

Asset Management Plan - Update Part 2

October 4, 2021



Asset Management Planning: What is it?

- Asset management encompasses the renewal/maintenance/rehabilitation of assets the Town **owns at this time.**
 - Growth is covered through separate financial plans such as development charge studies.
- Ultimate goal of asset management planning is to ensure and be able to demonstrate the financial sustainability of the assets that provide the services taxpayers rely on.
- Is a strategic planning process that is integrated with budgeting processes and long-term financial planning.

Asset Management Planning: What it isn't?

- It isn't depreciation.
- Asset Management planning differs from the financial audits and reporting that governments carry out under Public Sector Accounting Board (PSAB) standards and are shown in Annual Audited Financial Statements.

Ontario regulation 588/17

- Ontario regulation 588/17 was passed in 2017 which made it mandatory for municipalities to develop and adopt AMPs.
 - Phase 1 due July 1, 2022 (was extended due to the Pandemic);
 - Phase 2 July 1, 2024;
 - Phase 3 July 2025.



Infrastructure Status/LOS: Roads

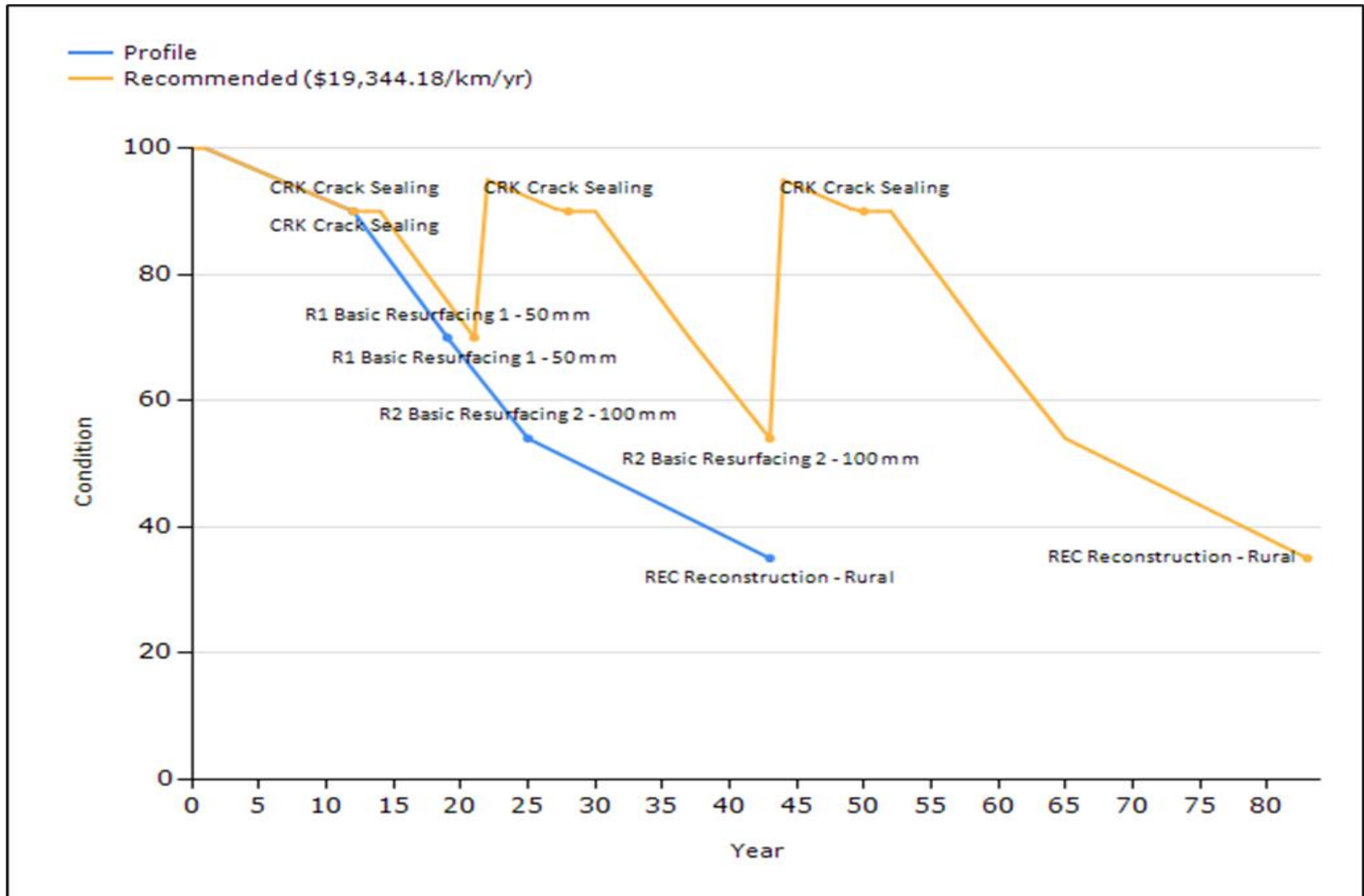
- Collingwood Roads are in above average condition
 - This has been achieved through:
 - Growth – new roads and reconstruction;
 - Successful grant application history;
 - Lifecycle funding (starting 2014) and ongoing capital programs: Sanitary Renewal and asphalt resurfacing.

