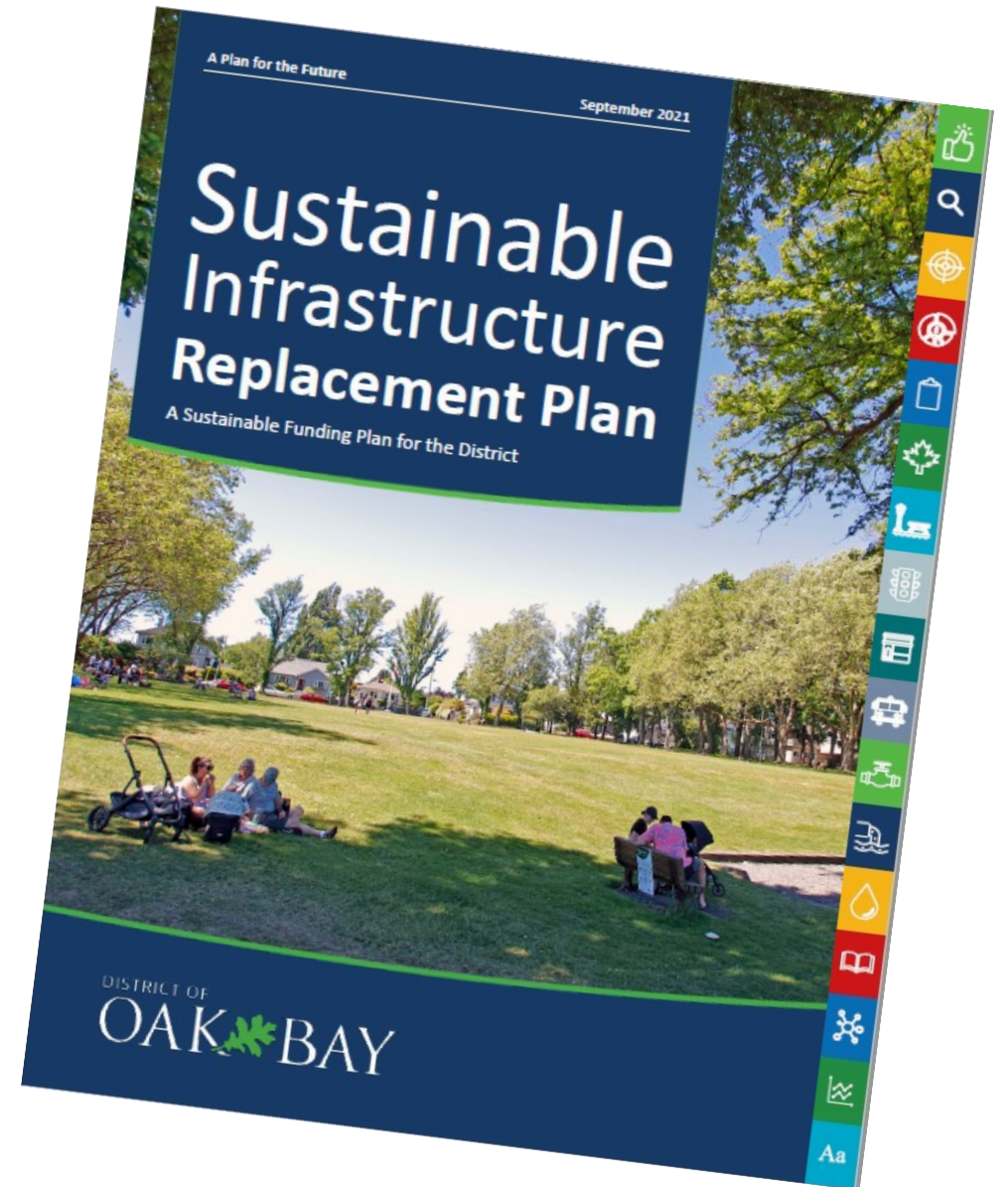




DRAFT Sustainable
Infrastructure
Replacement Plan –
September 2021



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BACKGROUND

- Council directed that staff develop a multi-year Asset Management (AM) Program in 2015
- In 2018 the AM Strategy was endorsed which detailed multiple components including Long Term Infrastructure Replacement Plan
- In 2021 Council directed that Plan be fast-tracked and delivered by September 2021
- This is the first time Council has seen this Draft Plan

