax Supported)



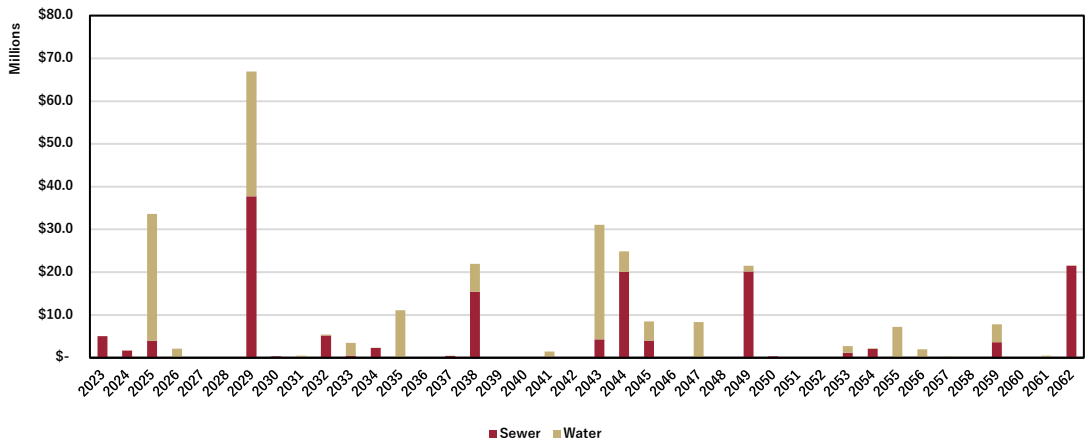
2. Rate Supported Assets

Figure 3 sets out the schedule of repair and replacement of assets, to maintain current levels of service for the rate supported (water and sewer) assets considered in the 2023 Plan. Over the 40-year period, to 2062, the rate supported repair and replacement program totals about $295.98 million. The average yearly replacement costs of these assets amount to approximately $7.40 million.

- **Sewer Assets:** The 5 year period (2023-2027) has identified replacement of $10.88 million for immediate replacement of a number of sewer mains that were installed in 1927 and have gone far beyond their useful lives, as well as the dated equipment that outfits the wastewater treatment plant.

- **Water Assets:** A total of $31.80 million is expected to require replacement within the 5 year period (2023-2027). This amount includes replacement of all water mains that were installed in 1927 and have outlived their useful lives.

Figure 3
Replacement Schedule (Risk Based, Rate Supported)



C. SUMMARY OF THE CUMULATIVE FULL LIFECYCLE COSTS

A key component of the financing strategy is to identify the level of expenditure required on an annual basis to pay for asset management. Costs to maintain and eventually repair or replace municipal assets need to be understood and contributions to reserves and reserve funds need to be quantified. In this section, provisions for repair and replacement are calculated for each asset based on its remaining useful life and the anticipated cost of replacement in constant 2023 dollars. The aggregate of all individual provisions forms an annual contribution to reserves for the purpose of asset repair and replacement.

1. Tax Supported Assets

Over the next forty years, the analysis indicates a spending need of about $758.45 million. Figure 4 below summarizes the cumulative 40-year investment needs across the tax supported service areas for the various lifecycle activities identified above. Of the total life cycle cost, most costs can be attributed to saving for the repair, renewal and replacement of existing infrastructure. About 18% of the total is related to operating and maintenance costs of the existing asset base. Please note no provisions for a level of service adjustments to account for requirements of *Ontario Regulation 588/17* to define and implement desired levels of service has been included in the analysis – this will be further addressed in the next plan to coincide with the regulatory deadline.

Figure 4
Summary of Lifecycle Cost Model 2023-2062 ($000's)

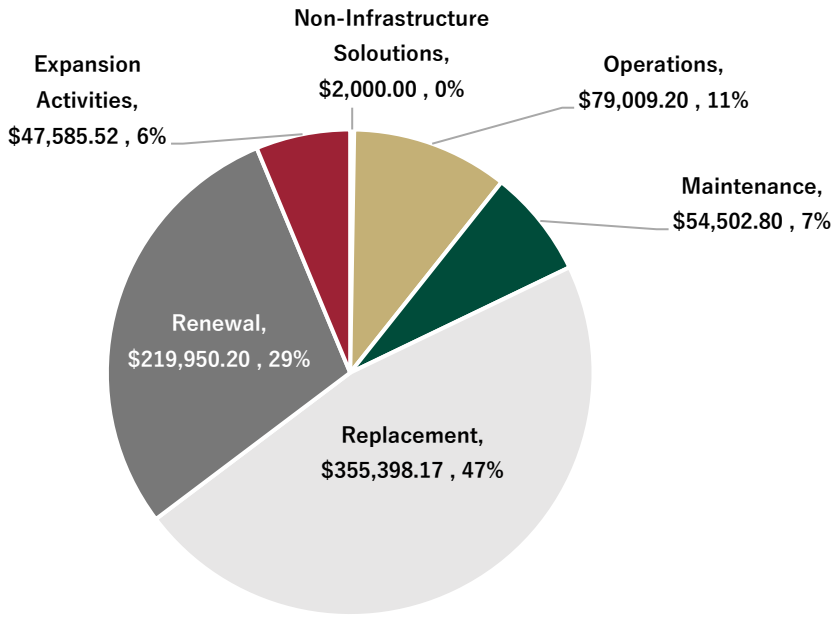
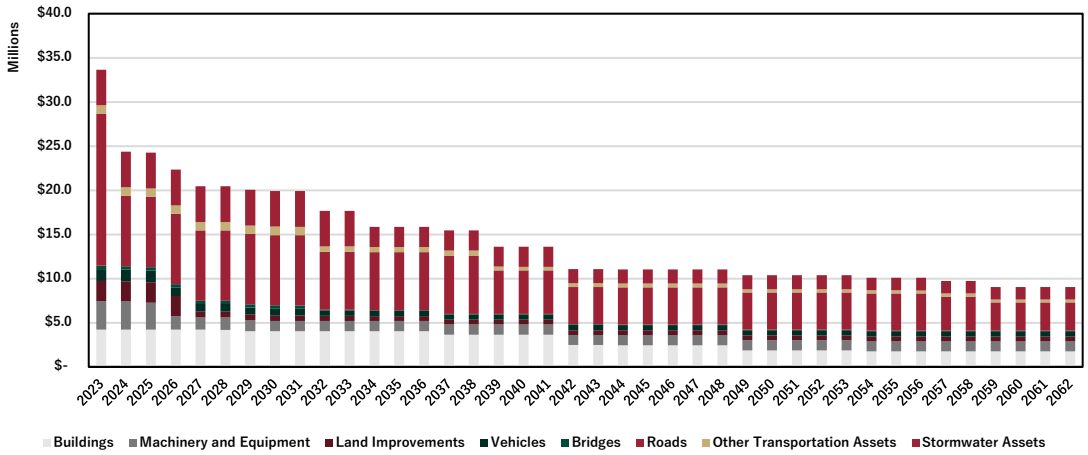


Figure 5 below provides an overview of the annual contributions related to the capital renewal and replacement requirements on an annualized basis over the planning period for tax supported infrastructure. Figure 5 shows the funds that would have to be contributed annually to reserves to maintain current levels of service for tax supported assets included in this 2023 Plan to 2062. Figure 5 demonstrates that:

- Average annual contributions over the 40-year period would have to be in the order of $14.38 million per year, with roads, machinery and equipment, buildings, and stormwater infrastructure renewals as the most significant portions. The current level of funding in the 2023 budget is $1.5 million for tax supported assets (this is based on the City's current Transfer to Reserves ($434,000) and transfer to Working Fund ($1.1 million).

- This level of investment in municipal assets would need to increase from current funding levels. It should be noted that of the 2023 capital funding sources for this set of assets, tax supported revenues are the most secure form of recurring revenue for the City as other funding sources could be subject to review by the Province and cannot be relied up as a secure funding source each year for financial planning.

Figure 5
Provision Schedule (Risk Based, Tax Supported)



2. Rate Supported Assets

Over the next forty years, the analysis indicates a spending need of about $538.2 million. Figure 6 below summarizes the cumulative 40-year investment needs across the utility rate service areas for the various lifecycle activities. Of the total life cycle cost, most costs can be attributed to operations and maintenance and saving for the repair, renewal and replacement of existing infrastructure. Similar to tax supported services, no provisions for a level of service adjustments to account for requirements of *Ontario Regulation 588/17* to define and implement desired levels of service has been included in the analysis – this will be further addressed in the next plan to coincide with the regulatory deadline.

Figure 6
Summary of Lifecycle Cost Model 2023-2062 ($000)

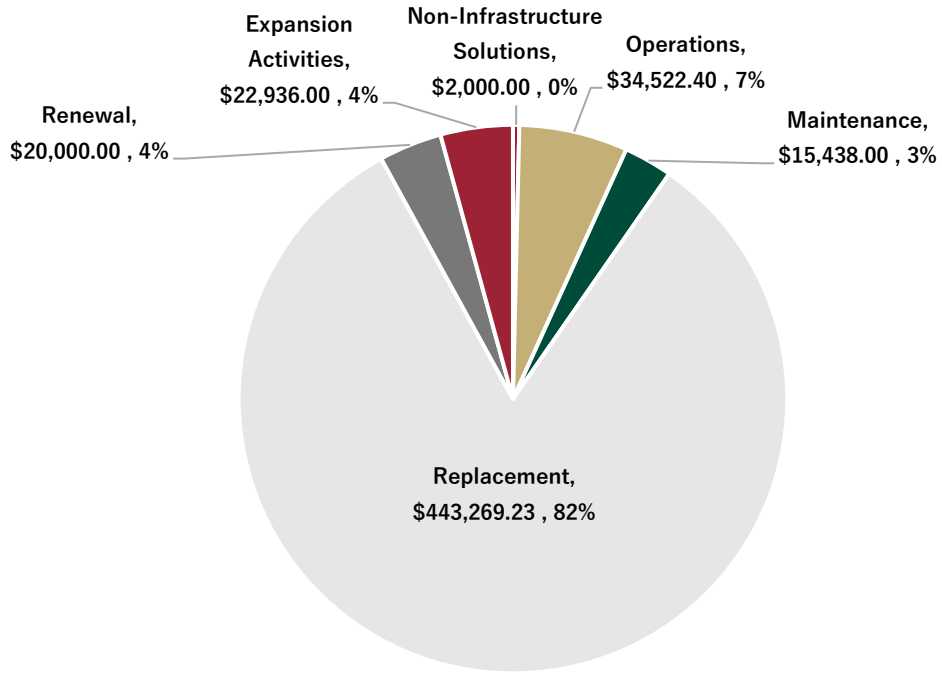
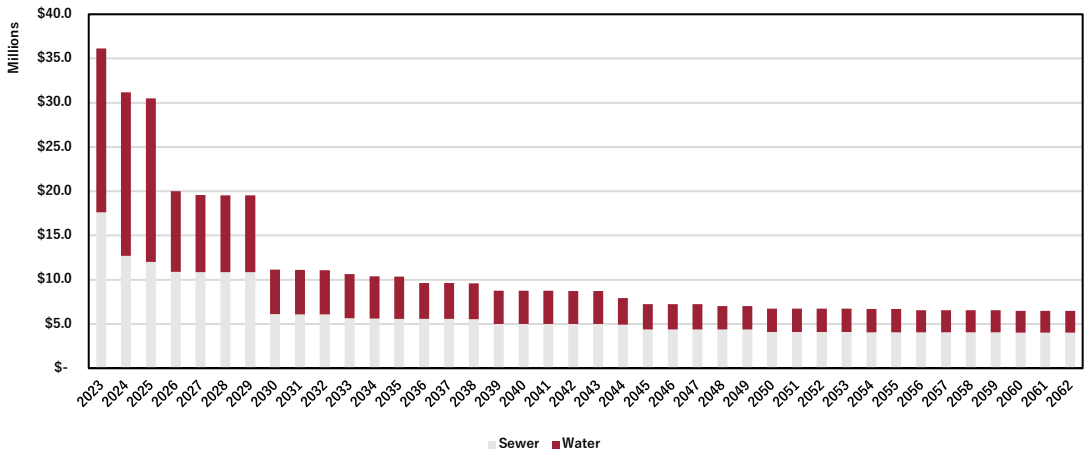


Figure 7 below provides an overview of the annual contributions related to the capital renewal and replacement requirements on an annualized basis over the planning period for rate supported infrastructure. Figure 7 shows the funds that would have to be contributed annually to reserves to maintain current levels of service for rate supported assets included in this 2023 Plan to 2062. Figure 7 demonstrates that:

- Average annual contributions over the 40-year period would have to be in the order of $11.1 million per year. The current level of funding in the 2023 budget is $1.6 million for rate supported assets this is based on the City's current Transfer to Reserves ($510,000) and Transfer to Working Fund ($1.1 million).

- This level of investment in municipal assets would need to increase from current funding levels. It should be noted that of the 2023 capital funding sources for this set of assets, rate supported revenues are the most secure form of recurring revenue for the City as other funding sources could be subject to review by the Province and cannot be relied up as a secure funding source each year for financial planning.

Figure 7
Provision Schedule (Risk Based, Rate Supported)



D. SUMMARY OF REVENUES

The municipal revenue sources available to address the identified full life cycle cost requirements outlined above are limited. Generally, the type of capital project aligns to its funding source. In this regard, growth related projects receive most of their funding through development charges in communities that impose DCs; replacement projects are predominantly funded through tax-based contributions for tax supported assets and water and wastewater rates for rate-based services. In Dryden, as DCs are not imposed, any new assets would be emplaced directly from developers (as part of the subdivision agreement) or from taxes and user fees. When assets require rehabilitation or are due for replacement, the source of funds are essentially limited to reserves or contributions from the operating budget regardless of how the initial first round capital asset was funded.

The tables below provide a summary of the revenues assumed in this analysis for both tax and rate supported assets separately.

Table 14
Financing Strategy Key Assumptions – Tax Supported Assets

Category	Assumptions
Tax Levy Support (including reserve contributions)	▪ Existing 2023 tax supported capital funding of $1.51 million is assumed to be the starting point and base case for increasing annual capital contributions. This includes the current Transfer to Reserves ($434,000) and Transfer to Working Fund ($1.1 million).

Table 14 Financing Strategy Key Assumptions – Tax Supported Assets	
Category	**Assumptions**
Tax Levy Support (for Operating and maintenance costs)	▪ Existing 2023 tax supported funding of $3.34 million is assumed and directly related to asset related operating and maintenance costs accounted for in the operating budget.
Debt (funded from taxes)	▪ Existing debt for capital related assets (funded from the tax base) is already built in to the City budgeting framework, therefore, this available funding capacity is expected to remain in the budget moving forward and applied to capital asset management activities. ▪ It has been assumed in the AMP, once the current debt is retired (amounting to $81,700), this amount would continue to be included in the budget but applied to asset management activities.
Canada Community Building Fund (Gas Tax Reserve Fund)	▪ About $475,500 in Gas tax funding in 2023 was applied to capital. AMO allocations were used for 2024 and 2025. Post 2026, gas tax funding is assumed based on AMO allocations to maintain at 2026 levels; about $503,000 per year.
Other Grants	▪ One-time government grants of approximately $9.7 million are assumed for 2023 only. Post 2023 the OCIF amount of $1.22 million was assumed to be received in each year. ▪ Should the City be successful in continuing to receive one-time funding for specific projects as well as regular NOHFC funding, this money would advance the asset management program to reduce the infrastructure deficit earlier.
Inflation	▪ Financing strategy is expressed in constant 2023 dollars.
Existing Reserves	▪ Existing tax supported reserve funds of $2.1 million have been accounted for and are applied against the lifecycle cost expenditures in 2023 for the purposes of forecast calculation. ▪ The reserves included for in the analysis only capture funds available for capital and generally exclude operating reserves
Expansion Activities	▪ The financial requirements identified in the strategies also include a provision for expansion activities. As the city does not levy DCs, the first round capital expenditure (for non local service infrastructure) is assumed to be funded by taxes plus the asset management requirements associated with new assets is included in the calculation. Based on a review of the budget, an annual allocation of $1.2 per annum is included.

Table 14 Financing Strategy Key Assumptions – Tax Supported Assets	
Category	**Assumptions**
Rate Revenue Support (including reserve contributions)	▪ Existing 2023 rate supported capital funding of 1.55 million is assumed to be the starting point and base case for increasing annual capital contributions. This includes the City's current Transfer to Reserves ($510,000) and Transfer to Working Fund ($1.1 million).

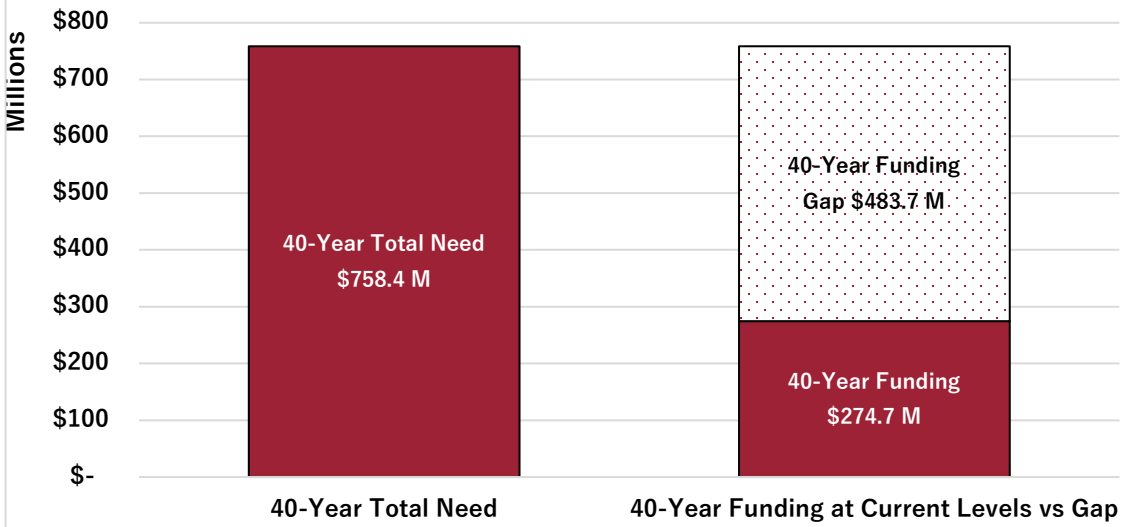
Table 15 Financing Strategy Key Assumptions – Rate Supported Assets	
Category	**Assumptions**
Inflation	▪ Financing strategy is expressed in constant 2023 dollars.
Existing Reserves	▪ Existing rate supported reserve funds of $820,000 have been accounted for and are applied against the lifecycle cost expenditures in 2023 for the purposes of forecast calculation.
Debt (funded from utility rates)	▪ Existing debt for capital related assets (funded from the sewer rates) is already built in to the City budgeting framework, therefore, this available funding capacity is expected to remain in the budget moving forward and applied to capital asset management activities. ▪ It has been assumed in the AMP, once the debt is retired (amounting to $869,000), this amount would continue to be included in the budget but applied to asset management activities.