Asset Class	Class Description	# of KMs	Average PCI	Replacement Cost
HCB-H-R	HCB, low volume, rural/SU	28.65	83.40	\$ 34,285,260
HCB-H-U	HCB High Volume Urban	20.79	87.96	48,809,979
HCB-L-R	Low volume rural/semi-urban	65.46	78.74	66,730,468
HCB-L-U	HCB, Low Volume, Urban	30.92	82.71	42,608,010
HCB4-U	Urban HCB-Collector/Local	0.74	56.72	729,753
	Grand Total Road Network	<u>146.56</u>	<u>81.90</u>	<u>\$ 193,163,470</u>

Infrastructure Status/LOS: Roads

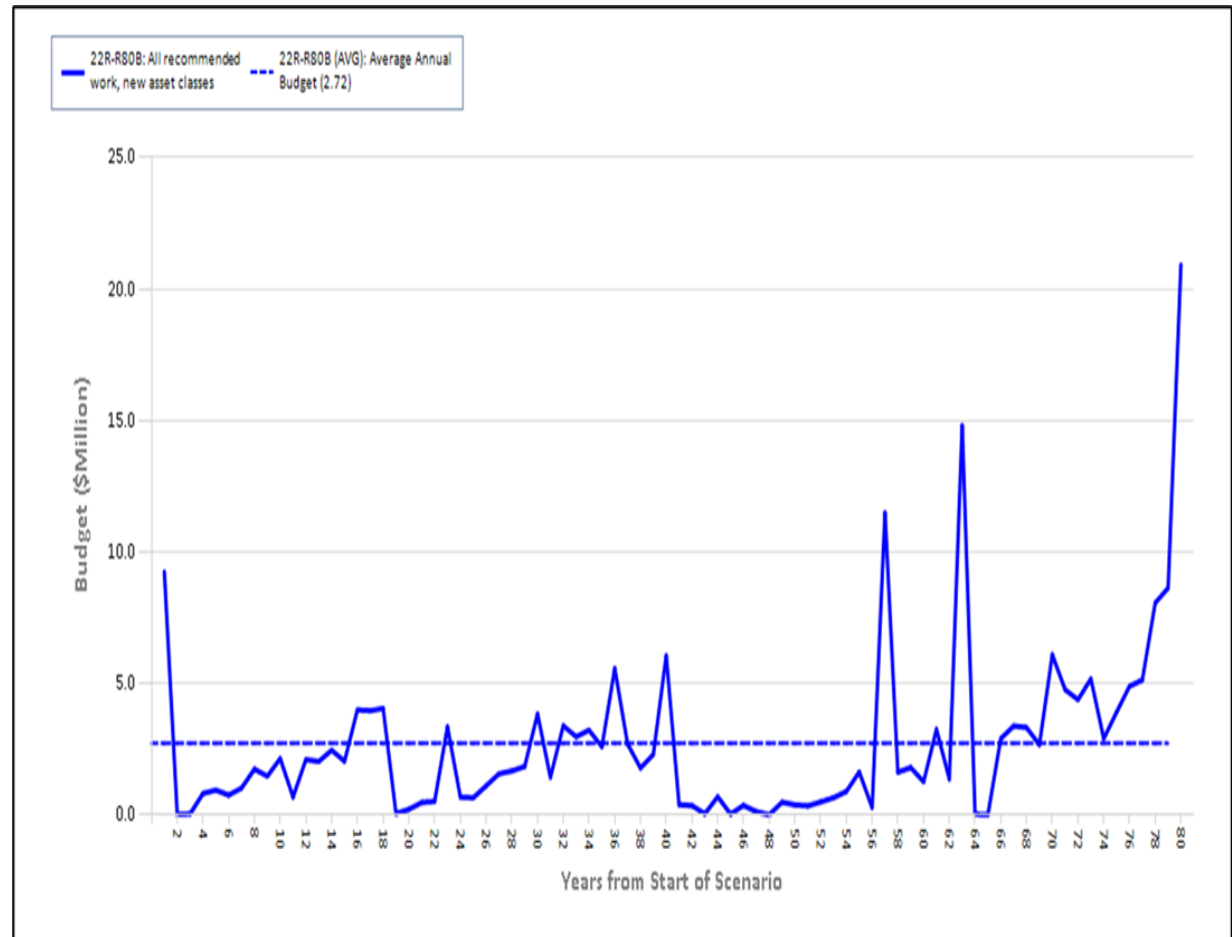
- Road Management
 - Best practices - doing the right things at right time
 - Significantly increase life of road ~ 80 years vs ~ 45 years if treatments aren't applied.
 - Equates to approximate savings \$181M
 - Smaller consistent investment in roads will save taxpayers money in the long term, and result in better average conditions of the road network.

