2022 ASSET MANAGEMENT PLAN

Dan Wilson / Adam McNabb

June 15, 2022

INTRODUCTION

Centre Wellington

Asset Management Plan - Structure

Chapter 1: Introduction – *A chapter introducing the Asset Management Plan*

Chapter 2: State of Township Assets – *A snapshot of the overall state of Township assets, including replacement cost, condition, risk assessments and long-term funding needs, by asset category.*

Chapter 3: Levels of Service – *A review of the services and service levels provided as well as the impacts of progressing towards expected service levels.*

Chapter 4: Asset Management Strategy – *A summary of the costs associated with maintaining Township assets, including a look into demands on assets/services.*

Chapter 5: Financing Strategy – *An overview of the funding sources available to fund asset management needs including recommendations on funding increases.*

Chapter 6: Monitoring and Continuous Improvement – *An outline of ways in which the Township's asset management process can be improved over time.*

Chapter 7: Conclusion and Recommendations – *A summary of recommendations provided in each chapter of the Asset Management Plan.*

Appendices – *Key information that supports the Asset Management Plan, including key concepts, maps, detailed levels of service tables, and listing of priority assets from each category.*

Technical Appendix (separate cover) – *A detailed listing of Township assets.*

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Asset Management Legislation

Timeline for Compliance:

July 1, 2019 – Strategic Asset Management Policy – Adopted by Council June 17, 2019

July 1, 2022 – Asset Management Plan – Current Levels of Service (Core Assets) Due

July 1, 2024 – Asset Management Plan – Current Levels of Service (All Assets) Due

July 1, 2025 – Asset Management Plan Proposed Levels of Service, Financing Strategy, and Key Assumptions

We are here!

	Current Levels of Service AM Plan July 2022 (core), 2024 (non-core)	**Proposed Levels of Service AM Plan** July 2025 (core, non-core)
State of Infrastructure (asset register)	• Inventory of assets, by category • Replacement cost of assets • Average age of assets • Condition of assets • Approach to assessing condition	• Inventory of assets, by category • Replacement cost of assets • Average age of assets • Condition of assets • Approach to assessing condition

Levels of Service (performance)	• Current LOS (performance) provided:
	  - To community (qualitative metrics)
	  - By assets (quantitative metrics)
	• For core assets as per Tables 1 to 5 in O.Reg. 588/17 (as minimum), and as established by the Township for other assets
		• Proposed LOS (performance) for the next 10 years
		  - For community (qualitative metrics)
		  - By assets (quantitative metrics)
		• And why appropriate based on risk and affordability assessment

Lifecycle Management Strategy	• Population & employment forecasts per 2019 Growth Plan
	• Lifecycle activities needed for each of the next 10 years to:
	  - Meet demand caused by growth or upgrade of existing assets
	  - Maintain the current LOS at least cost and acceptable level of risk
		• Population & employment forecasts per 2019 Growth Plan
		• Lifecycle activities needed for each of the next 10 years to:
		  - Meet demand caused by growth or upgrade of existing assets
		  - Provide proposed LOS at least cost and acceptable level of risk

Financing Strategy	• Cost of lifecycle activities needed for each of the next 10 years to:
	  - Meet demand caused by growth or upgrade of existing assets
	  - Maintain the current LOS
		• Cost of lifecycle activities needed for each of the next 10 years to:
		  - Meet demand caused by growth or upgrade of existing assets
		  - Provide proposed LOS
		• Funding projected to be available to undertake needed lifecycle activities
		• For funding shortfalls which activities will not be funded and associated risks

Implementation and Key Assumptions	• Statement on how all State of Infrastructure background information and reports will be made available to the public	• The risks and mitigation strategies associated with implementing the AM Plan • Explanation of key assumptions underlying the AM Plan that have not previously been explained

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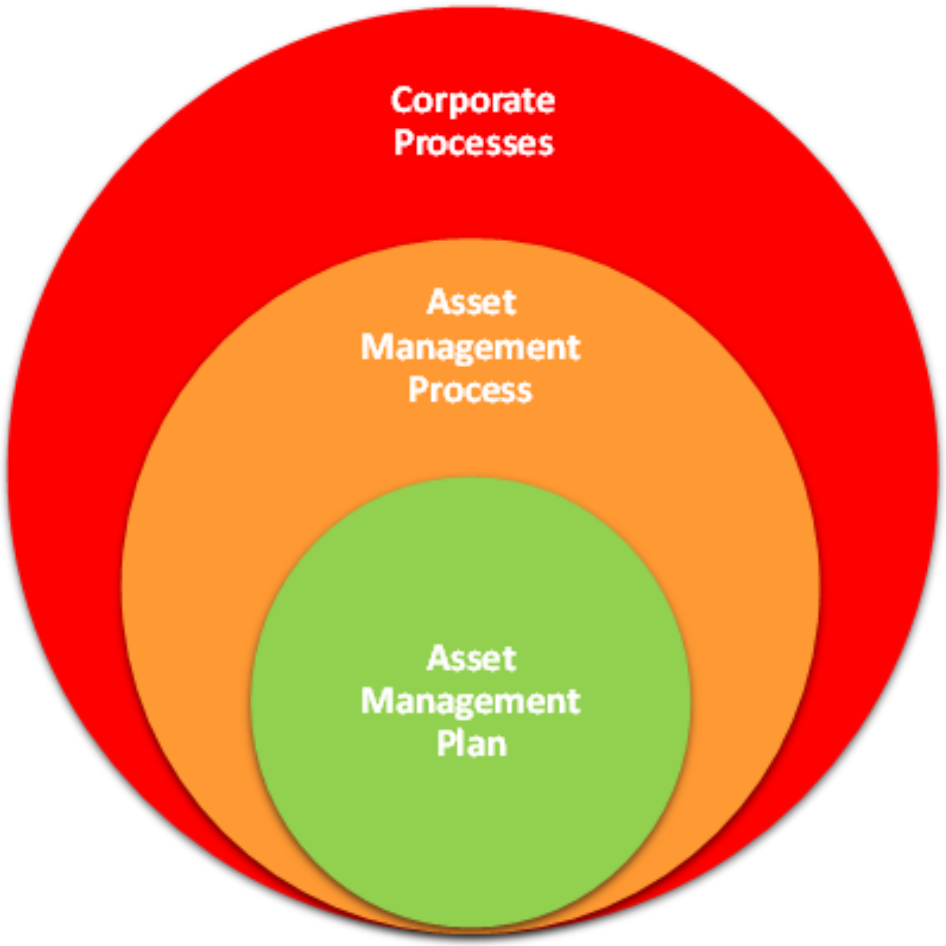
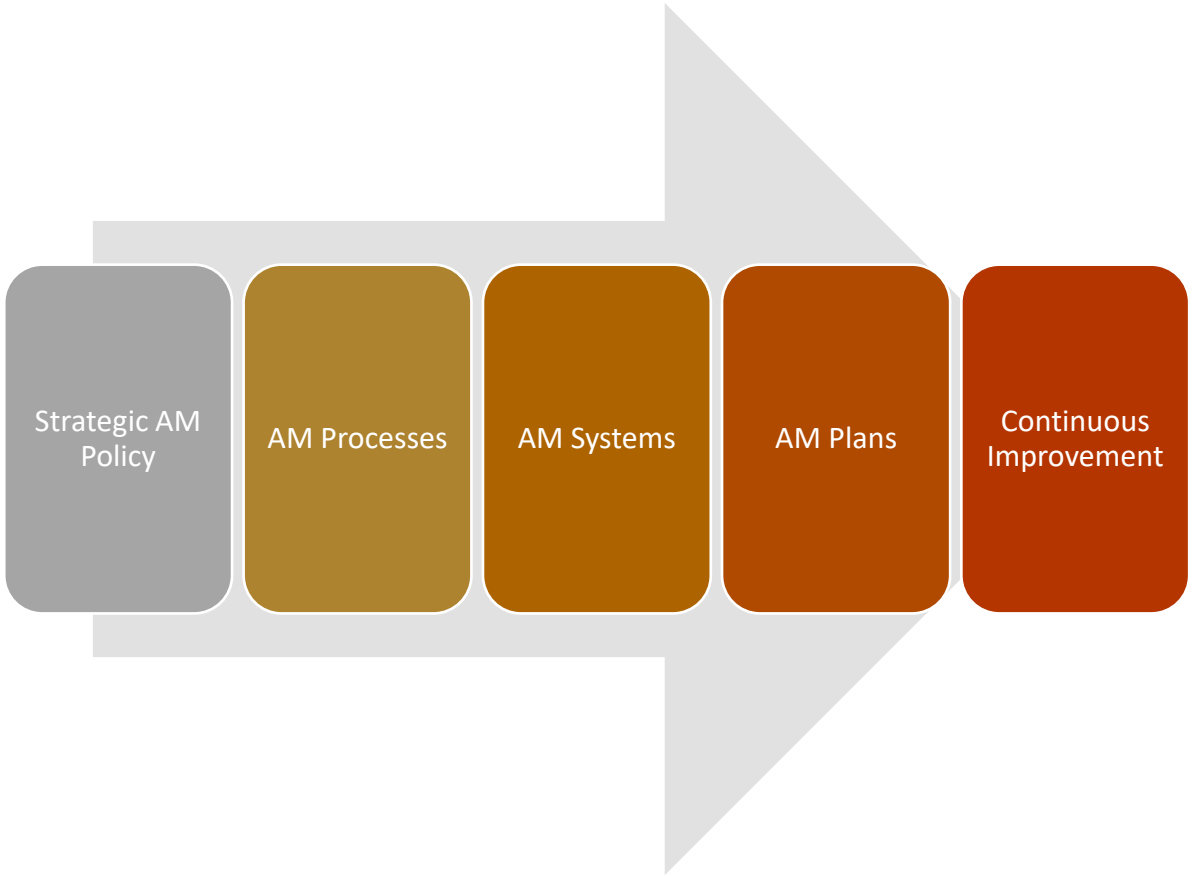
Asset Management as a Process