Based on current conditions:

1. Estimate replacement cost for all depreciable assets
2. Forecast infrastructure spending over the next 100 years
3. Analyze current funding levels
4. Forecast reserve balances and the need for debt financing if applicable

Why was the Plan Prepared

- Ensure critical capital services continue

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Assumptions

1. Imperfect information, living document
2. Existing Capital only
3. 2021 Dollars
4. Infrastructure Replacement Standards
5. Climate Change
6. Council Decision Making
7. Investment returns

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TERMINOLOGY

1. Annual Sustainable Infrastructure Funding
2. Annual Infrastructure Funding Gap
3. Sustainable Reserve Targets
4. Cumulative Infrastructure Funding Gap
5. Useful Life vs Physical Life

- 1. Approximate Replacement cost: \$900.3M**
- 2. Overdue Assets: \$273.9M**
- 3. Annual Funding Gap: \$4.6M, 36% (\$8.2M vs \$12.8M)**
- 4. Cumulative Infrastructure Funding Gap: \$463.5M**
- 5. Spending/Debt: approximate \$1.3B for the next 100 years**

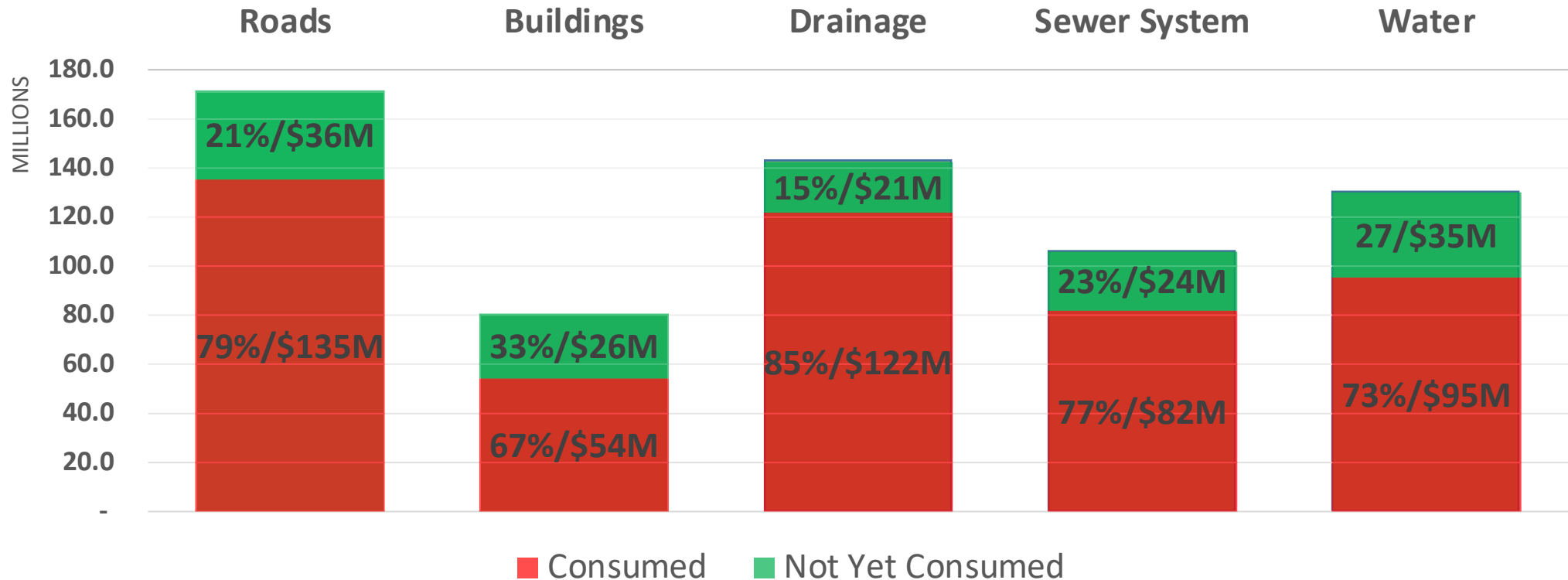
OVERVIEW OF ASSET INVENTORY

Asset	Quantity	Replacement Value
Natural Assets	N/A	Unknown
Land	75.68 ha	\$149.1 M
Park Structures	45+	\$6.7M
Roads	106.1km/ 944k m ²	\$171.5M
Buildings	30+	\$80.7M
Vehicles & Equipment	100 units +	\$15.7M