Infrastructure Status/LOS: Roads



Financing: Roads

- Staff have continued to review and refine the data in the Roads inventory (and all core assets) with a more concerted effort in the past year and half to meet the targets of the Ontario regulations 588/17.
- While the focus of the AMP has been to plan and work through the details of the next 10 years **it is imperative that as a municipality we are concentrating on the overall life span of each asset, to meet the goal of full asset management.**



Financing: Roads

- You will note that the average investment over 80 years equates to \$2.72M per year.
- Presented in 2021\$;
- Inflation should and needs to be addressed;

Improvement	Lifespan Average
Crack Sealing	\$ 40,032
R1 - 50MM	421,004
R2 - 100MM	831,261
Reconstruction	1,423,786
Grand Total	\$ 2,716,082

Infrastructure Status/LOS: Bridges

- The Town owns and maintains 25 bridges and has a legislative requirement to conduct bridge studies every 2 years to assess the condition and renewal or rehabilitation needs.
- Bridges are complex multi faceted structures with different elements requiring maintenance and renewal programs (deck, concrete, beams) and are assessed according to their own assessment criteria under Ontario Structure Inspection Manual (OSIM).
- The level of service for bridges is defined by the results of the town's OSIM reports which also produces a 10-year plan for rehabilitation and renewal.

Financing: Bridges

- According to the 2020 OSIM report the town's bridges will require \$8.6M in improvements
- \$860k/year over the next 10 years
- Based on life of the assets a similar amount per year in needs over the longer term

Name	Replacement Cost	Average Condition	Average Age	10 Year Capital Plan
Pretty River Bridge - Bridge 1	\$ 3,030,500	72	50	\$ 456,000
Hume Street Bridge	2,122,500	84	61	-
Highway 26 Bridge	947,500	100	61	-
Ontario Street Bridge	4,772,500	36	81	4,772,500
Huron Street Bridge over Station Creek	812,500	73	91	-
Hurontario Street Bridge	1,067,500	75	15	-
First Street Bridge over Oak Street Canal	5,869,500	70	51	415,000
Second Street Bridge over Oak Street Canal	576,500	67	55	202,000
Third Street Bridge over Oak Street Canal	981,500	67	61	247,000
Fourth Street Bridge over Oak Street Canal	962,500	97	7	-
Fifth Street Bridge over Oak Street Canal	1,022,500	97	6	-
Sixth Street Bridge over Oak Street Canal	801,500	72	50	219,000
First Street Bridge over Hickory Street	766,500	88	12	-
Mountain Road Bridge over Black Ash Creek	1,818,500	72	43	1,106,500
Highway 26 Bridge over Black Ash Creek	3,196,500	75	25	-
Sixth Street Bridge over Underwood Creek	1,326,500	73	21	238,500
Mountain Road Bridge over Silver Creek	1,088,500	66	38	342,000
Highway 26 West Bridge over Silver Creek	1,806,500	70	37	229,000
Highway 26 West Bridge over Silver Creek Ext.	1,268,500	74	31	284,000
Hwy 26 Cranberry - bridge 23	906,500	74	61	130,000
Hume St at Minnesota - bridge 25	597,500	98	6	-
Grand Total	\$ 35,742,500	76	41	\$ 8,641,500

