ASSET MANAGEMENT PLAN

2021

TOWN OF ERIN

Contents

Introduction

Infrastructure is inextricably linked to the economic, social and environmental advancement of a community. As analyzed in this Asset Management plan (AMP), the Town of Erin's infrastructure portfolio comprises the following asset classes; Road Network, Bridges and Culverts, Buildings, Machinery and Equipment, Land Improvements, Vehicles and Water. The asset classes analyzed in this asset management plan had a total 2021 valuation of $188.9 million.

The intent of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio. The initial acquisition of capital assets accounts for only 10 to 20% of their total cost of ownership. The remaining 80 to 90 % comes from operations and maintenance.

This Asset Management Plan (AMP) 2021 includes 2021 completed capital projects and provides details of the state of infrastructure of the town's service areas. Furthermore, the long-term financial strategy was also updated with changes to funding allotments based on the 2022 Capital budget and assumes the same for the long-term plan.

1.0 Financial Profile: Tax Funded Assets

1.1 Funding Objective

As with any Asset Management Plan, the objective is to have ownership of an asset base that is fully funded. This section provides an overview of the Town's current funding position. Details pertaining to these calculations are found in the remainder of the report.

1.2 Current Funding Position

Presented below is an updated funding scenario calculating the Town of Erin's infrastructure deficit by utilizing the same methodology as the 2020 Asset Management Plan update. This is calculated by taking each assets' replacement cost and dividing it by the estimated useful life. Furthermore, the bridges and culverts estimated value in the 2021 Ontario Structure Inspection Manual (OSIM) report was used for this update. The result yields the "Average annual investment required" in order to meet the replacement cost needs at the end of the useful life. This annual average is compared against the funding available in 2022 to arrive at an Annual Deficit amount of $1.953 million.

Calculated by CityWide, the average annual investment requirement for the above asset categories is $5.162 million compare to $4.5 million in the 2020 AMP Update. The 2022 funding allocated to these assets for capital purposes is $3.2 million resulting in an annual average deficit of $1.953 million compared to a $2.3 million deficit in the 2020 AMP update. Therefore, these asset categories are currently funded at 62% of their long-term requirement. This is a significant improvement from the 2020 Asset Management Plan update where these categories were funded at 50% of the long-term requirement.

In developing a long term financial strategy, the following changes to revenue and expenses need to be considered.

- The Town Ontario Community Infrastructure Fund (OCIF) formula-based component for 2022 is $0.549 million. This grant is no longer assured from year to year.
- Total debt payments for these asset categories will be decreasing by $167k over the next 10 years, $332k by year 15 and $432k by year 20.
- Water buildings and equipment are not included in the Facilities and Machinery & Equipment in this AMP as they are funded from rates and not taxation.

Town of Erin							
Summary of Infrastructure Requirements & 2022 Funding Available							
Asset Category	Average Annual Investment Required	Annual Funding Available					Annual Deficit
		Taxes	CCBF	OCIF	Taxes to Reserves	Total	
Tax funded:							
Road Network	2,301,328	-	725,579	-	697,509	1,423,088	878,240
Bridges & Culverts	830,590	-	-	548,545	-	548,545	282,045
Facilities	864,423	193,500	-	-	30,294	223,794	640,629
Land Improvements	221,469	55,000	-	-	-	55,000	166,469
Machinery and Equipment	376,364	155,000	-	-	66,300	221,300	155,064
Fleet	567,714	635,000	-	-	102,000	737,000	(169,286)
Total	**5,161,888**	**1,038,500**	**725,579**	**548,545**	**896,103**	**3,208,727**	**1,953,161**

Table below is taken from the 2020 AMP update.

Town of Erin							
Summary of Infrastructure Requirements & 2020 Funding Available							
Asset Category	Average Annual Investment Required	Annual Funding Available					Annual Deficit
		Taxes	Gas Tax	OCIF	Taxes to Reserves	Total	
Tax funded:							
Road Network	2,016,550	18,000	347,016		681,509	1,046,525	970,025
Bridges & Culverts	845,162	200,000		260,016	0	460,016	385,146
Facilities	656,671	257,200		0	0	257,200	399,471
Land Improvements	208,358	84,100	0	0	0	84,100	124,258
Machinery and Equipment	289,491	35,000	0	0	32,000	67,000	222,491
Fleet	515,535	250,000	0	0	100,000	350,000	165,535
Total	4,531,767	844,300	347,016	260,016	813,509	2,264,841	2,266,926

Assuming that the OCIF grants are not available in future years and the decrease in forecasted debt payments can be redirected to capital renewal requirements, increasing tax revenues by 1.2% for next 20 years will maintain existing asset classes in this AMP. The table from the 2020 AMP recommended a 1.4% increase each year.

Long Term Financial Plan				
Activity	**Years**			
	5	**10**	**15**	**20**
Infrastructure Deficit	**1,953,161**	**1,953,161**	**1,953,161**	**1,953,161**
Change in OCIF Grant	**548,545**	**548,545**	**548,545**	**548,545**
Change in Debt Costs	**-**	**(167,095)**	**(332,418)**	**(432,483)**
Resultant infrastructure Deficit	**2,501,706**	**2,334,611**	**2,169,288**	**2,069,223**
Resulting tax increase required Total Over Time	**32.5%**	**30.4%**	**28.2%**	**26.9%**
Annually	**6.5%**	**3.0%**	**1.9%**	**1.2%**

Below table taken from 2020 AMP

Long Term Financial Plan					
Year		**5**	**10**	**15**	**20**
Infrastructure Deficit		**2,266,926**	**2,266,926**	**2,266,926**	**2,266,926**
Change in OCIF Grant		**260,016**	**260,016**	**260,016**	**260,016**
Change in Debt Costs		**-171,000**	**-332,000**	**-333,000**	**-432,000**
Resultant infrastructure Deficit		**2,355,942**	**2,194,942**	**2,193,942**	**2,094,942**
Resulting tax increase required					
Total Over Time		**31.2%**	**29.1%**	**29.1%**	**27.8%**
Annually		**6.2%**	**2.9%**	**1.9%**	**1.4%**

OCIF funding and Reallocation Decreases in Debt Costs

With consideration to the table above, full asset funding can be achieved in a 20 year period by increasing capital funding by 1.2% and in combination with the following strategies:

- When realized, reallocate reductions in debt payments to infrastructure reserves
- Allocating Canadian Community Building Fund (CCBF), formerly Gas Tax funding to asset renewal requirements.

This is a 0.2% decrease from the 2020 Asset Management Plan Update is mainly owing to increases in CCBF and the 2022 budgeted capital investments for fleet vehicles. A detailed breakdown of how the annual funding deficit can be addressed is found in Appendix F.

VEHICLES

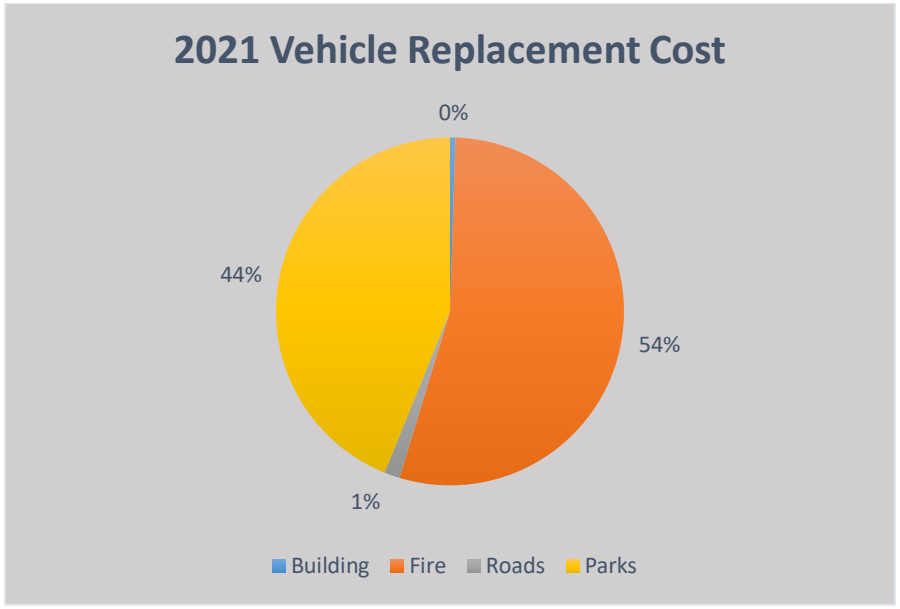
2.0 Vehicles

2.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the Town of Erin vehicle portfolio, including quantities by department, useful life, replacement cost, and valuation method. In total, the Town's vehicle assets are valued at $8.4 million based on 2021 replacement costs. A detailed listing of town vehicles is found in Appendix A.

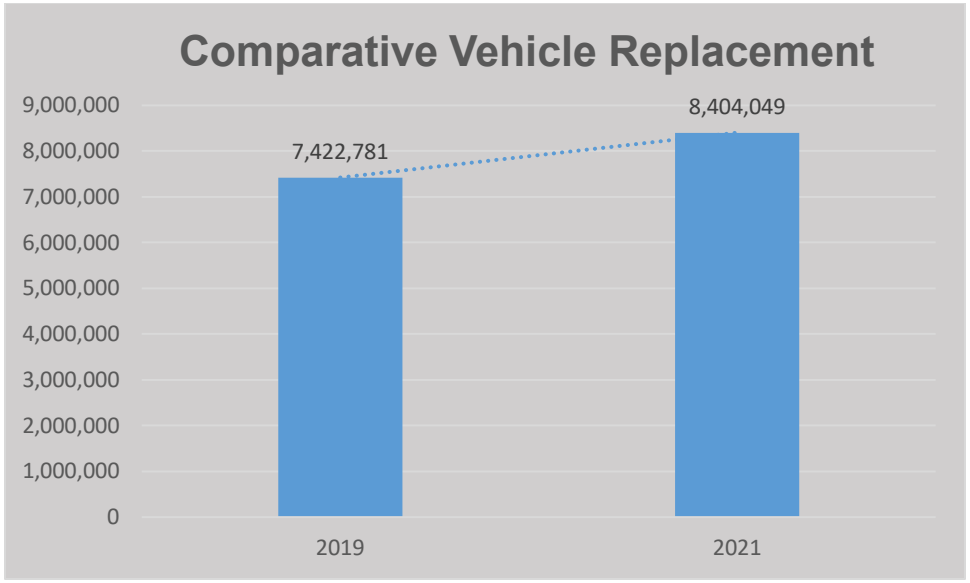
Component	QTY	Useful life (years)	Valuation Method	placement Cost	
				2019	2021
Building Vehicle Licensed	1	10	CPI Monthly (ON)	41,406	41,856
Fire Trailer	1	15	CPI Monthly (ON)	4,643	4,694
Fire Vehicle Unlicensed	1	10	CPI Monthly (ON)	23,706	23,963
Fire Vehicle Licensed	9,12	10,20	CPI Monthly (ON)	3,656,816	4,553,387
Parks Vehicle Licensed	3	10	CPI Monthly (ON)	88,359	89,320
Roads Trailer	1	15	CPI Monthly (ON)	33,265	33,627
Roads Vehicle licensed	11,12	10,20	CPI Monthly (ON)	1,602,260	1,649,711
Roads Vehicle Unlicensed	16	10,12,15,20	CPI Monthly (ON)	1,972,326	2,003,184
			TOTAL	**7,422,781**	**8,399,742**

A total of 98% of the Replacement cost for the Town of Erin Vehicles is the Fire and Road Departments.



