



City of Port Colborne

2021 Asset Management Plan



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AGENDA

1. Introduction
2. Asset Management (AM)
Purpose
3. Asset Management Plan (AMP)
Development and Results

The purpose of this presentation is to provide an overview of the Port Colborne AMP

Why an Asset Management Plan?



Continue from former AMP
Provide repeatable methodology for future comparison analysis



Means to discuss/document

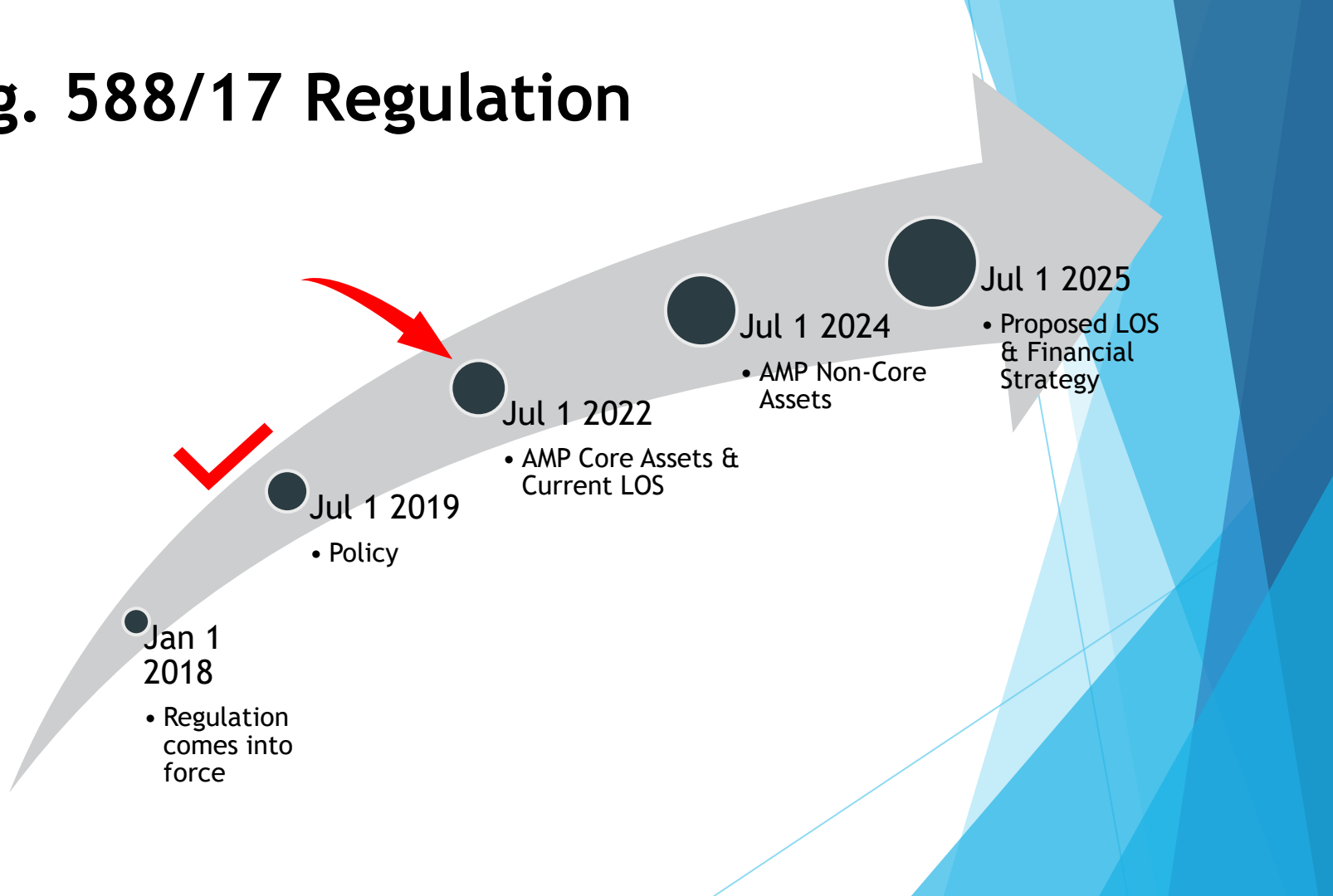
- Sustainability
- Informed asset investments
- Alignment with strategic plan



Provincial compliance
(O.Reg.588/17)