- Knowledge of Township assets
- Levels of service analysis
- Impacts of future demand
- Physical condition, risk, performance, utilization
- Lifecycle costs – options analysis
- Project prioritization
- Asset management systems and procedures
- Linkages with the annual budget



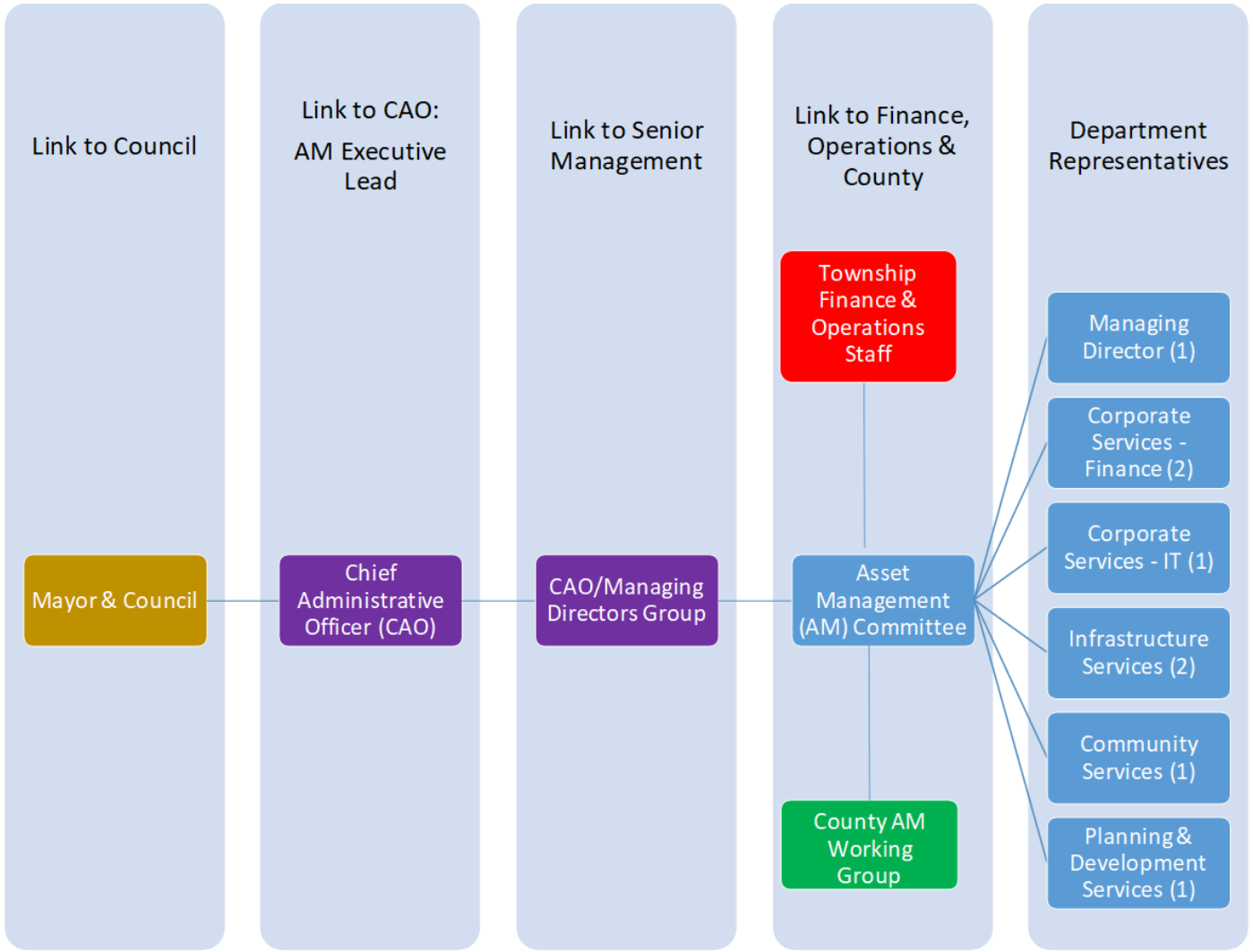
Strategic Asset Management Policy

Approach



Strategic Alignment

Governance


Link to Council
Link to CAO:
AM Executive Lead
Link to Senior Management
Link to Finance, Operations & County
Department Representatives
Township Finance & Operations Staff
Managing Director (1)
Corporate Services - Finance (2)
Corporate Services - IT (1)
Infrastructure Services (2)
Community Services (1)
Planning & Development Services (1)
Mayor & Council
Chief Administrative Officer (CAO)
CAO/Managing Directors Group
Asset Management (AM) Committee
County AM Working Group

2022 ASSET MANAGEMENT PLAN

STATE OF TOWNSHIP ASSETS

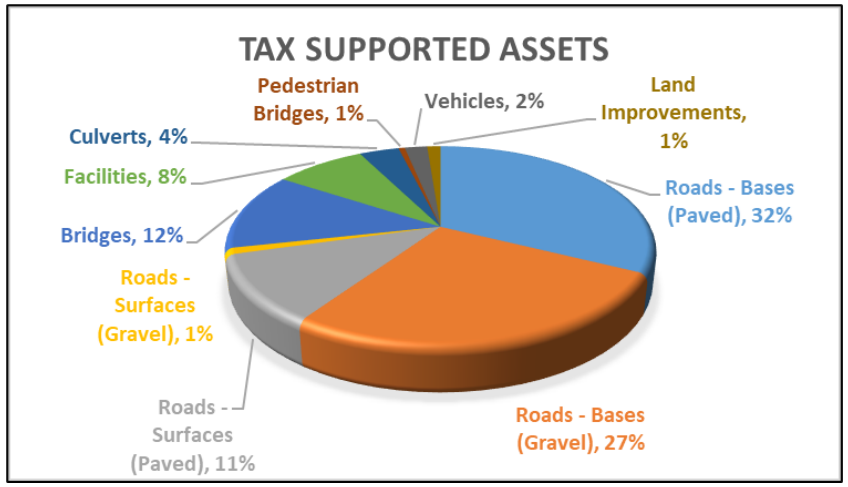
Township owned Assets – Replacement Value

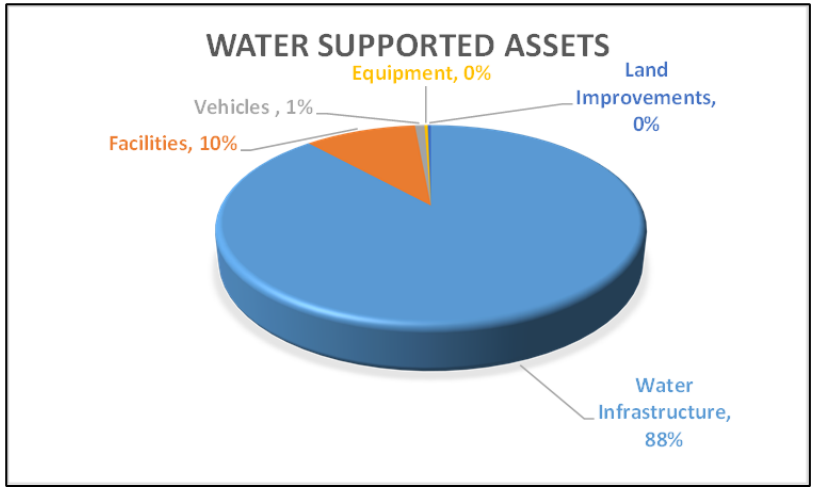
Asset Type	Replacement Cost (2022$)
Roads - Bases (Paved)	239,215,909
Roads - Bases (Gravel)	201,077,623
Roads - Surfaces (Paved)	81,405,359
Roads - Surfaces (Gravel)	1,906,064
Bridges	93,460,089
Facilities	61,324,166
Culverts	26,887,790
Pedestrian Bridges	4,140,627
Vehicles	15,261,500
Land Improvements	9,056,895
Equipment & Machinery	9,152,525
Stormwater Ponds	8,556,239
Total Tangible Capital Assets (Tax Supported)	**751,444,784**

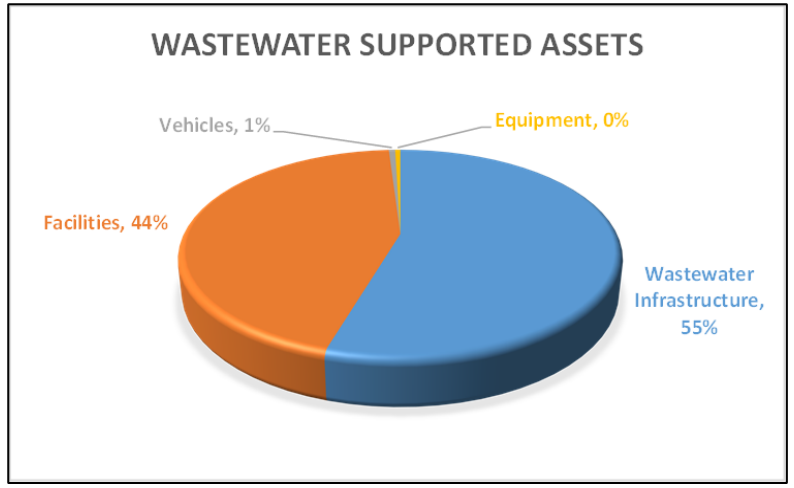
Asset Type	Replacement Cost (2022$)
Water Infrastructure	112,137,451
Facilities	12,960,409
Vehicles	1,062,500
Equipment	373,000
Land Improvements	370,622
Total Tangible Capital Assets (Water)	**126,903,983**

Asset Type	Replacement Cost (2022$)
Wastewater Infrastructure	84,538,312
Facilities	68,655,536
Vehicles	840,000
Equipment	686,800
Total Tangible Capital Assets (Wastewater)	**154,720,649**

Cumulatively, the Township owns, operates, and maintains assets with replacement values in excess of $1 Billion dollars.