E. INFRASTRUCTURE DEFICIT AND FINANCING STRATEGIES

To implement sustainable asset management practices the City needs to have an understanding of the current "infrastructure deficit" as well as the funding gaps that would arise should the required full life-cycle costs related to capital, identified in Part C: Capital Provision Schedule, be delayed.

The current infrastructure deficit shown in Figure 8 represents the difference between the required lifecycle costs and the current contributions to capital for tax supported assets in this 2023 Plan. The graph indicates that existing funding levels are insufficient to cover projected costs over the 40-year planning period, as a result, a notional gap of $483.7 million exists over the same period. It is unrealistic to expect the City to address the total infrastructure deficit in the short-term. Therefore, a long-term funding strategy that identifies options for addressing current and future asset expenditures is required.

Figure 8
40-Year Need vs Current Funding



If the City were to implement a funding strategy to eliminate the tax supported infrastructure deficit by 2062, the City would be required to increase capital contributions on an annual basis by an average of about $620,000 for 40 years (plus annual inflation). For 2024, the increase would be in addition to the $1.51 million tax supported capital funding, Gas Tax funding, OCIF funding, operating and maintenance costs associated with capital funded assets through the operating budget, existing tax supported reserve funds on hand and one-time grant funding applied in 2023. The yearly revenue requirement is equivalent to 4.23% of the City's 2023 tax levy revenues of $14.67 million. A detailed table of this strategy can be found in Appendix D – Table 1.

Eliminating the infrastructure deficit by 2062 is an aggressive objective and is an initiative the City may not want to explore at this time; a few reasons include:

- The required capital contributions (to eliminate the deficit) will necessitate an increase to property taxes beyond a reasonable measure;
- The City may need to decrease or limit funding of other key City services or initiatives in lieu for capital repair and replacement activity;
- Assets can remain in use past their engineered design life and are capable of performing to meet the City's current level of service under these circumstances. Therefore, in such instances, the asset does not necessarily need to be replaced by virtue of exceeding their design life; and

- Prudent asset management strategies, which are currently employed by the City can often extend the requirement of major repair or replacement of capital assets and may prolong the life of the asset.

Further to the above noted comments, three financing strategies were developed to illustrate a rational capital contribution level to meet the full lifecycle cost needs for tax supported assets as outlined in Figure 9. The financing strategies illustrate the "smoothed options" to the capital repair and replacement requirements identified in Part B. Key revenue assumptions for each of the three tax supported funding strategies is shown in Table 14 and each financing strategy is summarized in Table 16 below.

Table 16
Summary of Financing Strategies – Tax Supported Assets

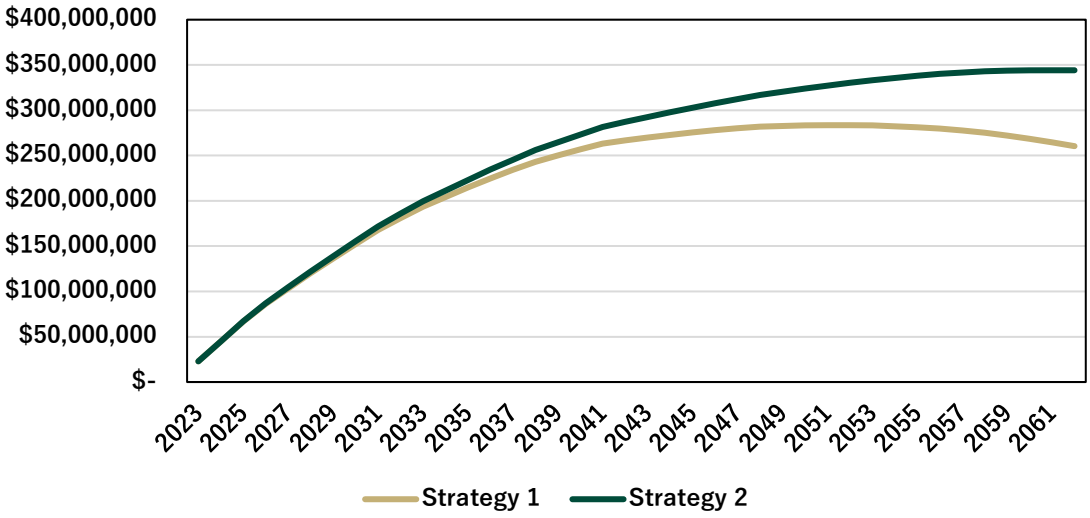
Financing Strategy	Strategy Parameters
Strategy 1 **Close in-year Funding Gap by 2052**	▪ Increase annual capital contributions by approximately $286,500 per year. ▪ The increase in funding would begin in 2024. ▪ The yearly revenue requirement is equivalent to 1.95% of the City's 2023 tax levy.
Strategy 2 **Close in-year Funding Gap by 2062**	▪ Increase annual capital contributions by approximately $179,000 per year. ▪ The increase in funding would begin in 2024. ▪ The yearly revenue requirement is equivalent to 1.22% of the City's 2023 tax levy.

Note: Key assumptions noted in Table 14 are maintained for both financing strategies.

Given the capital expenditure requirement to meet the asset lifecycle needs, the cumulative infrastructure deficit will increase in all scenarios before the City begins to reduce this amount by increasing capital contributions by more than the annual provision requirement. The infrastructure deficit will increase by the annual funding gap and decrease once the annual contributions are greater than the annual provision.

It is important to note that even though the in-year funding gap has been addressed within the planning horizon in all strategies, the infrastructure deficit poses risk to the City as it is indicative of overdue assets that have fully depreciated and may be in Very Poor condition. These assets would need to be addressed in a longer time frame and are at risk for asset failure. The figure below provides a snapshot summary of the infrastructure deficit for both strategies outlined in Table 16.

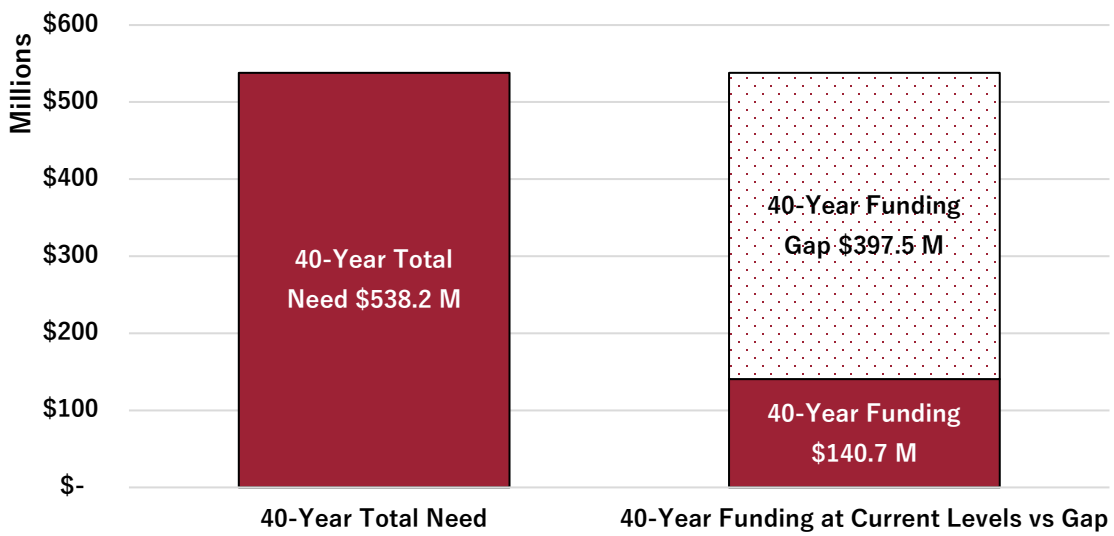
Figure 9
Infrastructure Deficit Comparison ($ millions)



Rate Supported Assets

The current infrastructure deficit shown in Figure 10 represents the difference between the required lifecycle costs and the current revenues to maintain capital assets for rate supported assets in this 2023 Plan. The graph indicates that existing funding levels are insufficient to cover projected costs over the planning period, as a result, a notional gap of $397.5 million exists over the same period. It is unrealistic to expect the City to address the total infrastructure deficit in the short-term. Therefore, a long-term funding strategy that identifies options for addressing current and future asset expenditures is required.

Figure 10
40-Year Need vs Current Funding



If the City were to implement a funding strategy to eliminate the user rate supported infrastructure deficit by 2062, the City would be required to increase capital contributions on an annual basis by an average of about $510,000 (plus inflation) for 40 years. The increase in funding would begin in 2024.

To provide consistency with the analysis on the tax supported assets, similar timeframes for additional funding strategies were developed. Strategy 1 in the case of the rate supported assets provides a more aggressive target of closing the in-year funding gap by 2052 where strategy 2 provides for more modest rate impacts. Assumptions used to develop each strategy is summarized in Table 15.

The financing strategies identified in Table 17 portray the “smoothed options” to the rate supported capital repair and replacement requirements identified in Part B. Assumptions for each of the funding strategies is shown below; however, it is expected that the City incorporate this information in future utility rate setting studies to balance the annual asset management requirements with affordable user rates.

Table 17 Summary of Financing Strategies – Utility Rate Supported Assets	
Financing Strategy	**Strategy Parameters**
Strategy 1 **Close in-year Funding Gap by 2052**	▪ Increase annual capital contributions by approximately $187,000 per year. ▪ The increase in funding would begin in 2024. ▪ The yearly revenue requirement is equivalent to 3.61% of the City's 2023 rate revenue.
Strategy 2 **Close in-year Funding Gap by 2062**	▪ Increase annual capital contributions by approximately $133,000 per year. ▪ The increase in funding would begin in 2024. ▪ The yearly revenue requirement is equivalent to 2.56% of the City's 2023 rate revenue.

F. COSTS TO MAINTAIN LEVELS OF SERVICE AND RELATIONSHIP WITH FINANCING STRATEGIES

As outlined in Part A of this Financing Strategy section, total budgeted asset maintenance expenditures in 2023 were about $3.3 million for tax supported assets. The largest share of expenditures has consistently been related to roads and related assets.

In addition, the City will spend about $10.0 million in 2023 for the full lifecycle costs of tax supported assets. The $10.0 million in capital spending is comprised of several different funding sources:

- $1.51 million in contributions to reserve for capital;
- $475,500 from gas taxes; and
- $8.0 million in grant funding[1].

For water and sewer services, the City will spend $1.25 million for operations and maintenance of assets.

In addition, the City will contribute about $1.55 million in 2023 to reserves for the full lifecycle costs of rate supported assets. This funding will come directly from the City's water and wastewater rates.

[1] NOHFC Funding = $949,500; Provincial = $370,100; MTO = $2.9 million; Federal Funding = 2.5 Million and OCIF = $1.2 million.

Both the capital maintenance requirements (from operating) and the capital spending provision identified are attributed to maintaining the service level associated with the tax and rate supported assets.

Overall, this funding allocation is required to ensure the City delivers the existing levels of service identified in Section 3 of the Asset Management Plan for both core and non-core infrastructure assets which represent the lifecycle activities outlined in Appendix C. Overall, it is recommended that the City continues to monitor levels of service on an annual basis in the context of budget expenditures. In this manner, the City can identify any significant changes in levels of service and identify if funding levels are appropriate to address any asset pressures.

Furthermore, the financing strategies represent sustainable options at maintaining the current levels of service from a long-term perspective. In summary, the following conclusions can be made:

- The option to "do nothing" and allow the infrastructure back-log to accumulate would mean that existing funding levels would not be sufficient to manage the infrastructure in place over the long-term. Therefore, the assets in service would deteriorate with a series of assets moving into poor and very poor condition which would effectively provide a reduction in the level of service over the short and long-term.
- Strategy 1 would ultimately result in a service level increase over the long-term as assets are replaced as required based on condition and useful life. Therefore, the deficit would largely be eliminated over the planning period. This strategy would represent a more optimal level of asset repair and replacement than existing trends and should be targeted with the determination of proposed levels of service moving forward.
- Strategy 2 would ensure, that over the long-term, the funding gap-stabilizes and the infrastructure deficit is controlled. Under this approach, the additional funding would allow for increased targeted investments in asset areas (such as buildings) currently in "fair" condition to ensure these assets don't transition into the poor category in the next 5 -10 years therefore maintaining the existing level of service.
    - Also of importance, the assets in Good/Very Good condition require continued investment to ensure service levels are maintained. As these assets age, they may also transition in the Fair or lower category. Continued contributions to reserves will ensure funds are available whenever assets require works to be completed.

G. AVAILABLE FUNDING TOOLS

The following section discusses, at a high level, the range of tools available to the City for funding capital expenditures.

Federal and Provincial Grants

Historically, the City has had some success in securing grant funding from higher orders of government to assist in funding capital projects. The City will continue to seek financial assistance from upper levels of government (where available) to fund non-growth related capital works.

The City of Dryden has indicated that it expects to continue receiving Gas Tax funds (renamed now to the Canada Community Building Fund) – these funds have been incorporated into the financing strategies at current levels. While other grants and funding sources may not be considered as a confirmed source year-over-year, no other future grant funding is assumed for the purposes of the financing strategy beyond what was identified for 2023. If the City continues to receive other funding sources over the long-term, it is expected that these funds would be directed to high-priority projects in an effort to reduce the overall infrastructure deficit. For context, in addition to gas tax funding, in 2023 the City was able to apply grant funding to carry-out a series of projects. The following funding was applied: NOHFC ($949,000), OCIF ($1.2 million), MTO funding ($2.9 million - project specific), Provincial ($370,000 – project specific) and Federal grant funding ($2.5 Million project specific works).

Property Taxes and Utility Rates

According to the 2023 budget, property taxes represent about $14.7[2] million in revenues, while utility rates account for an additional $5.1 million[3]. The use of property taxes to fund municipal tax supported services is the most secure source of funding for the City. The most common and secure avenue to generate additional funding to support increased capital asset management functions would be to increase property tax revenues.

The City manages utility rate supported infrastructure separately though water and sewer fees for serviced properties. The City regularly reviews the utility rates and financial plans to ensure the systems are self funding. Further to this, the City completed a water long range financial plan in 2020 to comply with the requirements of *Ontario Regulation 453/07*.

[2] Payments in Lieu are excluded from this figure and represent a further $458,400.

[3] Figure lincludes water sales and wastewater surcharge revenues. Excludes non-user rate revenues

This report also identified the regular adjustments to the water rates to increase the annual contributions to reserve for the purposes of asset repair and replacement.

Non-Utility Related User Fees

To the extent that user fees are being collected to fund repair and replacement of capital infrastructure, user fees should be allocated to capital reserves. The City should look to review and ensure user fees are being utilized to the full extent as allowed under Provincial legislation. This will help alleviate funding pressures from the tax base and allow for greater flexibility to fund capital asset repair and replacement activities. Most commonly, municipalities undertake detailed user fee reviews of their building, planning and engineering fees in order to recover the full cost of providing services – the full cost recovery user fee rates generally incorporate a component for building capital replacement.

Public Private Partnerships

Public Private Partnerships (P3s) are a common tool for delivering infrastructure services throughout communities across Canada to build roads, hospitals, light rail transit, water and wastewater treatment facilities and other infrastructure. P3s can offer more effective project and lifecycle cost control and risk management than traditional procurement methods. The City could explore P3s as a tool to carry out capital related activities.

Local Improvement Charges

Municipalities, through local improvement charges, have the ability to recover the costs of capital improvements made on public or privately owned land from property owners who will benefit from improvement. The City could use the local improvement process to undertake a capital project and recover all or part of the cost of the project through *Ontario Regulation 586/06*.

Developer Contributions

Municipalities obtain a wide-range of assets through developer contributions; these contributions can be “in kind” direct provision of assets or funded, partially or fully, through agreement. The contributions are typically facilitated through condition of a subdivision or site plan agreement under the *Planning Act*. An important consideration in determining the level and extent of developer contributions is the City’s “local service definitions” which, under the *Development Charges Act* and *Planning Act*, are used to establish which type, and shares, of capital expenses are considered eligible for direct development contribution or funding.

Assets funded, or provided, under developer contributions are typically "first round" assets but can, in certain circumstances, include replacement of existing assets and funding of non-DC recoverable shares. An example of replacement of an existing asset is when an existing road requires improvements or upgrades as a result of a specific development; the City could endeavour to require the developer to undertake, or fund, the road improvements as a condition of the subdivision agreement. The City benefits from the funding of the improved road, but is also an effective deferral of a capital renewal expense as the existing, and therefore depreciated asset, is also replaced or renewed.

H. FINANCING AND FINANCIAL MANAGEMENT PRACTICES

This section discusses, at a high level, the means by which capital revenue can be raised or secured.

Debt (as a financing tool)

Debt financing is a viable tool available to fund capital projects. Planned debt is a responsible way to spread the costs of a project over the life of an asset. This ensures the tax payers who benefit from the asset share the cost, therefore, the burden of capital is distributed equally between the current tax/rate payer and future tax/rate payers. It is important to note that debt funding is subject to interest costs.

The amount of debt a City can carry is set by Provincial regulations to ensure municipalities continue to operate in a fiscally sound environment. The Ministry of Municipal Affairs mandates that a city's annual debt repayment must not exceed 25% of annual own-source revenues. The repayment limit has been calculated based on data contained in the 2023 Annual Repayment Limit, as submitted to the Ministry. The City currently has about $1.41 million in annual net debt payments which means there is about $4.9 million in remaining annual debt charges under the restrictive 25% Provincial limit of Own Source Revenues. For context, 25% of net revenues would equal $6.4 million in the City.

The requirements of the *Municipal Act* and best practice, suggests that any potential debt should not be financed for a period longer than the average useful life of the asset. This will ensure the City is not paying for an asset outside the design life and beyond the asset's expected use.