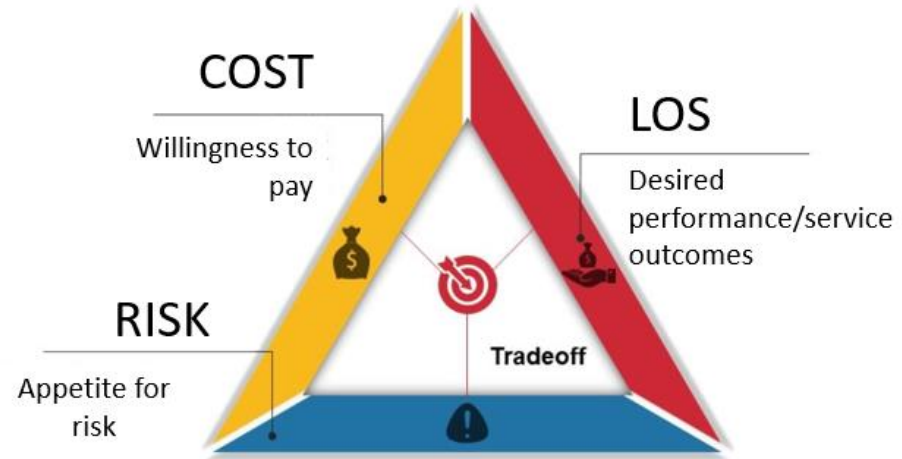
Series of deadlines
Prescribed content

O. Reg. 588/17 Regulation

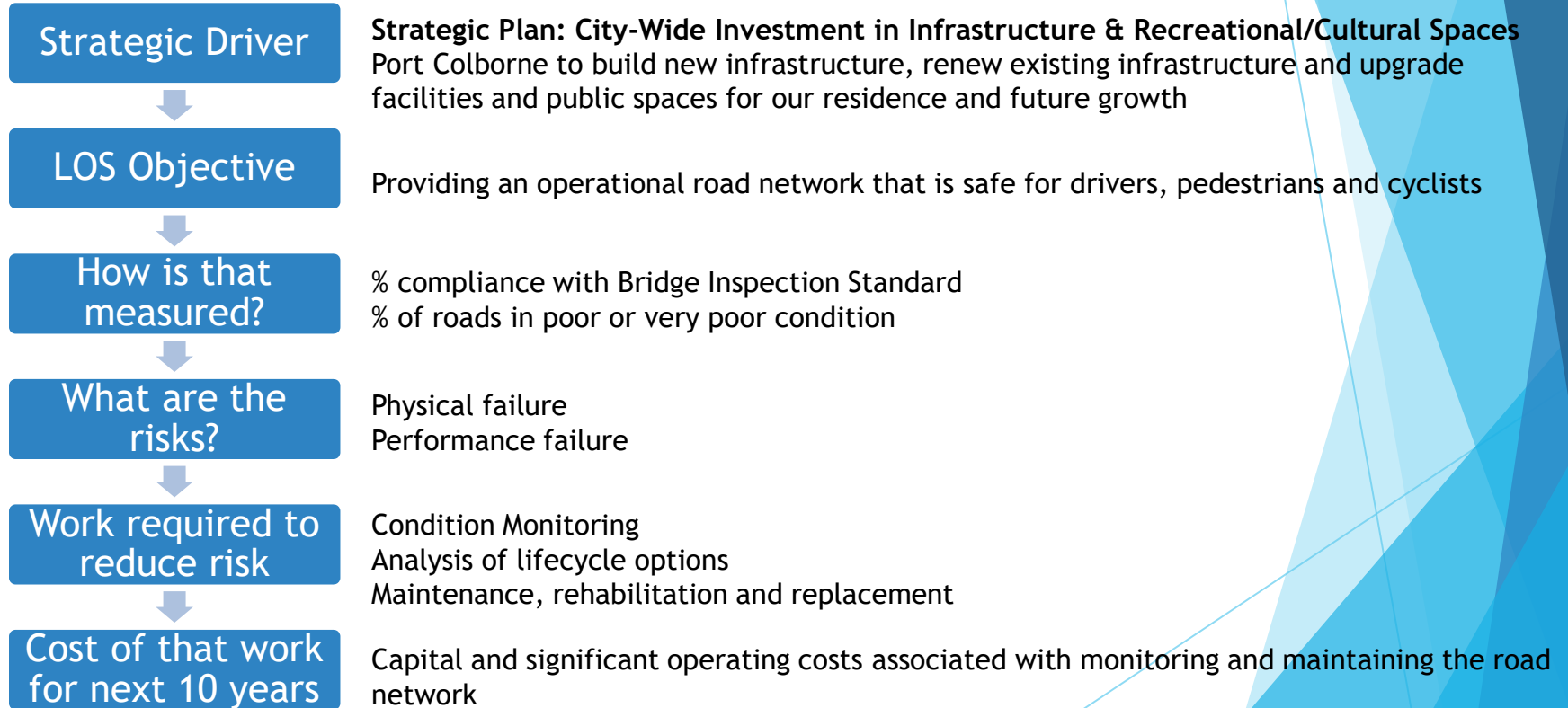


How Might the AMP be used?

- ▶ Facilitates discussions about the link between effort/expenditures and desired outcomes – what can be delivered at what cost
 - E.g. Should funding be constrained, the effect on LOS and risk can be defined and acknowledged
- ▶ Understanding Infrastructure Needs
- ▶ Relation to Actual Capital Budgets
- ▶ Level of Service statements
- ▶ Lifecycle Strategies
- ▶ Recommendations



Line of Sight





What the AMP is NOT

- AMP is not a capital plan
 - Capital plan is constrained by available budget
- AMP is not prescriptive
- AMP does not prescribe action to the capital planning or asset owner groups, but rather provides a framework for communication

Asset Types

► Core Assets (2022):