Drainage	141km	\$171.2M
Sanitary Sewer	100km	\$137.4M
Water	116km	\$168.0M
TOTAL		\$900.3M

Notes:

1. Land value is based on BC Assessment value

MAJOR ASSETS - PORTION CONSUMED



SUSTAINABLE RESERVE TARGET

Asset	Value Consumed	Reserve Balance	Funding Gap
Natural Assets	N/A	\$1.2M	\$(1.2)M
Park Structures	3.1M	0.4M	2.7M
Roads	135.3M	4.6M	130.7M
Buildings	54.3M	4.2M	50.1M
Vehicles & Equipment	10.3M	6.5M	3.8M
Drainage	121.7M	5.0M	116.7M
Sanitary Sewer	81.9M	8.7M	73.2M
Water	95.4M	7.9M	87.5M
TOTAL Sustainable Reserve Target	\$502.0M	\$38.5M	\$463.5M

Sustainable Funding Target = \$502.0M

Actual reserves = \$38.5M

Cumulative Funding Gap = \$502.0M – \$38.5 = \$463.5M

Note that the District had a total of \$16.7M undedicated reserves which has been included in the \$38.5M balance. These reserves have been allocated in the plan using forecasted spending over the next 20 years.

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Annual Funding Gap

How does a Cumulative Infrastructure Funding Gap Occur?

- Annual funding is less than sustainable annual funding
- Annual Funding Gap accumulates year after year

What is Sustainable Annual Funding?

- $\text{Replacement cost} / \text{useful life} = \text{annual Sustainable Funding}$

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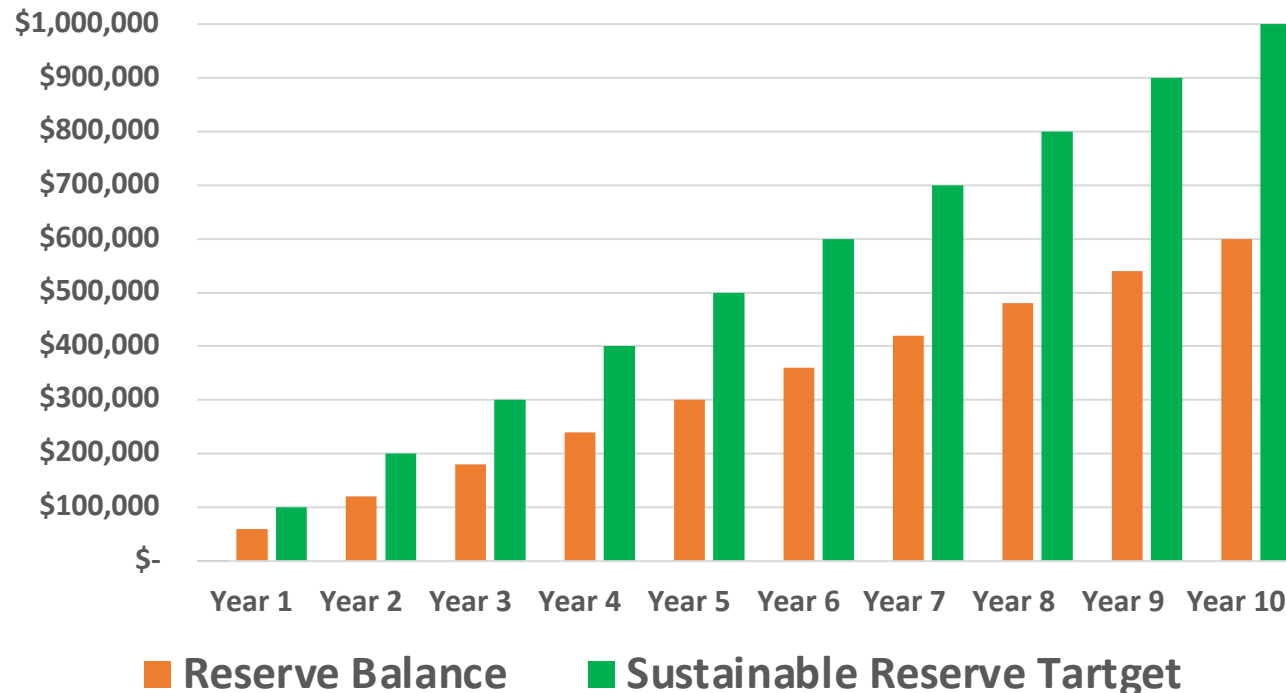
UNSUSTAINABLE ANNUAL FUNDING EXAMPLE