Reserves and Reserve Funds

Reserves are to be used to cope with high capital investment periods by saving during low capital investment periods. This practice will smooth annual expenditures and ensure the City can complete the required annual capital works. In addition to contributions during low

investment periods, many municipalities use annual surpluses, should one arise, to increase reserves. There is no prescribed amount of reserves for a City to have at any given time, but they should be sufficient to cover emergency work (if required).

As of year-end 2022, the City had an estimated capital reserve balance of $2.9 million, of which, $2.1 million is related to tax supported assets while the remaining $820,000 related to water and wastewater rate supported reserve funds. The reserve balances incorporated into the analysis only consider the funds the City has on hand to carry out capital projects related to the services to which this asset management plan applies and excludes operating and rate stabilization reserves. The entire $2.9 million in available tax and rate supported capital reserves have been accounted and applied towards the 2023 lifecycle needs.

I. FUTURE DEMAND

The 2023 Plan reflects the assets that the City currently owns and operates. According to Statistics Canada datasets, over the last 20 years (2001-2021) the City's population has declined by about 10 per cent from 8,198 people to 7,388 people in 2021. Notwithstanding the trends from the last two decades, the City is continuing to plan for growth. According to the draft Official Plan, population and employment are anticipated to grow to 11,760 people and 6,190 employees. The population growth identified is only assumed for the purposes of asset management planning. In order to manage the demand, a provision for expansion related activities has been set at $1.2 million for tax supported assets and a further $573,400, per annum for rate supported assets. These figures have been generated from the budget review only for the purposes of this AMP and should be superseded with engineered and service area need assessments to expand municipal services.

In order to facilitate growth, the City would be required to emplace new infrastructure to service development. Irrespective of how the first round capital is funded, when assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating[4]. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not growth-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Despite the additional asset management requirements associated with new infrastructure, growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to help offset the capital asset provisions required to replace the infrastructure required for expansion.

[4] The City does not currently use Development Charges to fund new growth-related capital assets.

6. CONTINUOUS IMPROVEMENTS AND UPDATES

The major premise of comprehensive corporate asset management is that an organization will seldom have perfect processes and data to manage the asset portfolio. Instead, the underlying culture of continuous improvement and reliability is its key to success. The improvements and next steps will form part of the City's evolving Asset Management planning moving forward.

A. NET BOOK VALUE VS. REPLACEMENT VALUE

As specified in the Ministry Guide, the value of the City's assets is presented in two different formats: 'Net Book Value' and 'Replacement Value'. These are described below.

Net Book Value (NBV) is consistent with the financial accounting practices defined by the Public Sector Accounting Board and is reported in the City's financial statements. The City of Dryden reported Net Book Value covers the full scope of the City's Tangible Capital Assets (TCA), including land. It is noted that the same scope of assets are considered under this 2023 Plan.

The Net Book Value is the original acquisition cost less accumulated depreciation, depletion or amortization. It is reported annually in accordance with reporting standards established by the Public Sector Accounting Board (PSAB) of the Canadian Institute of Chartered Accountants. As shown on Table 18 below, the City's 2022 Consolidated Financial Statement reported the NBV of the City's TCA as of December 31, 2022 at $84.6 million. Under the financial accounting approach many assets may be fully depreciated yet remain in use, therefore, Net Book Value is not the appropriate methodology to be employed for infrastructure renewal planning.

Table 18
Summary of Tangible Capital Asset Values

Asset Category	2022 Closing NBV
Land	$4,325.5
Land Improvements	$2,382.3
Buildings	$27,827.3
Machinery and Equipment	$10,166.3
Vehicles	$1,329.2
Linear Assets	$36,488.3
Construction in Progress	$2,039.9
Total	**$84,558.6**

Source: City of Dryden 2022 Financial Information Return.

Replacement Values are used to estimate the cost of replacing an asset when it reaches the end of its engineered design life. The total replacement cost of all assets is estimated at $773.4 million, which is approximately 9 times higher than the NBV.

Replacement Cost Valuation

The two basic methods to estimate replacement costs needed for infrastructure renewal planning are outlined:

- Local price indices: This is the most accurate method. The City has collected some recent acquisition data demonstrating similar replacement activities. The City's replacement costs are based on recent construction costs specific to the City particularly for buildings, roads, water and sewer.
- Accounting estimates: When assets cannot be estimated against either index, the City uses historic cost, estimated useful life and inflationary effects to determine replacement value.
- Benchmark costs: Some replacement costs are based on benchmarked engineering costs per unit, in particular for roads, bridges, and linear water, storm, and sewer infrastructure. Detailed unit costs are provided in Appendix B.

B. ASSET MANAGEMENT INTERNAL NETWORK

It is recommended that the City consider forming an Asset Management Committee to focus on the activities related to the management of Municipal assets and to coordinate asset management practices and policies. It is recognized that the City's annual capital budget process considers capital planning at a corporate level based on available funding and municipal priorities. The intention of the asset management committee is to consider capital planning over a longer-term period and co-ordinate any initiatives that need to be taken over the longer term.

C. PLAN MONITORING

The City will need to carefully monitor and evaluate the asset management progress and effectiveness of the Plan on or before July 1 in each year starting in 2025. This ensures that the Plan is utilized to its full extent and any gaps are identified prior to the regulatory date. Although the extent to which the regulation applies would not be applicable to the City for several years, the City could look to advance the review process and address the following criteria each year:

a) The City's progress in implementing its asset management plan;

b) Any factors impeding the City's ability to implement its asset management plan; and

c) A strategy to address the factors described above in clause b).

D. DATA QUALITY AND CONFIDENCE

The City should regularly review the confidence of existing data as well as its effectiveness integrating asset management activities into regular business processes. The Confidence Level Rating approach identified in Table 19 below will be used to identify what specific asset categories/areas the City can improve upon. The Confidence Level Rating is based on principles of the Ministry's Guide to Municipal Asset Management Plans, Federal Gas Tax Agreement Requirements, ISO 55000, and International Infrastructure Management Manual (IIMM). Current data used in the preparation of this asset management plan would be generally reliable and based on a **Level 3** recognizing that all asset categories are well documented. The data quality score is included in Appendix B complementing the State of the Local Infrastructure Reports.

Table 19
Data Quality Confidence Grading System

Confidence Grade		Description
5	**Highly Reliable**	▪ Data based on sound records, procedure, investigations and analysis, documented properly and recognized as the best method of assessment. ▪ *Dataset is complete and estimated to be accurate +/- 2%.*
4	**Reliable Data**	▪ Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. ▪ *Dataset is complete and estimated to be accurate +/- 10%.*
3	**Uncertain**	▪ Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade 4 or 5 data is available. ▪ *Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated +/- 25%.*

Table 19 Data Quality Confidence Grading System		
Confidence Grade		**Description**
2	**Very Uncertain**	▪ Data based on unconfirmed verbal reports and/or cursory inspection and analysis. ▪ *Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy +/- 40%.*
1	**Unknown**	▪ None or very little data held

E. TIMEFRAMES FOR REVIEW AND UPDATES

This Asset Management Plan should be reviewed and updated on a regular basis. Recognizing that a full plan and related policies should only be updated at key intervals, it is important that other asset management components, such as capital budgeting, risk assessments and updates to the asset register should be integrated into staff's regular routine. Table 20 below outlines the key timelines.

Table 20 Timeframes for Reviews and Updates	
Asset Management Framework	**Timeframe**
Asset Management Policy	5 Years
Asset Management Plan	3-5 Years
Capital Budget	Annually
Asset Register and Data	Semi-Annually or Annually
Risk assessment (capital prioritization)	Semi-Annually or Annually
Level of Service Framework	Semi-Annually or Annually
Reporting to Council	Annually

This asset management plan has been endorsed by the executive lead of the City and will need to be approved, by resolution, by City Council. The City will need to be mindful of the reporting timelines noted above relative to any potential changes to the timelines referenced by *Ontario Regulation 588/17.*

F. PUBLIC REVIEW AND COMMENT

Although the Asset Management Plan is intended to aid City staff and Council make informed decisions regarding future capital investment needs, the plan is intended to be available to the public. Therefore, it is recommended that the City post this plan as well as the strategic asset management policy on the website and provide a copy to anyone upon request.

The City of Dryden will require further public consultation and input to develop the target levels of service required for July 1, 2025.

7. CONCLUSIONS AND RECOMMENDATIONS

The objective of this 2023 Plan is to provide the City of Dryden with the information it needs to make decisions on how best to manage capital assets in a sustainable way to 2062. In this section, recommendations based on the analysis undertaken are made.

A. SUMMARY OF KEY FINDINGS

- The City's asset base is valued at $773.4 million, in relation to the census population of about 7,388 persons (or approximately $104,700 per capita).
- Overall, about 44% or $341.5 million of the City's assets are considered to be in "Good" to "Very Good" condition. Approximately 36% ($279.0 million) of infrastructure is considered to be in "Very Poor" condition. About $153.0 million (20%) is in "Fair" condition.
- The City of Dryden has made some effort in recent years to address the infrastructure gap and improve the condition of assets:
  - Upper level government grant money received has typically been allocated to capital asset repair and replacement activities;
  - The City has capital replacement reserves, and has recently begun contributing to reserves on an annual basis, which is in addition to in-year funding from the capital tax levy;
  - Through its annual capital budgeting process, the City addresses critical issues and assets in need of repair or replacement.
- The responsibility to maintain existing infrastructure is challenging, however, in addition to current capital funding, the City should increase annual capital contributions to address current and future infrastructure requirements;
  - Property taxes are the most secure form of revenue and the City should consider increasing tax base revenues, above current practices, to fund capital works;
  - Ensure user fees are being utilized to the full extent as allowed under Provincial legislation. This will help alleviate funding pressures from the tax base and allow for greater flexibility to fund capital asset repair and replacement activities.
  - Explore alternative arrangements to provide services – public private partnerships or shared services.

- Based on the year-end 2021 Annual Repayment Limit, the City is considered to be in good fiscal standing with strong budgetary performance and limited external debt – the City currently has about $1.41 million in annual net debt payments which means there is about $4.9 million in remaining annual debt charges under the restrictive 25% Provincial limit. This debt capacity could allow the City to continue to use debt to carry out emergency asset replacements, improvements, or other strategic projects which typically provide a return on investment such as a reduction in operating costs.

- The City should continue to seek funding from the Federal and Provincial government (when available) to undertake capital related works.

B. SUMMARY OF RECOMMENDATIONS

Based on the research and analysis undertaken for this 2023 Plan the following conclusions can be reached:

1. Continue to Improve Capital Development Planning Process

- The City should develop a multi-year capital budget and forecasts for all services based on a 10-year forecast horizon. The capital budget can be based on the asset replacement schedule in the City's Asset Management Model.

- Capital budgets and forecasts should identify and evaluate each capital project in terms of the following, including but not limited to:
  - gross and net project costs;
  - risk assessment;
  - timing and phasing;
  - funding sources;
  - potential financing and debt servicing costs;
  - long-term costs, including non-infrastructure solutions, maintenance activities, renewal/rehabilitation activities, replacement activities, disposal activities and expansion activities;
  - capacity to deliver; and
  - alternative service delivery and procurement options.

- A range of quantifiable service level targets that incorporate the quantity and quality of capital assets should be explored and established for all services over the next few years. Targets should be measured, reported on, and adjusted annually. This requirement will need to be in place by July 1st, 2025 as per *Ontario Regulation 588/17*.

- Repair and replacement capital works should be prioritized based on a risk assessment. For example, assets identified as “very poor” and “poor” and having a significant consequence of failure should be prioritized first.

- Infrastructure assets which have been provided a “fair” condition rating should be targeted for maintenance to ensure they continue to perform at current levels of service.

- The City should, where possible, coordinate the construction of new infrastructure with infrastructure repairs and replacement to achieve cost efficiencies.

2. Ensure Asset Inventories are Updated Regularly

- Sound asset management decisions are only possible if information in the asset registry is accurate. The City should regularly update the registry to account for asset purchases, upgrades, and replacements, as well as asset condition ratings and information on useful life.

- The City should continue to refine the condition assessments for all assets considered under this 2023 Plan; and

- The City should update this Asset Management Plan at a minimum every 5 years.

3. Optimize the Use of Existing Assets

- The City should implement a range of engineering and non-engineering approaches to extend the useful life of current assets, taking the lifecycle actions presented in Appendix C.

- The City should explore opportunities to dispose under utilized infrastructure/facilities which may not warrant repair/replacement. For example, underutilized facilities, or surplus land/parks, could be disposed and sold; and

- Coordinate assets into specific hubs to create operating and capital repair/maintenance efficiencies where possible.

Appendix A

Definitions

APPENDIX A – DEFINITIONS

This appendix contains definitions for commonly used terms throughout the City's Asset Management Plan.

1. **Annual Provision -** Given the timing and cost to replace an asset in the future, the amount of savings required year-over-year to replace that asset on schedule. This is also referred to as the annual requirement.
2. **Condition Assessment -** A description of the state of an asset based on engineered or staff inspections on a 5-tier scale (very poor, poor, fair, good, and very good).
3. **Cumulative Infrastructure Deficit -** The difference between available funding and the cost of works required based on the replacement schedule added over an extended time period. This difference includes the backlog of infrastructure work which remains unfunded. In years where funding continues to be less than the need, the deficit grows. Conversely, years where funding exceeds the need, the deficit decreases.
4. **In-Year Funding Gap -** For any given year, this is the difference between capital requirement costs and available funding.
5. ***Ontario Regulation 588/17* -** Ontario's Asset Management regulation that came into force on January 1st, 2018.
6. **Provision Schedule -** The required savings year-over-year needed to replace an asset based on the replacement schedule.
7. **Replacement Cost -** The cost of an asset to replace or reconstruct that asset at current prevailing market prices. The replacement cost will typically include all costs to procure, design, build and acquire the asset.
8. **Replacement Schedule -** The timing for replacement of an asset based on remaining useful life, condition or risk.
9. **Useful Life -** The expected service life of an asset expressed in years.
10. **Weighted Condition -** The average condition of an asset category weighted against the replacement costs of assets.
11. **Weighted Remaining Useful Life** - The average remaining useful life of an asset category weighted against the replacement cost of assets.

APPENDIX B

TECHNICAL APPENDIX:

STATE OF LOCAL INFRASTRUCTURE

APPENDIX B – TECHNICAL APPENDIX: STATE OF LOCAL INFRASTRUCTURE

The appendix provides a summary of the City's assets with reference to quality and quantity. Some assets have condition assessments included in the asset registry and others are based on staff level assessments; where neither of these are available, condition has been assumed based on the age and useful life of each asset. Useful life assumptions for the assets in this plan were acquired from the City's tangible capital asset inventory, from staff knowledge, and benchmarks from comparable municipalities. Hemson has prepared State of the Local Infrastructure report cards for each asset category which outline: summary of inventory, remaining useful life, asset condition, and data reliability. It is intended that these report cards be updated annually by staff and used accordingly the annual budget process.

1. Summary of Inventory

The summary of inventory provides and overview of the City's assets including asset components, the quantity of those components, the replacement cost in 2023 dollars, method used to determine the replacement cost and the engineered useful life of the assets. The inventory summary is developed based on the City's capital asset information. Furthermore, an asset management financial model based in Excel was developed as part of the 2023 AMP, this model contains all detailed asset information.

The assets included in this 2023 Plan are generally consistent with the asset categories included in Schedule 51 of the City's Financial Information Return. Inclusion of all assets in this Plan therefore meet the asset management plan requirements in the City's Gas Tax Funding Agreement with AMO.

2. Remaining Useful Life

The remaining useful life summary provides information on the age of assets based on the year assets were acquired or emplaced and their engineered useful life. Assets are categorized by remaining useful life based on their replacement cost in 2023 dollars. Assets categorized as overdue are considered to be beyond their engineered useful life, however, the asset may still be in good operating condition and therefore age does not represent the ideal method to determine condition. Typically, assets such as facilities are used well beyond their engineered useful lives with proper maintenance and repairs.

3. Asset Condition

A summary of the condition of assets is presented in a pie graph based on the replacement cost of assets in constant 2023 dollars. As discussed in Section 2, conditions have been determined based on a 5-tier rating system from very poor to very good. Condition assessments are based on several sources including staff assessments, third-party reports, and an age-based approach. Through the 2022 AMP process staff undertook a detailed review of the asset conditions, and based on their knowledge, provided a more up to date condition based on the 5-tier rating scale.

Table 1
Methodology for Condition Assessment

Asset Type	Methodology
Buildings	Building conditions assessments & Age-based approach
Machinery and Equipment	Ag-based approach
Land Improvements	Age-based approach
Vehicles	Age-based approach
Transportation: Bridges	BCI Ratings provided
Transportation: Road Surfaces	PCI Ratings provided
Transportation: Road Base	PCI Ratings provided
Transportation: Sidewalks	OCI Ratings provided
Transportation: Streetlighting	Age-based approach
Transportation: Traffic Signals	Age-based approach
Sewer	OCI Ratings where provided & Age based approach
Storm	OCI Ratings provided
Water	OCI Ratings where provided & Age based approach

4. Replacement Cost

Replacement values are used to estimate the cost of replacing an asset when it reaches the end of its engineered design life. The total replacement cost of all assets is estimated at $774.4 million, and the replacement values are used as the basis for this plan. Specific methods used to determine replacement costs for asset categories are outlined below.