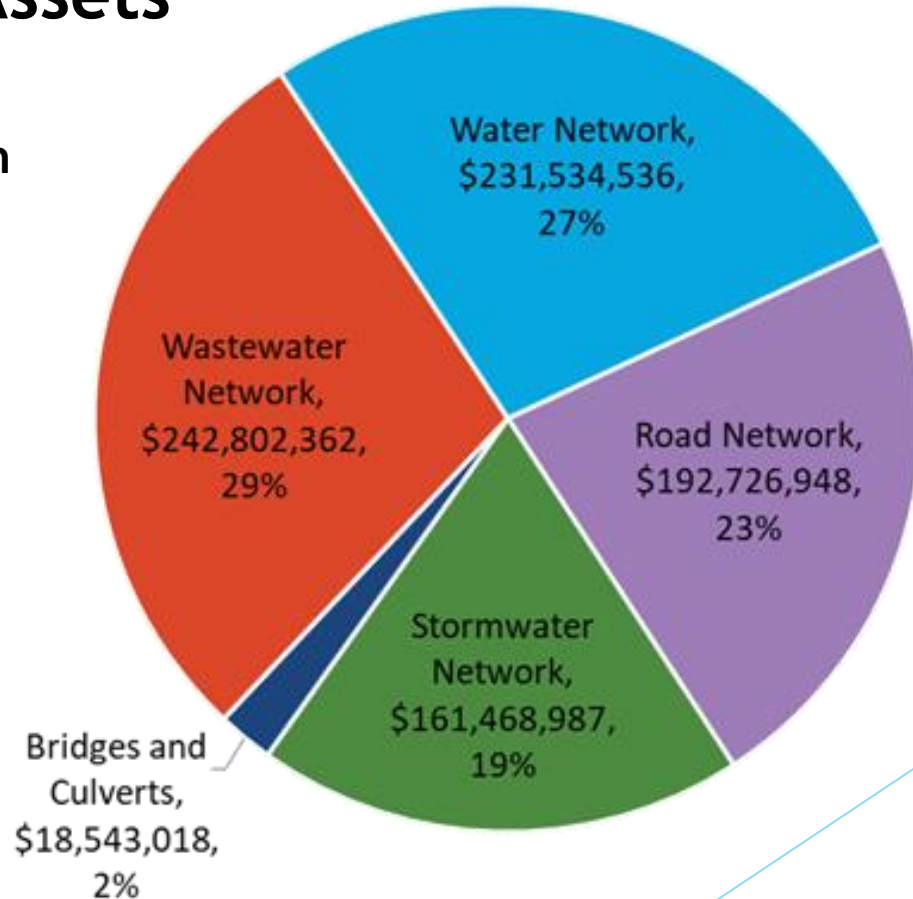
- Water Network
- Wastewater Network
- Stormwater Management Network
- Roads and Network
- Bridges and Culvert Network

► Non-Core Assets (2024):

- Facilities
- Parks
- Cemeteries
- Fleet
- Forestry
- Fire
- IT

Valuation of Assets

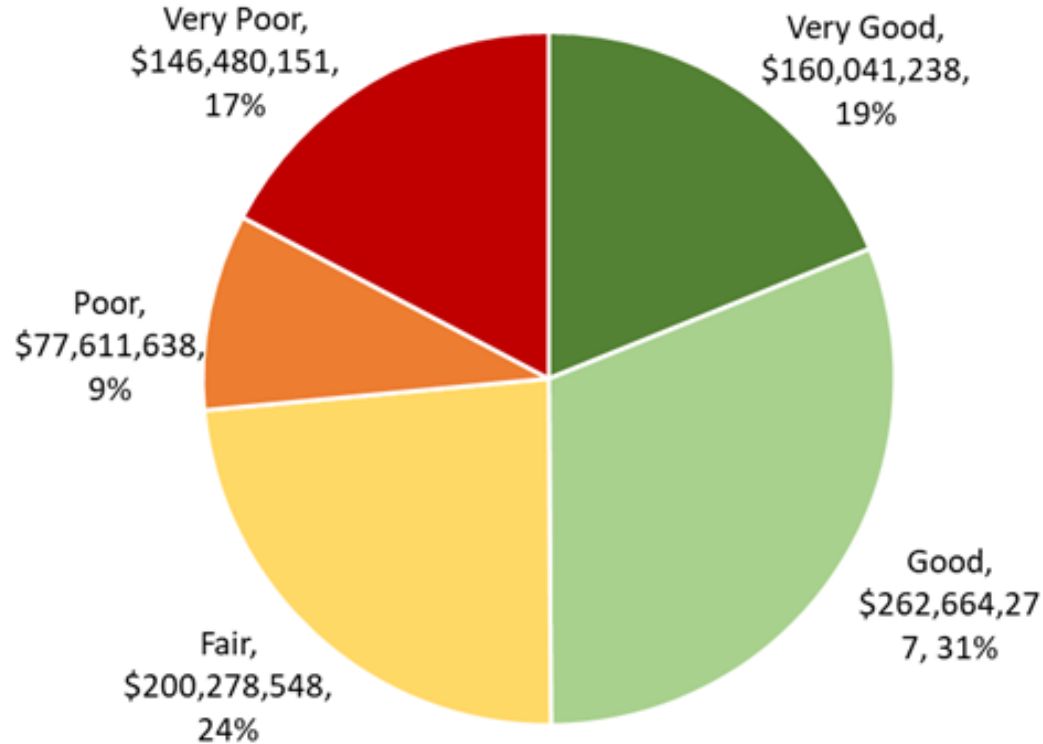
Total replacement
value of \$847 Million