Assume:

- Fire truck replacement cost: \$1M
- Useful life = 10 years
- Annual Sustainable funding = $\$1\text{M}/10 = \$100,000$
- Assume Annual unsustainable funding = \$60,000
- Annual Funding Gap = \$40,000 ($\$100\text{k} - \60k)

UNSUSTAINABLE ANNUAL FUNDING EXAMPLE

Unsustainable vs Sustainable
Annual Funding Example

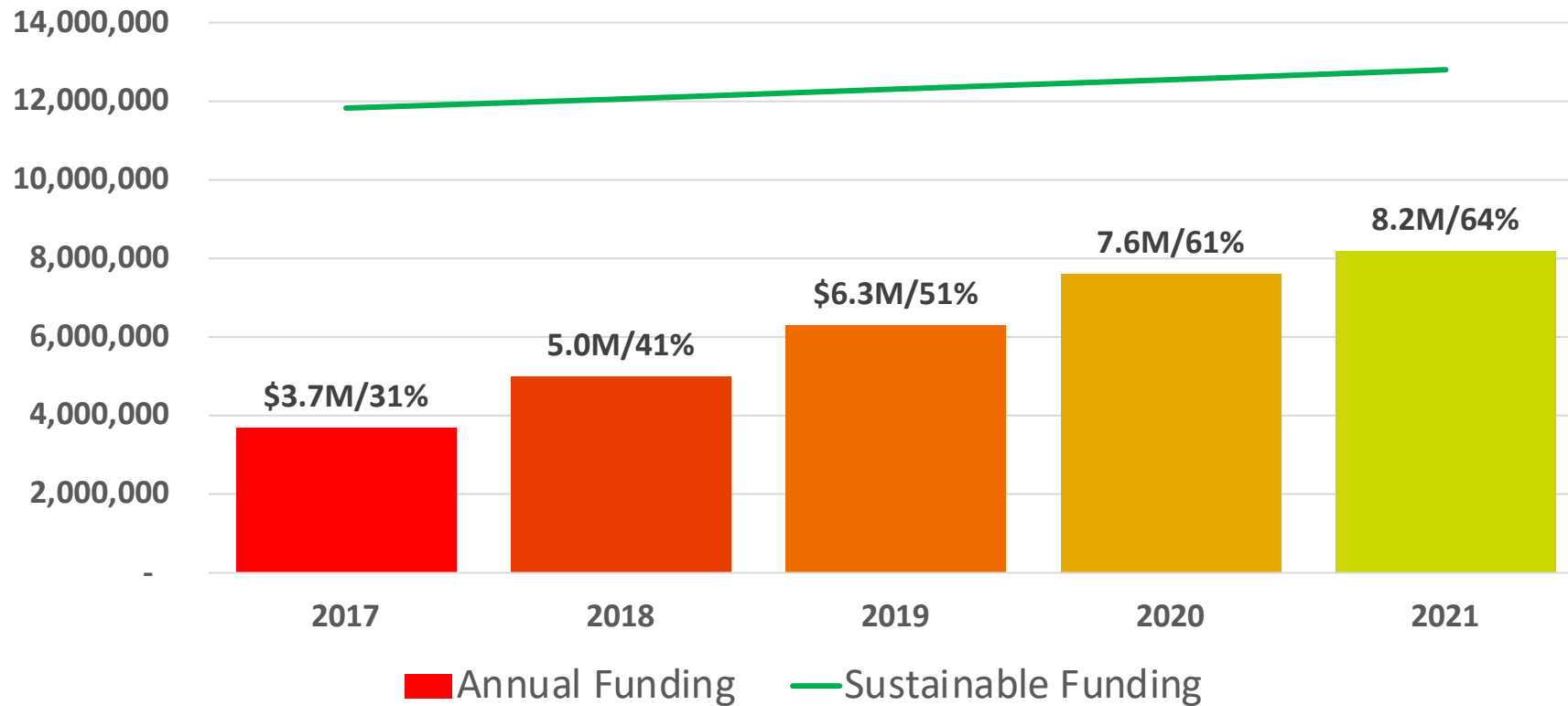


Notice after 10 years sustainable funding would result in a reserve balance of \$1M so the fire truck could be replaced.

However in this example, only \$600,000 was saved (10 years of \$60k contributions)