Infrastructure Status/LOS: Water Linear Assets

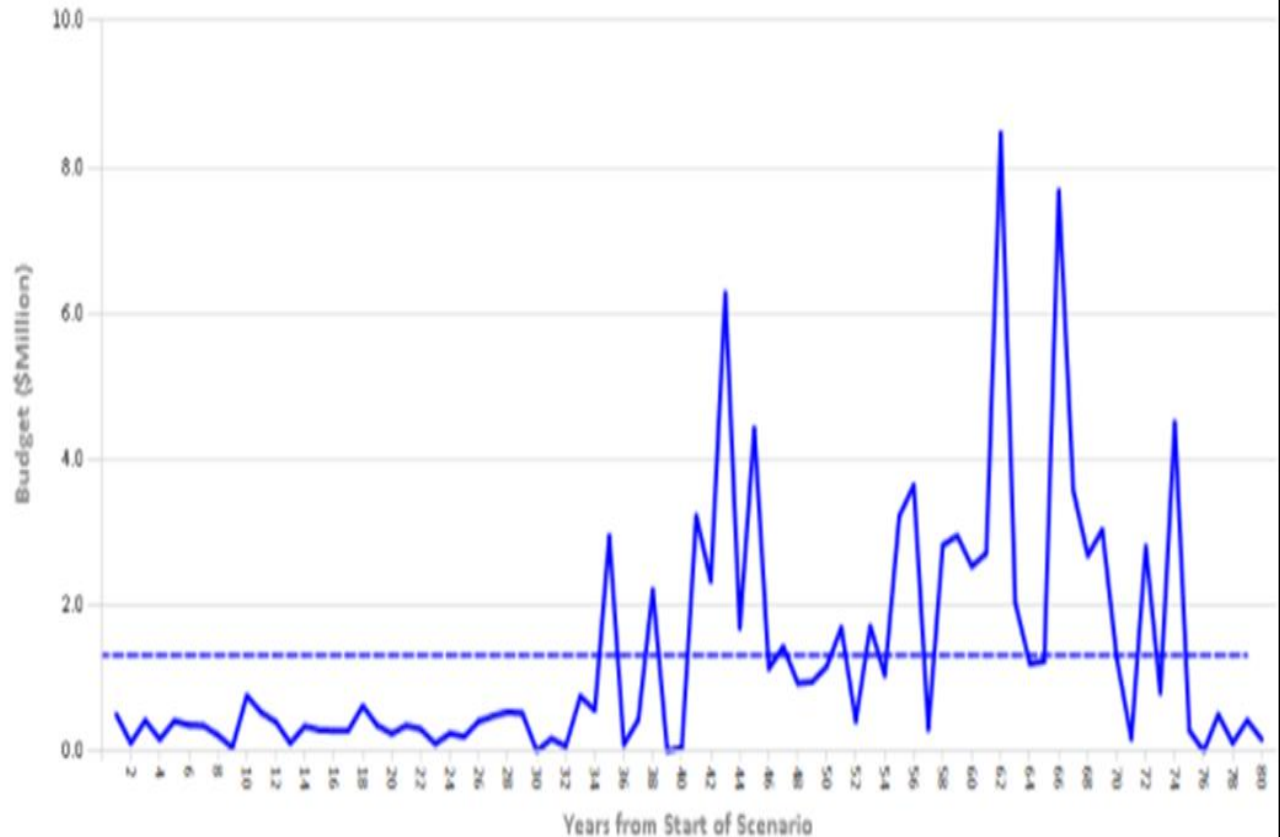
- With underground linear infrastructure it can be challenging to assess the condition and thus AMP plans are often based on the age of the assets.
- However, there are more factors that can help with the assessment of mains, such as material types, soil conditions or depth of installation, as well as the number of breaks experienced.
- Taking these additional factors into consideration the water department has developed a water priority weighting tool which assigns a weighted value score to asset segments based on age, number of breaks per 100 meters, main depth, and pressure issues in order to identify the most critical renewal requirements.

Infrastructure Status/LOS: Water Linear Assets

Asset ID	Length in Meters	Average Condition	Replacement Cost	Average of age
WM-CI-250	2,942	14.6	\$ 1,672,672	65.5
WM-CI-400	604	26.0	481,694	59.2
WM-CI-150	25,522	24.9	12,464,731	56.9
WM-CI-300	11,531	27.0	7,106,929	56.0
WM-CI-200	4,357	26.3	2,190,980	55.7
WM-CON-400	3,040	31.0	3,967,753	54.2
WM-CON-450	893	33.8	1,502,044	53.0
WM-PVC-300	107	64.6	48,986	28.3
WM-DI-300	25,241	66.0	15,624,211	26.9
WM-DI-250	2,393	67.3	1,385,654	25.8
WM-CON-600	4,885	68.8	9,279,545	25.0
WM-DI-150	56,986	69.4	27,821,901	24.3
WM-DI-200	19,739	72.7	9,865,244	21.4
WM-DI-400	7,064	74.5	5,667,405	20.4
WM-CU-50	531	70.9	9,920	19.3
WM-PVC-150	1,453	77.6	709,515	17.9
WM-DI-500	3,290	81.6	3,621,445	14.8
Grand Total	170,578	59.3	\$ 103,420,629	31.7

Financing: Water Linear

Over a full lifecycle view, the annual investment requirements have also been consistent with further revisions and refinement of the AMP at approximately \$1.34M/year.



Infrastructure Status/LOS: Water Vertical Assets

- The Water Treatment Plant facility, as well as associated reservoirs and booster stations has a current estimated replacement cost of \$36.9M (without expansion – note that the expansion will be included upon the next update to the AMP).
- A town-wide facility condition assessment is being conducted and until this is completed (late Fall 2021), the amount determined for the lifecycle portion has been based solely on age and useful life of the facilities.

Financing: Water Vertical Assets

Asset	Average Age	Average Service Life	Replacement Value 2021 \$	Annual investment Required
Georgian Meadows Booster Station	18	47	\$ 483,905	\$ 10,369
Osler Bluff Booster Station	21	47	486,331	10,421
South End Reservoir	13	40	4,350,297	108,757
Water Filtration Plant - Facility	24	100	3,668,000	36,680
Water Filtration Plant - Intake Pipe	71	125	2,341,808	18,734
Water Filtration Plant - Vertical Works	24	23	16,752,512	723,404
Water Tower	91	150	3,170,247	21,135
West End Reservoir	30	45	5,721,968	127,155
Grand Total	26	40	\$ 36,975,069	\$ 1,056,656