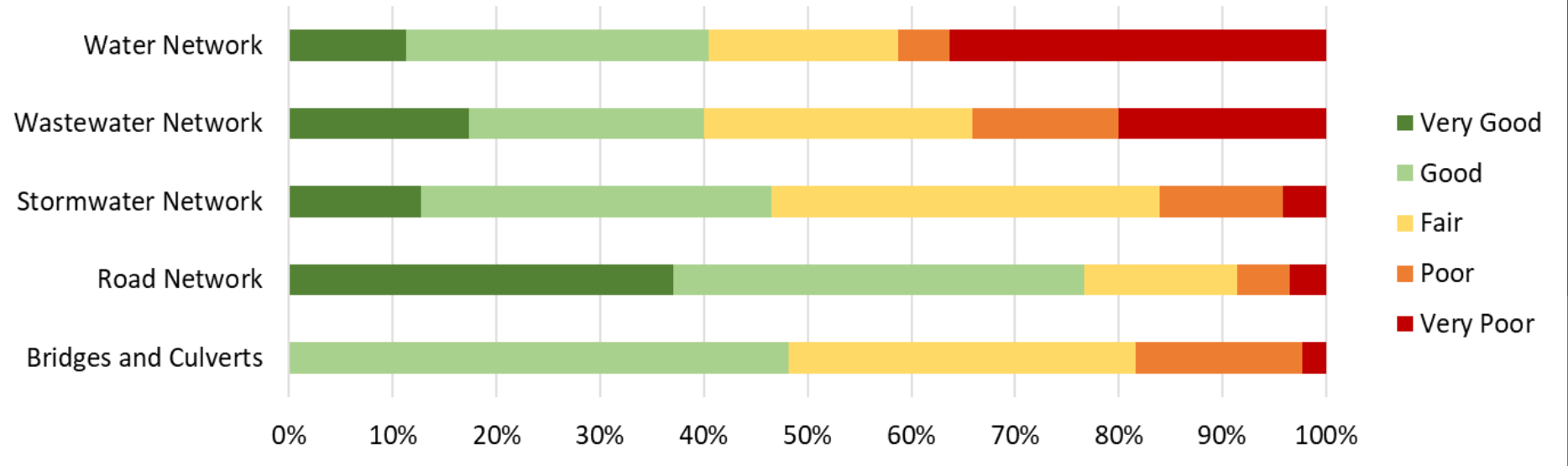
Measuring Condition / Performance

Condition State	Sanitary Sewers PACP Scores	Roads Pavement Condition Index (PCI)	Bridges/Culverts Bridge Condition Index (BCI)	Remaining Assets (incl. Water & Storm)
Very Good	0 - No Defects, 1 - Excellent	>80 PCI	>86 BCI	>80% life remaining
Good	2 - Good	67-80 PCI	70-86 BCI	60 – 80% life remaining
Fair	3 - Fair	55-67 PCI	61-70 BCI	40 – 60% life remaining
Poor	4 - Poor	35-55 PCI	41-61 BCI	20 - 40% life remaining
Very Poor	5 - Immediate Attention Required	<35 PCI	<41 BCI	<20% life remaining

Asset Condition



State of Assets



Levels of Service

- ▶ Levels of Service (LOS) describe the capacity, function and quality of the City services being provided
- ▶ Performance Measures:
 - ▶ **Customer** – communicates service outcomes from the perspective of the customer
 - ▶ **Technical** – Describes service inputs or outputs in technical terminology

Levels of Service - Water Network Example

Core Value	Level of Service Statement
Accessible & Reliable	A reliable water supply is provided with minimal service disruptions; system failures and service requests are responded to promptly; water connections are available and accessible to all properties within the public water network.
Safe & Regulatory	Water supply is safe to drink and meets all regulatory requirements.
Cost-Efficient	Infrastructure is managed cost-efficiently for the provided level of service.
Sustainable	Water resources are used efficiently, and long-term plans are in place for the sustainability of the water supply and all water infrastructure.

Customer Measures

Core Value	Community Level of Service	2021 Performance
Safe & Regulatory	Description of boil water advisories and service interruptions. ¹	There were no boil water advisories.
	Number of confirmed water quality customer complaints.	19

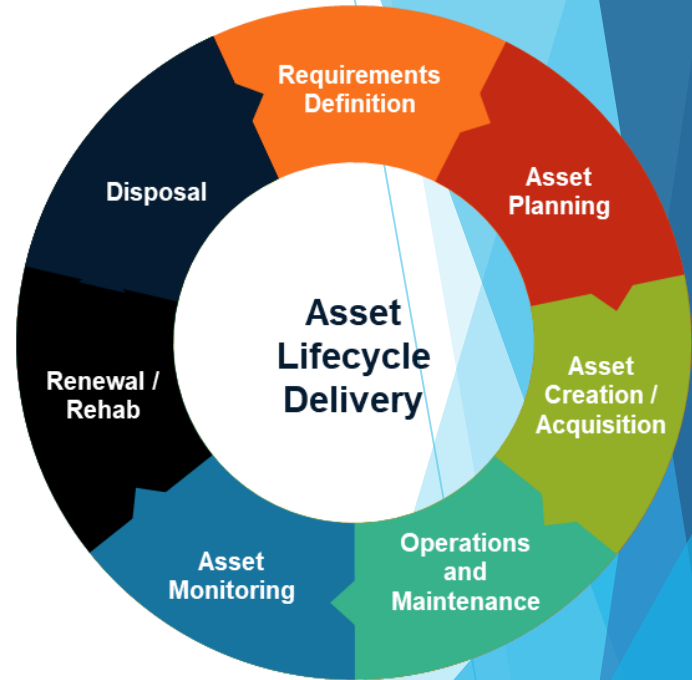
Technical Measures

Core Value	Community Level of Service	2021 Performance
Safe & Regulatory	# 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. ¹	0
	Percentage of water sampling meeting Safe Drinking Water Standards.	99.96%

Lifecycle Management

Captures the full lifecycle of the asset:

- ▶ **Non-infrastructure** – actions or policies that can lower costs or extend asset life
- ▶ **Maintenance** – including regularly scheduled inspection and maintenance, or more significant maintenance.
- ▶ **Renewal/rehabilitation** – significant repairs designed to extend the life of the asset.
- ▶ **Replacement** – activities for the end of its useful life
- ▶ **Expansion** - planned activities required to extend services to previously unserved areas - or expand services to meet growth demands.
- ▶ **Disposal** – the activities associated with disposing of an asset once it has reached the end of its useful life.