So the Cumulative Infrastructure Funding Gap is \$400,000

Annual Sustainable Funding Progress

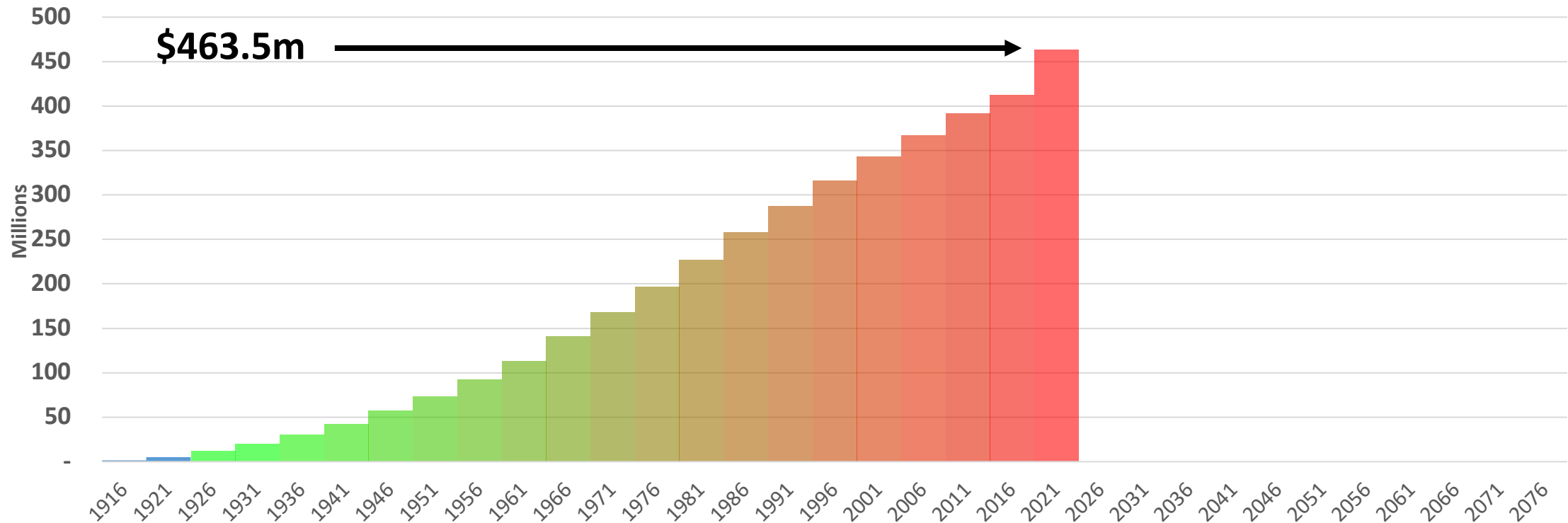


The SIRP estimates annual sustainable funding to be \$12.8M

Previous estimate \$9.3M (in 2021-2025 Financial Plan)

Funding Gap Growth 1916-2021

Forecasted Cumulative Infrastructure Gap
1916-2076 (2021 \$s)



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KEY RECOMMENDATIONS

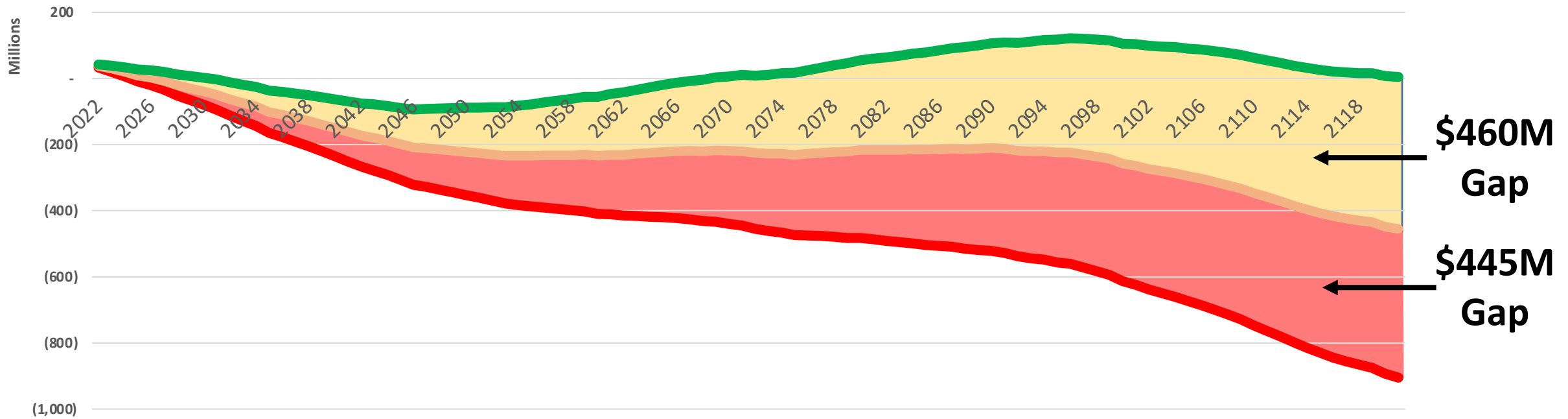
1. Increase Annual Reserve Contributions

- Taxes: 6 years of 2.06% (\$66 per median residential property per year)
 - ✓ Pace is governance decision
- Water Utility Rates: 8 years of 2.50% (\$10 per average residential property per year)
- Sewer Utility Rates: 8 years of 2.50% (\$7 per average residential property per year)

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Reserve Forecasts
2017 vs Current vs Sustainable Funding