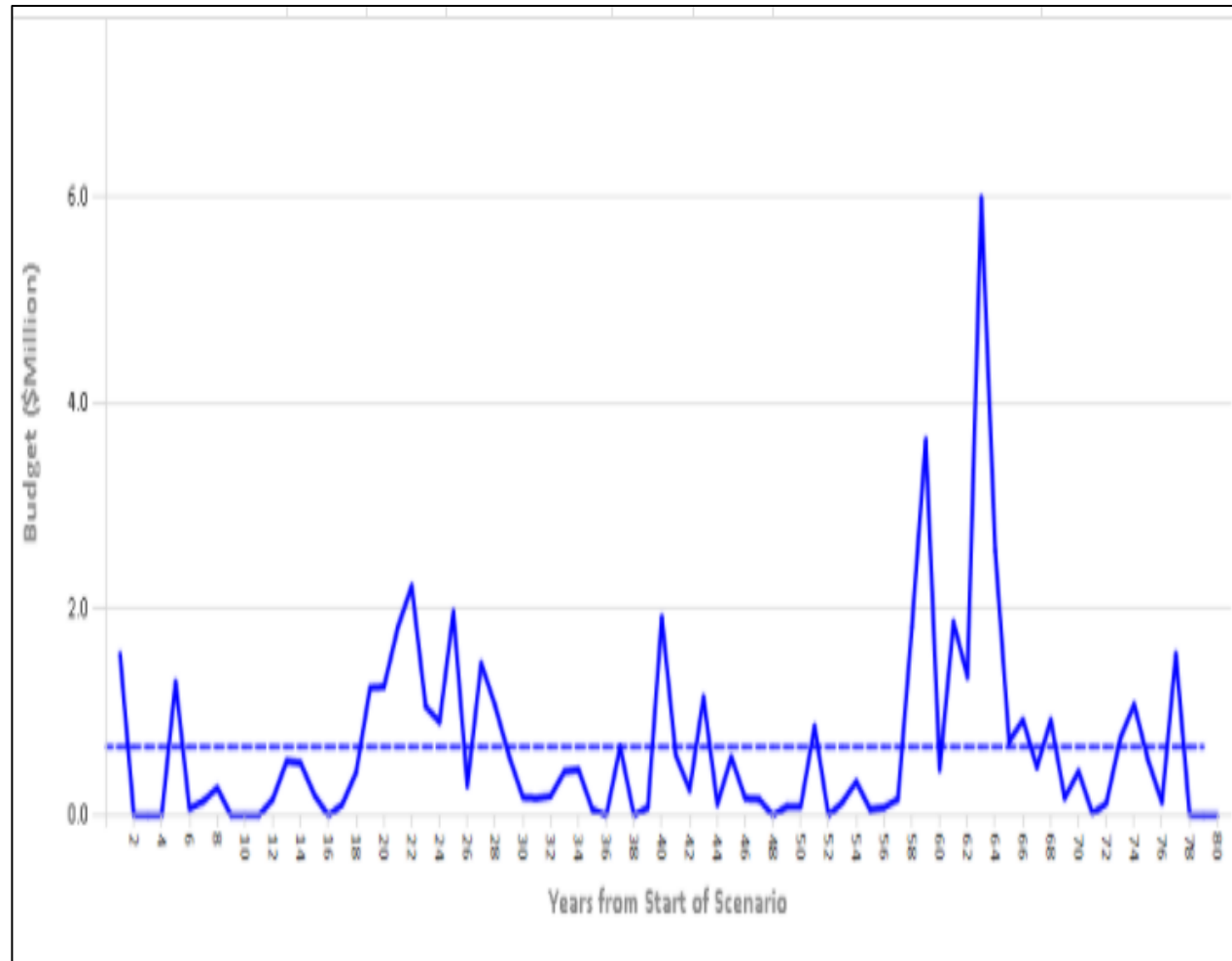
Infrastructure Status/LOS: Sanitary Linear Assets

- The sanitary inventory layer has benefited from extensive review and updates from the Master Servicing Plan being conducted by Public Works.
- Over 20,000 meters of updates added to system since 2019. The linear inventory is now > 117,000 meters.
- Conditions are based solely on age at this time.
- The system has benefited from the commitment of the ongoing Sanitary renewal capital program (10+ years now) which has addressed the most critical needs.

Sanitary Mains	Meters	Average Condition	Average age	Replacement Cost - 2021\$
SAN-150	1,151	88.9	21.5	\$ 507,158
SAN-200	37,443	80.4	29.5	14,133,914
SAN-250	30,669	69.2	41.7	15,479,200
SAN-300	11,384	74.3	36.0	6,077,214
SAN-375	9,912	76.1	33.3	5,501,710
SAN-450	16,440	77.0	33.0	10,686,027
SAN-525	3,556	67.7	46.0	2,658,134
SAN-600	783	75.6	37.3	687,082
SAN-675	540	88.4	19.4	561,338
SAN-750	5,202	72.0	40.5	6,424,488
Grand Total	117,080	75.4	35.1	\$ 62,716,265

Financing: Sanitary Linear Assets

Over a full lifecycle, the annual investment requirements have also been consistent with further revisions and refinement of the AMP at approximately \$700K/year.