Replacement cost increased 13.2% from 2019 to 2021. This is a combination of inflationary pressure and a net addition of the following vehicles.

1. Fire Station 10 Rescue Vehicle Purchase 2021, cost $204,620
2. Fire Station 50 Rescue Vehicle Purchase 2021, cost $204,620
3. Fire Station 10 Tanker Vehicle Purchase 2021, cost $424,242
4. Road Department, Used Grader, Purchase 2021 $30,036

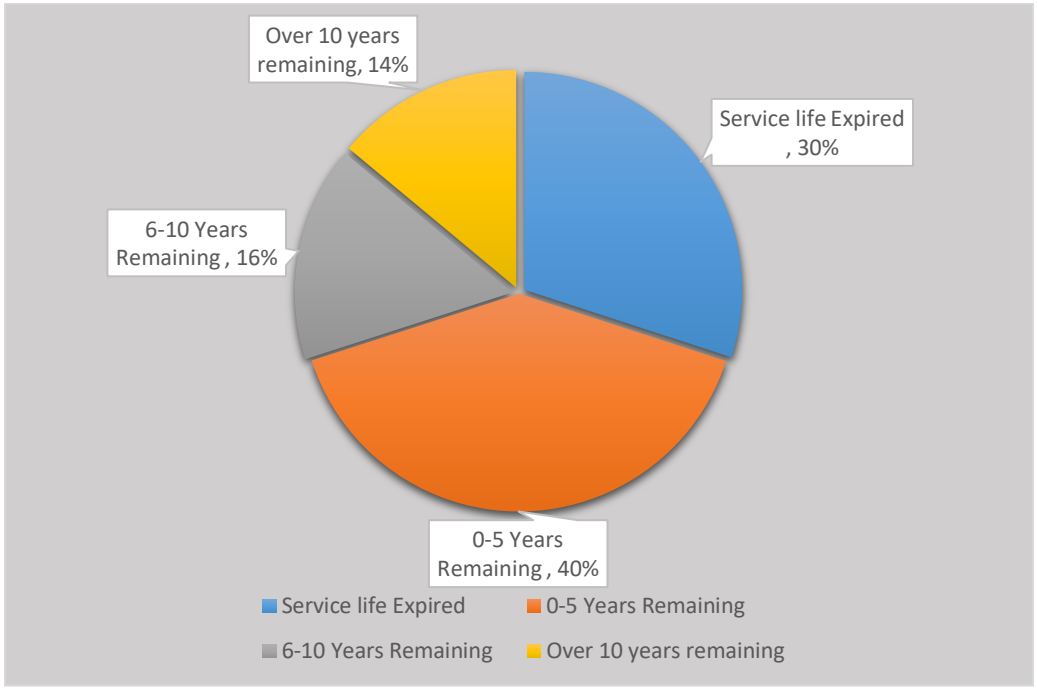


The Replacement costs above were derived applying an inflationary factor (Consumer Price Index) to the Town Vehicle historical costs. Using this methodology, the risk of replacement cost inaccuracy increases the longer an asset ages. (i.e. inflating historical cost may provide an accurate representation of replacement cost early in an asset life cycle, but the accuracy diminishes as more time passes). Therefore, there may be circumstances where an inflationary adjustment to historical cost may not be appropriate and should only be used for assets with shorter lifecycles (i.e. < 7 years).

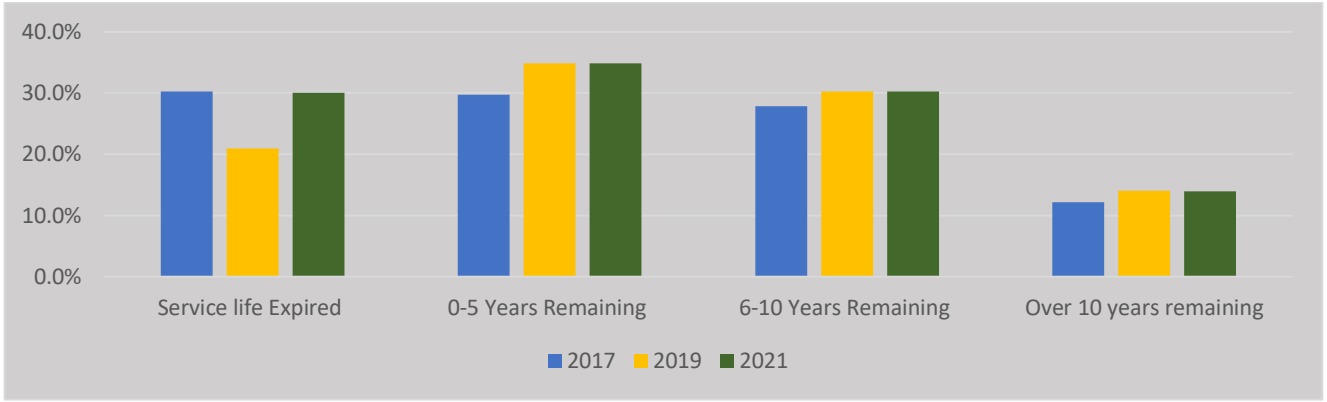
Additionally, inflating historical cost to calculate a replacement value assumes each asset will be replaced with a similar asset.

2.2 Useful Life Consumption

The consumption rate of assets based on industry established useful life standards provides a more complete profile of the state of a community's infrastructure. The figure below illustrates the useful life consumption levels as of 2021 for the Town's vehicles. The Service life Expired has significantly increased as it went from 21% in 2019 to 30%. Although there were the 2021 replacements of the Fire Tanker and Fire Rescue Vehicles, the Roads Department created the greatest amount of this increase with many of their vehicles having service life expired.

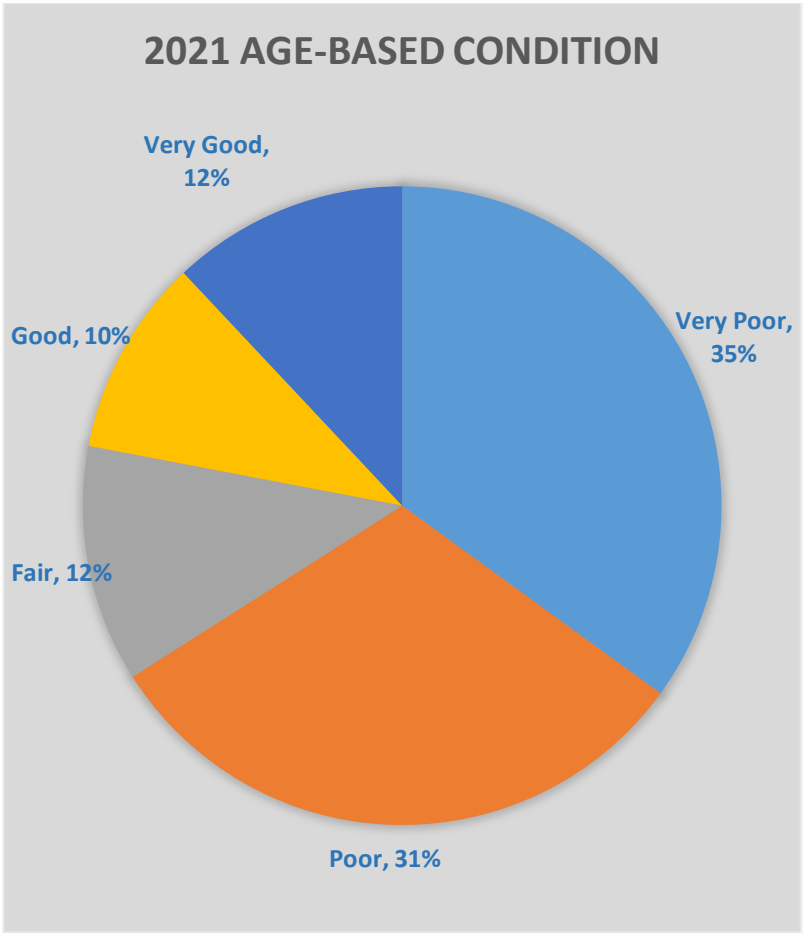


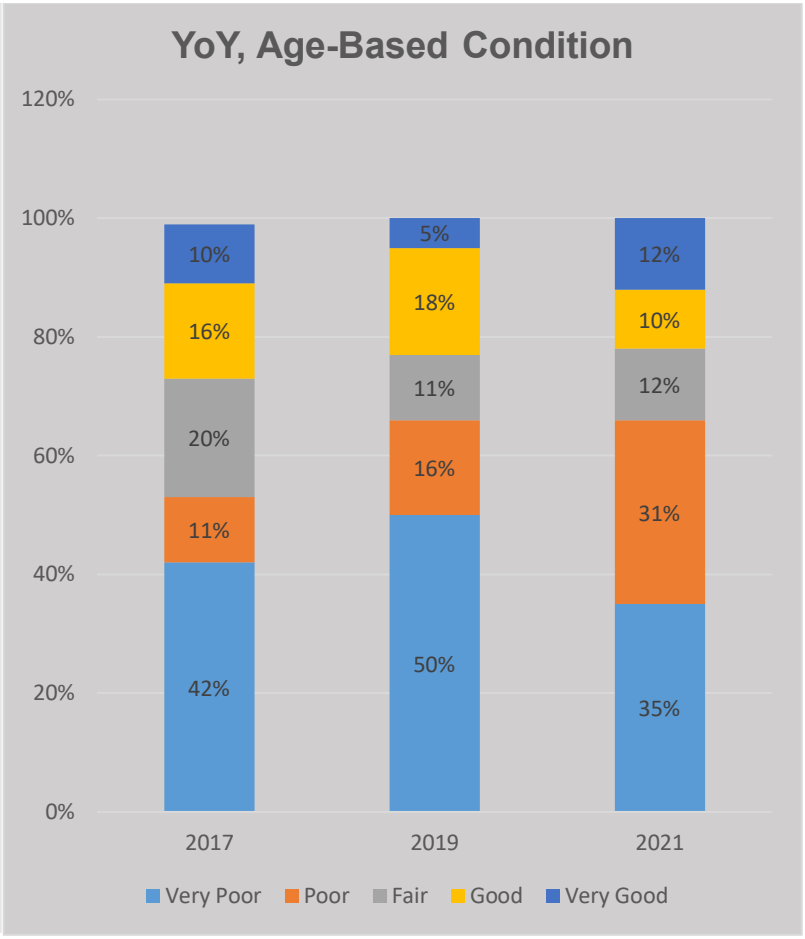
A comparison of Service Life remaining from 2017 to 2021 is shown below.