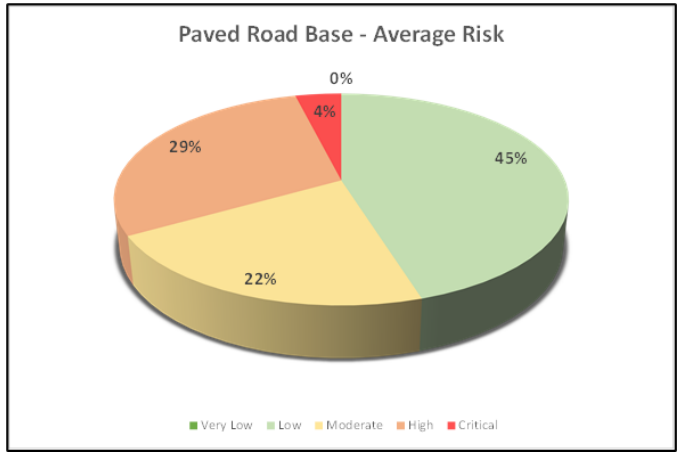


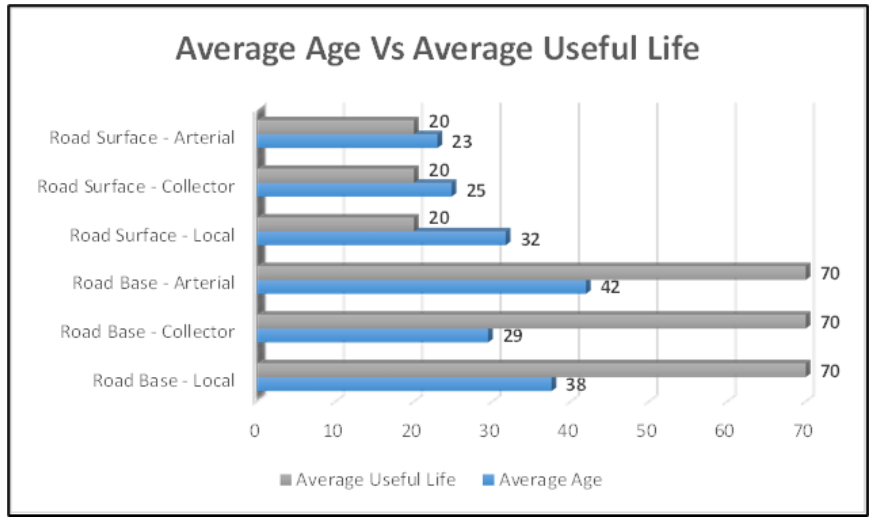




State of Township Assets – Areas of Assessment

	Areas of Assessment Used to Determine State of Local Infrastructure
Roads & Related	Age, Condition, Risk, and Financial
Bridges & Culverts	Age, Condition, Risk, and Financial
Facilities	Age, Condition, Risk, and Financial
Vehicles	Age, Condition, Risk, and Financial
Equipment	Age, Condition, Risk, and Financial
Land Improvements	Age, Condition, Risk, and Financial
Water	Age, Condition, Risk, and Financial
Wastewater	Age, Condition, Risk, and Financial
Stormwater Ponds	Age, Condition, and Risk



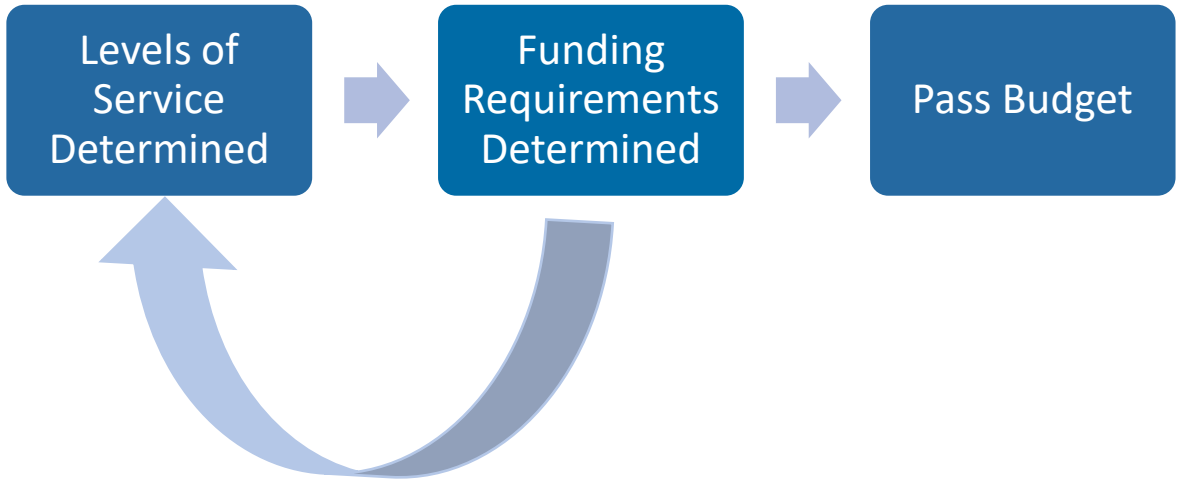


2022 ASSET MANAGEMENT PLAN

LEVELS OF SERVICE

Levels of Service

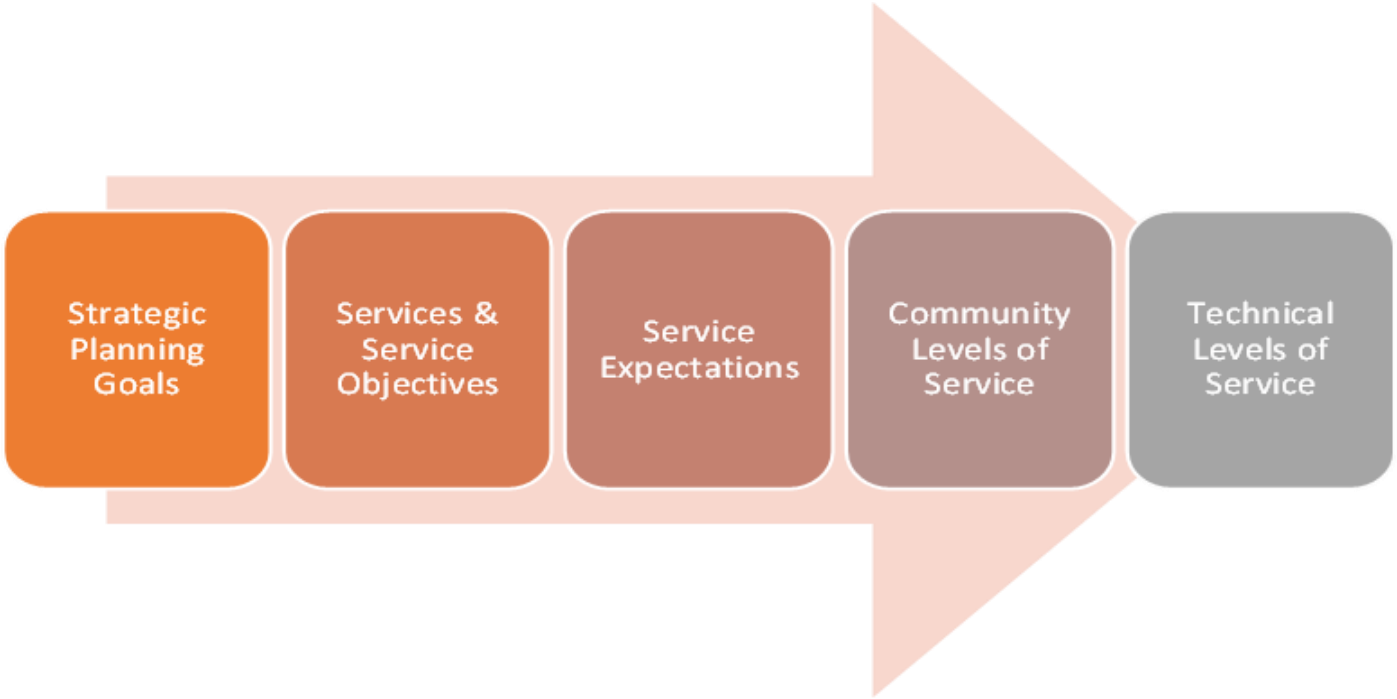
- Critical to asset management planning
- Most difficult section to understand and implement
- Cause and effect, for AM planning and budgeting:



Factors Impacting Levels of Service

Importance of Strategic Alignment

"Line of Sight"