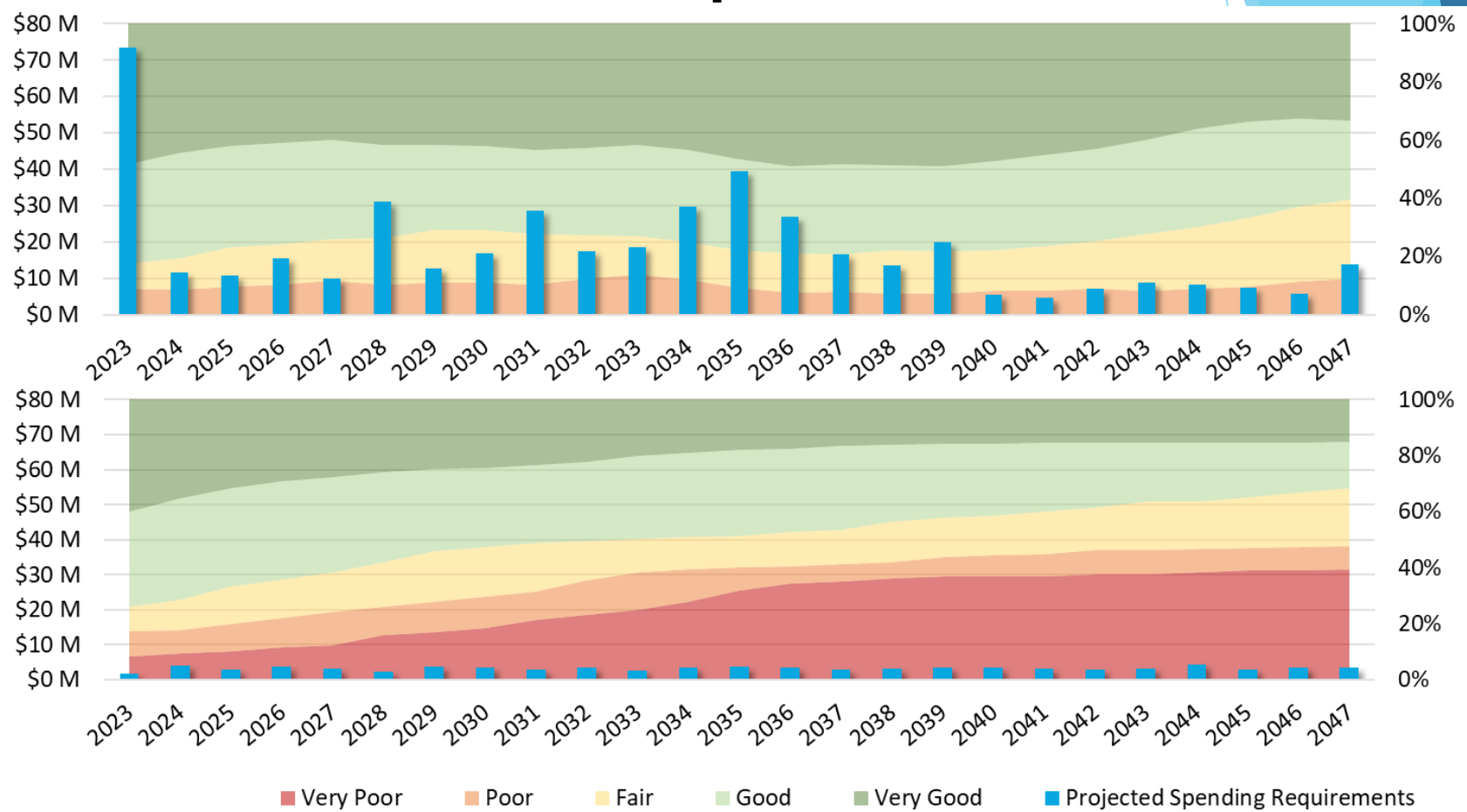
Lifecycle Management - Examples

Lifecycle Activity Type	Water	Wastewater	Stormwater	Roads	Bridges & Culverts
Maintenance	Main Flushing Valve Turning Main Break Repairs Hydrant Inspections & Fire Flow Testing Leak Detection Meter Calibrations	CCTV Inspections Main Flushing Spot Repairs / Grouting	CCTV Inspections Flushing/Cleaning Urban Ditch Cleaning Outlet cleaning Lead Inspections Storm Sewer Spot Repair	Road Inspections Road Sweeping Condition Assessments Sidewalk & Guiderail Maintenance Winter Maintenance Asphalt Patching Line painting Dust suppression	Inspections
Renewal/ Rehab	Trenchless Relining	Trenchless Relining	No Renewal Activities	Road Resurfacing	OSIM Instigated Activities
Replacement/ Construction	Replacement	Replacement	Replacement	ROW & Traffic Asset Replacements Road Reconstruction	Replacement
Non- Infrastructure	Water Loss Reports AWWA Audits Hydraulic Analysis Water Financial Plan DWQMS Audits	Pollution Prevention Control Plan (PPCP) Smoke Testing Flow Monitoring Review Design Std's	Infrastructure Needs Study (INS) Consolidated Linear Infrastructure ECAs	Traffic Studies/Counts	Condition inspections (OSIM)
Expansion/Growth	Pipe upsizing Expansion to support growth	Pipe upsizing Expansion to support growth	Pipe upsizing Expansion to support growth	Widening Expansion to support growth / new developments	Expansion to support growth / new developments