2.3 Asset Condition

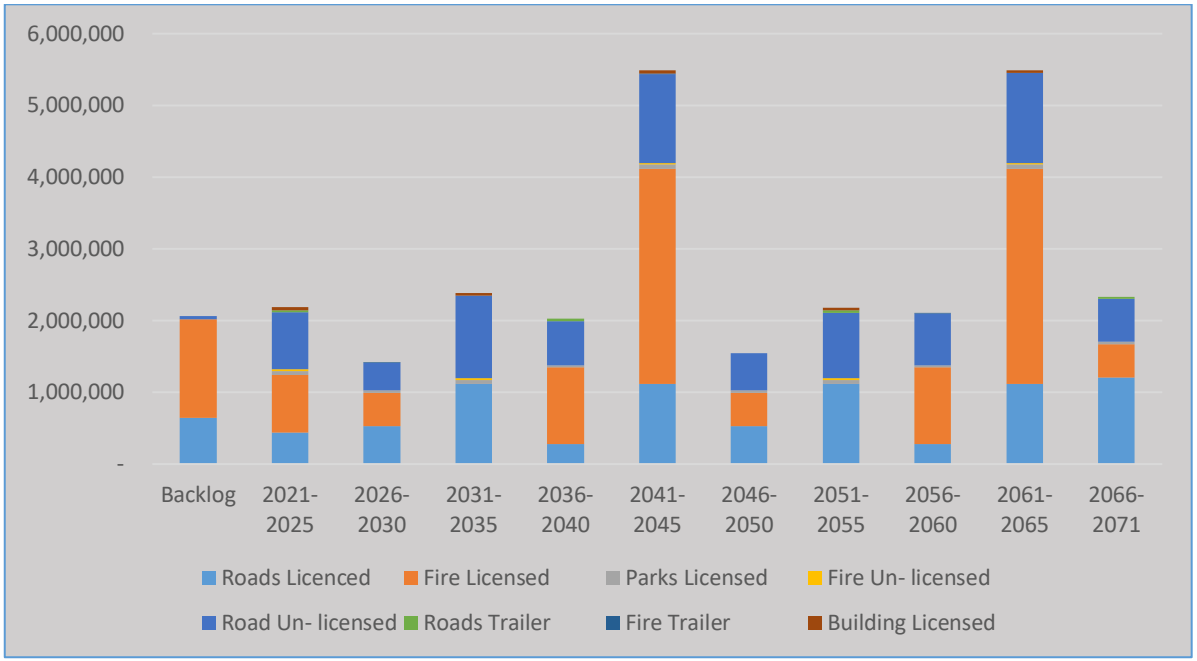
The Town of Erin does not have a formal mechanism for tracking vehicle condition. Therefore, the chart below summarizes replacement cost using age-based condition. It's compared against the age-based condition reported in the 2017 and 2019 Asset Management Plan to allow for a year-over year (YoY) comparison.





2.4 Forecasting Replacement Needs

In this section, the short, medium and long-term infrastructure spending requirements (replacement only) for the Town vehicle assets are illustrated. The backlog is the aggregate investment in infrastructure that was deferred over previous years or decades. In the absence of observed date, the backlog represents the value of assets that remain in operation beyond their useful life.



2.5 Recommendations

A preventative maintenance and lifecycle assessment program for all vehicle assets aid in understanding current condition and performance as well as short and medium term replacement needs. The Roads and Fire Department future operation plans have included vehicle preventative maintenance and Capital Budgets have included plans for vehicle replacement.

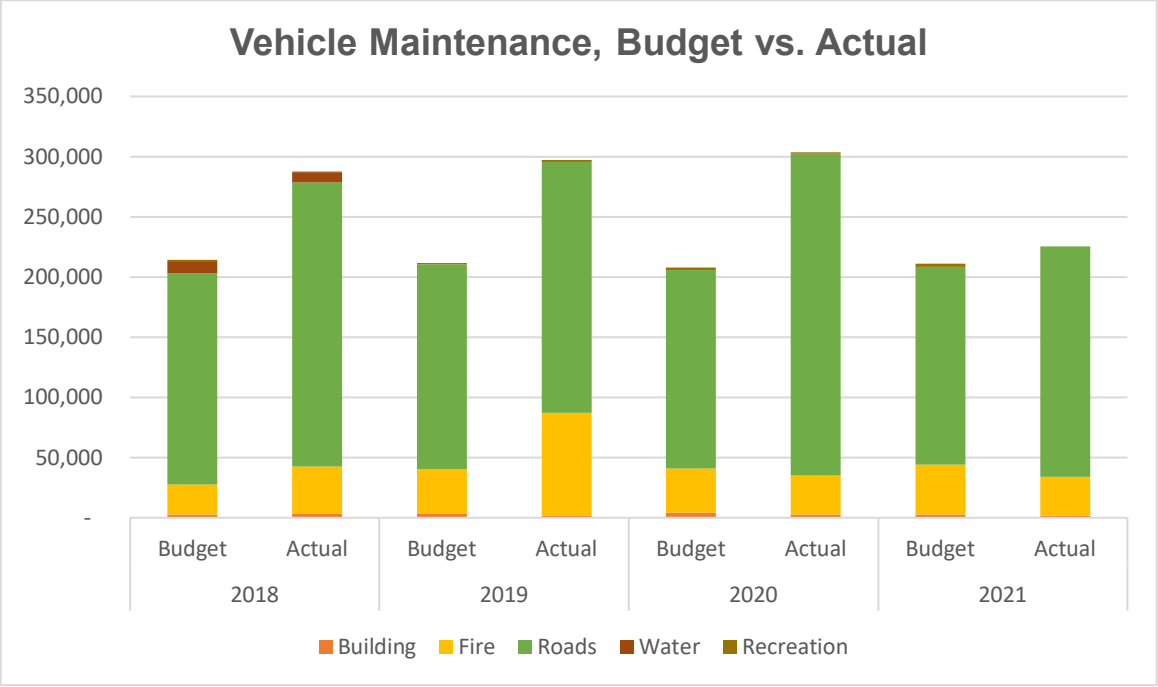
The Town should continue to assess its short, medium and long term capital, operations and maintenance needs. Currently the Roads and Fire Department is required to complete the operations plan (that would include maintenance) for four years of service. A 10 year Capital Plan for Roads, Parks and Recreation, and the Fire Department Vehicle's was prepared by staff. These Plans should be reviewed and updated annually.

An amount to set aside for the Towns Operating and Maintenance requirements should be calculated and in the budget. A percentage of replacement cost is an option, however, the Town is currently basing these requirements on historical spending and performance compared to Budget.

The preventative maintenance program for the Roads Department is contracted to Brandt Tractor or Jade Equipment based on availability, for graders and done in-house for large trucks and ½ ton and 4 wheel small trucks. Preventative maintenance encompasses the following activities:

Activities	*Frequency*		
	Trucks	*Graders*	*½ Ton and 4-Wheelers*
- *Oil Change* - *Air & Hydraulic Filter Replacement*	*Every 300 operating hours*	*Every 500 operating hours*	*Every 8,000kms*

These preventative maintenance measures are reflected in the Town of Erin's annual budgeting process with an annual average of $211,150 for the four preceding years. This represents 2.5% of the vehicle replacement cost. A summary of budget vs. actual performance is below.



For the Town vehicles long term replacement needs, an annual Roads Fleet reserve allocation of $50,000, and a Fire Capital Reserve allocation of $100,000 (assume 50% vehicles = $50,000), started in 2019 and has carried through on an annual basis for 2020 and 2021. With the planned investments based on the approved 2022 Budget for Fleet, the annual funding for Fleet is 130% of the annual requirement.

MACHINERY, EQUIPMENT AND COMPUTERS

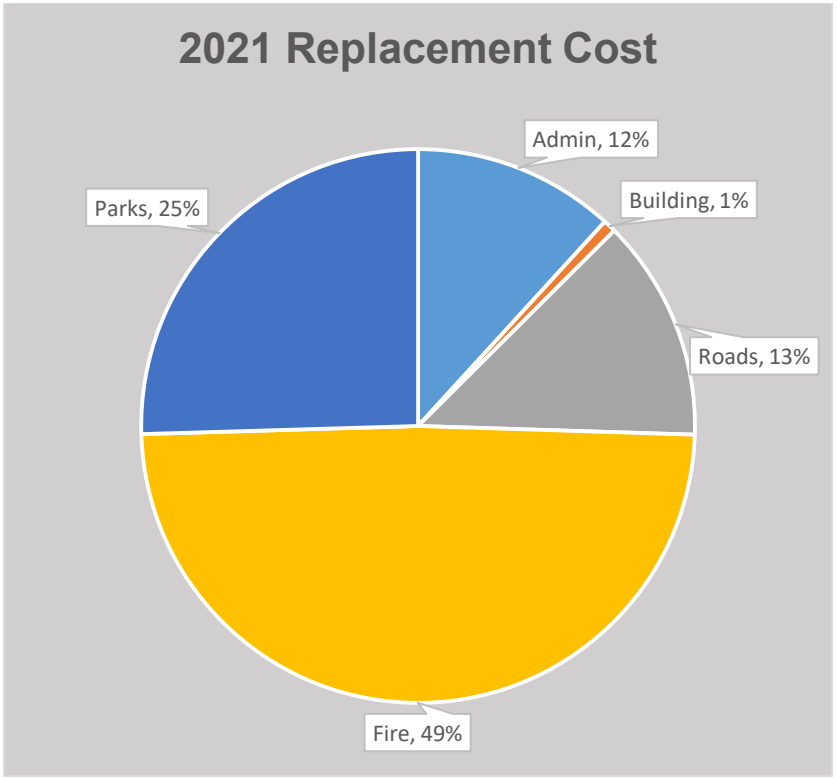
3.0 Machinery, Equipment & Computers

3.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the Town of Erin Machinery, Equipment and Computer portfolio, including quantities by department, useful life, replacement cost, and the valuation method. In total, the Town's Machinery, Equipment and Computer assets are valued at $3.1 million based on 2021 replacement costs. A detailed listing of the Town's Machinery, Equipment and Computers is found in Appendix B.

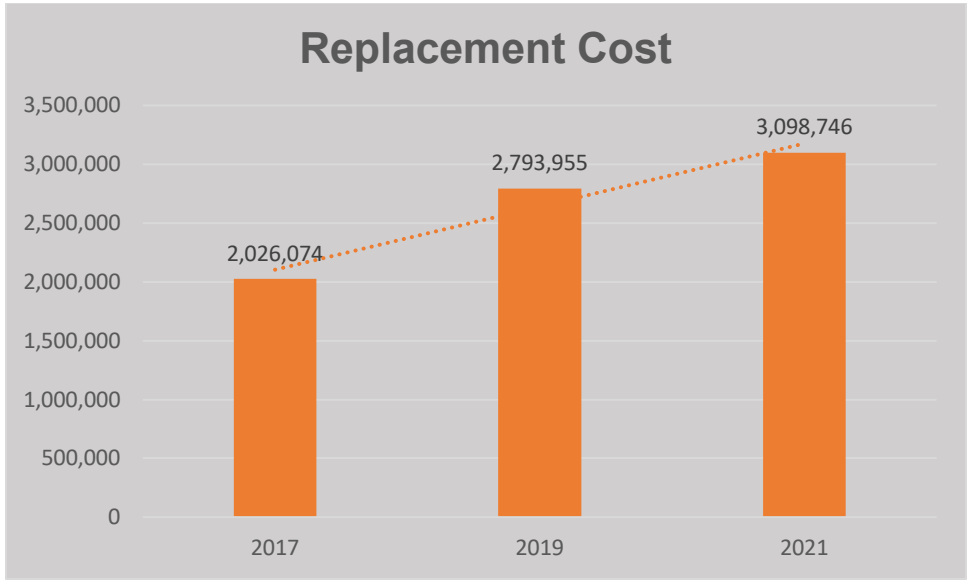
Component	QTY	Useful Life (years)	Valuation Method	Replacement Cost		
				2017	2019	2021
Admin Computer Software	1	5	CPI Monthly (ON)	43,090	44,642	45,128
Admin Computers & Equipment	15	5	CPI Monthly (ON)	258,125	316,595	320,037
Building Computer Software	1	5	CPI Monthly (ON)	21,011	21,768	22,004
Building Computers & Equipment	1	5	CPI Monthly (ON)	1,168	1,210	1,223
Fire Equipment	40	5,7,10,15,20	CPI Monthly (ON)	1,186,391	1,465,175	1,530,663
Parks Equipment	13	10,15,20	CPI Monthly (ON)	489,553	554,352	800,931
Roads Equipment	2	10	CPI Monthly (ON)	26,736	38,358	38,775
Roads -Streetlights	788	10	CPI Monthly (ON)	0	351,855	363,046
			TOTAL	2,026,074	2,793,955	3,121,807

The majority of replacement cost for Town of Erin Machinery, Equipment and computers is in the Fire Department at 49% and Parks and Recreation at $26%, a total of 75%.