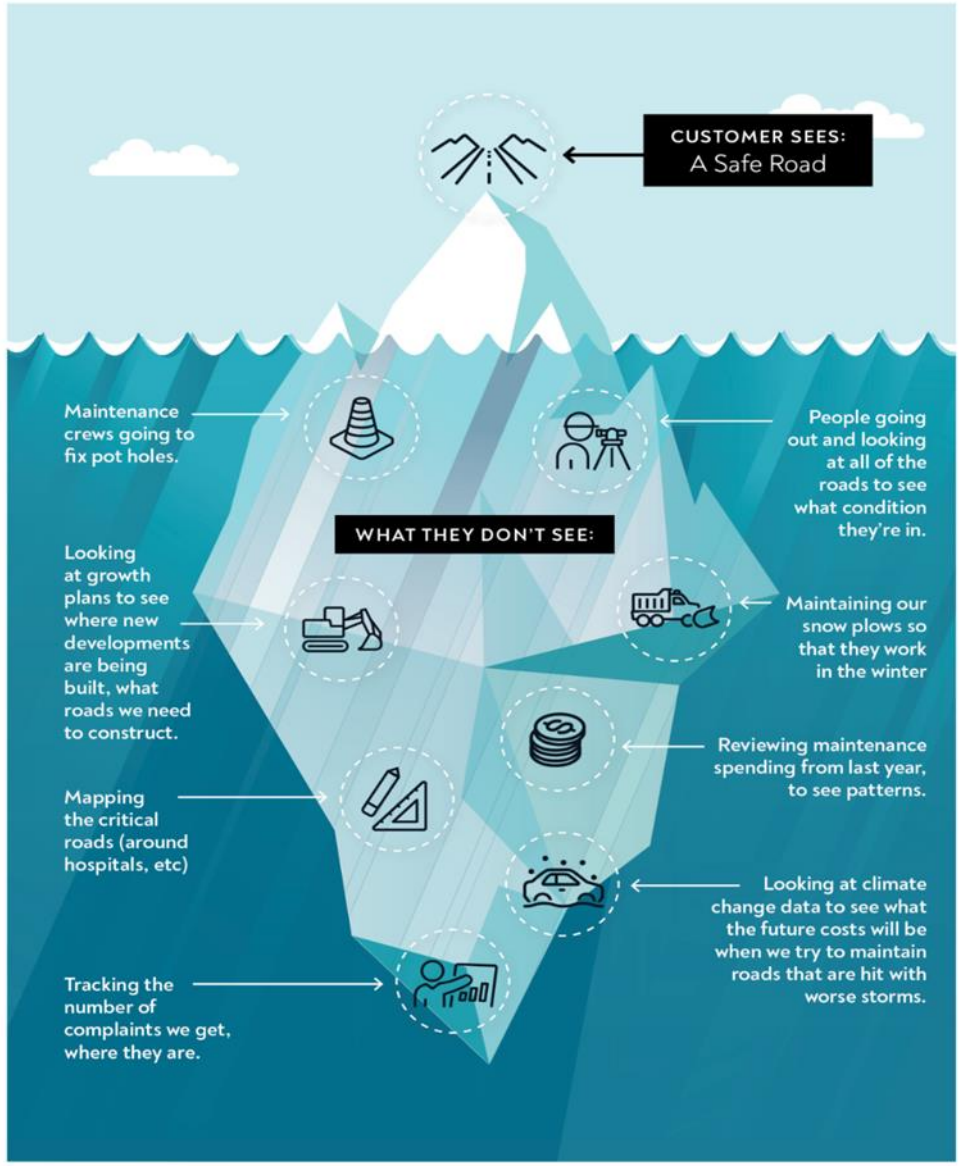
Levels of Service – Community vs. Technical

Community LOS

What the community receives

Technical LOS

How the Township provides the services



Levels of Service – Line of Sight Strategy

Line of Sight

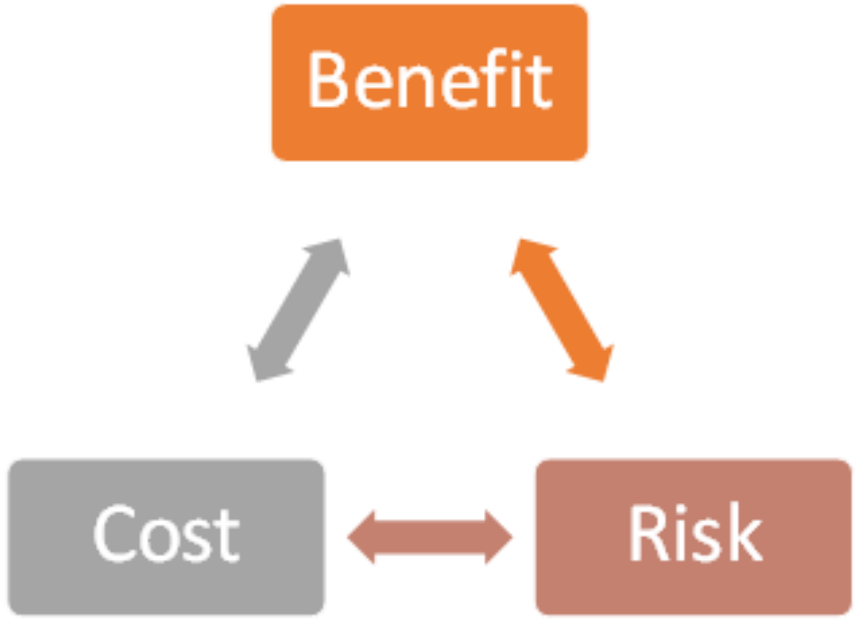
Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Roads Related Assets
Service Objective	Roads that take people and goods where they need to go in a safe and efficient manner
Service Expectations	SCOPE & FUNCTION: Roads that are open and provide efficient transportation.
	QUALITY: Roads that provide a comfortable ride
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Roads

Service Objective	Service Attributes & Expectations	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Roads that take people and goods where they need to go in a safe and efficient manner.	SCOPE & FUNCTION: Roads that are open and provide efficient transportation.	Description, which may include maps, of the road network in the municipality and its level of connectivity. **Ont. Reg 588/17- See Figure B-1 and B-2**	Arterial Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**0.01**	**0.01**	**0.01**	⟷
			Collector Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**0.19**	**0.19**	**0.19**	⟷
			Local Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**2.02**	**2.02**	**2.02**	⟷
	QUALITY: Roads that provide a comfortable ride	Description or images that illustrate the different levels of road class pavement condition. **Ont. Reg 588/17- See Figures B-3, B-4, B-5, and B-6**	For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Arterial Roads**	**N/A**	**6.72**	**6.72**	↑
			For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Collector Roads**	**N/A**	**7.17**	**7.17**	↑
			For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Local Roads**	**N/A**	**6.86**	**6.86**	↑
			For unpaved roads: the average surface condition (e.g. excellent, good, fair or poor). **Ont. Reg 588/17**	**Poor**	**Poor**	**Poor**	↑

Current vs. Proposed Levels of Service

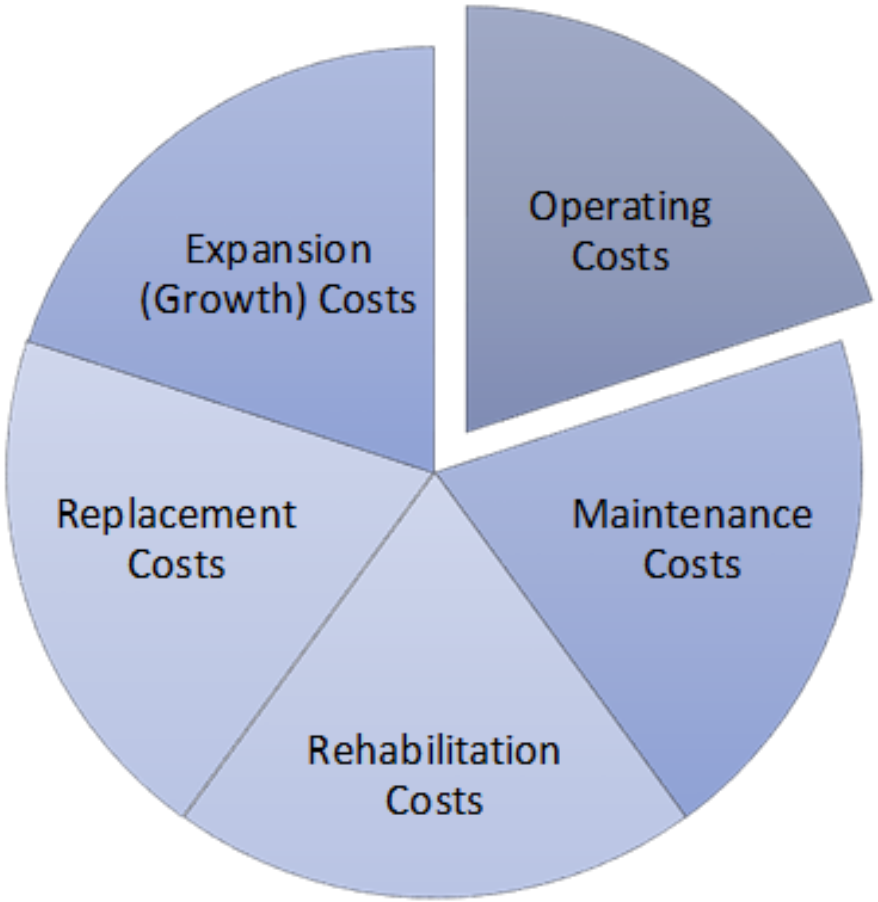
- Cost to maintain current Levels of Service
- Cost to transition to proposed Levels of Service
- Length of time to transition
- Resident/business ability and willingness to pay
- Ongoing trade-off between the benefit/service, the cost of providing that service, and the risks involved
- Line of sight between services/service levels and strategic/departmental planning