Table 1 Methodology for Current Replacement Cost	
Asset Type	**Methodology**
Buildings	Inflated Historical Cost & Assessed Values where available
Machinery and Equipment	Inflated Historical Cost
Land Improvements	Inflated Historical Cost
Vehicles	Inflated Historical Cost
Transportation: Bridges	Inflated Historical Cost
Transportation: Road Surfaces	Cost per Metre
Transportation: Road Base	Cost per Metre Inflated from 2016 AMP
Transportation: Sidewalks	Cost per Metre
Transportation: Streetlighting	Cost per unit
Transportation: Traffic Signals	Inflated Historical Cost
Sewer	Cost per Metre for linear & Cost per Unit for structures
Storm	Cost per Metre for linear & Cost per Unit for structures
Water	Cost per Metre for linear & Cost per Unit for structures

Buildings	Fair

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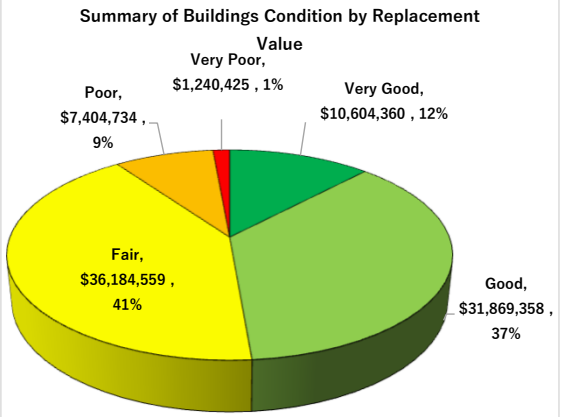
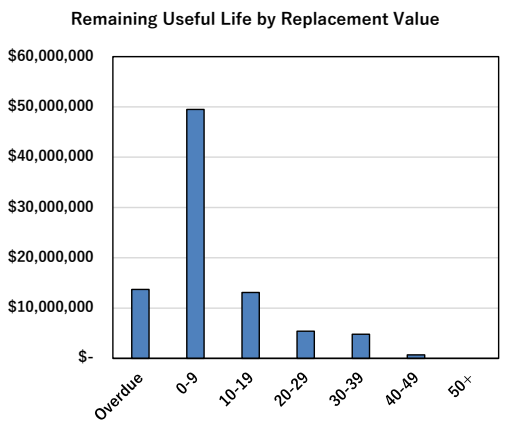
Function	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
General Government	$ 11,650,160	Inflation & Assessments	25 to 50
Fire	$ 7,001,426	Inflation & Assessments	50
Former Police Building	$ 3,900,000	Inflation & Assessments	25 to 50
Emergency Measures	$ 19,030	Inflation & Assessments	50
Roads	$ 5,776,901	Inflation & Assessments	50
Air Transport	$ 5,050,822	Inflation & Assessments	25 to 50
Waste Disposal & Diversion	$ 1,311,879	Inflation & Assessments	25 to 50
Parks	$ 873,460	Inflation & Assessments	20 to 50
Recreation Facilities	$ 46,300,532	Inflation & Assessments	25 to 50
Museum	$ 2,200,000	Inflation & Assessments	25 to 50
Library	$ 3,160,000	Inflation & Assessments	25 to 50
Cemetery	$ 59,226	Inflation & Assessments	20 to 50
Total	**$ 87,303,436**		

The City maintains buildings that are classified for the purposes of the FIR by 12 different functions with a total replacement value of $87.30 million. The building assets have an assumed useful life ranging between 20 and 50 years depending on the building asset and its components. The asset replacement values were derived by adjusting the original acquisition cost by inflation or through values provided by staff assessments. The source of the information is the City's Asset Registry.





Overall, $13.7 million (16%) of building assets are overdue by virtue of their design life. The rest of the buildings, amounting to $73.57 million (84%), still have several years of remaining useful life with 13% of all assets having over 20 years remaining. Overall, the City maintains $42.47 million (49%) of building assets in Good to Very Good condition. About $8.65 million (10%) of building assets are in Poor or Very Poor condition. The remainder of the assets $36.18 million (41%) are in Fair condition. Since the condition analysis is based on the subjective nature of the building condition assessments provided by City staff, and the age of the assets where that wasn't available, there is a portion of assets that were categorized to be in poorer condition, however these building assets are likely to be in better condition than their age would suggest. Condition assessments are recommended on a go-forward basis for all building assets.

Data Confidence and Reliability:	Level 4 (Reliable) Dataset is complete and estimated to be accurate +/- 10%.

Machinery and Equipment | Poor

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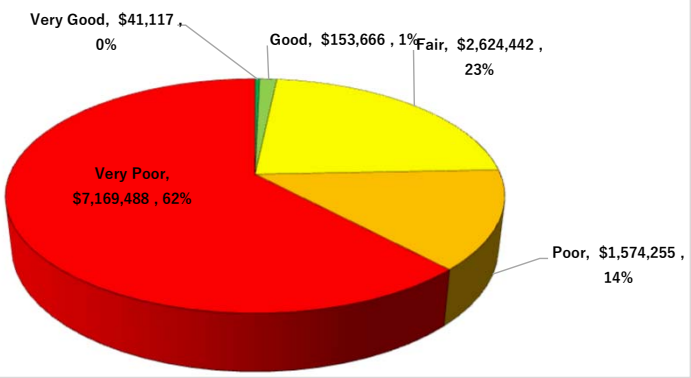
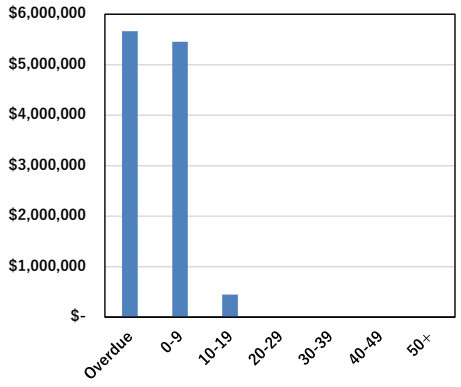
Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
General Government	65	$ 1,474,921.00	Inflation	5 to 20
Fire	32	$ 660,898.00	Inflation	5 to 10
Emergency Measures	4	$ 152,658.00	Inflation	10 to 20
Roads	36	$ 1,989,300.00	Inflation	5 to 10
Air Transport	24	$ 2,952,213.00	Inflation	10 to 20
Other Transportation	1	$ 11,373.00	Inflation	10
Waste Disposal & Diversion	9	$ 1,327,926.00	Inflation	10
Parks	15	$ 331,556.00	Inflation	10 to 20
Recreation Facilities Other	51	$ 1,730,809.00	Inflation	10 to 25
Museum	2	$ 51,309.00	Inflation	10 to 20
Library	12	$ 302,702.00	Inflation	5 to 20
Winter Control	10	$ 566,375.00	Inflation	10
Urban Storm Sewer	1	$ 10,928.00	Inflation	10
Total	**262**	**$ 11,562,968.00**		

The City maintains pooled units of equipment for various services, which includes general government equipment utilized at City facilities, recreation, and fire related equipment, with a total replacement value of $11.56 million. The equipment assets have an assumed useful life ranging between 5 and 25 years depending on the type of equipment. The asset replacement values were derived entirely by adjusting the original acquisition cost by inflation. The source of the information is the City's TCA asset registry.

Summary of Machinery & Equipment Condition by Replacement Value



Remaining Useful Life by Replacement Value



Overall, $5.66 million (49%) of equipment assets are considered to be overdue by virtue of their design life. Although not overdue at this time, it should be noted that all other equipment ($5.90 million) is likely require replacement over the next twenty years. The City maintains approximately $200,000 (2%) of machinery and equipment in Good to Very Good condition. $8.74 million (76%) of all machinery and equipment assets are considered to be in Poor or Very Poor condition, which would indicate signs of deterioration and these assets should be considered for repair or replacement. $2.62 million (23%) of the assets are maintained in Fair condition. It should be noted that the condition analysis is based on the age of the assets, and as a result, poor condition assets may still be in working order, however they should be monitored closely to ensure that they continue to provide service as needed.

Data Confidence and Reliability:	Level 4 (Reliable) Dataset is complete and estimated to be accurate +/- 10%.

Land Improvements — Poor

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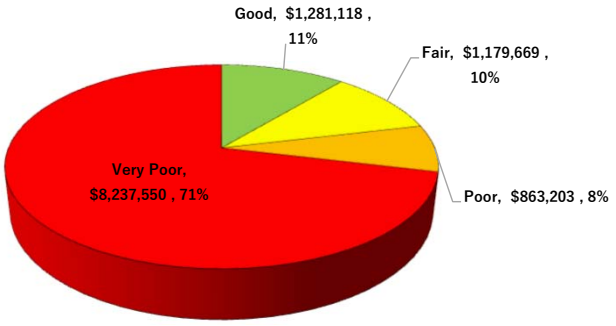
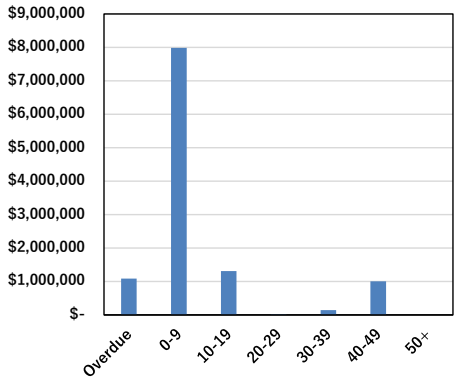
Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
General Government	1	$ 60,454	Inflation	10
Fire	1	$ 28,851	Inflation	20
Air Transport	4	$ 5,107,779	Inflation	20 to 40
Other Transportation	6	$ 1,335,649	Inflation	20 to 68
Waste Disposal	3	$ 310,311	Inflation	20
Parks	22	$ 2,706,970	Inflation	15 to 28
Recreation Facilities	5	$ 995,710	Inflation	20 to 28
Commerce & Economic Development	2	$ 535,486	Inflation	20
Water Treatment	1	$ 13,232	Inflation	20
Cemetery	7	$ 467,098	Inflation	20 to 40
Total	**52**	**$ 11,561,540**		

The City maintains approximately 50 types of land improvement assets with a total replacement value of $11.56 million. The land improvement assets have an assumed useful life ranging between 10 and 68 years depending on the type of land improvement. The asset replacement values were mainly derived by adjusting the original acquisition cost by inflation. The source of the information is the City's TCA Asset Registry.

Summary of Land Improvements Condition by Replacement Value



Remaining Useful Life by Replacement Value



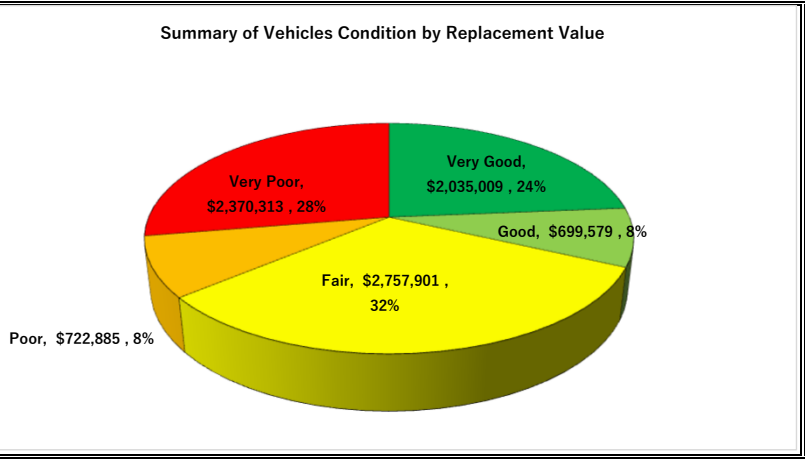
Overall, $1.09 million (9%) of land improvements are considered to be overdue for replacement. Although not overdue at this time, it should be noted that land improvement assets amounting to $9.29 million (80%) will be overdue within 20 years. As the condition analysis for this category is based on the relative age of each asset, the conditions closely link to the remaining useful life graph. Overall, the City maintains no land improvement assets in Very Good condition and $1.28 million (11%) of assets in Good condition. About 9.1 million (79%) of land improvement assets are in Poor or Very Poor condition. The remainder of the assets $1.18 million (10%) are maintained in Fair condition. Noting that the condition analysis is based on the age of the assets, poorer condition assets may still be in good working condition, however they should be monitored closely to ensure that they continue to provide service as needed.

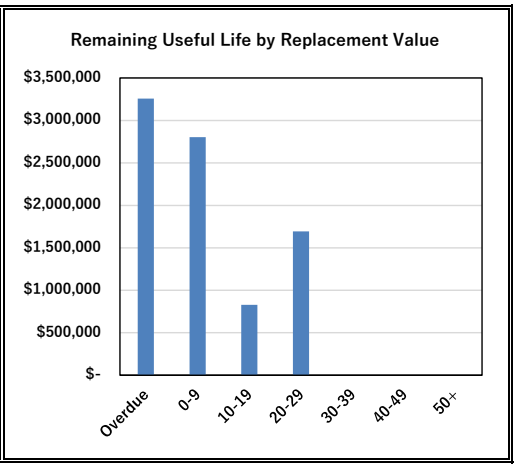
Data Confidence and Reliability:	Level 3 (Uncertain) Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated +/- 25%.

Vehicles — Fair

Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
General Government	2	$ 61,706	Inflation	10 to 20
Fire	13	$ 4,833,012	Inflation	10 to 25
Air Transport	6	$ 346,123	Inflation	10 to 20
Other Transportation	2	$ 266,410	Inflation	10
Waste Diversion	3	$ 248,847	Inflation	10
Parks	3	$ 99,125	Inflation	10
Recreation Facilities Other	5	$ 131,949	Inflation	10 to 20
Roads Paved	22	$ 1,614,055	Inflation	10 to 20
WW Collection	3	$ 753,645	Inflation	10 to 20
Water Treatment	7	$ 230,816	Inflation	10 to 20
Total	**66**	**$ 8,585,687**		

The City maintains 66 vehicle assets which includes general government, fire, air transport, other transportation, waste disposal, parks, recreation facility, roads paved, WW collection, and water treatment vehicles with a total replacement value of $8.59 million. The vehicle assets have an assumed useful life ranging between 10 and 25 years depending on the type of vehicle. The asset replacement values were derived by adjusting the original acquisition cost by inflation. The source of the information is the City's TCA registry.





Overall, $3.26 million (38%) of vehicle assets are considered to be overdue by virtue of their design life. Although not overdue at this time, it should be noted that the rest of the vehicles, amounting to $5.33 million (62%), will require replacement over the next 30 years. As the condition analysis for this category is based on the relative age of each asset, the conditions closely link to the remaining useful life graph. Overall, the City maintains $2.73 million (32%) in Good and Very Good condition. About $3.09 million (36%) of vehicle assets are in Poor or Very Poor condition. The remainder of the assets $2.76 million (32%) are maintained in Fair condition. Vehicles are unique since these assets are considered "rolling stock" and they have shorter useful lives than other assets, it is common to see assets in the Poor or Very Poor categories as they may be older vehicles. However the vehicles continue to be maintained for safety and operation but are more closely inspected or maintained and would be prioritized for replacement over the short-term.

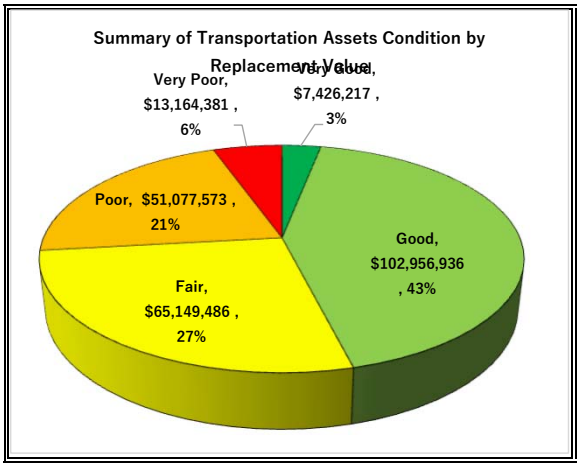
Data Confidence and Reliability:	Level 4 (Reliable) Dataset is complete and estimated to be accurate +/- 10%.

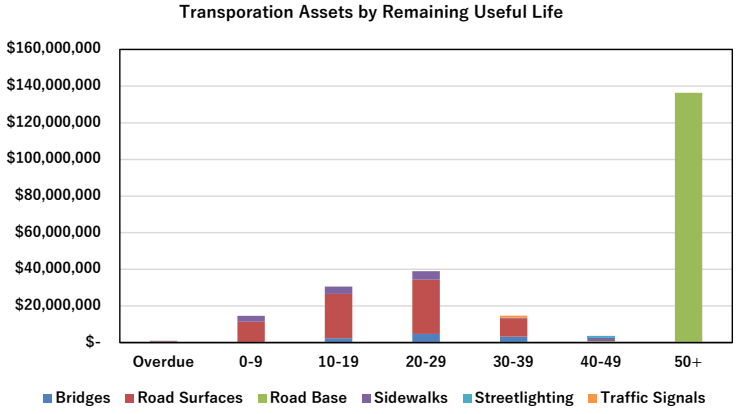
Transportation	Fair

DRYDEN

Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
Bridges	8	$ 10,368,133	Inflation	50
Roads - Surface	93484 Metres	$ 76,089,896	Cost per Metre	50
Roads - Base	93484 Metres	$ 137,050,515	Inflation	100
Sidewalks	51375 Metres	$ 14,353,281	Cost per Metre	50
Streetlighting	1337	$ 692,200	Inflation	50
Traffic Signals	10	$ 1,220,569	Inflation	30
Total		**$ 239,774,594**		

The City maintains over 93 kilometres of roadways with a total replacement value of $213.14 million, over 51 km of sidewalks with a total replacement value of $14.35 million, and 8 bridges with a replacement value of $10.37 million. Streetlights and traffic signals combined amount to $1.91 million. The asset replacement values for road bases, streetlights and traffic signals were derived by adjusting the original cost by inflation. Cost per metre assumptions were applied to all road surfaces and sidewalks, and replacement values of bridges was determined using a cost per square metre of deck area. The source of the information is the City's 2016 AMP, 2022 OSIM report, TCA schedules, and Streetscan Assessments.





Overall, $13.16 million (6%) of the assets are in very poor condition, and an additional $51.08 million (21%) are in poor condition. A total of $65.15 million (27%) of assets are in fair condition. Overall, the City maintains $110.38 million (46%) of Transportation assets in Good to Very Good condition. Condition data for roads was arrived at through assessed condition of the road surfaces, and it was assumed that road bases contained the same proportion of conditions. Due to recent replacements of many assets, all streetlights and traffic signals are deemed to be in very good condition because they possess a significant amount of remaining useful life.

Data Confidence and Reliability:	Level 3 (Uncertain) Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated +/- 25%.