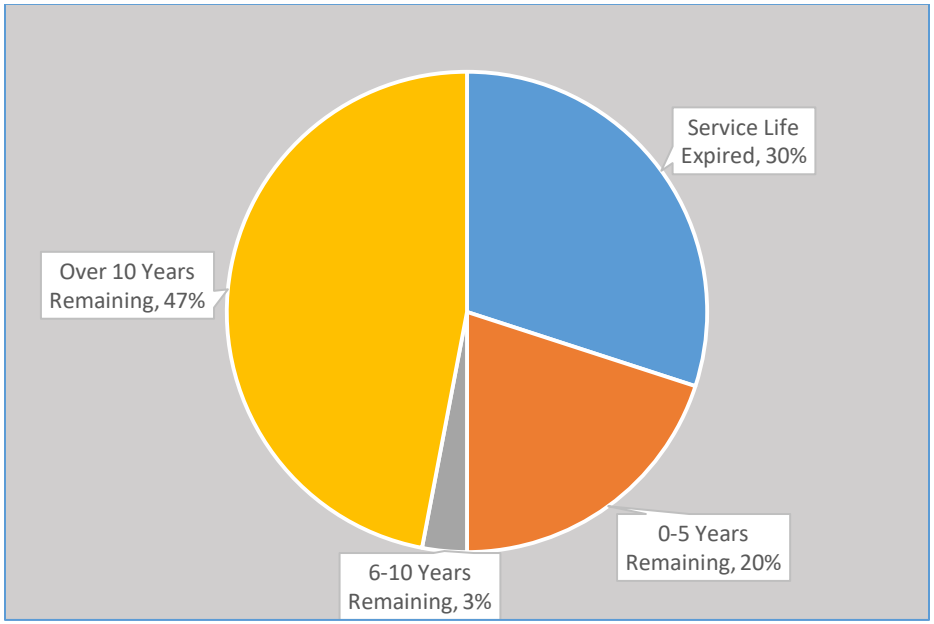
Replacement cost has increased by 11.7% from 2019 to 2021. This is a combination of inflation and the addition of the following items in 2020 and 2021.

1) Fire – Thermal Imaging Camera
2) Parks – Parks and Recreation Software
3) Parks – Brine Pump and Motor
4) Parks – 2 Zamboni Ice Resurface Machines – Erin and Hillsburgh Community Centres
5) Fire – Hose Cache

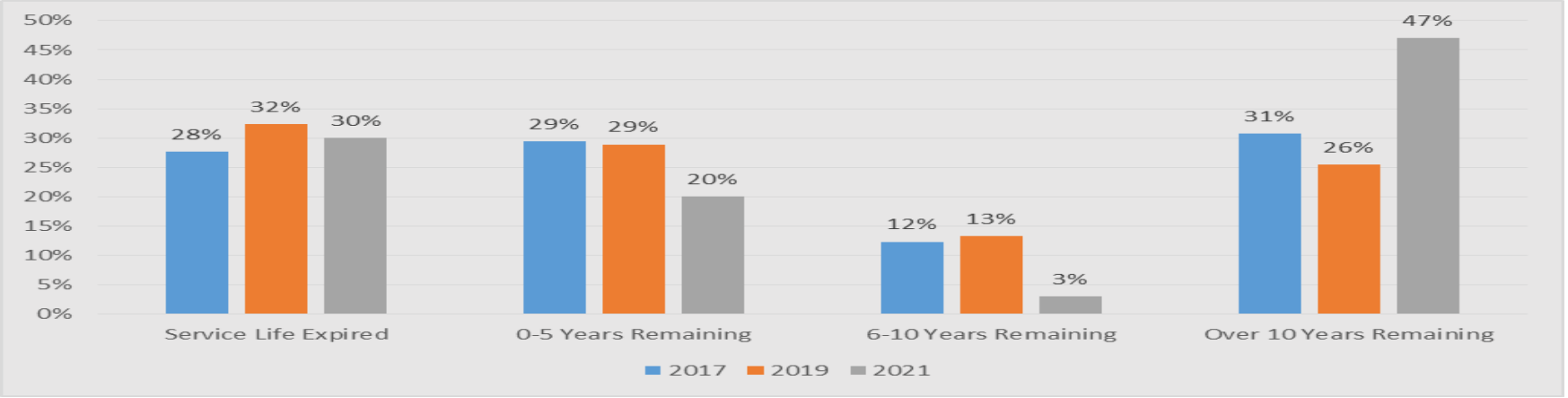

Replacement Cost
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
2,026,074
2,793,955
3,098,746
2017
2019
2021

3.2 Useful Life Consumption

A review of the comparison consumption rates of assets based on industry established useful life standards provides a more complete profile of the state of a community's infrastructure. The figure below illustrates the 2021 useful life consumption levels for the Town's Machinery, Equipment and Computers. Service life Expired decreased from 32% to 30% in 2019 to 2021, respectively.

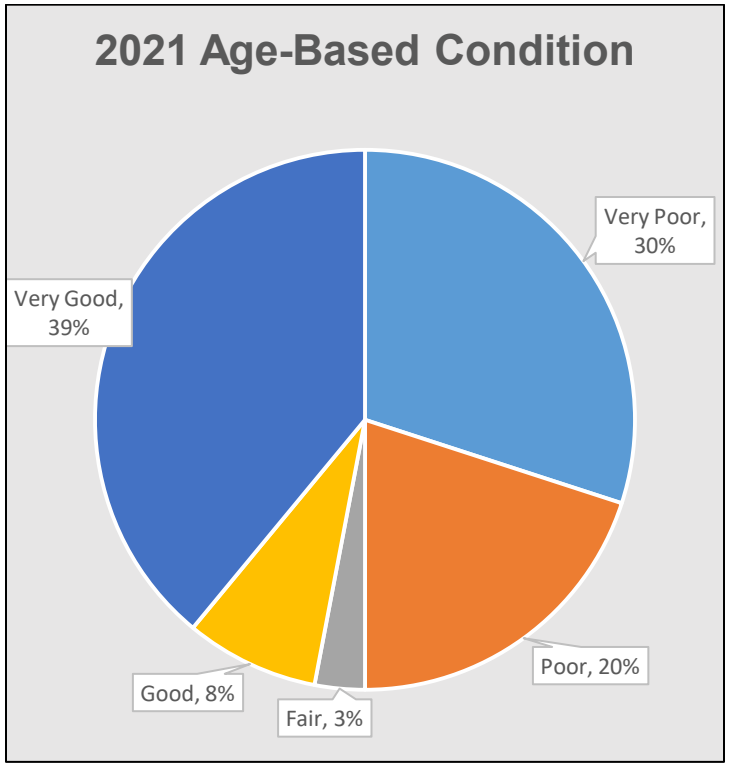


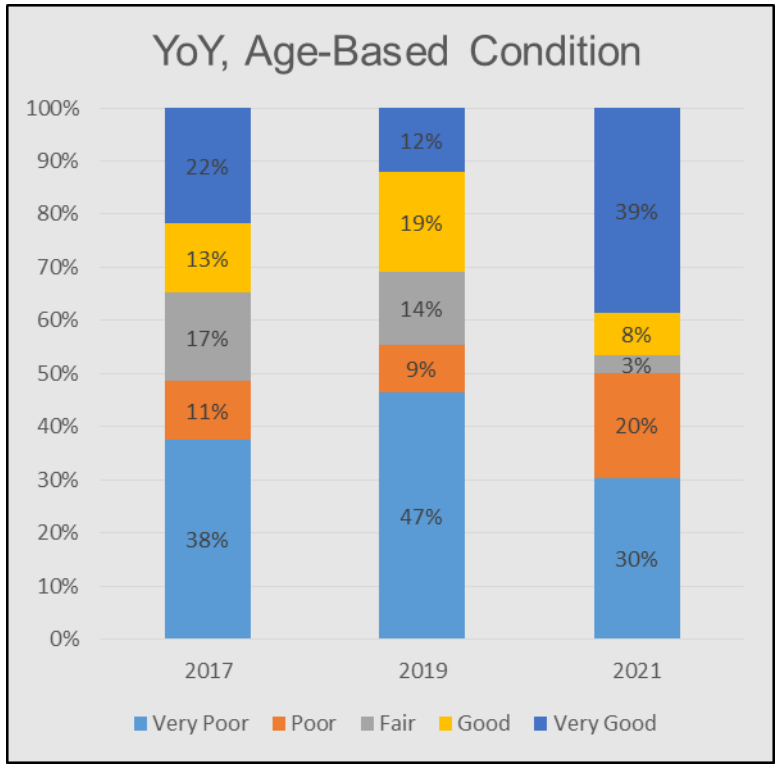
A comparison of service life remaining between the years 2017, 2019 and 2021 is below.



3.3 Asset Condition

Using replacement cost, the condition of the Town's Machinery, Equipment & Computer assets are summarized by condition as of 2021. The town does not have a mechanism for tracking asset condition for machinery and equipment so age-based data (increased by CPI values) is used as a proxy.

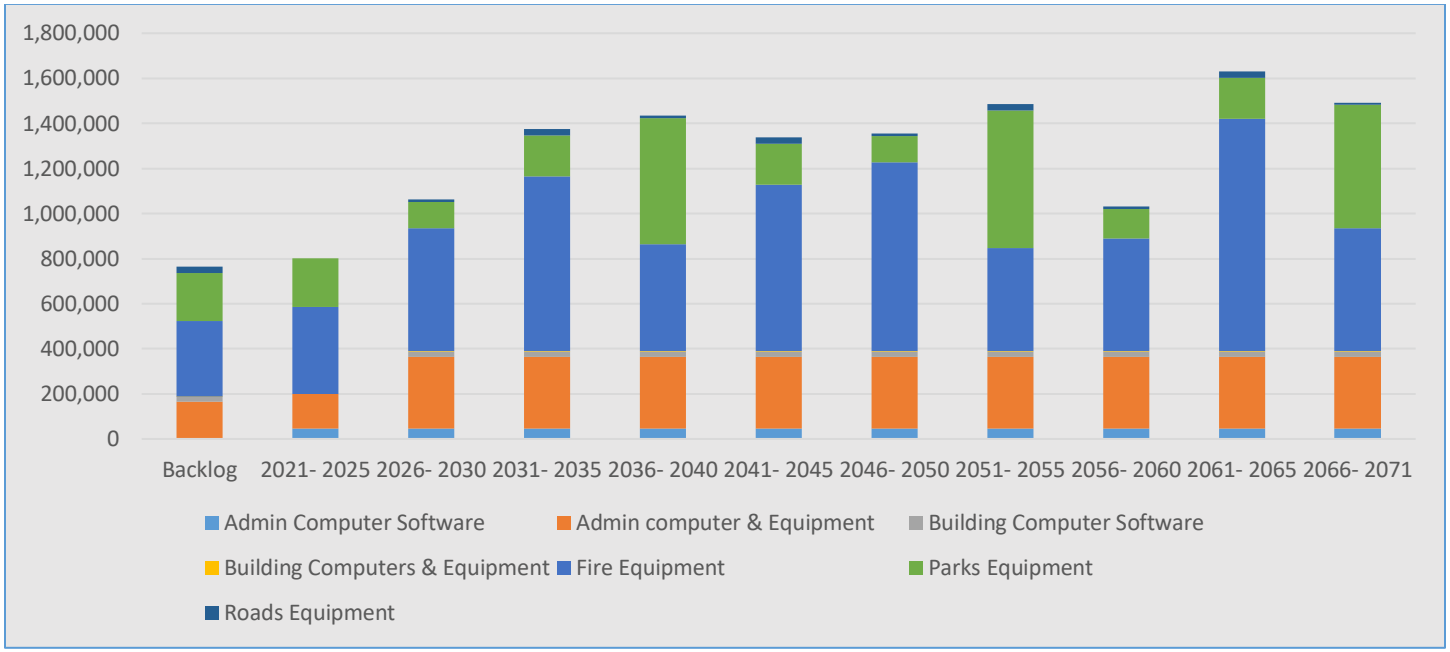




The 2017 to 2021 comparison below shows an overall improvement in 2021 with a decrease in the 'Very Poor' category of 17% as older assets were disposed. Referring to the 3.1 list of new assets acquired explains the 2021 increase in 'Very Good' Category.