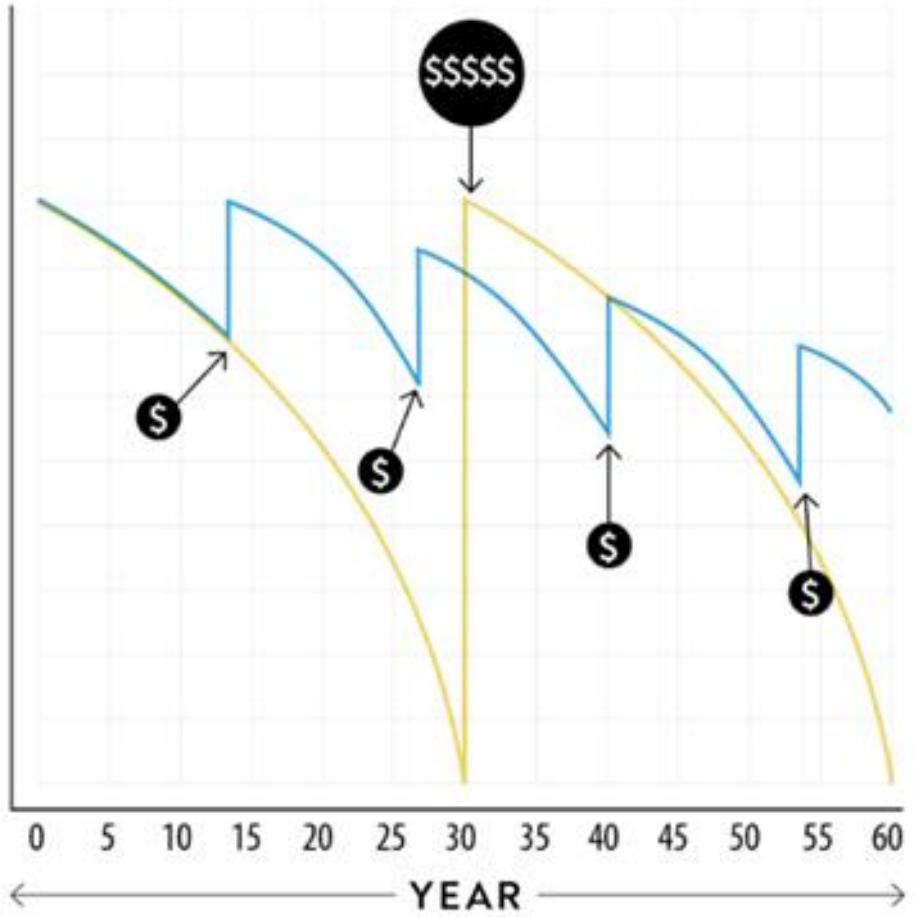


2022 ASSET MANAGEMENT PLAN

ASSET MANAGEMENT STRATEGY

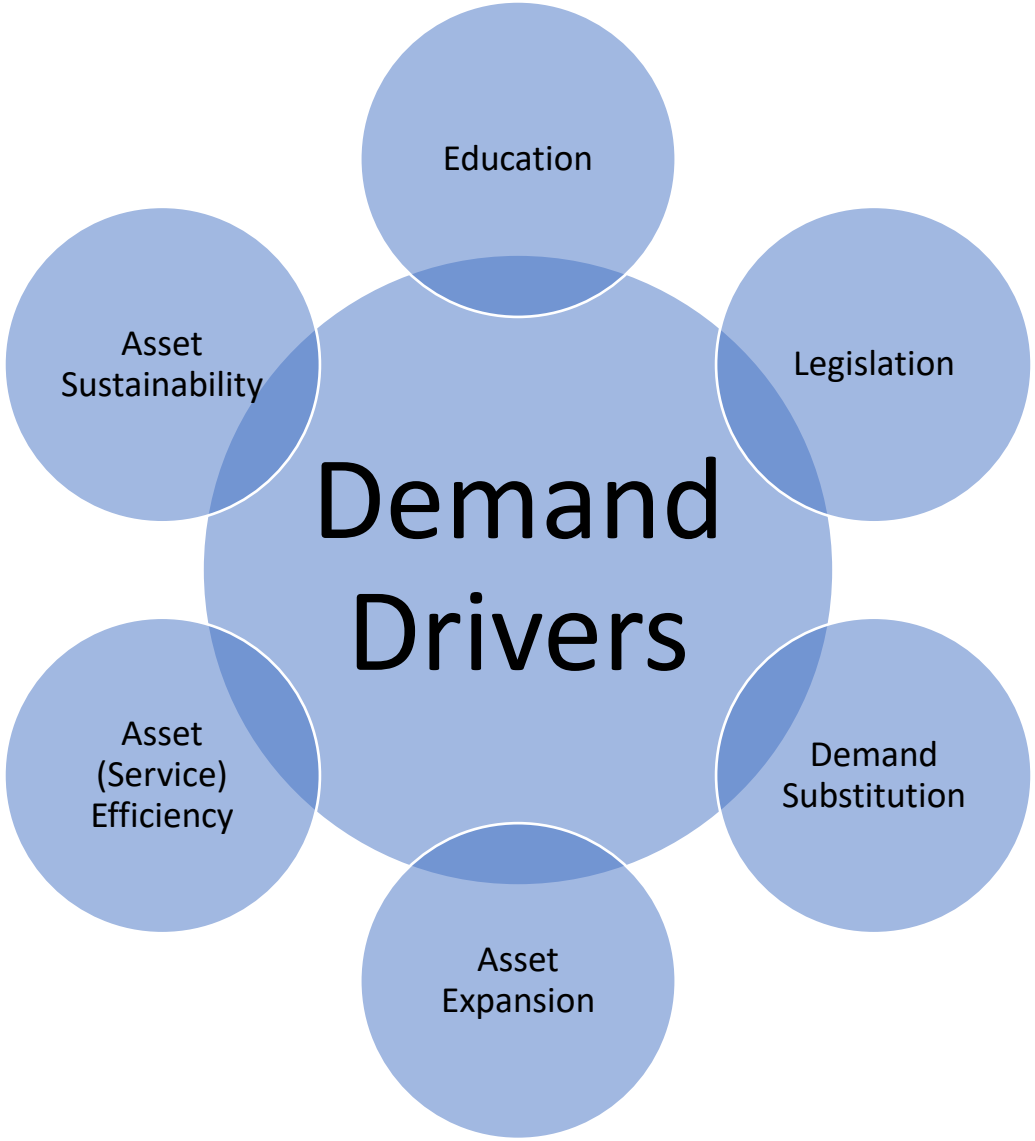
Asset Management Strategy





Asset Management Strategy – Demand Drivers

Asset Management Strategy – Demand Strategies



Asset Management Strategy – Risk Management

Asset Class	Probability of Failure
Road Base	Age and Average Daily Traffic (ADT)
Road Surface	Overall Condition Index (OCI)
Bridges and Culverts	Average Daily Traffic (ADT), Bridge Condition Index (BCI) and Load Limits
Pedestrian Bridges	Bridge Condition Index (BCI) and Load Limits
Facility Assets	Building Condition Audit Results
Vehicles	Age Based
Equipment	
Land Improvements	
Water Network Assets	Main Breaks per 100m and Age Based
Wastewater Network Assets	Forcemain Status and Age Based

Asset Class	Consequence of Failure
Road Base	Average Daily Traffic (ADT) and Speed Limit
Road Surface	
Bridges and Culverts	Emergency Response Time, Detour Length, Average Daily Traffic (ADT), Local Access, and Heritage Status
Pedestrian Bridges	Bridge Condition Index (BCI) and Load Limits
Facility Assets	Determined by Township Staff
Vehicles	
Equipment	
Land Improvements	
Water Network Assets	Static Pressure (kPa), Redundancy, Pipe Diameter (mm), Average Daily Traffic (ADT), and Accessibility of Pipes
Wastewater Network Assets	Forcemain Status, Pipe Diameter (mm), Proximity to Water, Average Daily Traffic (ADT), and Accessibility of Pipes