Water	Poor

DRYDEN
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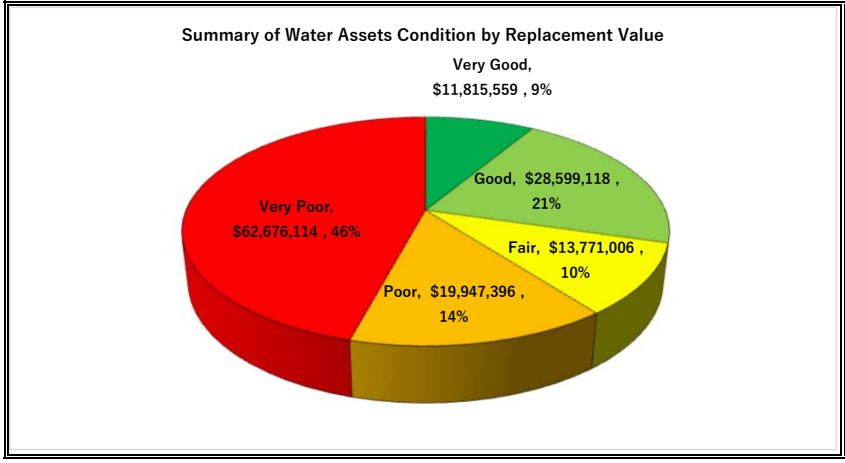
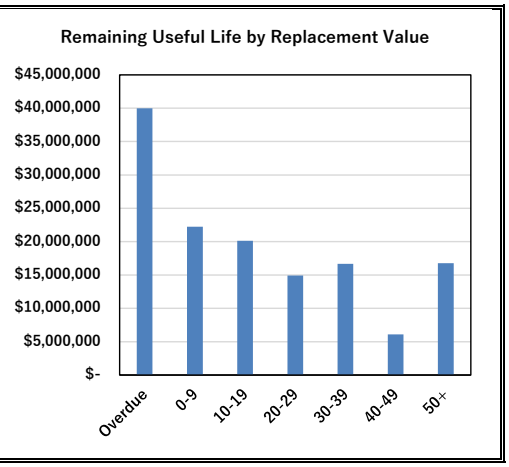
Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
WTP Machinery and Equipment	60	$ 7,026,698	Inflation	10 to 30
WTP Building	N/A	$ 20,197,854	Inflation & Cost per GFA	20 to 50
Water Mains	67392 Metres	$ 59,409,475	Cost per Metre	80
Water Hydrants	314	$ 1,322,568	Cost per Unit	60
Water Laterals	56376 Metres	$ 43,184,115	Cost per Metre	60
Water Meters	2593	$ 1,296,500	Cost per Unit	20
Water Service Valves	2647	$ 3,300,809	Cost per Unit	60
Water Valves	859	$ 1,071,173	Cost per Unit	60
Total		**$ 136,809,192**		

The City maintains water system assets with a replacement cost of $136.81 million. The assets have an assumed useful life ranging between 10 and 80 years. The asset replacement values have been derived by applying a replacement cost per metre for the linear assets (water mains, laterals) and a replacement cost per unit for the water structures (water hydrants, valves). The replacement values of the machinery and equipment, as well as the smaller buildings within the water treatment plant were arrived at by inflating the original acquisition cost. The replacement value assigned to the building envelope of the water treatment plant was arrived at by applying a cost per square foot that is consistent with other municipalities.





Overall, $39.98 million (29%) of water system assets are overdue by virtue of their design life while $42.36 million (31%) of water system assets may require replacement within the next twenty years. As the condition analysis for this category is based on the relative age of each asset, the conditions closely link to the remaining useful life graph. Overall, the City maintains $40.41 million (30%) of water system assets in Good to Very Good condition. About $82.62 million (60%) are in Poor to Very Poor condition. The remainder of the assets $13.77 million (10%) are maintained in Fair condition.

Data Confidence and Reliability:	Level 3 (Uncertain) Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated +/- 25%.

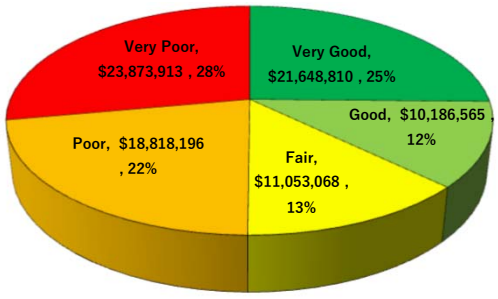
Storm	Fair

DRYDEN

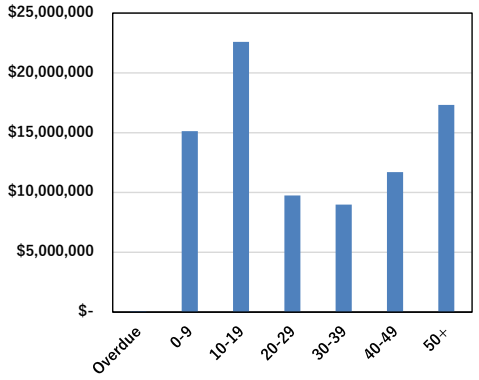
Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
Storm Inlets	675	$ 7,037,815.49	Cost per Unit	100
Storm Outlets	65	$ 677,715.57	Cost per Unit	100
Storm Manholes	676	$ 12,348,965.20	Cost per Unit	100
Storm Pipes	42451 Metres	$ 59,814,316.00	Cost per Metre	60
Storm Culverts	5363 Metres	$ 5,701,740.00	Cost per Metre	60
Total		**$ 85,580,552.26**		

The City maintains 1416 stormwater management structures and over 47 km of linear infrastructure with a total replacement cost of $85.58 million. The assets have an assumed useful life ranging between 60 to 100 years. The asset replacement values have largely been derived by applying a cost per metre for replacement of the infrastructure where the length of assets was available, or by adjusting the original acquisition cost by inflation for non-linear assets.

Summary of Stormwater Management Assets Condition by Replacement Value



Remaining Useful Life by Replacement Value



Overall, $73,071 (< 1%) of storm assets are overdue by virtue of their design life while $37.74 million (44%) of storm sewer system assets may require replacement within the next twenty years. As the condition analysis for many assets within this category are based on the relative age of each asset, the conditions closely link to the remaining useful life graph. Overall, the City maintains $31.84 million (37%) of storm sewer system assets in Good to Very Good condition. $42.69 million (50%) are in Poor or Very Poor condition. The remainder of the assets, totalling $11.05 million (13%) are maintained in Fair condition. The relatively long useful life of the storm assets means that most of the infrastructure will continue to remain in the Good to Very Good category over the coming years.

Data Confidence and Reliability:	Level 4 (Reliable) Dataset is complete and estimated to be accurate +/- 10%.

Sewer	Fair

DRYDEN
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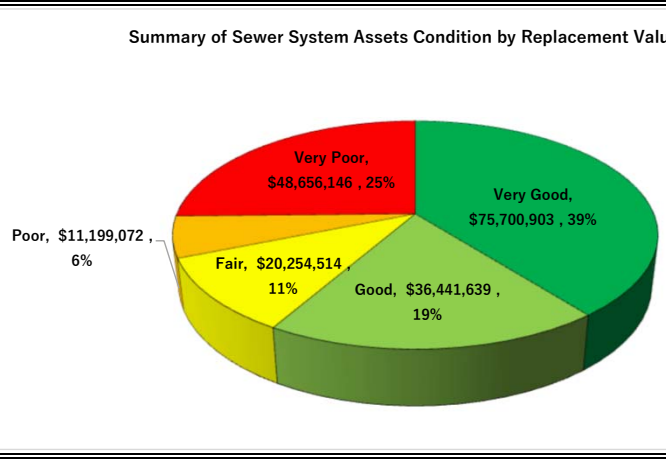
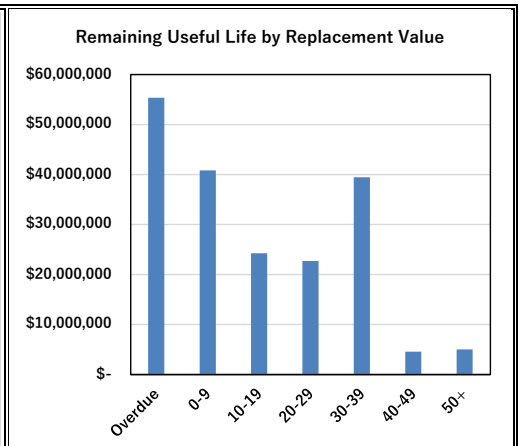
Function	Quantity	Replacement Cost ($2023)	Replacement Cost Method	Useful Life (Years)
WWTP Machinery and Equipment	77	$ 17,286,626.00	Inflation	15 to 30
WWTP Building	N/A	$ 24,994,270.00	Inflation	40
Sewer Mains	57935 Metres	$ 87,036,639.00	Cost per Metre	60
Sewer Pumps	15	$ 109,678.44	Cost per Unit	25
Sewer Lateral	55264 Metres	$ 53,053,544.93	Cost per Metre	60
Sewer Manholes	772	$ 9,771,516.00	Cost per Unit	60
Total		**192,252,274**		

The City maintains 864 sewer system structures, 1 treatment plant, and over 113 km of linear assets with a total replacement cost of $192.25 million. The assets have an assumed useful life ranging between 15 and 60 years. The asset replacement values have been derived by applying a cost per metre for replacement of the infrastructure where the length of assets was available, or by adjusting the original acquisition cost by inflation for non-linear assets, including machinery and equipment. The replacement value assigned to the building envelope of the wastewater treatment plant was detailed in a recent building condition assessment.





Overall, $55.36 million (29%) of sewer system assets are overdue by virtue of their design life while $65.09 million (34%) of the sewer system assets may require replacement within the next twenty years. Overall, the City maintains $112.14 million (58%) of sewer system assets in Good to Very Good condition. About $59.86 million (31%) are in Poor to Very Poor condition. The remainder of the assets, totalling $20.25 million (11%) are maintained in Fair condition. The relatively long useful life of the storm sewer assets means that the majority of the infrastructure will continue to remain in the Good to Very Good category over the coming years as long as the necessary replacements are performed as detailed in the financing strategy section.

Data Confidence and Reliability:	Level 4 (Reliable) Dataset is complete and estimated to be accurate +/- 10%.

APPENDIX C

ASSET MANAGEMENT STRATEGY

APPENDIX C – ASSET MANAGEMENT STRATEGY

Stormwater

Table 1 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 1
Planned Actions: Stormwater

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Regularly scheduling of repair work orders. ▪ Annually provide the necessary departments with related information when works are completed.
Maintenance Activities	▪ Preventative maintenance program for components of the stormwater system. ▪ Regular safety inspections.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections.
Replacement	▪ Components replaced based on needs.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Service improvements made where possible (new technologies, environmental impacts, etc.).

Bridges

Table 2 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 2
Planned Actions: Bridges

Areas	Planned Actions
Non-Infrastructure Solutions	• Operating budgets should be informed by regular inspections as needed. • Adjust service levels if necessary. • Regularly scheduling of repair work orders. • Annually provide the necessary departments with related information when works are completed. • Update OSIM Inspections Report on a regular basis and input OSIM data into AMP model as needed. • Update policies and procedures regarding the accounting and reporting of the City's tangible capital assets. • Prioritize bridge improvements based on inspection reports.
Maintenance Activities	• Continue required Bridge OSIM inspections (every 2 years) • Continue to monitor road restrictions based on municipal policy, in particular for load restrictions in effect during the spring months • Continued maintenance of roads in line with *Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways* • Continue to conduct visual reviews of bridges that require work within the next two years to determine if there are any safety concerns.
Renewal/ Rehabilitation	• Regular component repairs based on inspections. • Continue to implement recommendations of OSIM Inspections Reports. • Establish a dedicated annual budget for bridge assessments and renewal.
Replacement	• Component replacement based on needs.
Disposal	• Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	• Identify needs through regular capital planning. • Service improvements made where possible (new technologies, environmental impacts, etc.).

Roads

The roads and related category, includes all City roads infrastructure. Regular maintenance and inspections are required to maintain safety and operational standards for roads. Table 3 summarizes general actions that can be taken to ensure that roads are maintained in a state of good repair.

Table 3
Planned Actions: Roads

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Regularly scheduling of repair work orders. ▪ Annually provide the necessary departments with related information when new and additional equipment is acquired. ▪ Continue to conduct road inspections and maintain an up-to-date database (i.e. Inventory of roads in Dryden).
Maintenance Activities	▪ Regular maintenance including, road sweeping, snow removal, dust control, roadside vegetation management, and roadside ditch cleanout and clearing. ▪ Continued maintenance of roads in line with Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways. ▪ Continue to monitor road restrictions based on City policy, in particular for load restrictions in effect during the spring months ▪ Maintain roads in the winter based on the Snow Clearing Policy minimum standards.
Renewal/ Rehabilitation	▪ Resurfacing of poor conditioned paved roads. ▪ Regular grading and application of gravel for gravel roads. ▪ Regular component repairs based on inspections.
Replacement	▪ Road reconstruction based on condition assessments.
Disposal	▪ Convert low traffic roads to less costly gravel if necessary.
Expansion	▪ Identify needs through regular capital planning. Ensure assumed roads are tracked through the asset management plan. ▪ Service improvements made where possible (new technologies, environmental impacts, etc.).

Sidewalks, Streetlighting, and Traffic Signals

Table 4 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 4 Planned Actions: Sidewalks	
Areas	**Planned Actions**
Non-Infrastructure Solutions	• Operating budgets should be informed by regular inspections as needed. • Adjust service levels if necessary. • Regularly scheduling of repair work orders. • Annually provide the necessary departments with related information when works are completed. • Update policies and procedures regarding the accounting and reporting of the City's tangible capital assets.
Maintenance Activities	• Preventative maintenance program for all City sidewalks, streetlighting, and traffic signals. • Regular seasonal maintenance as needed to ensure safety of pedestrians. • Snow removal on primary and secondary sidewalks. Secondary sidewalk maintenance occurs after primary sidewalks have been maintained.
Renewal/ Rehabilitation	• Repairs should continue as needed.
Replacement	• Components replaced based on needs.
Disposal	• Consider not replacing one-off dead end sidewalks where there is existing sidewalks already on one side of the roadway.
Expansion	• Identify needs through regular capital planning. • Continue to track needs based on the capital program. • Service improvements made where possible (new technologies, environmental impacts, etc.).

Land Improvements

Table 5 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 5
Planned Actions: Land Improvements

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Operating budgets should be informed by regular inspections as needed. ▪ Update policies and procedures regarding the accounting and reporting of the City's tangible capital assets.
Maintenance Activities	▪ Preventative maintenance program for all City land improvements. ▪ Pool safety and maintenance to industry and legislative standards ▪ Inspection of assets on a regular basis to ensure safety
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections.
Replacement	▪ Component replacement based on inspection.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Continue to track future needs based on demands placed on infrastructure by the overall public

Buildings

There are a variety of buildings in the City that are utilized for various purposes. Usually, customized maintenance plans are required for each facility depending on their purpose. Table 6 summarizes general actions that can be employed to ensure that City facilities are maintained in a state of good repair.

Table 6
Planned Actions: Buildings

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Operating budgets should be informed by condition assessments and regular inspections as needed. ▪ Business cases, special studies and consultation with stakeholders should be done when constructing a new facility or modifying an existing facility. ▪ Review of the design and layout of buildings and properties to minimize maintenance costs through design efficiencies over the lifecycle of buildings. ▪ Adjust service levels if necessary.
Maintenance Activities	▪ Buildings and facilities inspected regularly in accordance with occupational health and safety regulations ▪ HVAC and heating systems inspected regularly. ▪ Plumbing inspected regularly. ▪ Maintain electrical systems to Electrical Safety Authority standards. ▪ Fire alarms, fire extinguishers and emergency lights inspected regularly.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections.
Replacement	▪ Component replacement based on inspections.
Disposal	▪ Selling or demolishing facilities that are no longer in use or underutilized. ▪ Re-use or sell land not in use.
Expansion	▪ Identify needs through regular capital planning. ▪ Assumptions on required facility space through development agreements if necessary.

Machinery & Equipment

Machinery and equipment assets include small equipment and tools as well as large road equipment such as graders and trailers. Table 7 summarizes general actions that can be taken to ensure that assets are maintained in a state of good repair.

Table 7
Planned Actions: Machinery and Equipment

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Regularly scheduling of repair work orders. ▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Annually provide the necessary departments with related information when new and additional units are acquired. ▪ Training for staff to ensure safe and efficient operation of equipment.
Maintenance Activities	▪ Preventative maintenance program for all City equipment. ▪ Regular inspection of all City equipment. ▪ Annual inspection, service and certification performed on all applicable machinery vehicles in accordance with MTO requirements. ▪ Regular safety inspections of all vehicles before and after use to ensure safety standards are maintained.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections. ▪ Mid-life component replacements are usually common for larger equipment and can be scheduled accordingly (engine/transmission rebuilds).
Replacement	▪ Equipment replacement based on inspections. ▪ Equipment replacement forecast reviewed annually.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Service improvements made where possible (new technologies, environmental impacts, etc.).

Vehicles

Vehicles are considered for all service areas including Fire, Roads and other general government vehicles. Actions related to maintaining the fleet are unique to each type of vehicle unit. Table 8 summarizes general actions that can be taken to ensure that fleet vehicles are maintained in a state of good repair.

Table 8
Planned Actions: Vehicles

Areas	Planned Actions
Non-Infrastructure Solutions	▪ Regularly scheduling of repair work orders. ▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Annually provide the necessary departments with related information when new and additional units are acquired. ▪ Training for staff to ensure safe and efficient operation of vehicles.
Maintenance Activities	▪ Preventative maintenance program for all City vehicles. ▪ Regular inspection of all City vehicles. Emergency vehicles should be inspected in accordance with industry and regulatory guidelines. ▪ Annual inspection, service and certification performed on all applicable vehicles in accordance with MTO requirements. ▪ Regular safety inspections of all vehicles before and after use to ensure safety standards are maintained.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections. ▪ Mid-life component replacements are usually common for larger vehicles and can be scheduled accordingly (engine/transmission rebuilds).
Replacement	▪ Vehicle replacement based on inspections. ▪ Vehicle replacement forecast reviewed annually.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Service improvements will be made where possible (new technologies, environmental impacts, etc.).

Water

Table 9 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 9 Planned Actions: Water	
Areas	**Planned Actions**
Non-Infrastructure Solutions	▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Regularly scheduling of repair work orders. ▪ Annually provide the necessary departments with related information when works are completed. ▪ Continue investing capital and operational funds to provide upgrades and rehabilitations to treatment and distribution systems. ▪ Establish and upgrade current practices and policies. ▪ Continue to provide Water Treatment Plan Annual Reports, as per Ministry of the Environment requirements. ▪ Liaise with the sewer and water operator to ensure continued maintenance of sanitary sewage and water systems.
Maintenance Activities	▪ Preventative maintenance program for components of the water system. ▪ Regular safety inspections. ▪ CCTV camera inspections performed as identified and needed.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections.
Replacement	▪ Components replaced based on needs.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Service improvements made where possible (new technologies, environmental impacts, etc.). ▪ Ensure expansion related to capital costs of growth is borne by developers.

Sewer

Table 9 summarizes general actions that can be taken to ensure that these assets are maintained in a state of good repair.