3.4 Forecasting Future Replacement Needs

In this section, the short, medium and long term infrastructure spending requirements (replacement only) for the Town's machinery, equipment and computer assets are illustrated below. The backlog is the aggregate investment in infrastructure that was deferred over previous years of decades. In the absence of observed date, the backlog represents the value of assets that remain in operation beyond their useful life.



3.5 Recommendations

The Town of Erin currently completes in-house inspection of all machinery and equipment assets. An annual staff inspection program should be implemented to better define financial requirements for machinery and equipment. The majority of the assets within this category are Fire equipment, then Parks and Recreation equipment, and the Administrative Equipment. Given the nature of assets included within this category, the costs associated with an outside inspection program would outweigh any potential benefits.

All future annual budgets should continue to require each related department for Machinery and Equipment to prepare a plan and a timetable of short, medium and long-term capital, operations and maintenance needs.

For the Town machinery, equipment and computer long term replacement needs, an annual Building reserve allocation of $30,000, and a Fire Capital Reserve allocation of $50,000 (50% of $100,000 for all Fire Capital) and Administrative annual reserve of $15,000. . The $95,000 along with other available funding in total represents 59% of average annual funding of the machinery, equipment and computer replacement cost of these assets.

BUILDINGS AND FACILITIES

4.0 Buildings and Facilities

4.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the Town of Erin Building and Facilities portfolio. It has been developed to include values from previous Asset Management Plan's to allow for a year-over-year comparison and includes asset quantities, useful life and replacement cost. In total, the Town Building and Facilities are valued at $25 million based on 2021 replacement costs. A detailed listing of the Town's Buildings & Facilities is found in Appendix C.

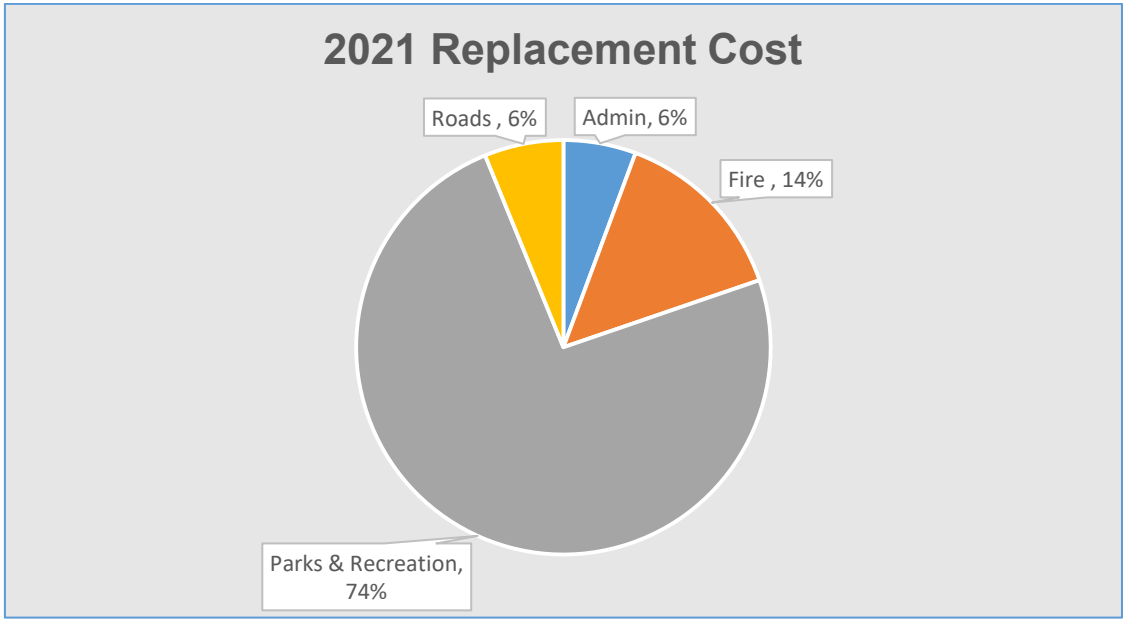
Asset Type	Component	Quantity	Useful Life (yrs)	Valuation Method	Replacement Cost		
					2017	2019	2021
Buildings & Facilties	Admin Building	1	40	CPI Monthly (ON)	853,579	1,409,043	1,424,360
	Fire Building	2	20, 40	CPI Monthly (ON)	3,373,166	3,499,751	3,545,403
	Parks Building	7	20, 40	CPI Monthly (ON)	17,724,989	18,445,904	18,638,756
	Roads Building	4	20, 40	CPI Monthly (ON)	1,414,489	1,531,912	1,551,935
				TOTAL	23,366,223	24,886,610	25,160,454

Note: Quantity refers to the total number of buildings recognized in the Town's Asset Management Software and in the Pinchin Building Condition Assessment.

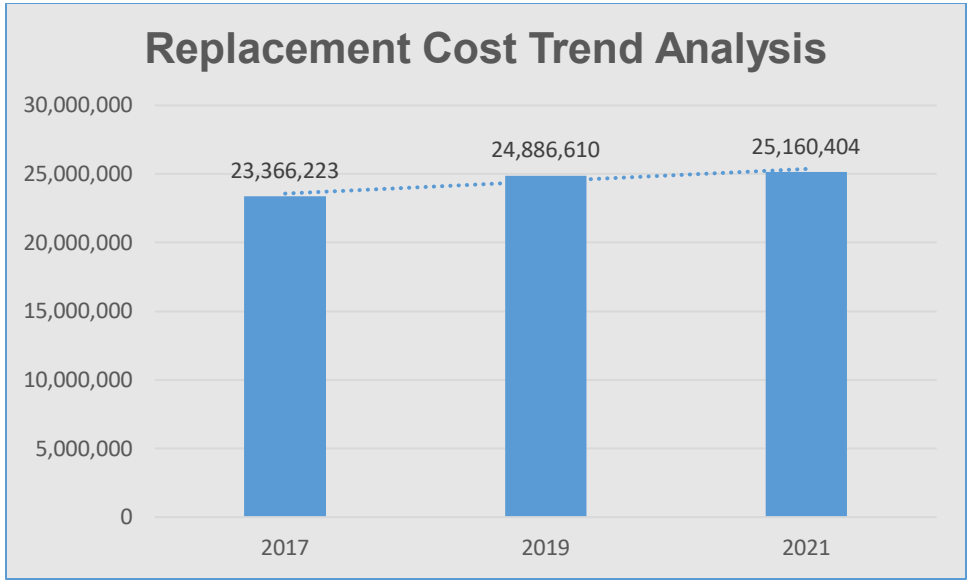
Details of each building can be found in Appendix C while a financial overview of each facility is below.

Facility	Cost	Accumulated Amortization	Net Book Value	Replacement Cost	Number of Components
Erin Community Centre	5,087,835	3,163,854	1,923,981	12,904,023	9
Hillsburgh Community Centre	1,509,881	1,334,913	174,969	4,658,814	12
Ballinafad Community Centre	214,128	192,340	21,788	627,616	3
Parks Buildings	269,111	127,372	141,739	448,303	4
Roads Shop	898,823	569,626	329,197	1,551,935	6
Municipal Office	1,115,560	416,600	698,960	1,424,360	5
Hillsburgh Fire Station	2,538,108	511,472	2,026,636	2,871,095	2
Erin Fire Station	298,882	265,817	33,065	674,308	2
TOTALS	11,932,330	6,581,994	5,350,335	25,160,454	43

The majority of Replacement cost of Buildings and Facilities is for Parks and Recreation.



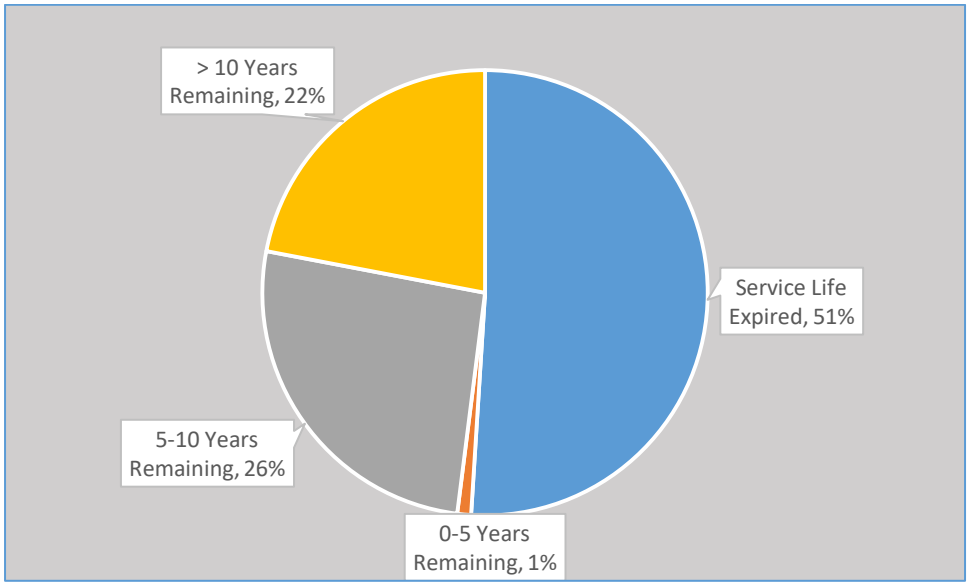
Replacement cost has risen 6.5% from 2017 to 2019 and 1.1% from 2019 to 2021. This is a combination of inflationary increases and the addition of building components (2021 is listed above).