Disposal	Removal through standard construction practices or abandoned in place	Removal through standard construction practices	Removals through standard construction practices	Asphalt Reuse Contaminated Soils Disposal	Disposal of abandoned or obsolete structures during construction projects.

Financial Strategy

- ▶ Developed models to forecast annual spending based on asset lifecycle strategies and replacement costs
- ▶ Two types of scenarios:
 - ▶ **Unconstrained** – This type of scenario has no budget applied, meaning that the year an asset is triggered for some type of work, the work is completed that year
 - ▶ **Constrained** – This type of scenario applies a budget to the forecast so that if an asset is triggered for work, that work may not be completed if there is not enough funding available that year and it will be deferred until more funding is available
- ▶ Assumptions:
 - ▶ Growth has not been factored in
 - ▶ Replacements and renewal costs only
 - ▶ Assets replaced when they reach Very Poor condition

Condition Profile Comparison

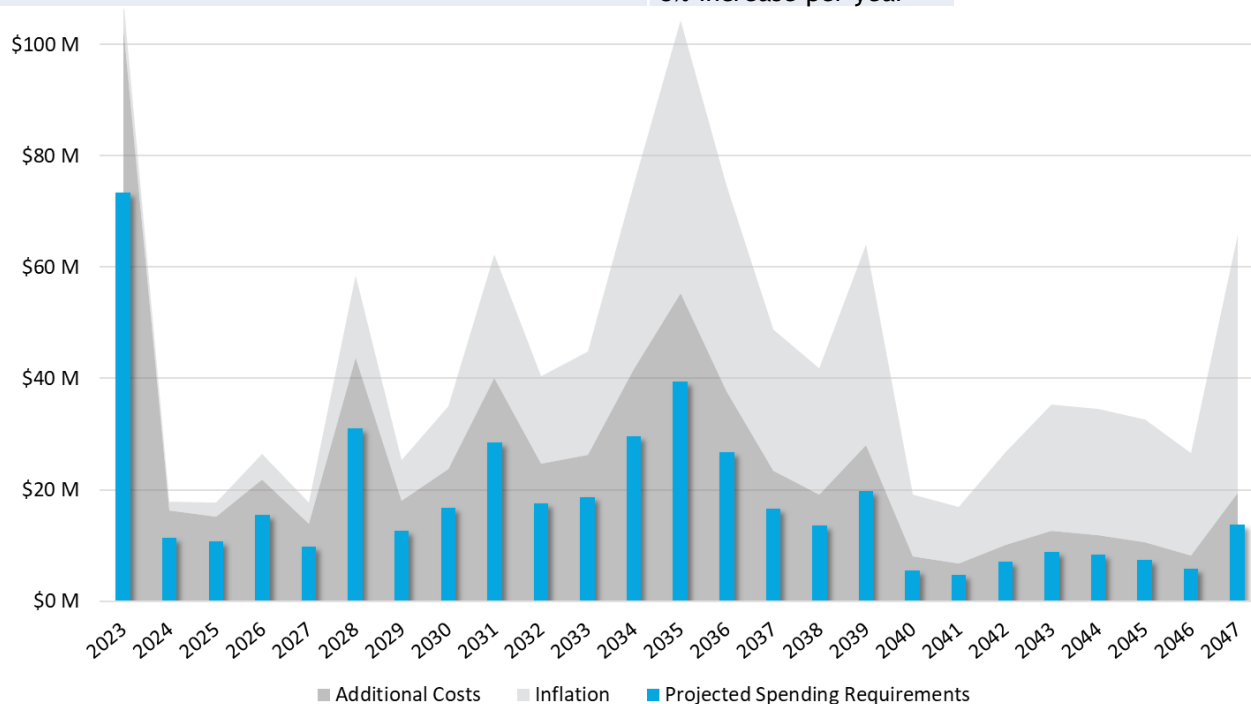


Average Annual Cost to Maintain Current LOS

Core Asset Category	Average Annual Cost (\$2022)
Road Network	\$8.5M
Stormwater Network	\$0.49M
Water Network	\$3.7M
Wastewater Network	\$3.5M
Bridges & Culverts	\$43K
Total:	\$16.2M