2017 Funding Current Funding Sustainable Funding



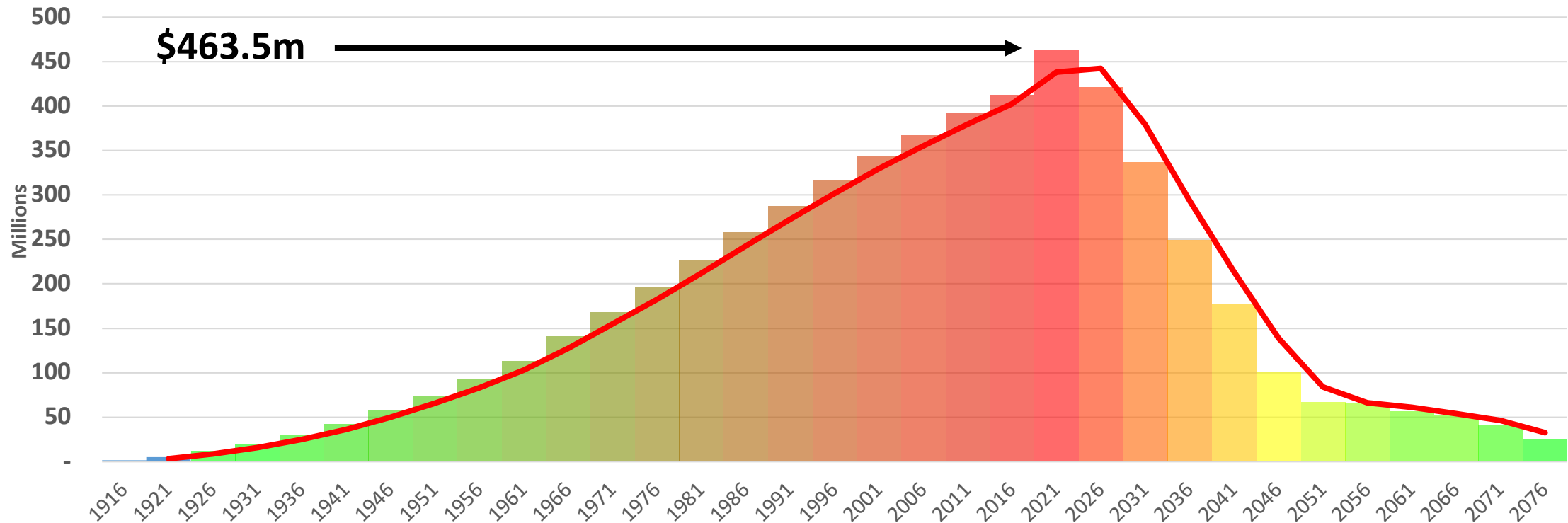
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KEY RECOMMENDATIONS

2. Replace \$273.9M overdue assets over next 25 years, and
3. Significantly increase replacement of road, water, storm and sanitary sewer infrastructure

Forecasted Cumulative Infrastructure Gap
1916-2076 (2021 \$s)



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2019-2022 Council Priorities Success

- Reduced the 100-year funding gap by \$460M since 2018
 - ✓ Pace of annual increase in infrastructure funding unprecedented
- Prepare Asset Management BC endorsed 'Long Term Financial Sustainability Plan'
- Such a long-term plan is uncommon in BC local governments

A sensitivity analysis was conducted to determine how much key findings would change if key assumptions were changed

- There is a low probability that costs will be less than forecasted
 - ✓ good chance they will be higher because of climate change and other factors
- Useful life can be impacted by numerous factors including local conditions, installation quality, etc.

- The findings we recalculated after optimistically assuming 25% increase to the useful life for all assets
- Results in the same broad findings:
 1. A large cumulative infrastructure funding gap has accumulated over the last century, and
 2. A \$2-4M annual funding gap still remains to be closed
 3. Significant portion of assets are past useful life

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NEXT STEPS

1. Inform & Consult with public (budget questionnaire)
 - Consultation to inform 2022-2026 Financial Plan
2. Staff to return Q1 2022 with recommendations on infrastructure project delivery capabilities, capacities and outcomes



GOVERNANCE DECISION AT HAND

“THAT questions about infrastructure service levels and the pace of tax/utility rate increases be included in the 2022-2026 Financial Plan budget questionnaire for public engagement.

AND FURTHER THAT staff provide a report with recommendations on infrastructure project delivery capabilities, capacities and outcomes within Quarter 1 of 2022.”