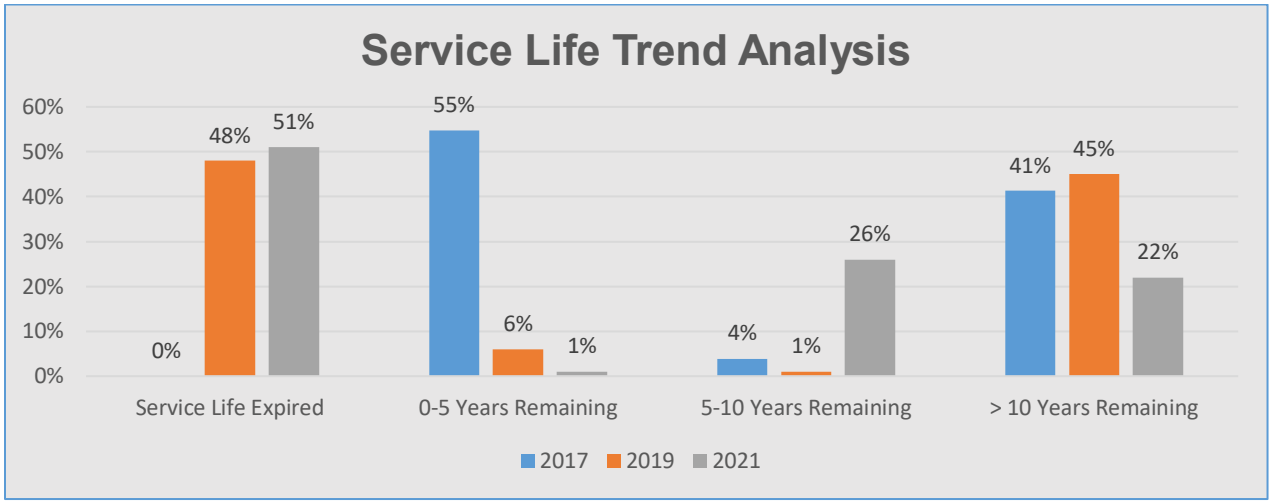
From the 2020 Budget, $2.4 Million in renovations over 3 years was planned for the Erin Community Centre, with funding from grants, Erin Community Centre Reserves and Cash-in-lieu of Parkland. Also, $126 Thousand in renovations was planned for the Hillsburgh Community Centre which will be funded from the Canadian Community Building Fund. Due to COVID restrictions, the majority of these renovations have been pushed forward to the third year 2022.

4.2 Useful Life Consumption

Understanding the consumption rate of assets based on industry established useful life standards provides a more complete profile of the state of a community's infrastructure. The figure below illustrates the useful life consumption levels as of 2021 for the Town's Building and Facilities.

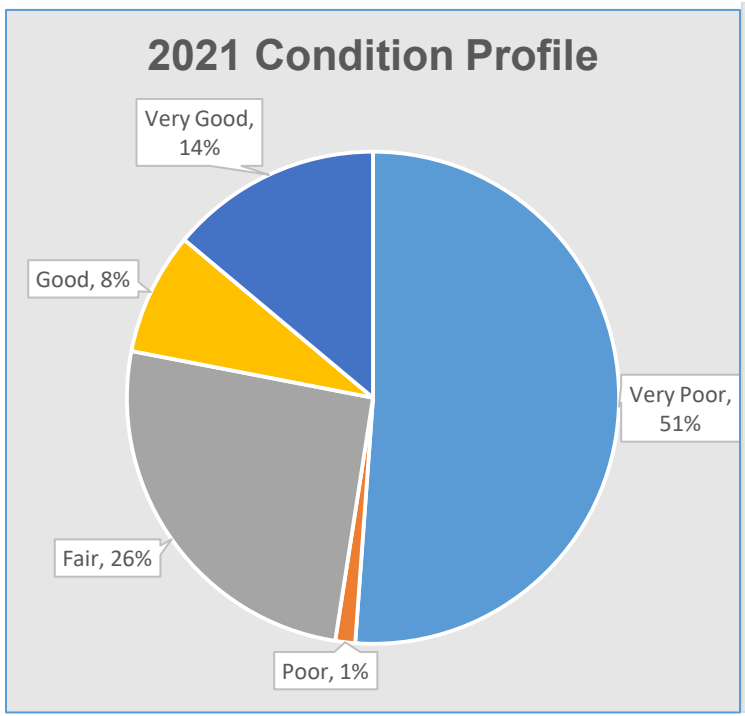


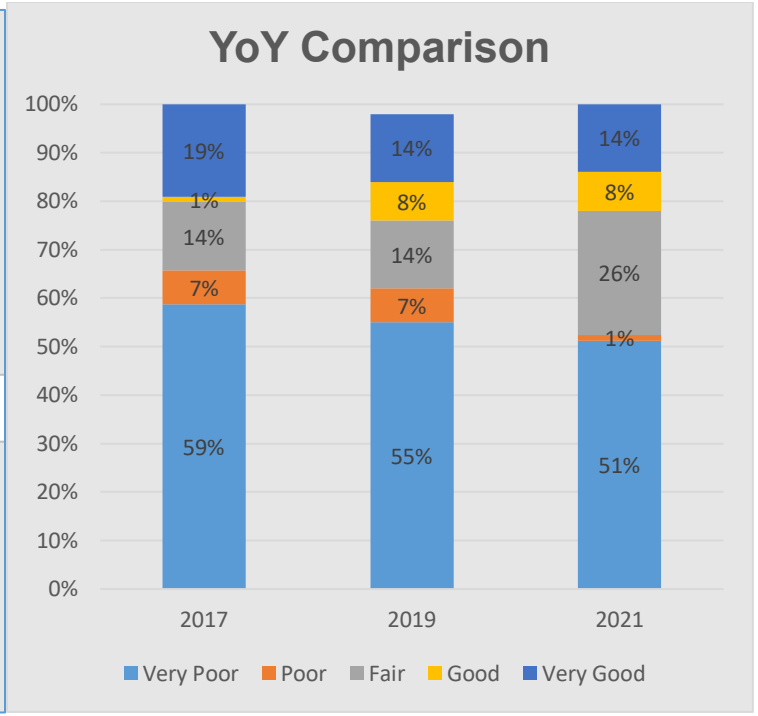
Service life Expired has increased 3% from 2019 to 2021, while service life greater than 10 years has decreased by 13%. These statistics will improve with the projects that were delayed due to COVID response will now be moving ahead with planning and construction. A comparison of service life remaining between 2017 and 2021 is below.



4.3 Asset Condition

Using replacement cost, in this section, the condition of the Town's Building and Facilities are summarized as of 2021. Asset condition has shifted slightly in positive direction with a lower percentage in the 'Very Poor' category. The main take away from the charts below is the increase in 'Fair' condition over the 5 years and the need to maintain these assets so that they do not fall into the 'Poor' and 'Very Poor' category.





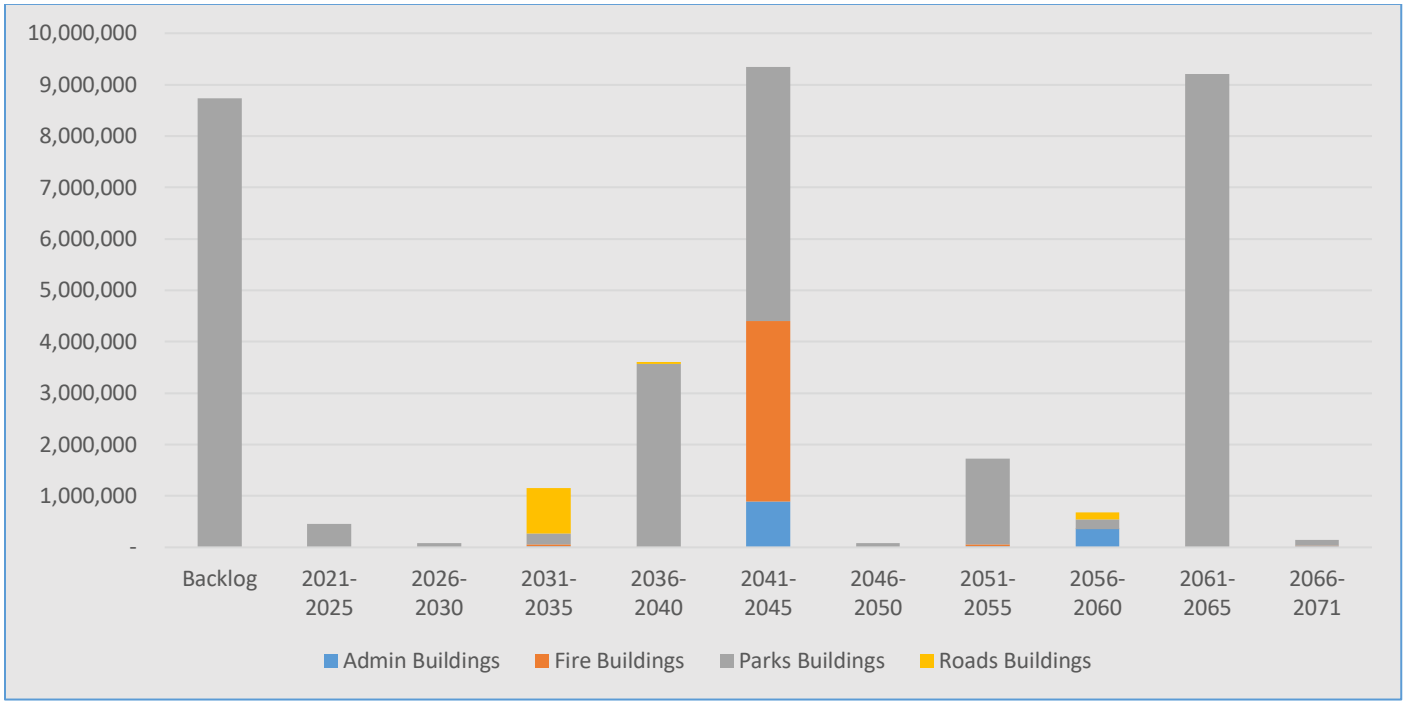
Additionally, Building condition Assessments (BCA) were performed on the following Town of Erin Buildings during 2019 by Pinchin Engineering: Ballinafad Community Centre, Hillsburgh community Centre, Erin Community (& Tennis Courts), Victoria, Barbour Field and McMillan Parks, Erin and Hillsburgh Fire Stations and the Municipal Office. The Roads Shop BCA was completed by Pinchin Engineering in 2021.

During the assessment a visual inspection of building element was conducted with all common and service room reviewed and an inspection of the exterior was completed. A summary of the components by condition assigned is below.

Condition Assessment	Erin Community Centre	Hillsburgh Community Centre	Ballinafad Community Centre	Parks Buildings	Roads Shop	Municipal Office	Hillsburgh Fire Station	Erin Fire Station
Very Poor	5	3	1	1	0	0	0	0
Poor	3	4	0	2	5	1	0	4
Fair	8	9	7	9	10	5	0	5
Good	9	3	9	7	5	6	4	11
Very Good	5	5	14	48	7	19	26	9

4.4 Forecasting Future Replacement Needs

In this section, the short, medium and long-term infrastructure spending requirements (replacement only) for the Town's Building and Facilities assets are illustrated. The backlog is the aggregate investment in infrastructure that was deferred over previous years or decades. In the absence of observed data, the backlog represents the value of assets that remain in operation beyond their useful life.