Infrastructure Status/LOS: Sanitary Vertical Assets

- Much of the wastewater treatment facilities are nearing the end of their original estimated useful life; however these facilities are being impacted more so by growth with a major expansion project already being planned to start in 2026 with an estimated cost of \$67.8M (largely covered by development charges).
- Once again as we await the condition assessments for town facilities, the amount determined for the lifecycle portion has been based solely on age and useful life.

Financing: Sanitary Vertical Assets

Asset	Asset item	Average Age	Average Service Life	Replacement Value \$2021	Annual Investment Required
Water Pollution CP	Electrical	22	20	\$ 11,558,400	\$ 577,920
	Mechanical	22	30	30,822,400	1,027,413
	Structural	27	75	34,675,200	462,336
Grand Total		23	39	\$ 77,056,000	\$ 1,961,425

Asset	Asset item	Average Age	Average Service Life	Replacement Value \$2021	Annual Investment Required
Black Ash Creek SPS	Electrical (incl. generator)	37	20	\$ 230,720	\$ 11,536
	Forcemain	6	75	230,720	3,076
	Pumps, Piping and Mechanical	37	20	230,720	11,536
	Structural	37	75	385,280	5,137
	Variable Frequency Drive	8	20	38,080	1,904
Cranberry Trail SPS	Electrical	5	20	164,640	8,232
	Forcemain (PVC)	5	75	339,360	4,525
	Pumps, Piping and Mechanical	5	20	180,320	9,016
	Structural and Architectural	5	75	203,840	2,718
Minnesota St. SPS	Electrical (incl. generator)	29	20	230,720	11,536
	Forcemain	4	75	200,480	2,673
	Pumps, Piping and Mechanical	40	20	308,000	15,400
	Structural	60	75	385,280	5,137
	Variable Frequency Drives	9	20	77,280	3,864
Paterson St. SPS	Electrical	14	20	113,120	5,656
	Forcemain (PVC)	4	75	132,160	1,762
	Pumps, Piping and Mechanical	14	20	218,400	10,920
	Structural	14	75	278,880	3,718
St.Clair St. SPS	Electrical/Scada	4	20	846,720	42,336
	Forcemain (HDPE)	4	75	1,182,720	15,770
	Pumps, Piping and Mechanical	4	20	703,360	35,168
	Structural	4	75	648,480	8,646
Grand Total		16	45	\$ 7,329,280	\$ 220,267

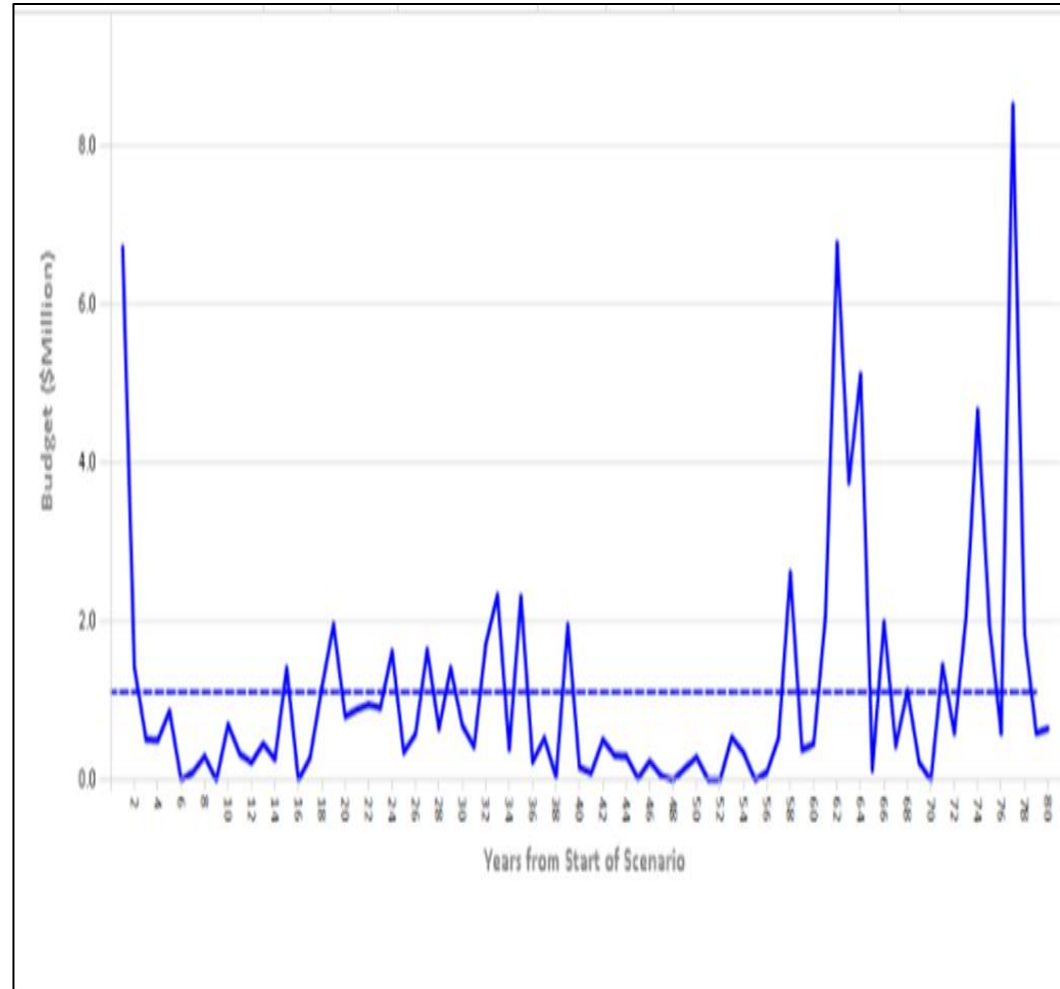
Infrastructure Status/LOS: Stormwater Assets