Table 9 Planned Actions: Sewer	
Areas	**Planned Actions**
Non-Infrastructure Solutions	▪ Operating budgets should be informed by regular inspections as needed. ▪ Adjust service levels if necessary. ▪ Regularly scheduling of repair work orders. ▪ Annually provide the necessary departments with related information when works are completed. ▪ Liaise with the sewer and water operator to ensure continued maintenance of sanitary sewage and water systems.
Maintenance Activities	▪ Preventative maintenance program for the sewer system. ▪ CCTV camera inspections performed as identified and needed.
Renewal/ Rehabilitation	▪ Regular component repairs based on inspections.
Replacement	▪ Components replaced based on needs.
Disposal	▪ Dispose or sell assets that are no longer in use or are in poor condition.
Expansion	▪ Identify needs through regular capital planning. ▪ Service improvements made where possible (new technologies, environmental impacts, etc.). ▪ Ensure expansion related to capital costs of growth is borne by developers.

APPENDIX D

DETAILED FINANCING STRATEGY TABLES

Table 1
City of Dryden
2023 Asset Management Plan
Base Scenario: Close Cumulative Infrastructure Deficit by 2062

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Soloutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Taxation	Capital from Taxation (Including Transfers to Reserves)	Yearly Increase in Tax Funding ($)	Yearly Increase in Tax Funding (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Retirement (transferred to AM Reserve)	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 28,164,059	$ 5,498,755	$ 1,189,638	$ 38,240,252	$ 3,337,800	$ 1,514,201			$ 475,500	$ 7,979,645	$ 2,098,943	$ -	$ 15,406,089	$ 22,834,163	$ 22,834,163
2024	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 18,874,158	$ 5,498,755	$ 1,189,638	$ 28,950,351	$ 3,337,800	$ 2,134,358	$ 620,157	41.0%	$ 464,559	$ 1,220,000	$ -	$ -	$ 7,156,717	$ 21,793,634	$ 44,627,797
2025	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 18,757,425	$ 5,498,755	$ 1,189,638	$ 28,833,618	$ 3,337,800	$ 2,754,515	$ 620,157	29.1%	$ 483,916	$ 1,220,000	$ -	$ -	$ 7,796,230	$ 21,037,388	$ 65,665,185
2026	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 16,830,326	$ 5,498,755	$ 1,189,638	$ 26,906,519	$ 3,337,800	$ 3,374,671	$ 620,157	22.5%	$ 503,272	$ 1,220,000	$ -	$ -	$ 8,435,744	$ 18,470,775	$ 84,135,960
2027	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 14,954,419	$ 5,498,755	$ 1,189,638	$ 25,030,612	$ 3,337,800	$ 3,994,828	$ 620,157	18.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,137,565	$ 15,893,047	$ 100,029,007
2028	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 14,949,439	$ 5,498,755	$ 1,189,638	$ 25,025,632	$ 3,337,800	$ 4,614,985	$ 620,157	15.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,757,722	$ 15,267,910	$ 115,296,917
2029	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 14,558,722	$ 5,498,755	$ 1,189,638	$ 24,634,915	$ 3,337,800	$ 5,235,142	$ 620,157	13.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,377,879	$ 14,257,036	$ 129,553,953
2030	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 14,423,764	$ 5,498,755	$ 1,189,638	$ 24,499,957	$ 3,337,800	$ 5,855,298	$ 620,157	11.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,998,036	$ 13,501,921	$ 143,055,874
2031	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 14,411,272	$ 5,498,755	$ 1,189,638	$ 24,487,465	$ 3,337,800	$ 6,475,455	$ 620,157	10.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,618,192	$ 12,869,273	$ 155,925,147
2032	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 7,095,612	$ 620,157	9.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,238,349	$ 10,022,252	$ 165,947,399
2033	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 7,715,769	$ 620,157	8.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,858,506	$ 9,402,095	$ 175,349,494
2034	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 8,335,925	$ 620,157	8.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,478,663	$ 6,956,555	$ 182,306,049
2035	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 8,956,082	$ 620,157	7.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,098,819	$ 6,336,399	$ 188,642,448
2036	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 9,576,239	$ 620,157	6.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,718,976	$ 5,716,242	$ 194,358,690
2037	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 10,196,396	$ 620,157	6.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 15,339,133	$ 4,683,197	$ 199,041,887
2038	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 10,816,552	$ 620,157	6.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 15,959,290	$ 4,063,041	$ 203,104,928
2039	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 8,115,867	$ 5,498,755	$ 1,189,638	$ 18,192,060	$ 3,337,800	$ 11,436,709	$ 620,157	5.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 16,579,447	$ 1,612,613	$ 204,717,541
2040	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 12,056,866	$ 620,157	5.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 17,199,603	$ 990,693	$ 205,708,234
2041	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 12,677,023	$ 620,157	5.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 17,819,760	$ 370,536	$ 206,078,770
2042	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 13,297,179	$ 620,157	4.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 18,439,917	$ (2,792,369)	$ 203,286,401
2043	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 13,917,336	$ 620,157	4.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 19,060,074	$ (3,412,526)	$ 199,873,875
2044	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 14,537,493	$ 620,157	4.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 19,680,230	$ (4,064,356)	$ 195,809,519
2045	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 15,157,650	$ 620,157	4.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 20,300,387	$ (4,684,512)	$ 191,125,006
2046	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 15,777,807	$ 620,157	4.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 20,920,544	$ (5,304,669)	$ 185,820,337
2047	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 16,397,963	$ 620,157	3.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 21,540,701	$ (5,924,826)	$ 179,895,511
2048	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 17,018,120	$ 620,157	3.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 22,160,857	$ (6,544,983)	$ 173,350,528
2049	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 17,638,277	$ 620,157	3.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 22,781,014	$ (7,815,771)	$ 165,534,758
2050	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 18,258,434	$ 620,157	3.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 23,401,171	$ (8,435,928)	$ 157,098,830
2051	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 18,878,590	$ 620,157	3.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 24,021,328	$ (9,056,084)	$ 148,042,746
2052	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 19,498,747	$ 620,157	3.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 24,641,484	$ (9,676,241)	$ 138,366,504
2053	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 20,118,904	$ 620,157	3.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 25,261,641	$ (10,296,398)	$ 128,070,106
2054	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 20,739,061	$ 620,157	3.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 25,881,798	$ (11,212,297)	$ 116,857,810
2055	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 21,359,217	$ 620,157	3.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 26,501,955	$ (11,832,453)	$ 105,025,356
2056	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,586,836	$ 5,498,755	$ 1,189,638	$ 14,663,029	$ 3,337,800	$ 21,979,374	$ 620,157	2.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 27,122,112	$ (12,459,083)	$ 92,566,273
2057	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 22,599,531	$ 620,157	2.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 27,742,268	$ (13,419,449)	$ 79,146,824
2058	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 23,219,688	$ 620,157	2.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 28,362,425	$ (14,039,606)	$ 65,107,218
2059	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 23,839,844	$ 620,157	2.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 28,982,582	$ (15,346,569)	$ 49,760,649
2060	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 24,460,001	$ 620,157	2.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 29,602,739	$ (15,966,726)	$ 33,793,923
2061	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 25,080,158	$ 620,157	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 30,222,895	$ (16,586,883)	$ 17,207,040
2062	$ 50,000.00	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 25,700,315	$ 620,157	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 30,843,052	$ (17,207,040)	$ -
Total	**$ 2,000,000**	**$ 79,009,200**	**$ 54,502,800**	**$ 355,398,175**	**$ 219,950,200**	**$ 47,585,520**	**$ 758,445,895**	**$ 133,512,000**	**$ 544,290,315**	**$ 24,186,114**		**$ 20,045,057**	**$ 55,559,645**	**$ 2,098,943**	**$ 2,939,934**	**$ 758,445,895**		

Table 2
City of Dryden
2023 Asset Management Plan
Financing Strategy 1: Close In-Year Funding Gap by 2052

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Soloutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Taxation	Capital from Taxation (Including Transfers to Reserves)	Yearly Increase in Tax Funding ($)	Yearly Increase in Tax Funding (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Repayment	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000	$ 1,975,230	$ 1,362,570	$ 28,164,059	$ 5,498,755	$ 1,189,638	$ 38,240,252	$ 3,337,800	$ 1,514,201			$ 475,500	$ 7,979,645	$ 2,098,943	$ -	$ 15,406,089	$ 22,834,163	$ 22,834,163
2024	$ 50,000	$ 1,975,230	$ 1,362,570	$ 18,874,158	$ 5,498,755	$ 1,189,638	$ 28,950,351	$ 3,337,800	$ 1,800,694	$ 286,493	18.9%	$ 464,559	$ 1,220,000	$ -	$ -	$ 6,823,053	$ 22,127,297	$ 44,961,461
2025	$ 50,000	$ 1,975,230	$ 1,362,570	$ 18,757,425	$ 5,498,755	$ 1,189,638	$ 28,833,618	$ 3,337,800	$ 2,087,188	$ 286,493	15.9%	$ 483,916	$ 1,220,000	$ -	$ -	$ 7,128,903	$ 21,704,715	$ 66,666,175
2026	$ 50,000	$ 1,975,230	$ 1,362,570	$ 16,830,326	$ 5,498,755	$ 1,189,638	$ 26,906,519	$ 3,337,800	$ 2,373,681	$ 286,493	13.7%	$ 503,272	$ 1,220,000	$ -	$ -	$ 7,434,753	$ 19,471,766	$ 86,137,941
2027	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,954,419	$ 5,498,755	$ 1,189,638	$ 25,030,612	$ 3,337,800	$ 2,660,174	$ 286,493	12.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 7,802,911	$ 17,227,701	$ 103,365,642
2028	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,949,439	$ 5,498,755	$ 1,189,638	$ 25,025,632	$ 3,337,800	$ 2,946,667	$ 286,493	10.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,089,405	$ 16,936,227	$ 120,301,869
2029	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,558,722	$ 5,498,755	$ 1,189,638	$ 24,634,915	$ 3,337,800	$ 3,233,161	$ 286,493	9.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,375,898	$ 16,259,017	$ 136,560,886
2030	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,423,764	$ 5,498,755	$ 1,189,638	$ 24,499,957	$ 3,337,800	$ 3,519,654	$ 286,493	8.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,662,391	$ 15,837,566	$ 152,398,452
2031	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,411,272	$ 5,498,755	$ 1,189,638	$ 24,487,465	$ 3,337,800	$ 3,806,147	$ 286,493	8.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,948,885	$ 15,538,581	$ 167,937,033
2032	$ 50,000	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 4,092,640	$ 286,493	7.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,235,378	$ 13,025,223	$ 180,962,256
2033	$ 50,000	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 4,379,134	$ 286,493	7.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,521,871	$ 12,738,730	$ 193,700,986
2034	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 4,665,627	$ 286,493	6.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,808,364	$ 10,626,854	$ 204,327,840
2035	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 4,952,120	$ 286,493	6.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,094,858	$ 10,340,360	$ 214,668,200
2036	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 5,238,614	$ 286,493	5.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,381,351	$ 10,053,867	$ 224,722,067
2037	$ 50,000	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 5,525,107	$ 286,493	5.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,667,844	$ 9,354,486	$ 234,076,553
2038	$ 50,000	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 5,811,600	$ 286,493	5.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,954,337	$ 9,067,993	$ 243,144,546
2039	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,115,867	$ 5,498,755	$ 1,189,638	$ 18,192,060	$ 3,337,800	$ 6,098,093	$ 286,493	4.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,240,831	$ 6,951,229	$ 250,095,776
2040	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 6,384,587	$ 286,493	4.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,527,324	$ 6,662,972	$ 256,758,748
2041	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 6,671,080	$ 286,493	4.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,813,817	$ 6,376,479	$ 263,135,227
2042	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 6,957,573	$ 286,493	4.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,100,311	$ 3,547,237	$ 266,682,463
2043	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 7,244,066	$ 286,493	4.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,386,804	$ 3,260,744	$ 269,943,207
2044	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 7,530,560	$ 286,493	4.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,673,297	$ 2,942,578	$ 272,885,785
2045	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 7,817,053	$ 286,493	3.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,959,790	$ 2,656,084	$ 275,541,869
2046	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 8,103,546	$ 286,493	3.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,246,284	$ 2,369,591	$ 277,911,460
2047	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 8,390,040	$ 286,493	3.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,532,777	$ 2,083,098	$ 279,994,558
2048	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 8,676,533	$ 286,493	3.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,819,270	$ 1,796,604	$ 281,791,162
2049	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 8,963,026	$ 286,493	3.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,105,763	$ 859,480	$ 282,650,642
2050	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 9,249,519	$ 286,493	3.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,392,257	$ 572,987	$ 283,223,629
2051	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 9,536,013	$ 286,493	3.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,678,750	$ 286,493	$ 283,510,122
2052	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 9,822,506	$ 286,493	3.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 14,965,243	$ -	$ 283,510,122
2053	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 10,108,999	$ 286,493	2.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 15,251,737	$ (286,493)	$ 283,223,629
2054	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 10,395,493	$ 286,493	2.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 15,538,230	$ (868,729)	$ 282,354,900
2055	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 10,681,986	$ 286,493	2.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 15,824,723	$ (1,155,222)	$ 281,199,678
2056	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,586,836	$ 5,498,755	$ 1,189,638	$ 14,663,029	$ 3,337,800	$ 10,968,479	$ 286,493	2.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 16,111,216	$ (1,448,188)	$ 279,751,490
2057	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 11,254,972	$ 286,493	2.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 16,397,710	$ (2,074,891)	$ 277,676,600
2058	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 11,541,466	$ 286,493	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 16,684,203	$ (2,361,384)	$ 275,315,216
2059	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 11,827,959	$ 286,493	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 16,970,696	$ (3,334,684)	$ 271,980,532
2060	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 12,114,452	$ 286,493	2.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 17,257,189	$ (3,621,177)	$ 268,359,355
2061	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 12,400,945	$ 286,493	2.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 17,543,683	$ (3,907,670)	$ 264,451,685
2062	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 12,687,439	$ 286,493	2.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 17,830,176	$ (4,194,164)	$ 260,257,521
Total	**$ 2,000,000**	**$ 79,009,200**	**$ 54,502,800**	**$ 355,398,175**	**$ 219,950,200**	**$ 47,585,520**	**$ 758,445,895**	**$ 133,512,000**	**$ 284,032,794**	**$ 11,173,238**		**$ 20,045,057**	**$ 55,559,645**	**$ 2,098,943**	**$ 2,939,934**	**$ 498,188,374**		

Table 3
City of Dryden
2023 Asset Management Plan
Financing Strategy 2: Close In-Year Funding Gap by 2062