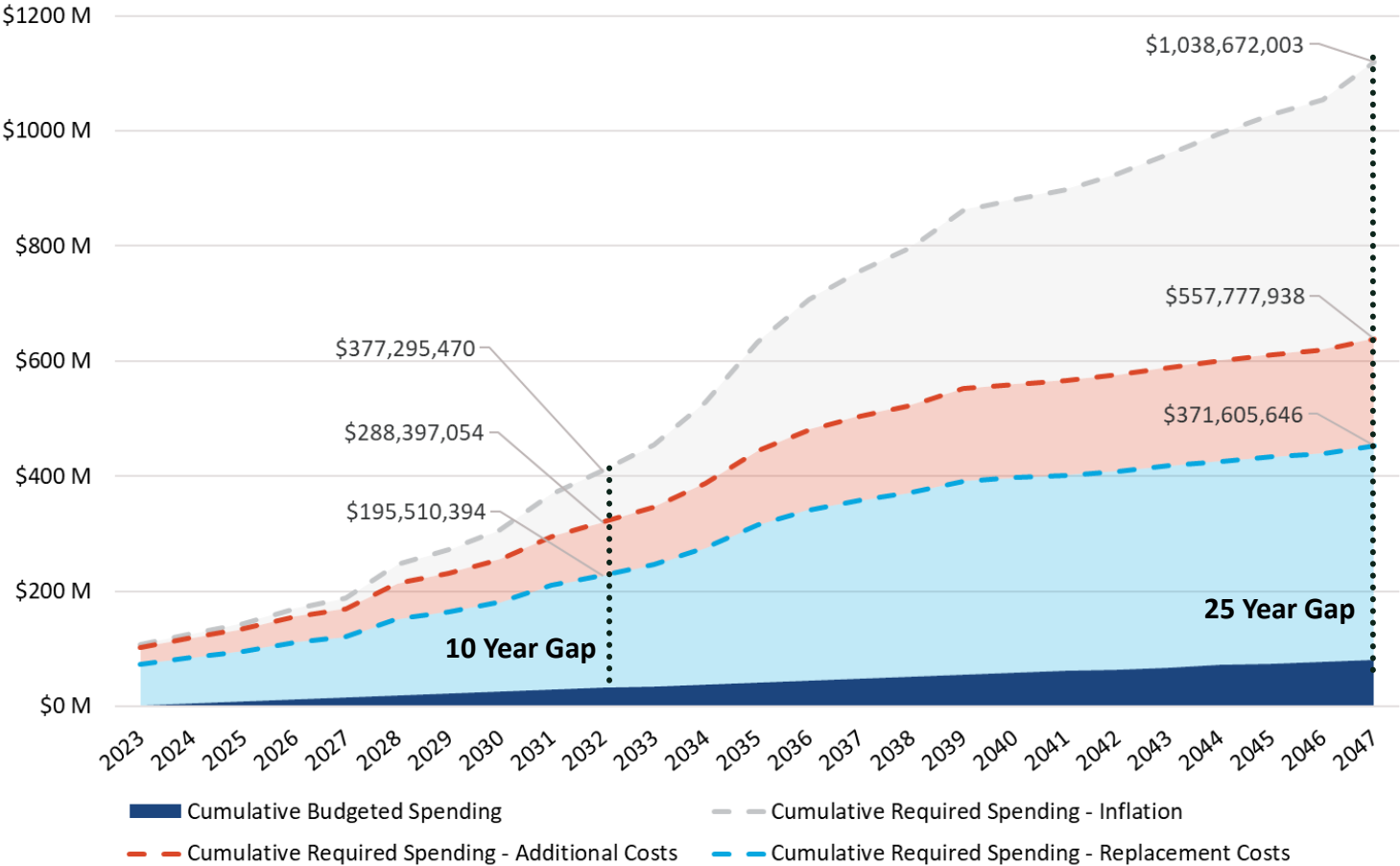
Additional Spending Requirements

Additional Costs	Included	Assumption
Implementation Costs	Design, project management, etc.	20%
Service Improvements	New technologies and materials, level of service improvements, etc.	20%
Additional Activities	Non-Infrastructure, Capital Maintenance projects, etc.	\$200,000 per year
Inflation	--	5% increase per year



The Gap (Cumulative Costs)

- Scenario
- Constrained/Budget
(Current Funding)
- Unconstrained (Base
Replacement Costs)
- Unconstrained +
Additional Costs
- Unconstrained +
Additional Costs +
Inflation



Addressing the Gap - Lower Spending

Lifecycle Strategies & Risk

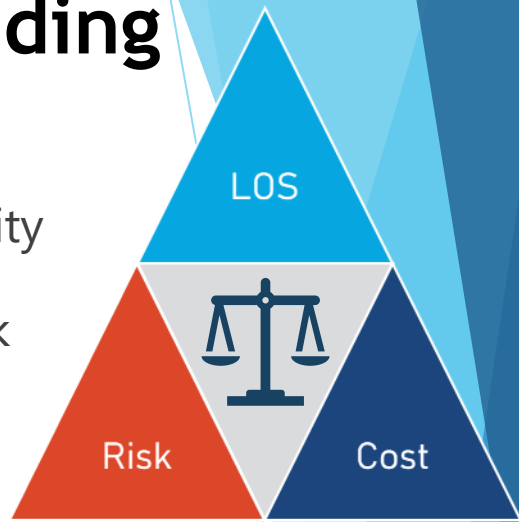
- ▶ Optimize strategies to help balance LOS and costs
- ▶ Adjust model strategies to improve forecasting reliability
- ▶ Focus on proactive activities over reactive work
- ▶ Incorporate risk into lifecycle strategies (e.g. higher risk assets replaced earlier, low risk assets run to failure)

Levels of Service

- ▶ Reduce LOS or adjust how they are measured
- ▶ Consider the minimum cost required to maintain current LOS