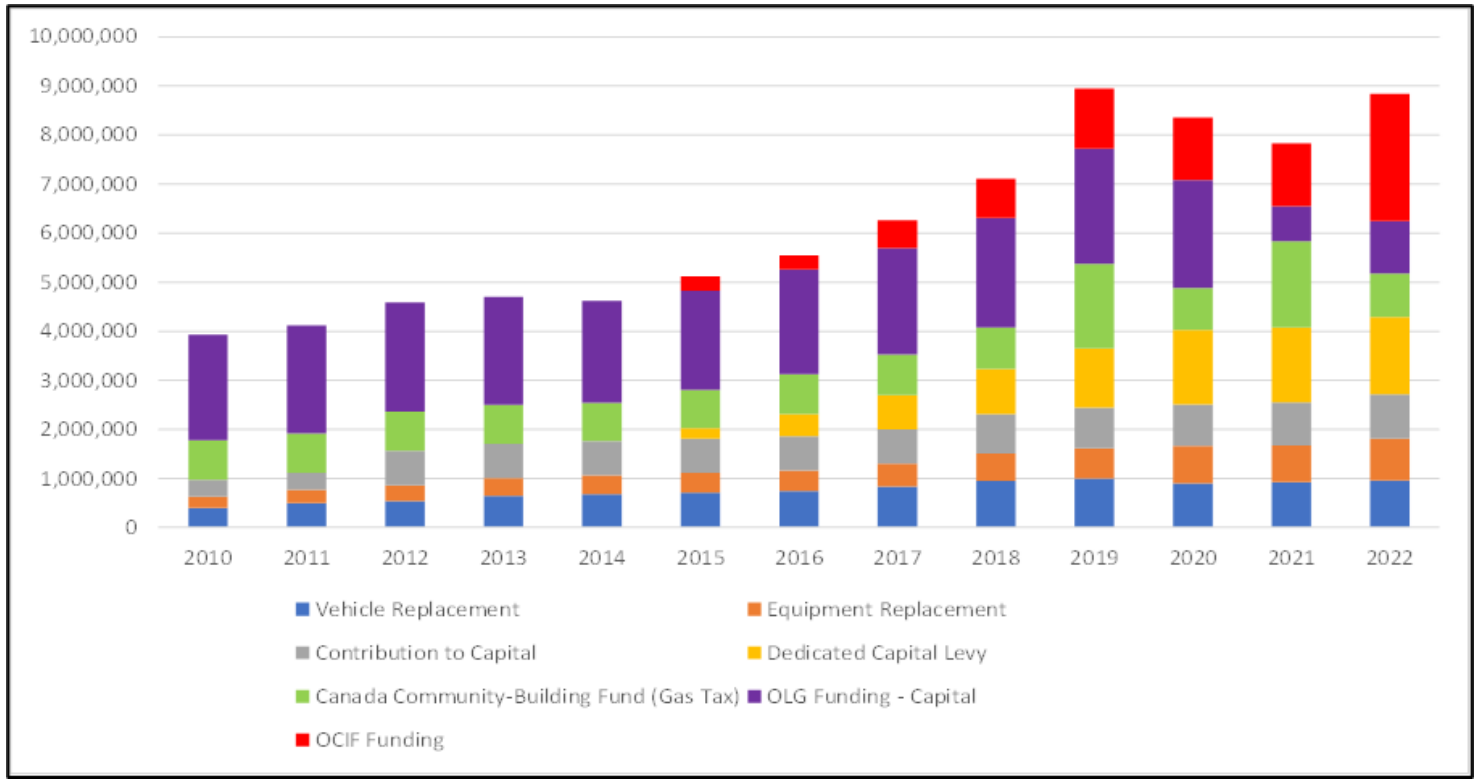
		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Moderate	Moderate	High	Critical	Critical

2022 ASSET MANAGEMENT PLAN

FINANCING STRATEGY

Financing Strategy – Historical Sources of Funding: Tax Supported

Internal Resources	External Sources
• Operating Budgets (operating & maintenance costs) • Contributions to Capital • Dedicated Capital Levy • Vehicle Replacement • Equipment Replacement • Facility Replacement	• Canada Community-Building Fund (Federal Gas Tax) • Ontario Community Infrastructure Fund (OCIF) • OLG Funding • One-time Capital Grants • Development Charges (growth) • Partner Contributions • Debt



Financing Strategy – Funding Assumptions

Funding Source	AM Plan Assumptions
Canada Community-Building Fund (CCBF)	Inflationary increases every 2 years.
OCIF Funding	Approximately $2.59 million annually, $1.27 million to bridges/culverts and $1.32 million to roads.
One-time Grants	Not included in projections.
OLG Funds	$2.2 million to Township capital annually.
Development Charges	Based on forecasted cash flow for capital and growth-related debt.
Debt	Debt for specific projects, predominantly growth-related. Planned debt payments not to exceed 15% of Township revenues.
Partner Contributions	Not included in projections.

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Financing Strategy – Optimal vs. Actual Funding

Tax Supported (excl. Bridges/Culverts)			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding (note 1)**	**% of Optimal**
Road Base - Paved	2,551,000	4,179,318	43%
Road Surface - Paved	5,519,459		
Road - Gravel	2,000,000		
Buildings	1,626,761		
Vehicles	1,235,550	961,000	
Equipment	731,372	849,400	
Land Improvements	319,700		
Total	**$ 13,983,842**	**$ 5,989,718**	

Note 1: Assumes that the extra OCIF funding received in 2022 (and every year thereafter) is dedicated to roads.

Bridges and Culverts			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding**	**% of Optimal**
Bridges	2,109,986	2,849,139	74%
Culverts	1,677,000		
Pedestrian Bridges	75,000		
Total	**$ 3,861,986**	**$ 2,849,139**	

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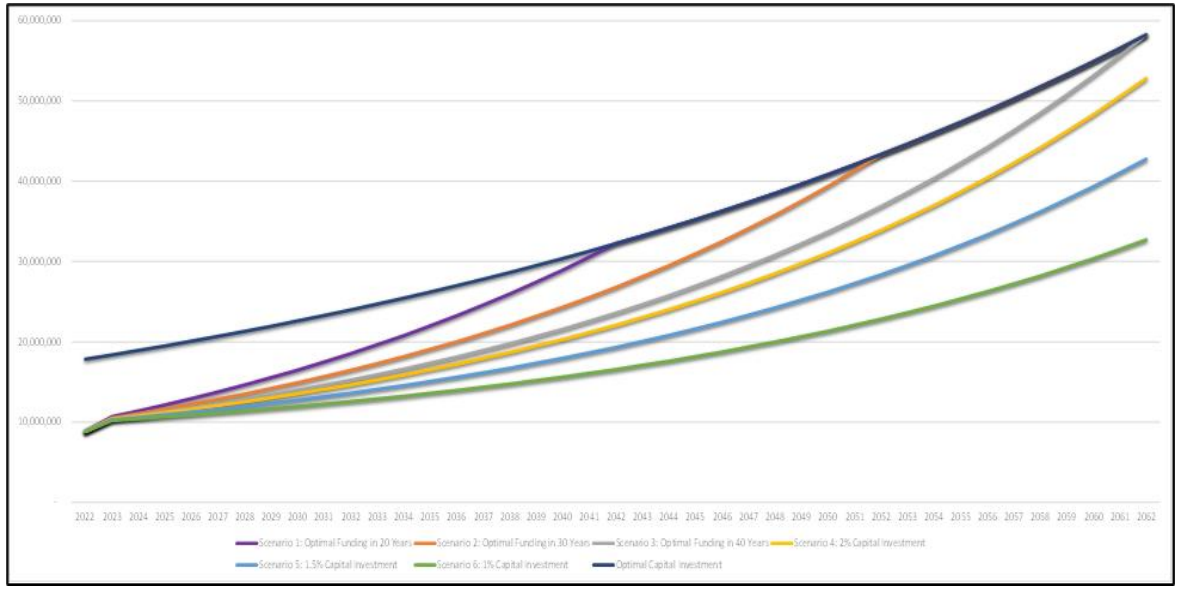
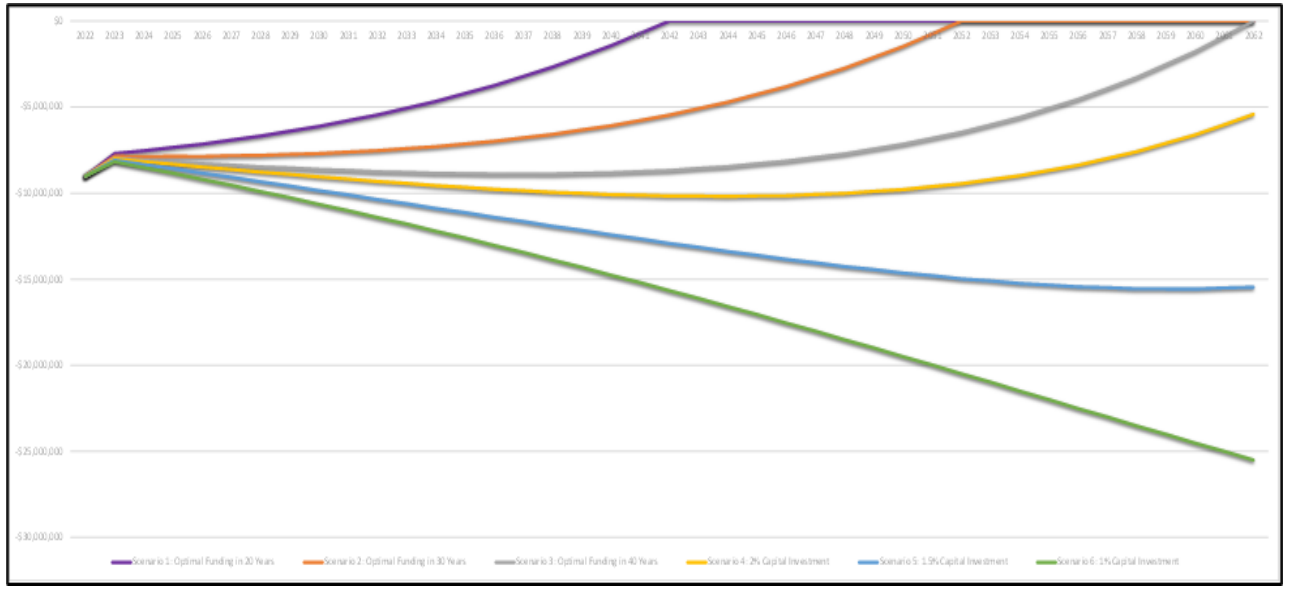
Financing Strategy – Scenario Modelling