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Solutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Taxation	Capital from Taxation (Including Transfers to Reserves)	Yearly Increase in Tax Funding ($)	Yearly Increase in Tax Funding (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Repayment	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000	$ 1,975,230	$ 1,362,570	$ 28,164,059	$ 5,498,755	$ 1,189,638	$ 38,240,252	$ 3,337,800	$ 1,514,201			$ 475,500	$ 7,979,645	$ 2,098,943	$ -	$ 15,406,089	$ 22,834,163	$ 22,834,163
2024	$ 50,000	$ 1,975,230	$ 1,362,570	$ 18,874,158	$ 5,498,755	$ 1,189,638	$ 28,950,351	$ 3,337,800	$ 1,693,152	$ 178,951	11.8%	$ 464,559	$ 1,220,000	$ -	$ -	$ 6,715,511	$ 22,234,840	$ 45,069,003
2025	$ 50,000	$ 1,975,230	$ 1,362,570	$ 18,757,425	$ 5,498,755	$ 1,189,638	$ 28,833,618	$ 3,337,800	$ 1,872,102	$ 178,951	10.6%	$ 483,916	$ 1,220,000	$ -	$ -	$ 6,913,818	$ 21,919,800	$ 66,988,803
2026	$ 50,000	$ 1,975,230	$ 1,362,570	$ 16,830,326	$ 5,498,755	$ 1,189,638	$ 26,906,519	$ 3,337,800	$ 2,051,053	$ 178,951	9.6%	$ 503,272	$ 1,220,000	$ -	$ -	$ 7,112,125	$ 19,794,394	$ 86,783,197
2027	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,954,419	$ 5,498,755	$ 1,189,638	$ 25,030,612	$ 3,337,800	$ 2,230,004	$ 178,951	8.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 7,372,741	$ 17,657,872	$ 104,441,068
2028	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,949,439	$ 5,498,755	$ 1,189,638	$ 25,025,632	$ 3,337,800	$ 2,408,954	$ 178,951	8.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 7,551,691	$ 17,473,941	$ 121,915,009
2029	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,558,722	$ 5,498,755	$ 1,189,638	$ 24,634,915	$ 3,337,800	$ 2,587,905	$ 178,951	7.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 7,730,642	$ 16,904,273	$ 138,819,282
2030	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,423,764	$ 5,498,755	$ 1,189,638	$ 24,499,957	$ 3,337,800	$ 2,766,855	$ 178,951	6.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 7,909,593	$ 16,590,364	$ 155,409,646
2031	$ 50,000	$ 1,975,230	$ 1,362,570	$ 14,411,272	$ 5,498,755	$ 1,189,638	$ 24,487,465	$ 3,337,800	$ 2,945,806	$ 178,951	6.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,088,543	$ 16,398,922	$ 171,808,568
2032	$ 50,000	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 3,124,757	$ 178,951	6.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,267,494	$ 13,993,107	$ 185,801,675
2033	$ 50,000	$ 1,975,230	$ 1,362,570	$ 12,184,408	$ 5,498,755	$ 1,189,638	$ 22,260,601	$ 3,337,800	$ 3,303,707	$ 178,951	5.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,446,445	$ 13,814,156	$ 199,615,831
2034	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 3,482,658	$ 178,951	5.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,625,395	$ 11,809,823	$ 211,425,654
2035	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 3,661,609	$ 178,951	5.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,804,346	$ 11,630,872	$ 223,056,527
2036	$ 50,000	$ 1,975,230	$ 1,362,570	$ 10,359,025	$ 5,498,755	$ 1,189,638	$ 20,435,218	$ 3,337,800	$ 3,840,559	$ 178,951	4.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 8,983,296	$ 11,451,922	$ 234,508,448
2037	$ 50,000	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 4,019,510	$ 178,951	4.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,162,247	$ 10,860,083	$ 245,368,531
2038	$ 50,000	$ 1,975,230	$ 1,362,570	$ 9,946,137	$ 5,498,755	$ 1,189,638	$ 20,022,330	$ 3,337,800	$ 4,198,460	$ 178,951	4.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,341,198	$ 10,681,133	$ 256,049,664
2039	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,115,867	$ 5,498,755	$ 1,189,638	$ 18,192,060	$ 3,337,800	$ 4,377,411	$ 178,951	4.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,520,148	$ 8,671,912	$ 264,721,576
2040	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 4,556,362	$ 178,951	4.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,699,099	$ 8,491,197	$ 273,212,773
2041	$ 50,000	$ 1,975,230	$ 1,362,570	$ 8,114,103	$ 5,498,755	$ 1,189,638	$ 18,190,296	$ 3,337,800	$ 4,735,312	$ 178,951	3.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 9,878,050	$ 8,312,247	$ 281,525,019
2042	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 4,914,263	$ 178,951	3.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,057,000	$ 5,590,547	$ 287,115,566
2043	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,571,354	$ 5,498,755	$ 1,189,638	$ 15,647,547	$ 3,337,800	$ 5,093,214	$ 178,951	3.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,235,951	$ 5,411,597	$ 292,527,163
2044	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 5,272,164	$ 178,951	3.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,414,902	$ 5,200,973	$ 297,728,136
2045	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 5,451,115	$ 178,951	3.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,593,852	$ 5,022,023	$ 302,750,159
2046	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 5,630,065	$ 178,951	3.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,772,803	$ 4,843,072	$ 307,593,231
2047	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 5,809,016	$ 178,951	3.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 10,951,753	$ 4,664,121	$ 312,257,352
2048	$ 50,000	$ 1,975,230	$ 1,362,570	$ 5,539,682	$ 5,498,755	$ 1,189,638	$ 15,615,875	$ 3,337,800	$ 5,987,967	$ 178,951	3.1%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,130,704	$ 4,485,171	$ 316,742,523
2049	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 6,166,917	$ 178,951	3.0%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,309,655	$ 3,655,589	$ 320,398,111
2050	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 6,345,868	$ 178,951	2.9%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,488,605	$ 3,476,638	$ 323,874,749
2051	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 6,524,819	$ 178,951	2.8%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,667,556	$ 3,297,687	$ 327,172,437
2052	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 6,703,769	$ 178,951	2.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 11,846,507	$ 3,118,737	$ 330,291,173
2053	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,889,050	$ 5,498,755	$ 1,189,638	$ 14,965,243	$ 3,337,800	$ 6,882,720	$ 178,951	2.7%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,025,457	$ 2,939,786	$ 333,230,960
2054	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 7,061,670	$ 178,951	2.6%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,204,408	$ 2,465,094	$ 335,696,053
2055	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,593,308	$ 5,498,755	$ 1,189,638	$ 14,669,501	$ 3,337,800	$ 7,240,621	$ 178,951	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,383,358	$ 2,286,143	$ 337,982,196
2056	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,586,836	$ 5,498,755	$ 1,189,638	$ 14,663,029	$ 3,337,800	$ 7,419,572	$ 178,951	2.5%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,562,309	$ 2,100,720	$ 340,082,916
2057	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 7,598,522	$ 178,951	2.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,741,260	$ 1,581,559	$ 341,664,475
2058	$ 50,000	$ 1,975,230	$ 1,362,570	$ 4,246,626	$ 5,498,755	$ 1,189,638	$ 14,322,819	$ 3,337,800	$ 7,777,473	$ 178,951	2.4%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 12,920,210	$ 1,402,609	$ 343,067,084
2059	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 7,956,424	$ 178,951	2.3%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,099,161	$ 536,852	$ 343,603,935
2060	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 8,135,374	$ 178,951	2.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,278,112	$ 357,901	$ 343,961,836
2061	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 8,314,325	$ 178,951	2.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,457,062	$ 178,950	$ 344,140,786
2062	$ 50,000	$ 1,975,230	$ 1,362,570	$ 3,559,819	$ 5,498,755	$ 1,189,638	$ 13,636,012	$ 3,337,800	$ 8,493,275	$ 178,951	2.2%	$ 503,272	$ 1,220,000	$ -	$ 81,665	$ 13,636,013	$ -	$ 344,140,786
Total	**$ 2,000,000**	**$ 79,009,200**	**$ 54,502,800**	**$ 355,398,175**	**$ 219,950,200**	**$ 47,585,520**	**$ 758,445,895**	**$ 133,512,000**	**$ 200,149,529**	**$ 6,979,074**		**$ 20,045,057**	**$ 55,559,645**	**$ 2,098,943**	**$ 2,939,934**	**$ 414,305,109**		

Table 4
City of Dryden
2022 Asset Management Plan
Base Scenario: Close Cumulative Infrastructure Deficit by 2062
Rate Supported Assets

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Solutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Rates	Capital from Rates (Including Transfers to Reserves)	Yearly Increase in Rate Revenue ($)	Yearly Increase in Rates (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Retirement (transferred to AM Reserve)	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000.00	$ 863,060	$ 385,950	$ 36,129,041	$ 500,000	$ 573,400	$ 38,501,451	$ 1,249,010	$ 1,552,756			$ -	$ -	$ 820,902	$ -	$ 3,622,668	$ 34,878,783	$ 34,878,783
2024	$ 50,000.00	$ 863,060	$ 385,950	$ 31,189,675	$ 500,000	$ 573,400	$ 33,562,085	$ 1,249,010	$ 2,062,329	$ 509,573	32.8%	$ -	$ -	$ -	$ -	$ 3,311,339	$ 30,250,745	$ 65,129,528
2025	$ 50,000.00	$ 863,060	$ 385,950	$ 30,486,477	$ 500,000	$ 573,400	$ 32,858,887	$ 1,249,010	$ 2,571,903	$ 509,573	24.7%	$ -	$ -	$ -	$ -	$ 3,820,913	$ 29,037,974	$ 94,167,502
2026	$ 50,000.00	$ 863,060	$ 385,950	$ 20,019,945	$ 500,000	$ 573,400	$ 22,392,355	$ 1,249,010	$ 3,081,476	$ 509,573	19.8%	$ -	$ -	$ -	$ -	$ 4,330,486	$ 18,061,869	$ 112,229,371
2027	$ 50,000.00	$ 863,060	$ 385,950	$ 19,567,711	$ 500,000	$ 573,400	$ 21,940,121	$ 1,249,010	$ 3,591,049	$ 509,573	16.5%	$ -	$ -	$ -	$ -	$ 4,840,059	$ 17,100,061	$ 129,329,432
2028	$ 50,000.00	$ 863,060	$ 385,950	$ 19,532,816	$ 500,000	$ 573,400	$ 21,905,226	$ 1,249,010	$ 4,100,623	$ 509,573	14.2%	$ -	$ -	$ -	$ -	$ 5,349,633	$ 16,555,593	$ 145,885,025
2029	$ 50,000.00	$ 863,060	$ 385,950	$ 19,521,424	$ 500,000	$ 573,400	$ 21,893,834	$ 1,249,010	$ 4,610,196	$ 509,573	12.4%	$ -	$ -	$ -	$ -	$ 5,859,206	$ 16,034,628	$ 161,919,654
2030	$ 50,000.00	$ 863,060	$ 385,950	$ 11,131,371	$ 500,000	$ 573,400	$ 13,503,781	$ 1,249,010	$ 5,119,770	$ 509,573	11.1%	$ -	$ -	$ -	$ -	$ 6,368,780	$ 7,135,002	$ 169,054,655
2031	$ 50,000.00	$ 863,060	$ 385,950	$ 11,104,174	$ 500,000	$ 573,400	$ 13,476,584	$ 1,249,010	$ 5,629,343	$ 509,573	10.0%	$ -	$ -	$ -	$ 868,965	$ 7,747,318	$ 5,729,266	$ 174,783,922
2032	$ 50,000.00	$ 863,060	$ 385,950	$ 11,067,645	$ 500,000	$ 573,400	$ 13,440,055	$ 1,249,010	$ 6,138,916	$ 509,573	9.1%	$ -	$ -	$ -	$ 868,965	$ 8,256,891	$ 5,183,164	$ 179,967,085
2033	$ 50,000.00	$ 863,060	$ 385,950	$ 10,623,642	$ 500,000	$ 573,400	$ 12,996,052	$ 1,249,010	$ 6,648,490	$ 509,573	8.3%	$ -	$ -	$ -	$ 868,965	$ 8,766,464	$ 4,229,588	$ 184,196,673
2034	$ 50,000.00	$ 863,060	$ 385,950	$ 10,364,990	$ 500,000	$ 573,400	$ 12,737,400	$ 1,249,010	$ 7,158,063	$ 509,573	7.7%	$ -	$ -	$ -	$ 868,965	$ 9,276,038	$ 3,461,363	$ 187,658,036
2035	$ 50,000.00	$ 863,060	$ 385,950	$ 10,334,697	$ 500,000	$ 573,400	$ 12,707,107	$ 1,249,010	$ 7,667,636	$ 509,573	7.1%	$ -	$ -	$ -	$ 868,965	$ 9,785,611	$ 2,921,496	$ 190,579,532
2036	$ 50,000.00	$ 863,060	$ 385,950	$ 9,621,769	$ 500,000	$ 573,400	$ 11,994,179	$ 1,249,010	$ 8,177,210	$ 509,573	6.6%	$ -	$ -	$ -	$ 868,965	$ 10,295,184	$ 1,698,994	$ 192,278,526
2037	$ 50,000.00	$ 863,060	$ 385,950	$ 9,617,574	$ 500,000	$ 573,400	$ 11,989,984	$ 1,249,010	$ 8,686,783	$ 509,573	6.2%	$ -	$ -	$ -	$ 868,965	$ 10,804,758	$ 1,185,226	$ 193,463,752
2038	$ 50,000.00	$ 863,060	$ 385,950	$ 9,601,891	$ 500,000	$ 573,400	$ 11,974,301	$ 1,249,010	$ 9,196,356	$ 509,573	5.9%	$ -	$ -	$ -	$ 868,965	$ 11,314,331	$ 659,970	$ 194,123,722
2039	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 9,705,930	$ 509,573	5.5%	$ -	$ -	$ -	$ 868,965	$ 11,823,904	$ (691,870)	$ 193,431,852
2040	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 10,215,503	$ 509,573	5.3%	$ -	$ -	$ -	$ 868,965	$ 12,333,478	$ (1,201,444)	$ 192,230,408
2041	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 10,725,077	$ 509,573	5.0%	$ -	$ -	$ -	$ 868,965	$ 12,843,051	$ (1,711,017)	$ 190,519,391
2042	$ 50,000.00	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 11,234,650	$ 509,573	4.8%	$ -	$ -	$ -	$ 868,965	$ 13,352,625	$ (2,267,357)	$ 188,252,034
2043	$ 50,000.00	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 11,744,223	$ 509,573	4.5%	$ -	$ -	$ -	$ 868,965	$ 13,862,198	$ (2,776,930)	$ 185,475,104
2044	$ 50,000.00	$ 863,060	$ 385,950	$ 7,913,220	$ 500,000	$ 573,400	$ 10,285,630	$ 1,249,010	$ 12,253,797	$ 509,573	4.3%	$ -	$ -	$ -	$ 868,965	$ 14,371,771	$ (4,086,141)	$ 181,388,963
2045	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 12,763,370	$ 509,573	4.2%	$ -	$ -	$ -	$ 868,965	$ 14,881,345	$ (5,261,887)	$ 176,127,076
2046	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 13,272,943	$ 509,573	4.0%	$ -	$ -	$ -	$ 868,965	$ 15,390,918	$ (5,771,461)	$ 170,355,615
2047	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 13,782,517	$ 509,573	3.8%	$ -	$ -	$ -	$ 868,965	$ 15,900,491	$ (6,281,034)	$ 164,074,581
2048	$ 50,000.00	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 14,292,090	$ 509,573	3.7%	$ -	$ -	$ -	$ 868,965	$ 16,410,065	$ (7,019,883)	$ 157,054,698
2049	$ 50,000.00	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 14,801,663	$ 509,573	3.6%	$ -	$ -	$ -	$ 868,965	$ 16,919,638	$ (7,529,456)	$ 149,525,241
2050	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 15,311,237	$ 509,573	3.4%	$ -	$ -	$ -	$ 868,965	$ 17,429,211	$ (8,328,046)	$ 141,197,195
2051	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 15,820,810	$ 509,573	3.3%	$ -	$ -	$ -	$ 868,965	$ 17,938,785	$ (8,837,620)	$ 132,359,575
2052	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 16,330,383	$ 509,573	3.2%	$ -	$ -	$ -	$ 868,965	$ 18,448,358	$ (9,347,193)	$ 123,012,382
2053	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 16,839,957	$ 509,573	3.1%	$ -	$ -	$ -	$ 868,965	$ 18,957,932	$ (9,856,767)	$ 113,155,615
2054	$ 50,000.00	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 17,349,530	$ 509,573	3.0%	$ -	$ -	$ -	$ 868,965	$ 19,467,505	$ (10,408,114)	$ 102,747,501
2055	$ 50,000.00	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 17,859,104	$ 509,573	2.9%	$ -	$ -	$ -	$ 868,965	$ 19,977,078	$ (10,917,687)	$ 91,829,814
2056	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 18,368,677	$ 509,573	2.9%	$ -	$ -	$ -	$ 868,965	$ 20,486,652	$ (11,555,054)	$ 80,274,760
2057	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 18,878,250	$ 509,573	2.8%	$ -	$ -	$ -	$ 868,965	$ 20,996,225	$ (12,064,627)	$ 68,210,133
2058	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 19,387,824	$ 509,573	2.7%	$ -	$ -	$ -	$ 868,965	$ 21,505,798	$ (12,574,200)	$ 55,635,933
2059	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 19,897,397	$ 509,573	2.6%	$ -	$ -	$ -	$ 868,965	$ 22,015,372	$ (13,083,774)	$ 42,552,159
2060	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 20,406,970	$ 509,573	2.6%	$ -	$ -	$ -	$ 868,965	$ 22,524,945	$ (13,674,479)	$ 28,877,679
2061	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 20,916,544	$ 509,573	2.5%	$ -	$ -	$ -	$ 868,965	$ 23,034,518	$ (14,184,053)	$ 14,693,627
2062	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 21,426,117	$ 509,573	2.4%	$ -	$ -	$ -	$ 868,965	$ 23,544,092	$ (14,693,626)	$ -
Total	**$ 2,000,000**	**$ 34,522,400**	**$ 15,438,000**	**$ 443,269,234**	**$ 20,000,000**	**$ 22,936,000**	**$ 538,165,634**	**$ 49,960,400**	**$ 459,577,462**	**$ 19,873,361**		**$ -**	**$ -**	**$ 820,902**	**$ 27,806,870**	**$ 538,165,634**		

Table 5
City of Dryden
2022 Asset Management Plan
Financing Strategy 1: Close In-Year Funding Gap by 2052
Rate Supported Assets