- The storm water system has had the most dramatic updates due to the Master Servicing Plan review and the efforts of our GIS staff (In 2019, we didn't have sufficient data to do reasonable analysis).
- The condition of these assets are based solely on age and the town is benefitting from a fairly young system.

Asset	Number of Segments	Average Condition	Replacement Cost - 2021\$	Average Age	Length in Meters
STS-1050	38	75	\$ 5,556,368	38	2,728
STS-1050-CSP	3	1	208,880	57	103
STS-1200	12	85	2,174,094	22	862
STS-1350	32	81	5,981,137	28	2,103
STS-1500	7	52	2,199,899	57	672
STS-1500-CSP	4	24	1,995,841	40	610
STS-300	619	86	12,359,987	23	13,055
STS-300-CSP	239	17	4,252,063	46	4,885
STS-375	168	88	6,502,750	21	6,324
STS-375-CSP	109	16	4,943,091	47	4,906
STS-450	159	89	7,809,078	19	7,335
STS-450-CSP	165	20	6,857,865	45	6,520
STS-525	127	83	6,922,913	28	6,295
STS-525-CSP	10	6	356,392	51	324
STS-600	161	85	10,986,719	24	8,520
STS-600-CSP	27	27	1,356,942	38	1,052
STS-750	134	79	10,862,638	29	7,222
STS-750-CSP	11	50	824,852	26	548
STS-900	79	82	7,196,676	26	4,391
STS-900-CSP	11	43	1,059,309	29	643
STS-975	6	92	407,554	16	228
Grand Total	2,121	67	\$ 100,815,048	30	79,323

Financing: Stormwater Assets

- The stormwater network has the highest annual average estimated cost of any of the underground linear systems at \$1.1M/year.



Financing: Core Assets Summary

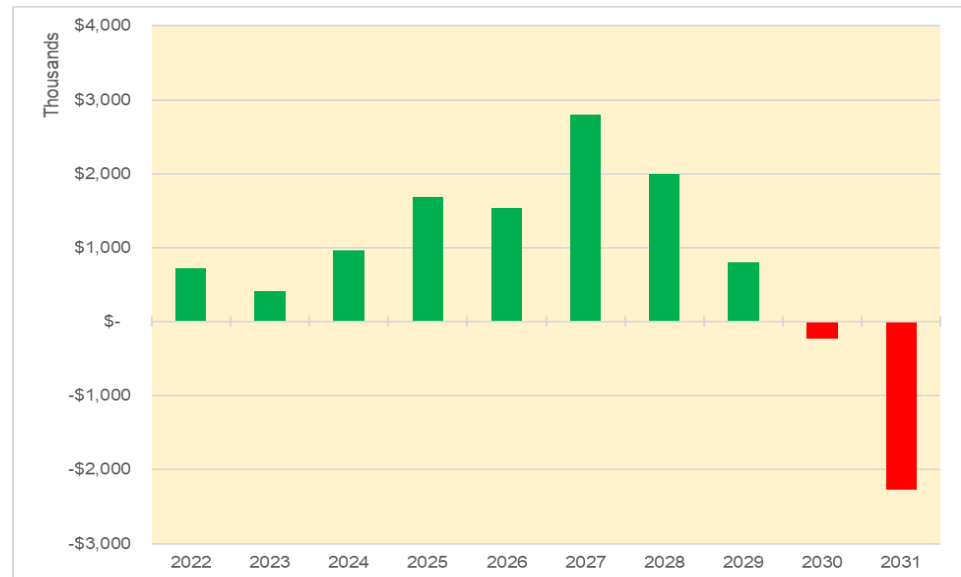
- Summary amount needed to be invested annually to ensure that all Core Assets are sustainably renewed over their lifecycles = \$10M/year.
- Sources of funding:
 - Reserves/Reserve Funds;
 - Grants;
 - Debt financing (internal/external);
 - Tax Levy; and
 - User Fees.

Asset Group	Annual Lifecycle Amount - 2021\$
Roads	\$ 2,716,082
Bridges	864,150
Water - Linear/Vertical	2,398,166
Wastewater - Linear/Vertical	2,853,479
Stormwater	1,114,235
Grand Total	\$ 9,946,112

Financing: Tax Supported (Roads/Bridges/Stormwater)

- Summary lifecycle investment amount of Tax Supported Assets = \$4.7M/year.
- Sources of funding:
 - Reserves/Reserve Funds – Special Capital Levy & Lifecycle Reserve;
 - Grants – OCIF/FGT etc.;
 - Debt financing (internal/external); and
 - Tax Levy.