The 10-year replacement needs visualized in the chart above is summarized in the table below and compared against recommendations from Building Condition Assessments (BCAs):

Building	City Wide (Age-Based)			BCA 10 year
	2021-2025	2026-2030	10 Year Total	
Erin Community Centre	8,120,657	13,323	8,133,980	1,938,117
Hillsburgh Community Centre	756,017	52,965	808,982	1,004,050
Ballinafad Community Centre	318,368	14,850	333,218	198,875
Parks buildings			-	550,507
Roads Shop			-	117,362
Municipal Building			-	283,961
Hillsburgh Fire Hall			-	170,387
Erin Fire Hall			-	344,322
TOTAL	9,195,042	81,138	9,276,180	4,607,581

4.5 Recommendations

The information from the Building Condition Assessments (BCA) done for 10 facilities in 2019 and the Roads Shop in 2021, included component information that has been incorporated into the Town of Erin capital software and will be updated as recommended improvements are completed.

This information has been incorporated into the 2021 budget and 2022-2025 Forecast and developed a risk management framework that prioritizes the repairs and replacements required to extend component life and maintain functionality.

Lifecycle activity framework were completed from the BCA studies and will continue to be updated in the Town of Erin capital software.

Assessment of short, medium and long-term capital, operations and maintenance needs have been prioritized from the information obtained in the BCA.

Key performance indicators continue to be developed for assets and tracked annually.

The Town is currently funding 26% of its average annual requirement for its building and facilities.

ROAD NETWORK

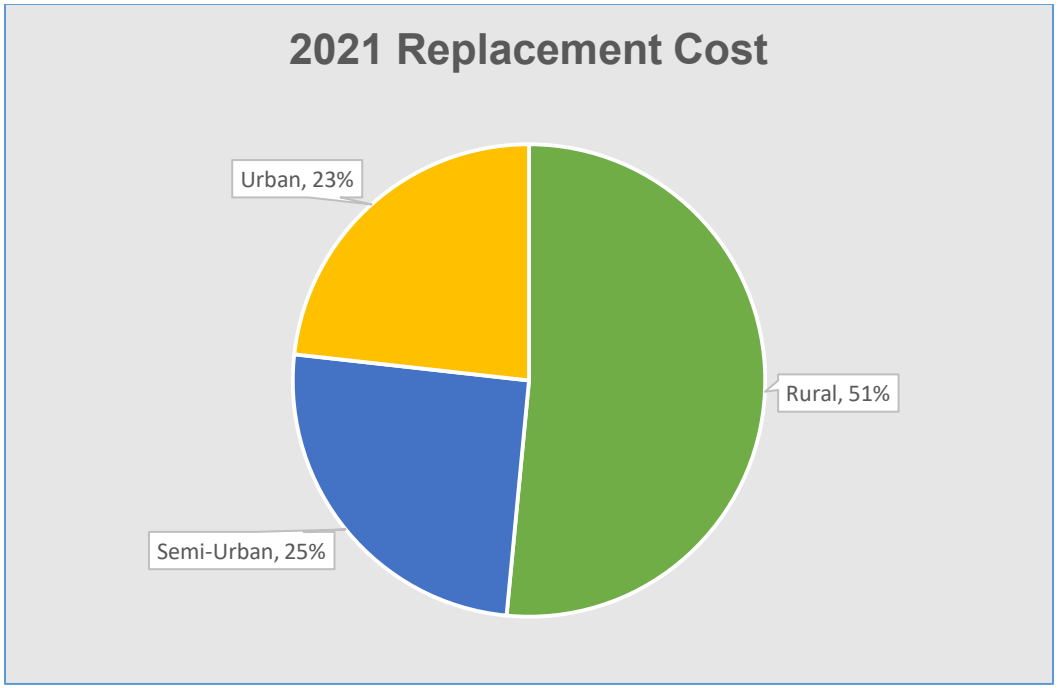
5.0 Road Network

5.1 Asset Portfolio; Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the town's Road Network portfolio, including quantities of various assets, their useful life, replacement cost, and valuation method. In total, the Town's Road assets are valued at $72,675,827 million based on 2021 replacement costs. Useful life indicated for each asset type was assigned from the Capital Asset Policy.

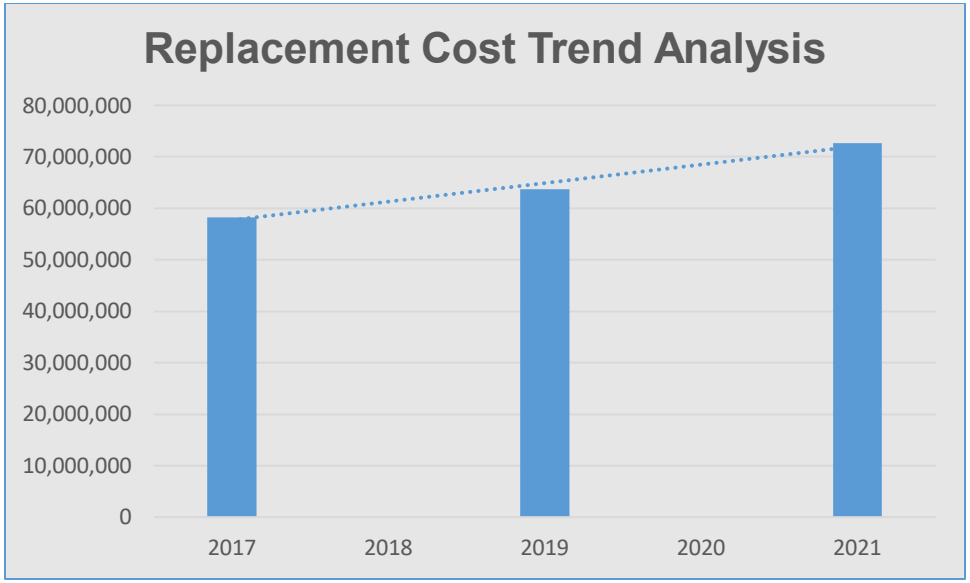
Component	QTY	Useful Life (years)	Valuation Method	Replacement Cost		
				2017	2019	2021
Road Base - Asphalt - R	36km	40	NRBCPI Quarterly	14,883,388	16,198,417	18,421,489
Road Base - Asphalt - S	23km	40	NRBCPI Quarterly	8,889,508	9,643,751	10,868,702
Road Base - Asphalt - U	10km	40	NRBCPI Quarterly	10,362,205	11,285,271	12,848,953
Road Base - Earth - R	0.32km	40	Not Planned	-	-	-
Road Base - Earth - S	0.25km	40	Not Planned	-	-	-
Road Base - Gravel - R	190km	40	Not Planned	-	-	-
Road Base - Gravel - S	2km	40	Not Planned	-	-	-
Road Base - Surface Treatment -R	33km	40	NRBCPI Quarterly	8,150,319	8,925,195	10,324,646
Road Base - Surface Treatment -S	2km	40	NRBCPI Quarterly	610,098	658,963	734,723
Road Surface - Asphalt - R	30km	20	NRBCPI Quarterly	7,047,459	7,669,683	8,732,389
Road Surface - Asphalt - S	23km	20	NRBCPI Quarterly	5,126,711	5,741,337	6,636,873
Road Surface - Asphalt - U	11km	20	NRBCPI Quarterly	3,227,439	3,608,116	4,108,052
			TOTAL	58,297,127	63,730,733	72,675,827

The majority of Town of Erin replacement cost is comprised or rural roads.



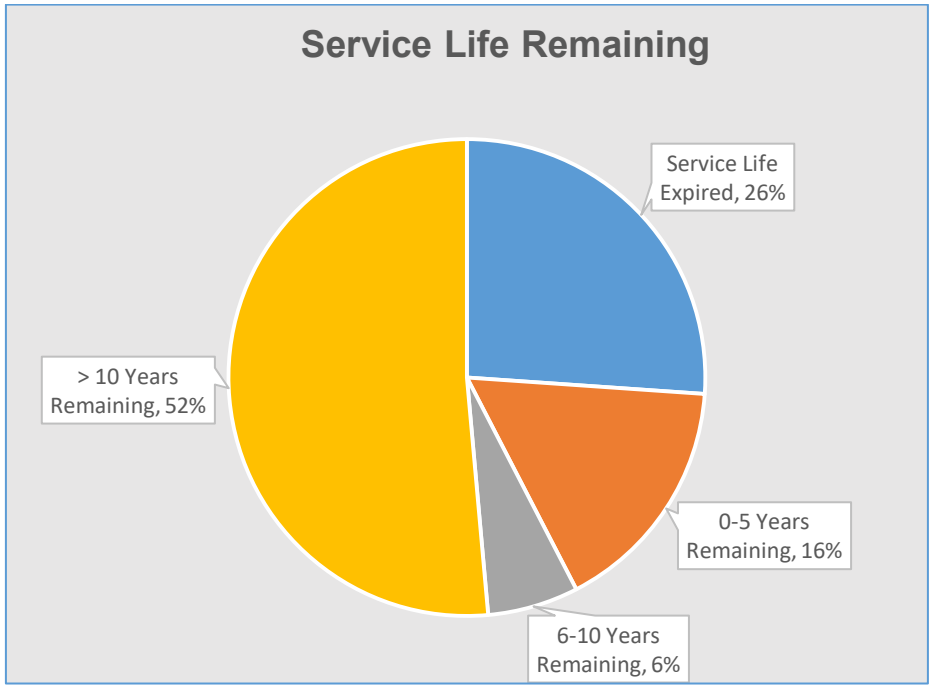
Replacement cost has risen 14% from 2019 to 2021. This is a combination of inflationary increases and the addition of the following road-related components that totaled a net addition of $ 359.955

17th Sideroad between Wellington Road 26 and 2nd Line	$259,939
Dundas Street Sidewalk between Main Street and Boland Drive	$100,016

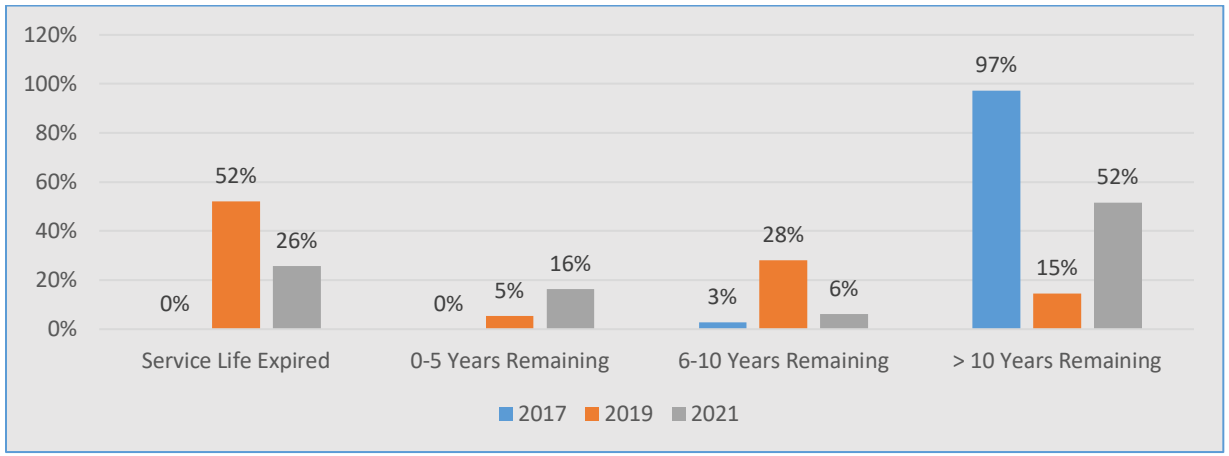

Replacement Cost Trend Analysis
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
2017
2018
2019
2020
2021

5.2 Useful life Consumption

Understanding the consumption rate of assets based on industry established useful life standards provides a more complete profile of the state of a community's infrastructure. The figure below illustrates the useful life consumption levels as of 2021 for the Town's Road Network based on Replacement Values.