Other Considerations

- ▶ Increase efficiencies in operating over time
- ▶ Use developer support to pay for growth and any necessary upsizing or replacements required for new developments
- ▶ Strategic growth planning to take advantage of any areas with existing infrastructure that can support greater density



Addressing the Gap - Increase Funding

\$1200 M

Budget Scenario	Annual Increase	
	2023 - 2035	2035 - 2047
Scenario 1	20% increase / year	5% increase / year
Scenario 2	25% increase / year	5% increase / year

\$800 M

\$600 M

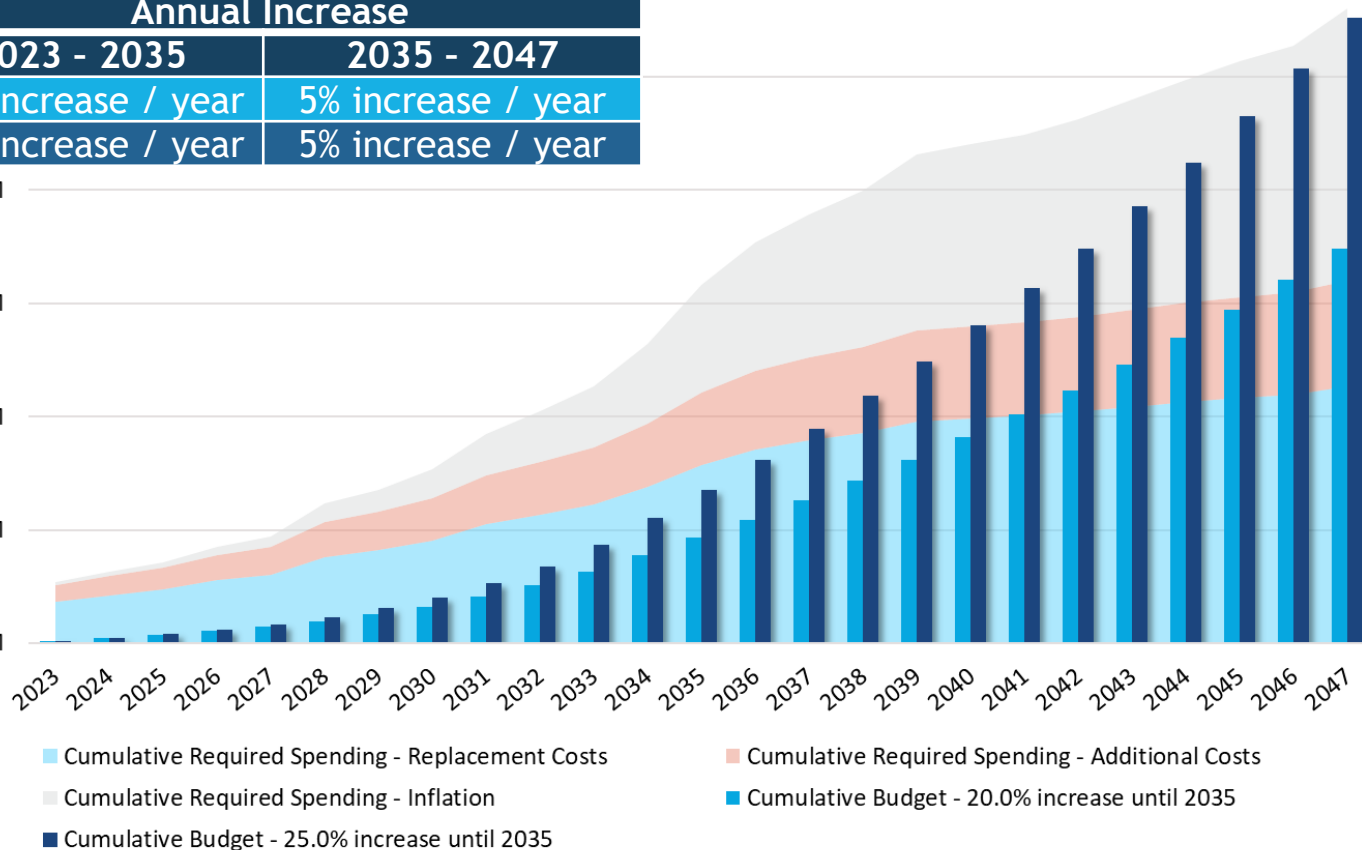
\$400 M

\$200 M

\$0 M

Funding Options:

Tax Levies
Rates
Grants
Reserves
Debentures
Growth
Divestitures



Recommendations

- ▶ Continue to advance corporate asset management capabilities by focusing on AM enablers:
 - ▶ Resources
 - ▶ Business Processes
 - ▶ Information Systems
 - ▶ Asset Data
- ▶ Focus on overall improvements to data confidence and lifecycle strategies to improve forecast reliability

Next Steps

- ▶ Infrastructure Needs Study
 - ▶ Currently being completed
 - ▶ Council Report late 2022
 - ▶ Collection of data to improve data confidence
 - ▶ Analysis and prioritization of needs at a more detailed level
- ▶ 5 Year Capital Program
 - ▶ Based on Infrastructure Needs Study
 - ▶ Bundling of prioritized needs into projects
- ▶ Begin preparing to complete AMP to meet 2024 and 2025 regulatory requirements
 - ▶ Non-core Assets
 - ▶ Proposed Levels of Service

Thank You for Attending

Thank You



PORT COLBORNE