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Solutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Rates	Capital from Rates (Including Transfers to Reserves)	Yearly Increase in Rate Revenue ($)	Yearly Increase in Rates (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Retirement (transferred to AM Reserve)	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000.00	$ 863,060	$ 385,950	$ 36,129,041	$ 500,000	$ 573,400	$ 38,501,451	$ 1,249,010	$ 1,552,756			$ -	$ -	$ 820,902	$ -	$ 3,622,668	$ 34,878,783	$ 34,878,783
2024	$ 50,000.00	$ 863,060	$ 385,950	$ 31,189,675	$ 500,000	$ 573,400	$ 33,562,085	$ 1,249,010	$ 1,740,012	$ 187,256	12.1%	$ -	$ -	$ -	$ -	$ 2,989,022	$ 30,573,062	$ 65,451,845
2025	$ 50,000.00	$ 863,060	$ 385,950	$ 30,486,477	$ 500,000	$ 573,400	$ 32,858,887	$ 1,249,010	$ 1,927,269	$ 187,256	10.8%	$ -	$ -	$ -	$ -	$ 3,176,279	$ 29,682,608	$ 95,134,453
2026	$ 50,000.00	$ 863,060	$ 385,950	$ 20,019,945	$ 500,000	$ 573,400	$ 22,392,355	$ 1,249,010	$ 2,114,525	$ 187,256	9.7%	$ -	$ -	$ -	$ -	$ 3,363,535	$ 19,028,820	$ 114,163,273
2027	$ 50,000.00	$ 863,060	$ 385,950	$ 19,567,711	$ 500,000	$ 573,400	$ 21,940,121	$ 1,249,010	$ 2,301,781	$ 187,256	8.9%	$ -	$ -	$ -	$ -	$ 3,550,791	$ 18,389,330	$ 132,552,603
2028	$ 50,000.00	$ 863,060	$ 385,950	$ 19,532,816	$ 500,000	$ 573,400	$ 21,905,226	$ 1,249,010	$ 2,489,038	$ 187,256	8.1%	$ -	$ -	$ -	$ -	$ 3,738,048	$ 18,167,178	$ 150,719,781
2029	$ 50,000.00	$ 863,060	$ 385,950	$ 19,521,424	$ 500,000	$ 573,400	$ 21,893,834	$ 1,249,010	$ 2,676,294	$ 187,256	7.5%	$ -	$ -	$ -	$ -	$ 3,925,304	$ 17,968,530	$ 168,688,311
2030	$ 50,000.00	$ 863,060	$ 385,950	$ 11,131,371	$ 500,000	$ 573,400	$ 13,503,781	$ 1,249,010	$ 2,863,550	$ 187,256	7.0%	$ -	$ -	$ -	$ -	$ 4,112,560	$ 9,391,221	$ 178,079,532
2031	$ 50,000.00	$ 863,060	$ 385,950	$ 11,104,174	$ 500,000	$ 573,400	$ 13,476,584	$ 1,249,010	$ 3,050,807	$ 187,256	6.5%	$ -	$ -	$ -	$ 868,965	$ 5,168,781	$ 8,307,803	$ 186,387,334
2032	$ 50,000.00	$ 863,060	$ 385,950	$ 11,067,645	$ 500,000	$ 573,400	$ 13,440,055	$ 1,249,010	$ 3,238,063	$ 187,256	6.1%	$ -	$ -	$ -	$ 868,965	$ 5,356,038	$ 8,084,017	$ 194,471,351
2033	$ 50,000.00	$ 863,060	$ 385,950	$ 10,623,642	$ 500,000	$ 573,400	$ 12,996,052	$ 1,249,010	$ 3,425,319	$ 187,256	5.8%	$ -	$ -	$ -	$ 868,965	$ 5,543,294	$ 7,452,758	$ 201,924,109
2034	$ 50,000.00	$ 863,060	$ 385,950	$ 10,364,990	$ 500,000	$ 573,400	$ 12,737,400	$ 1,249,010	$ 3,612,576	$ 187,256	5.5%	$ -	$ -	$ -	$ 868,965	$ 5,730,550	$ 7,006,850	$ 208,930,959
2035	$ 50,000.00	$ 863,060	$ 385,950	$ 10,334,697	$ 500,000	$ 573,400	$ 12,707,107	$ 1,249,010	$ 3,799,832	$ 187,256	5.2%	$ -	$ -	$ -	$ 868,965	$ 5,917,807	$ 6,789,300	$ 215,720,259
2036	$ 50,000.00	$ 863,060	$ 385,950	$ 9,621,769	$ 500,000	$ 573,400	$ 11,994,179	$ 1,249,010	$ 3,987,088	$ 187,256	4.9%	$ -	$ -	$ -	$ 868,965	$ 6,105,063	$ 5,889,116	$ 221,609,375
2037	$ 50,000.00	$ 863,060	$ 385,950	$ 9,617,574	$ 500,000	$ 573,400	$ 11,989,984	$ 1,249,010	$ 4,174,345	$ 187,256	4.7%	$ -	$ -	$ -	$ 868,965	$ 6,292,319	$ 5,697,664	$ 227,307,039
2038	$ 50,000.00	$ 863,060	$ 385,950	$ 9,601,891	$ 500,000	$ 573,400	$ 11,974,301	$ 1,249,010	$ 4,361,601	$ 187,256	4.5%	$ -	$ -	$ -	$ 868,965	$ 6,479,576	$ 5,494,725	$ 232,801,765
2039	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 4,548,857	$ 187,256	4.3%	$ -	$ -	$ -	$ 868,965	$ 6,666,832	$ 4,465,202	$ 237,266,967
2040	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 4,736,114	$ 187,256	4.1%	$ -	$ -	$ -	$ 868,965	$ 6,854,088	$ 4,277,946	$ 241,544,912
2041	$ 50,000.00	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 4,923,370	$ 187,256	4.0%	$ -	$ -	$ -	$ 868,965	$ 7,041,345	$ 4,090,689	$ 245,635,602
2042	$ 50,000.00	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 5,110,626	$ 187,256	3.8%	$ -	$ -	$ -	$ 868,965	$ 7,228,601	$ 3,856,667	$ 249,492,268
2043	$ 50,000.00	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 5,297,883	$ 187,256	3.7%	$ -	$ -	$ -	$ 868,965	$ 7,415,858	$ 3,669,410	$ 253,161,678
2044	$ 50,000.00	$ 863,060	$ 385,950	$ 7,913,220	$ 500,000	$ 573,400	$ 10,285,630	$ 1,249,010	$ 5,485,139	$ 187,256	3.5%	$ -	$ -	$ -	$ 868,965	$ 7,603,114	$ 2,682,516	$ 255,844,194
2045	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 5,672,396	$ 187,256	3.4%	$ -	$ -	$ -	$ 868,965	$ 7,790,370	$ 1,829,087	$ 257,673,282
2046	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 5,859,652	$ 187,256	3.3%	$ -	$ -	$ -	$ 868,965	$ 7,977,627	$ 1,641,831	$ 259,315,112
2047	$ 50,000.00	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 6,046,908	$ 187,256	3.2%	$ -	$ -	$ -	$ 868,965	$ 8,164,883	$ 1,454,574	$ 260,769,687
2048	$ 50,000.00	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 6,234,165	$ 187,256	3.1%	$ -	$ -	$ -	$ 868,965	$ 8,352,139	$ 1,038,042	$ 261,807,729
2049	$ 50,000.00	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 6,421,421	$ 187,256	3.0%	$ -	$ -	$ -	$ 868,965	$ 8,539,396	$ 850,786	$ 262,658,515
2050	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 6,608,677	$ 187,256	2.9%	$ -	$ -	$ -	$ 868,965	$ 8,726,652	$ 374,513	$ 263,033,028
2051	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 6,795,934	$ 187,256	2.8%	$ -	$ -	$ -	$ 868,965	$ 8,913,908	$ 187,257	$ 263,220,285
2052	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 6,983,190	$ 187,256	2.8%	$ -	$ -	$ -	$ 868,965	$ 9,101,165	$ -	$ 263,220,285
2053	$ 50,000.00	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 7,170,446	$ 187,256	2.7%	$ -	$ -	$ -	$ 868,965	$ 9,288,421	$ (187,256)	$ 263,033,029
2054	$ 50,000.00	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 7,357,703	$ 187,256	2.6%	$ -	$ -	$ -	$ 868,965	$ 9,475,677	$ (416,286)	$ 262,616,743
2055	$ 50,000.00	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 7,544,959	$ 187,256	2.5%	$ -	$ -	$ -	$ 868,965	$ 9,662,934	$ (603,543)	$ 262,013,200
2056	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 7,732,215	$ 187,256	2.5%	$ -	$ -	$ -	$ 868,965	$ 9,850,190	$ (918,592)	$ 261,094,608
2057	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 7,919,472	$ 187,256	2.4%	$ -	$ -	$ -	$ 868,965	$ 10,037,446	$ (1,105,848)	$ 259,988,760
2058	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 8,106,728	$ 187,256	2.4%	$ -	$ -	$ -	$ 868,965	$ 10,224,703	$ (1,293,105)	$ 258,695,655
2059	$ 50,000.00	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 8,293,984	$ 187,256	2.3%	$ -	$ -	$ -	$ 868,965	$ 10,411,959	$ (1,480,361)	$ 257,215,294
2060	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 8,481,241	$ 187,256	2.3%	$ -	$ -	$ -	$ 868,965	$ 10,599,215	$ (1,748,750)	$ 255,466,544
2061	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 8,668,497	$ 187,256	2.2%	$ -	$ -	$ -	$ 868,965	$ 10,786,472	$ (1,936,006)	$ 253,530,538
2062	$ 50,000.00	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 8,855,753	$ 187,256	2.2%	$ -	$ -	$ -	$ 868,965	$ 10,973,728	$ (2,123,262)	$ 251,407,276
Total	**$ 2,000,000**	**$ 34,522,400**	**$ 15,438,000**	**$ 443,269,234**	**$ 20,000,000**	**$ 22,936,000**	**$ 538,165,634**	**$ 49,960,400**	**$ 208,170,187**	**$ 7,302,997**		**$ -**	**$ -**	**$ 820,902**	**$ 27,806,870**	**$ 286,758,358**		

Table 6
City of Dryden
2022 Asset Management Plan
Financing Strategy 2: Close In-Year Funding Gap by 2062
Rate Supported Assets

Legend		1. Lifecycle Costs						2. Forecast of Revenues								3. Funding Gap Calculation		
Year	Non-Infrastructure Solutions	Operations	Maintenance	Replacement	Renewal	Expansion Activities	Total Lifecycle Costs	O&M from Rates	Capital from Rates (Including Transfers to Reserves)	Yearly Increase in Rate Revenue ($)	Yearly Increase in Rates (%)	Canada Community Building Fund CCBF (formerly Gas Tax)	Other Grants	Existing Reserves	Debt Retirement (transferred to AM Reserve)	Total Funding	Annual Funding Gap	Cumulative Infrastructure Deficit
2023	$ 50,000	$ 863,060	$ 385,950	$ 36,129,041	$ 500,000	$ 573,400	$ 38,501,451	$ 1,249,010	$ 1,552,756			$ -	$ -	$ 820,902	$ -	$ 3,622,668	$ 34,878,783	$ 34,878,783
2024	$ 50,000	$ 863,060	$ 385,950	$ 31,189,675	$ 500,000	$ 573,400	$ 33,562,085	$ 1,249,010	$ 1,685,570	$ 132,814	8.6%	$ -	$ -	$ -	$ -	$ 2,934,580	$ 30,627,505	$ 65,506,288
2025	$ 50,000	$ 863,060	$ 385,950	$ 30,486,477	$ 500,000	$ 573,400	$ 32,858,887	$ 1,249,010	$ 1,818,383	$ 132,814	7.9%	$ -	$ -	$ -	$ -	$ 3,067,393	$ 29,791,494	$ 95,297,781
2026	$ 50,000	$ 863,060	$ 385,950	$ 20,019,945	$ 500,000	$ 573,400	$ 22,392,355	$ 1,249,010	$ 1,951,197	$ 132,814	7.3%	$ -	$ -	$ -	$ -	$ 3,200,207	$ 19,192,147	$ 114,489,929
2027	$ 50,000	$ 863,060	$ 385,950	$ 19,567,711	$ 500,000	$ 573,400	$ 21,940,121	$ 1,249,010	$ 2,084,011	$ 132,814	6.8%	$ -	$ -	$ -	$ -	$ 3,333,021	$ 18,607,100	$ 133,097,029
2028	$ 50,000	$ 863,060	$ 385,950	$ 19,532,816	$ 500,000	$ 573,400	$ 21,905,226	$ 1,249,010	$ 2,216,825	$ 132,814	6.4%	$ -	$ -	$ -	$ -	$ 3,465,835	$ 18,439,391	$ 151,536,420
2029	$ 50,000	$ 863,060	$ 385,950	$ 19,521,424	$ 500,000	$ 573,400	$ 21,893,834	$ 1,249,010	$ 2,349,638	$ 132,814	6.0%	$ -	$ -	$ -	$ -	$ 3,598,648	$ 18,295,186	$ 169,831,606
2030	$ 50,000	$ 863,060	$ 385,950	$ 11,131,371	$ 500,000	$ 573,400	$ 13,503,781	$ 1,249,010	$ 2,482,452	$ 132,814	5.7%	$ -	$ -	$ -	$ -	$ 3,731,462	$ 9,772,319	$ 179,603,925
2031	$ 50,000	$ 863,060	$ 385,950	$ 11,104,174	$ 500,000	$ 573,400	$ 13,476,584	$ 1,249,010	$ 2,615,266	$ 132,814	5.4%	$ -	$ -	$ -	$ 868,965	$ 4,733,241	$ 8,743,343	$ 188,347,268
2032	$ 50,000	$ 863,060	$ 385,950	$ 11,067,645	$ 500,000	$ 573,400	$ 13,440,055	$ 1,249,010	$ 2,748,080	$ 132,814	5.1%	$ -	$ -	$ -	$ 868,965	$ 4,866,054	$ 8,574,001	$ 196,921,269
2033	$ 50,000	$ 863,060	$ 385,950	$ 10,623,642	$ 500,000	$ 573,400	$ 12,996,052	$ 1,249,010	$ 2,880,893	$ 132,814	4.8%	$ -	$ -	$ -	$ 868,965	$ 4,998,868	$ 7,997,184	$ 204,918,453
2034	$ 50,000	$ 863,060	$ 385,950	$ 10,364,990	$ 500,000	$ 573,400	$ 12,737,400	$ 1,249,010	$ 3,013,707	$ 132,814	4.6%	$ -	$ -	$ -	$ 868,965	$ 5,131,682	$ 7,605,719	$ 212,524,172
2035	$ 50,000	$ 863,060	$ 385,950	$ 10,334,697	$ 500,000	$ 573,400	$ 12,707,107	$ 1,249,010	$ 3,146,521	$ 132,814	4.4%	$ -	$ -	$ -	$ 868,965	$ 5,264,495	$ 7,442,611	$ 219,966,783
2036	$ 50,000	$ 863,060	$ 385,950	$ 9,621,769	$ 500,000	$ 573,400	$ 11,994,179	$ 1,249,010	$ 3,279,334	$ 132,814	4.2%	$ -	$ -	$ -	$ 868,965	$ 5,397,309	$ 6,596,870	$ 226,563,653
2037	$ 50,000	$ 863,060	$ 385,950	$ 9,617,574	$ 500,000	$ 573,400	$ 11,989,984	$ 1,249,010	$ 3,412,148	$ 132,814	4.1%	$ -	$ -	$ -	$ 868,965	$ 5,530,123	$ 6,459,861	$ 233,023,514
2038	$ 50,000	$ 863,060	$ 385,950	$ 9,601,891	$ 500,000	$ 573,400	$ 11,974,301	$ 1,249,010	$ 3,544,962	$ 132,814	3.9%	$ -	$ -	$ -	$ 868,965	$ 5,662,937	$ 6,311,365	$ 239,334,878
2039	$ 50,000	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 3,677,776	$ 132,814	3.7%	$ -	$ -	$ -	$ 868,965	$ 5,795,750	$ 5,336,284	$ 244,671,162
2040	$ 50,000	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 3,810,589	$ 132,814	3.6%	$ -	$ -	$ -	$ 868,965	$ 5,928,564	$ 5,203,470	$ 249,874,632
2041	$ 50,000	$ 863,060	$ 385,950	$ 8,759,624	$ 500,000	$ 573,400	$ 11,132,034	$ 1,249,010	$ 3,943,403	$ 132,814	3.5%	$ -	$ -	$ -	$ 868,965	$ 6,061,378	$ 5,070,656	$ 254,945,288
2042	$ 50,000	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 4,076,217	$ 132,814	3.4%	$ -	$ -	$ -	$ 868,965	$ 6,194,192	$ 4,891,076	$ 259,836,365
2043	$ 50,000	$ 863,060	$ 385,950	$ 8,712,858	$ 500,000	$ 573,400	$ 11,085,268	$ 1,249,010	$ 4,209,031	$ 132,814	3.3%	$ -	$ -	$ -	$ 868,965	$ 6,327,005	$ 4,758,262	$ 264,594,627
2044	$ 50,000	$ 863,060	$ 385,950	$ 7,913,220	$ 500,000	$ 573,400	$ 10,285,630	$ 1,249,010	$ 4,341,844	$ 132,814	3.2%	$ -	$ -	$ -	$ 868,965	$ 6,459,819	$ 3,825,811	$ 268,420,438
2045	$ 50,000	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 4,474,658	$ 132,814	3.1%	$ -	$ -	$ -	$ 868,965	$ 6,592,633	$ 3,026,825	$ 271,447,263
2046	$ 50,000	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 4,607,472	$ 132,814	3.0%	$ -	$ -	$ -	$ 868,965	$ 6,725,446	$ 2,894,011	$ 274,341,274
2047	$ 50,000	$ 863,060	$ 385,950	$ 7,247,047	$ 500,000	$ 573,400	$ 9,619,457	$ 1,249,010	$ 4,740,285	$ 132,814	2.9%	$ -	$ -	$ -	$ 868,965	$ 6,858,260	$ 2,761,197	$ 277,102,471
2048	$ 50,000	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 4,873,099	$ 132,814	2.8%	$ -	$ -	$ -	$ 868,965	$ 6,991,074	$ 2,399,108	$ 279,501,579
2049	$ 50,000	$ 863,060	$ 385,950	$ 7,017,772	$ 500,000	$ 573,400	$ 9,390,182	$ 1,249,010	$ 5,005,913	$ 132,814	2.7%	$ -	$ -	$ -	$ 868,965	$ 7,123,888	$ 2,266,294	$ 281,767,873
2050	$ 50,000	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 5,138,727	$ 132,814	2.7%	$ -	$ -	$ -	$ 868,965	$ 7,256,701	$ 1,844,464	$ 283,612,336
2051	$ 50,000	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 5,271,540	$ 132,814	2.6%	$ -	$ -	$ -	$ 868,965	$ 7,389,515	$ 1,711,650	$ 285,323,986
2052	$ 50,000	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 5,404,354	$ 132,814	2.5%	$ -	$ -	$ -	$ 868,965	$ 7,522,329	$ 1,578,836	$ 286,902,822
2053	$ 50,000	$ 863,060	$ 385,950	$ 6,728,755	$ 500,000	$ 573,400	$ 9,101,165	$ 1,249,010	$ 5,537,168	$ 132,814	2.5%	$ -	$ -	$ -	$ 868,965	$ 7,655,143	$ 1,446,022	$ 288,348,845
2054	$ 50,000	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 5,669,982	$ 132,814	2.4%	$ -	$ -	$ -	$ 868,965	$ 7,787,956	$ 1,271,435	$ 289,620,280
2055	$ 50,000	$ 863,060	$ 385,950	$ 6,686,981	$ 500,000	$ 573,400	$ 9,059,391	$ 1,249,010	$ 5,802,795	$ 132,814	2.3%	$ -	$ -	$ -	$ 868,965	$ 7,920,770	$ 1,138,621	$ 290,758,900
2056	$ 50,000	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 5,935,609	$ 132,814	2.3%	$ -	$ -	$ -	$ 868,965	$ 8,053,584	$ 878,014	$ 291,636,915
2057	$ 50,000	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 6,068,423	$ 132,814	2.2%	$ -	$ -	$ -	$ 868,965	$ 8,186,397	$ 745,200	$ 292,382,115
2058	$ 50,000	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 6,201,236	$ 132,814	2.2%	$ -	$ -	$ -	$ 868,965	$ 8,319,211	$ 612,387	$ 292,994,502
2059	$ 50,000	$ 863,060	$ 385,950	$ 6,559,188	$ 500,000	$ 573,400	$ 8,931,598	$ 1,249,010	$ 6,334,050	$ 132,814	2.1%	$ -	$ -	$ -	$ 868,965	$ 8,452,025	$ 479,573	$ 293,474,075
2060	$ 50,000	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 6,466,864	$ 132,814	2.1%	$ -	$ -	$ -	$ 868,965	$ 8,584,839	$ 265,627	$ 293,739,702
2061	$ 50,000	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 6,599,678	$ 132,814	2.1%	$ -	$ -	$ -	$ 868,965	$ 8,717,652	$ 132,813	$ 293,872,515
2062	$ 50,000	$ 863,060	$ 385,950	$ 6,478,056	$ 500,000	$ 573,400	$ 8,850,466	$ 1,249,010	$ 6,732,491	$ 132,814	2.0%	$ -	$ -	$ -	$ 868,965	$ 8,850,466	$ -	$ 293,872,515
Total	**$ 2,000,000**	**$ 34,522,400**	**$ 15,438,000**	**$ 443,269,234**	**$ 20,000,000**	**$ 22,936,000**	**$ 538,165,634**	**$ 49,960,400**	**$ 165,704,948**	**$ 5,179,735**		**$ -**	**$ -**	**$ 820,902**	**$ 27,806,870**	**$ 244,293,120**		