Roads/Bridges/Stormwater	Amount
Annual Lifecycle Amount - 2021\$	\$ 4,694,467
Less:	
Reserve Contribution per year	2,200,000
OCIF Funding	900,000
Federal Gas Tax (50%)	315,000
Amounts in Operational Budget	356,785
Financing Gap	\$ 922,682



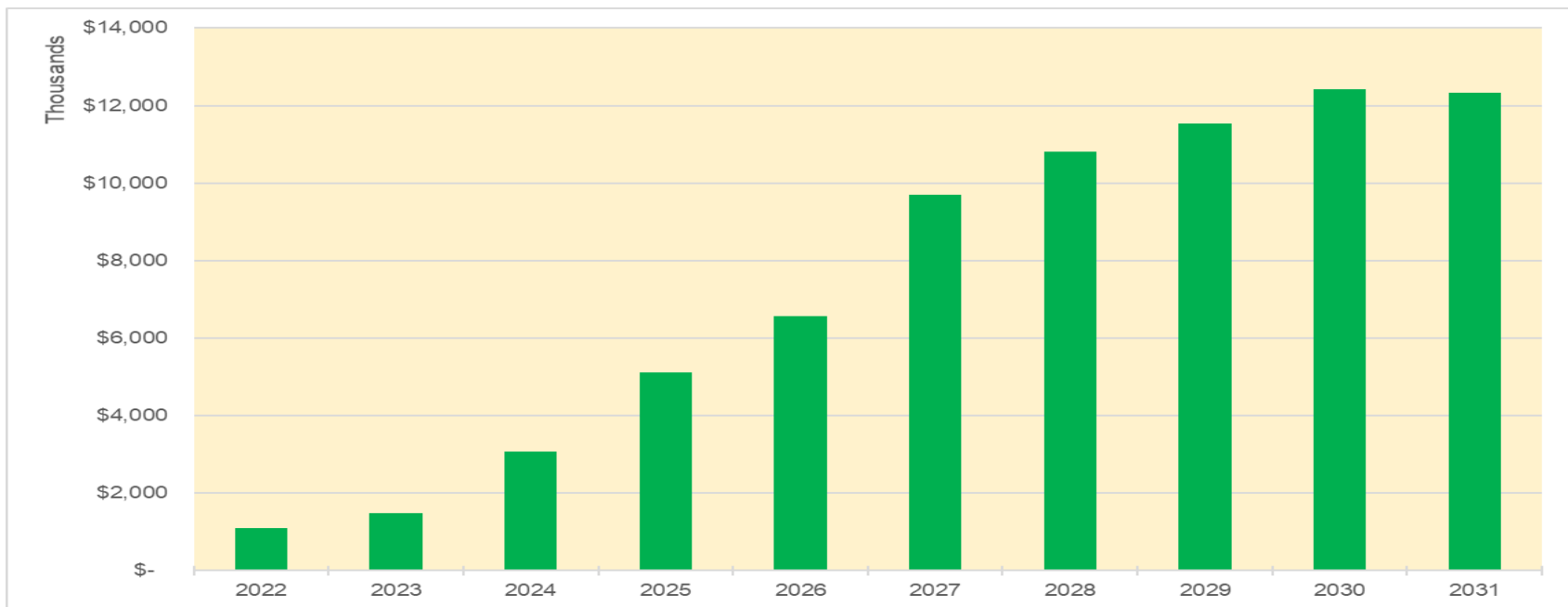
How do we finance the funding gap?

Options are available and this not uncommon for municipalities – we aren't alone.

1. Add small increases to the Special Capital Levy over the next several years.
2. As old debt expires use the tax levy component to create a future debt reserve and/or additional contributions to the lifecycle fund.
3. Slowly increase the contribution to the reserve funds.

How do we finance the funding gap?

- If we combined all 3 options as noted over the next 5 years there could be small impacts to the tax rate (up to 2.25%) but provide for big changes to the reserves required.
- Debt financing would also need to be considered.



Financing: User Fee Supported (Water/Wastewater)

- Summary financing amount of user Fee Supported Assets = \$5.3M/year.
- Sources of funding:
 - Reserves/Reserve Funds – Water/Wastewater Reserve;
 - Grants – OCIF/FGT etc.;
 - Debt financing (internal/external); and
 - User Fees Levy.

Water/Wastewater Assets	Amount
Annual Lifecycle Amount - 2021\$	\$ 5,251,645
Less:	
Reserve Contribution per year (average)	4,184,682
Federal Gas Tax (50%)	<u>315,000</u>
Financing Gap	<u>\$ 751,964</u>

- Reserves continue to build for the next 10 years since spending in this area builds significantly in the next 20 – 30 years.
- Slight increases in the User Fees over the next 5 – 10 years will help continue to build financial sustainability.