Sensitivity Analysis - Financing Strategy	Funding Investment by Year 10	Funding Investment by Year 20	Funding Investment by Year 30	Funding Investment by Year 40	Equivalent Annual Increase in Taxation
Scenario 1: Optimal Funding in 20 Years	77%	100%	100%	100%	3.85%
Scenario 2: Optimal Funding in 30 Years	69%	83%	100%	100%	2.86%
Scenario 3: Optimal Funding in 40 Years	63%	73%	85%	100%	2.27%
Scenario 4: 2% Capital Investment	61%	68%	78%	91%	2.00%
Scenario 5: 1.5% Capital Investment	57%	60%	65%	73%	1.50%
Scenario 6: 1% Capital Investment	52%	51%	53%	56%	1.00%
Optimal Capital Investment	**$ 23,983,000**	**$ 32,231,000**	**$ 43,317,000**	**$ 58,214,000**	





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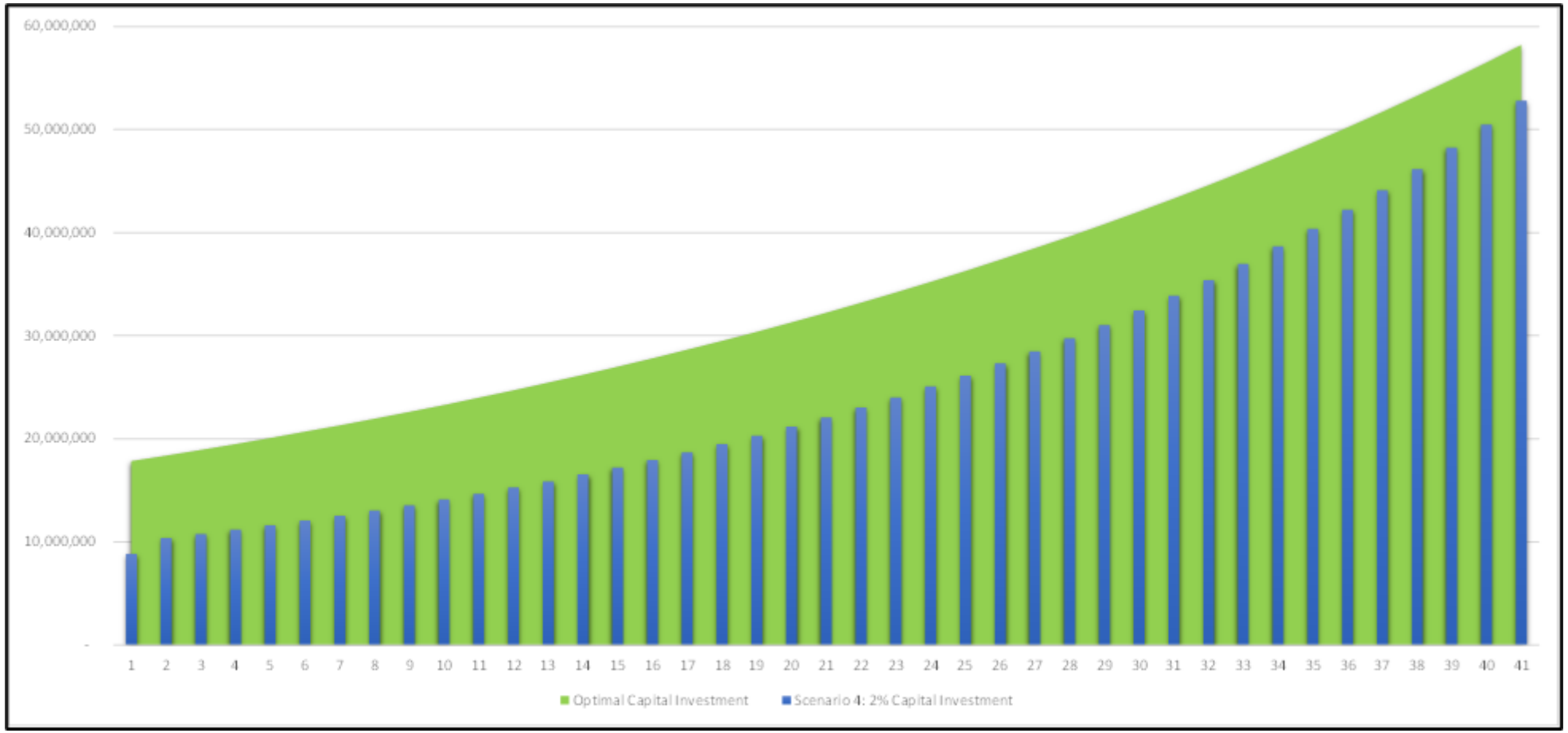
Financing Strategy – Impact of Funding Scenario 4 (2% Capital Investment)



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Financing Strategy – Use of Assessment Growth

Assessment Growth		Allocation of Growth to:		Equivalent Reduction in Taxation Impact			
				Operations		Asset Investment	
Min	Max	Operations (including New Staff Positions)	Asset Investment	Min	Max	Min	Max
0.00%	1.00%	50%	50%	0.00%	0.50%	0.00%	0.50%
1.01%	2.00%	75%	25%	0.76%	1.50%	0.25%	0.50%
2.01%	3.00%	75%	25%	1.51%	2.25%	0.50%	0.75%
3.01%	4.00%	75%	25%	2.26%	3.00%	0.75%	1.00%
4.01%	5.00%	75%	25%	3.01%	3.75%	1.00%	1.25%
Over 5%		75%	25%	3.76%	n/a	1.25%	n/a

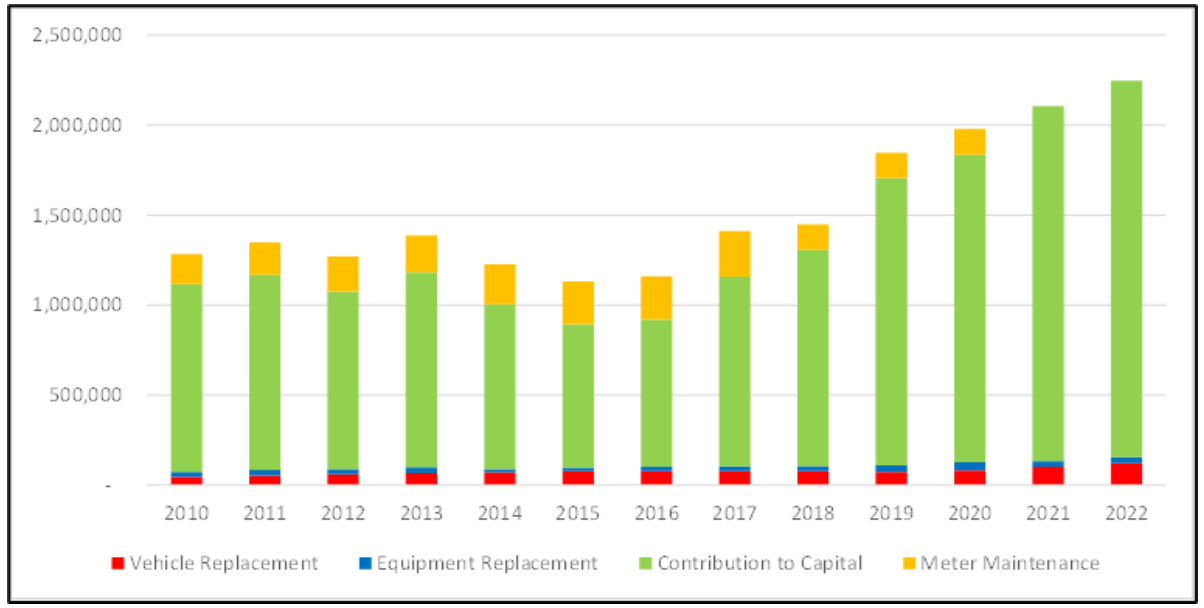
Assessment Growth		Taxation Impact before Assessment Growth	Impact of Assessment Growth	Net Impact on Taxation
Min	Max			
0%	1%	2.00%	0.00% to -0.50%	2.00% to 1.50%
1.01%	2%	2.00%	-0.25% to -0.50%	1.75% to 1.50%
2.01%	3%	2.00%	-0.50% to -0.75%	1.50% to 1.25%
3.01%	4%	2.00%	-0.75% to -1.00%	1.25% to 1.00%
4.01%	5%	2.00%	-1.00% to -1.25%	1.00% to 0.75%
Over 5%		2.00%	-1.25% to n/a	0.75% to n/a

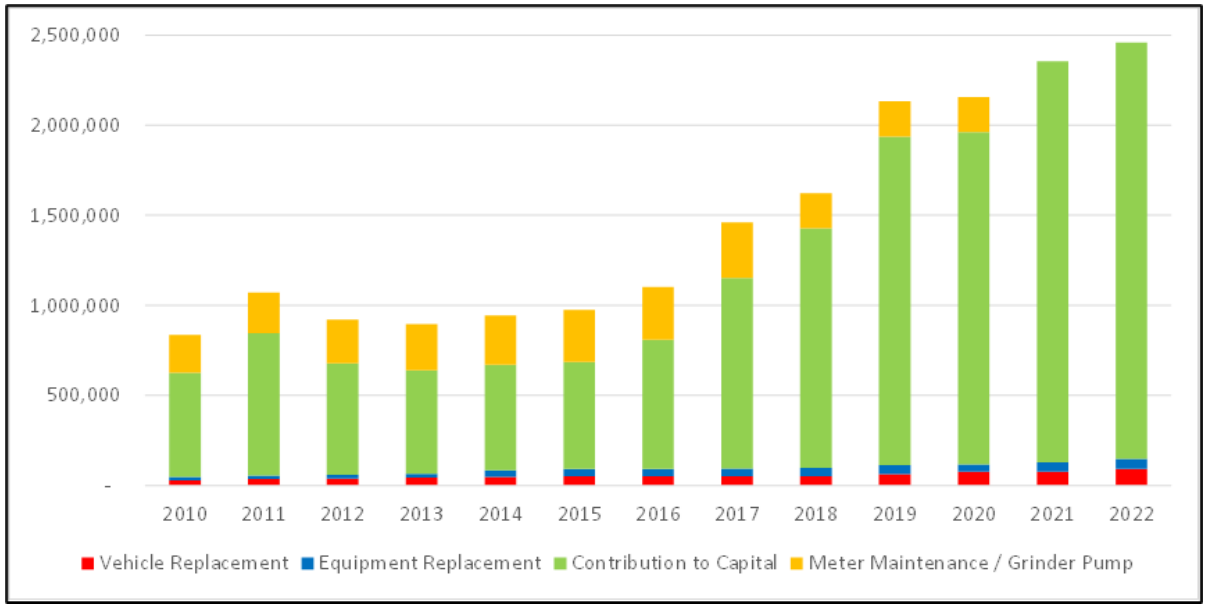
If AM Financing Strategies were implemented in the 2022 Budget:

Equivalent Increase in Taxation to Support Asset Management	**2.00%**	**= $309,310 in extra capital funding**
Assessment Growth = 3.21% (25% to Asset Management)	**(0.80%)**	
Net Increase in Township General Taxation Levy	**1.20%**	
Net Increase in the Township Total Taxation Levy	**1.09%**	
Net Increase on Tax Bill (Township, County, Education)	**0.32%**	
Annual Impact: Average Assessed Residential Property of $381,095	**$14**	

Financing Strategy – Historical Sources of Funding: Rate Supported

Internal Resources	External Sources
• Operating Budgets (operating & maintenance costs) • Contributions to Capital • Vehicle Replacement • Equipment Replacement • Facility Replacement	• One-time Capital Grants • Development Charges (growth) • Partner Contributions • Debt





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Asset Management Financial Strategy – Rate Supported

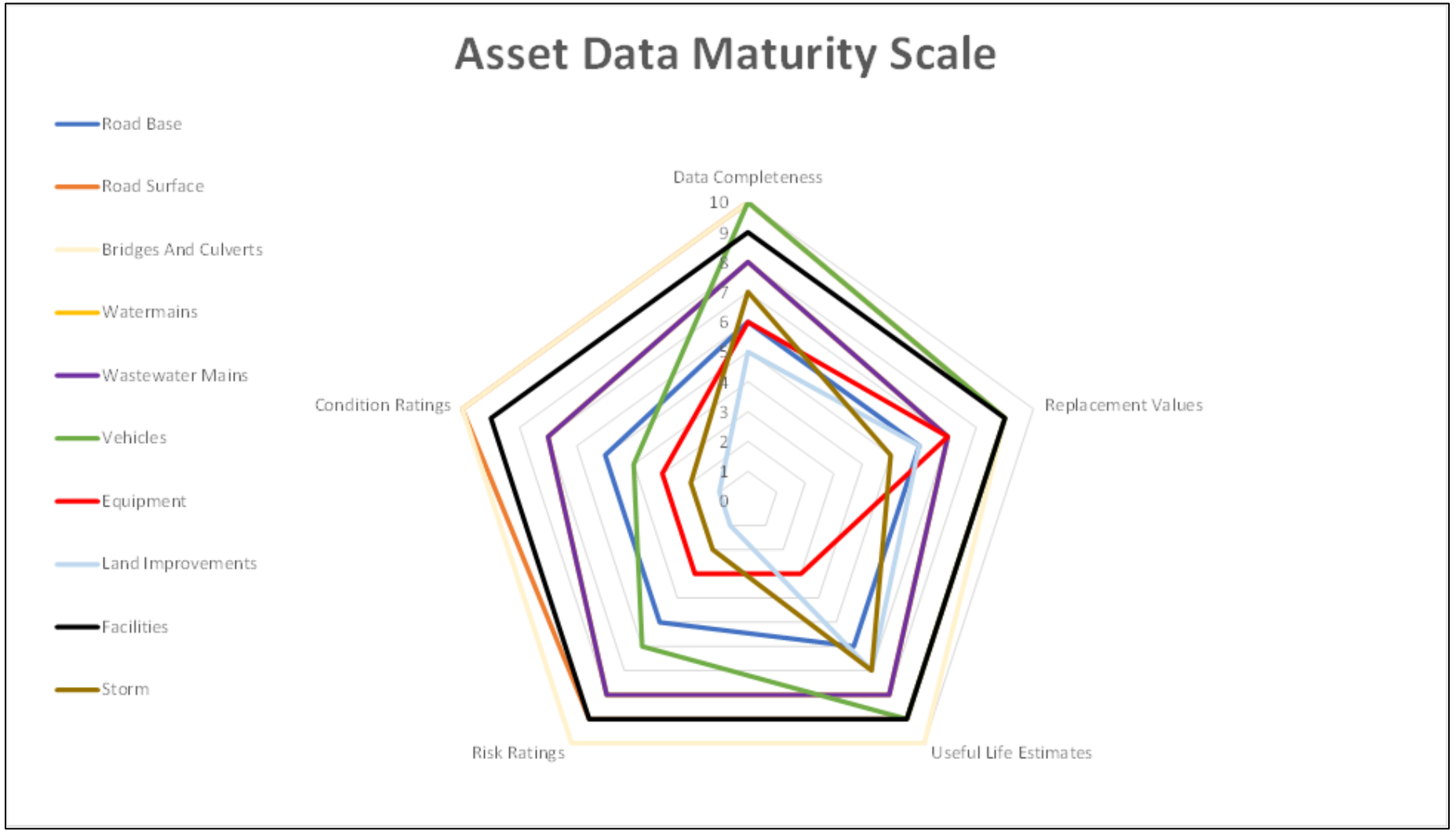
Water Assets			
Asset Type	Optimal Annual Investment (2022 $)	Existing (2022) Funding	% of Optimal
Water Mains	2,667,455	2,090,398	76%
Buildings	147,760		
Vehicles	112,186	122,550	
Equipment	22,560	33,300	
Land Improvements	5,921		
Total	$ 2,955,882	$ 2,246,248	

Wastewater Assets			
Asset Type	Optimal Annual Investment (2022 $)	Existing (2022) Funding	% of Optimal
Wastewater Mains	2,242,000	2,308,907	76%
Buildings	839,152		
Vehicles	90,750	92,450	
Equipment	56,000	56,700	
Land Improvements	5,921		
Total	$ 3,233,823	$ 2,458,057	

Proposed Rate Increases	2023	2024	2025	2026	2027	2028	2029	2030
Water	1.10%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
Wastewater	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.40%	3.40%
Combined Increase	**2.30%**	**2.30%**	**2.30%**	**2.40%**	**2.40%**	**2.40%**	**2.40%**	**2.50%**

MONITORING AND CONTINUOUS IMPROVEMENT

Asset Management – Monitoring and Continuous Improvement



Asset Management – Monitoring and Continuous Improvement

Short-term Targets:

- Compliance with Ontario Regulation 588/17
- Full implementation of asset management software
- Development and refinement of asset management procedures and processes
- Integrate data from various studies, reports, and systems
- Full integration of risk assessments and the levels of service framework

Long-term Targets:

- Develop Data Governance Strategy
- Data Integration
- Maturation of Asset Data
- Integration of Township Strategic Planning and Master Planning
- Refine funding assumptions
- Public Engagement Strategy

CONCLUSIONS AND RECOMMENDATIONS

Asset Management – Conclusions & Recommendations

Chapter Reference	Description
Overall	Recognize that asset management planning is a journey that requires continuous improvement and updates.
Chapter 3	Consider the costs associated with providing services at expected levels when developing the annual budget.
Chapter 4	Consider the following when developing the annual budget: a) All asset management related costs (non-infrastructure solutions and lifecycle costs) required to provide Township services. b) The risks (both corporate and asset related) of deferring various asset lifecycle costs. c) The impacts of demand on Township assets, including anticipated growth. d) Recognition that "critical assets" play a significant role in providing services and have a high consequence of failure. e) Priority assets represent assets in each category with the highest asset risk, and future short/medium-term lifecycle costs should focus on these assets.

Asset Management – Conclusions & Recommendations

Chapter Reference	Description
Chapter 5	Consider the following when developing the annual budget: a) Staff to closely monitor external sources of funding trends, given the associated risks of relying on this funding from an asset management perspective. b) Increases in OCIF funding received in 2022 as well as ongoing increases in OCIF funding received going forward will be dedicated to roads related rehabilitation and replacement needs. c) The OLG Allocation Policy is to be reviewed considering the goal to maximize funding available for asset management purposes. d) Planned debt payments over the ten-year capital forecast is not to exceed 15% of Township revenues. e) A proportion of annual taxation assessment growth is to be allocated to asset investment as outlined in chapter 5. f) To provide meaningful increases in tax supported asset investment over time, an annual increase equivalent to a 2.0% increase in taxation is needed. Other available funding increases, such as a proportion of assessment growth would reduce the net impact on taxation. g) To continue to follow Water and Wastewater Rate Study recommended rate increases.

Asset Management – Conclusions & Recommendations

Chapter Reference	Description
Chapter 6	Continue to monitor and continuously improve Township asset management planning practices. a) Continue to work with the County and associated lower-tier municipalities in the advancement of asset management planning. b) Continuous improvement of asset data quality (i.e. completeness and accuracy) for all asset categories over time. c) Progression of short/medium-term and long-term continuous improvement targets.

2022 ASSET MANAGEMENT PLAN

Dan Wilson / Adam McNabb

June 15, 2022