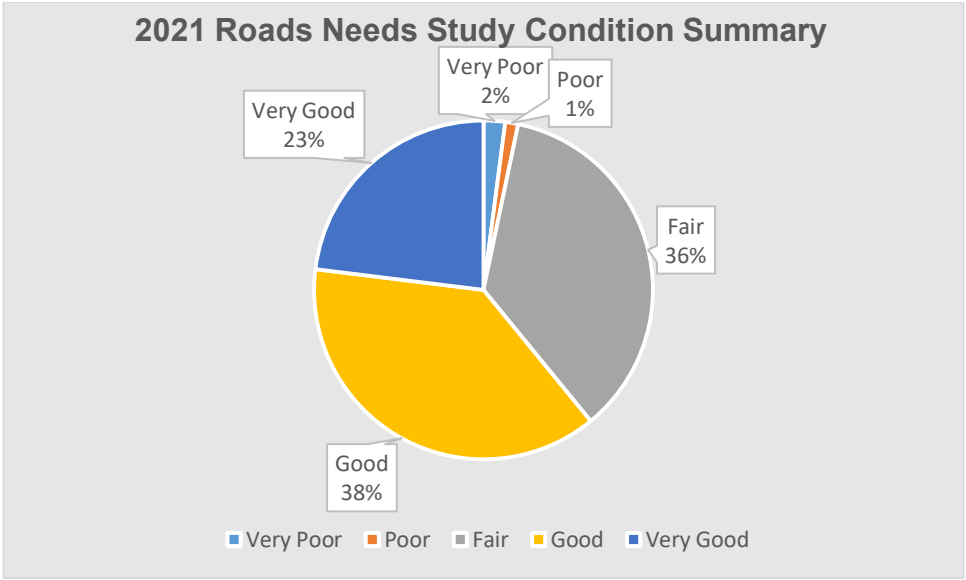
A comparison of service life remaining from 2017 to 2021 is below. Service life Expired has decreased to 26% in 2021 versus 52% in 2019 and Greater than 10 years remaining increased to 52% in 2021 versus 15% in 2019. These are both favourable results, attributable to maintenance and the replacement of the assets.



5.3 Asset Condition

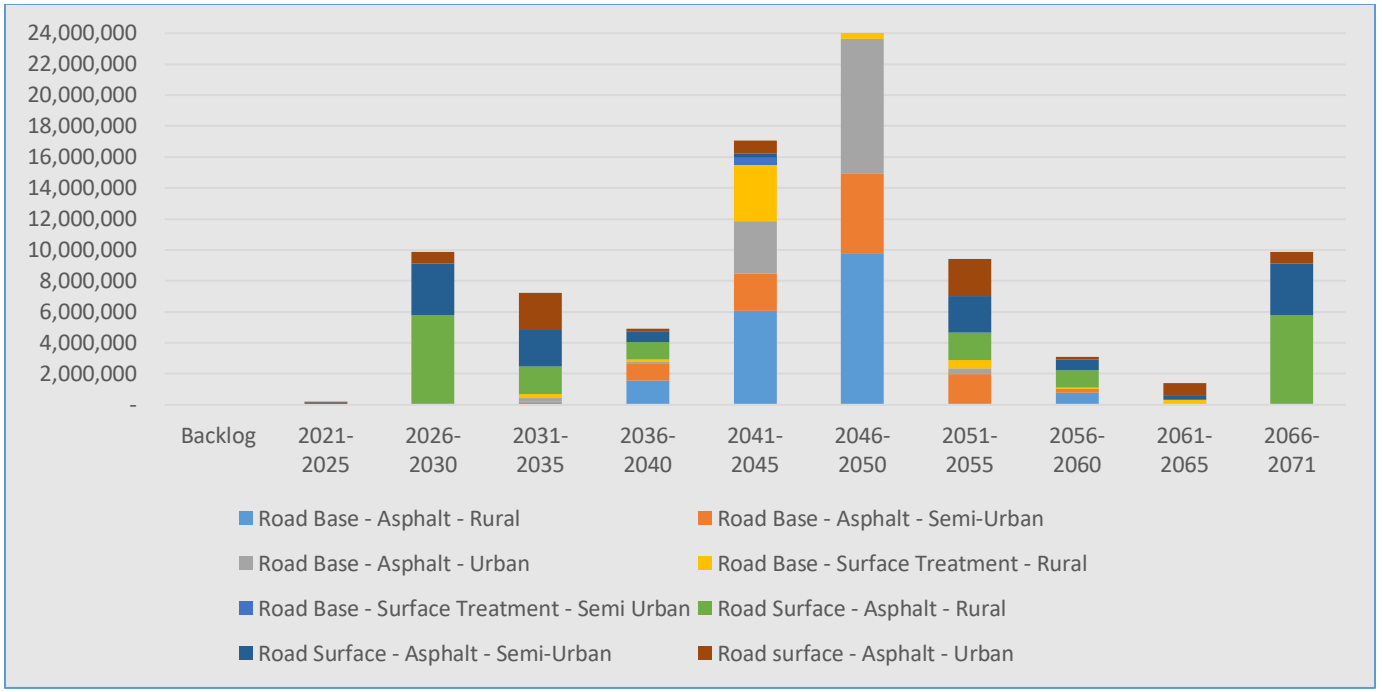
The Roads Needs Study was completed in 2021. Asset condition has been categorized based on 6 factors totaling 100% with a resulting condition index for each road section. The scoring system is as follows:

Surface Condition	10
Surface Width	25
Level of Service	20
Structural Adequacy	20
Drainage	15
Maintenance Demand	10
TOTAL	100


2021 Roads Needs Study Condition Summary
Very Poor 2%
Poor 1%
Fair 36%
Good 38%
Very Good 23%
Very Poor
Poor
Fair
Good
Very Good

5.4 Forecasting Future Replacement Needs

In this section, the short, medium and long term infrastructure spending requirements (replacement only) for the Town's Roads assets are illustrated. The backlog is the aggregate investment infrastructure that was deferred over previous years or decades. In the absence of observed data, the backlog represents the value of assets that remain in operation beyond their useful life.



5.5 Recommendations

2021 Age based Data as well as previous years indicates no backlog. Ten year replacement needs have increased to $10,078,616. Information from the 2021 Roads Needs Study should be updated in 'Citywide' software and has already been incorporated into 'Streetscape' Software. This new data will assist the Town in pinpointing Roads that require maintenance, rehabilitation or replacement.

Condition assessment data from the 2021 Roads Needs Study will be integrated into the 2022 Operations Plan as prioritization guidance for short, medium and long term replacements needs. In addition, The 2021 Roads Needs Study will establish priorities for capital improvements, based on the scoring method that included a breakdown of Surface Condition, Surface Width, Level of Service, Structure Adequacy, Drainage and Maintenance Demand.

Key performance indicators from the Study included traffic counts, and tracking of maintenance requirements such as crack sealing, patching and winter maintenance that also included community consultation. Using the Total Long Term requirements from the Road Needs Study, The town is currently funding 62% of its average annual requirements for the road network.

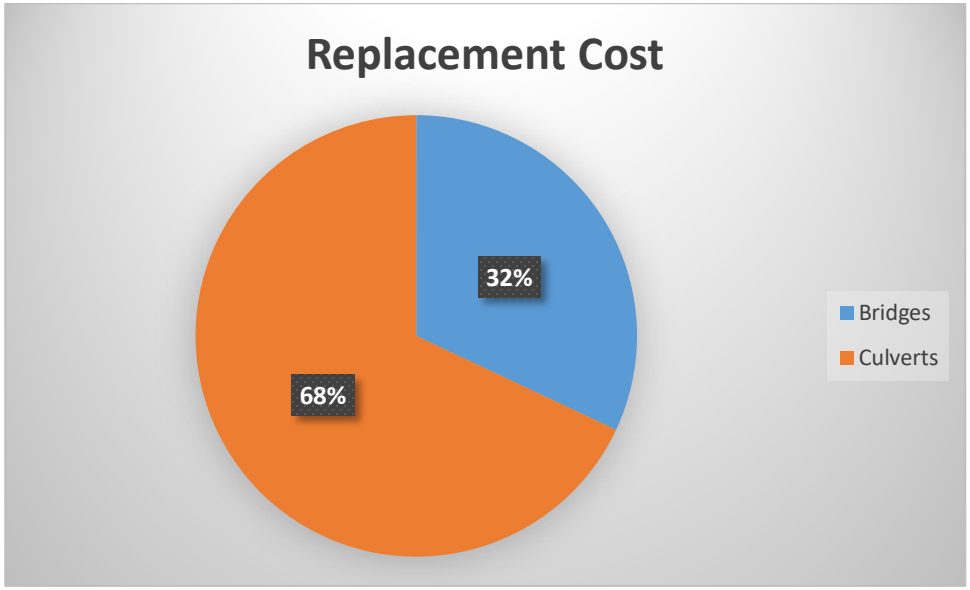
BRIDGES AND CULVERTS

6.0 Bridges and Culverts

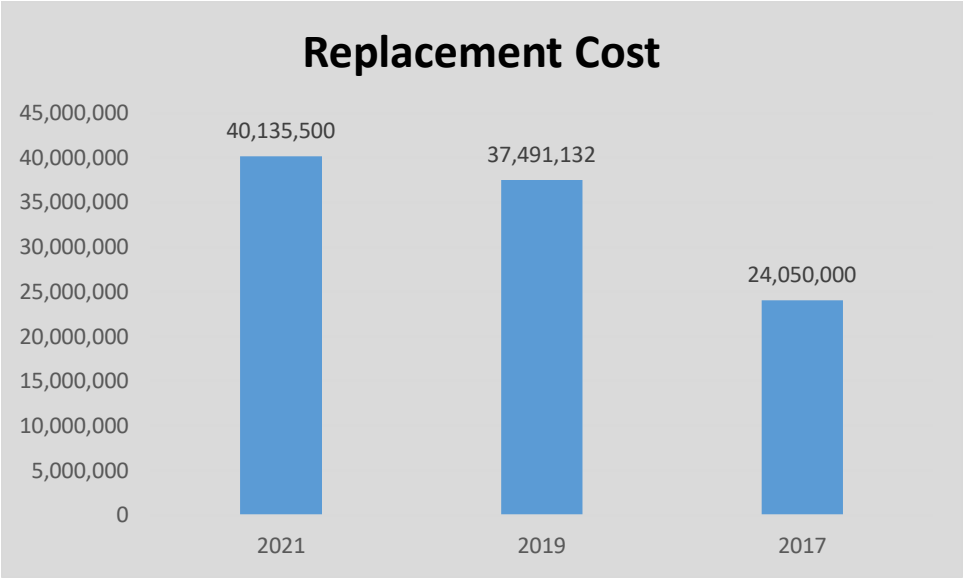
6.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the Town of Erin Bridge and Culvert portfolio. All values are from the OSIM Bridge Inspection Reports, completed every two years as per Ontario regulation 104/97.

Component	QTY	Useful Life (Average 2021)	Valuation	2021 Replacement Cost	2019 Replacement Cost	2017 Replacement Cost
Bridges	11	17.34	OSIM Report	12,767,500	11,800,302	8,650,000
Culverts	36	15.61	OSIM Report	27,368,000	25,690,830	15,400,000
TOTAL	47			40,135,500	37,491,132	24,050,000



The figure below shows the upward trend in cost of Replacement from 2017 to 2021.

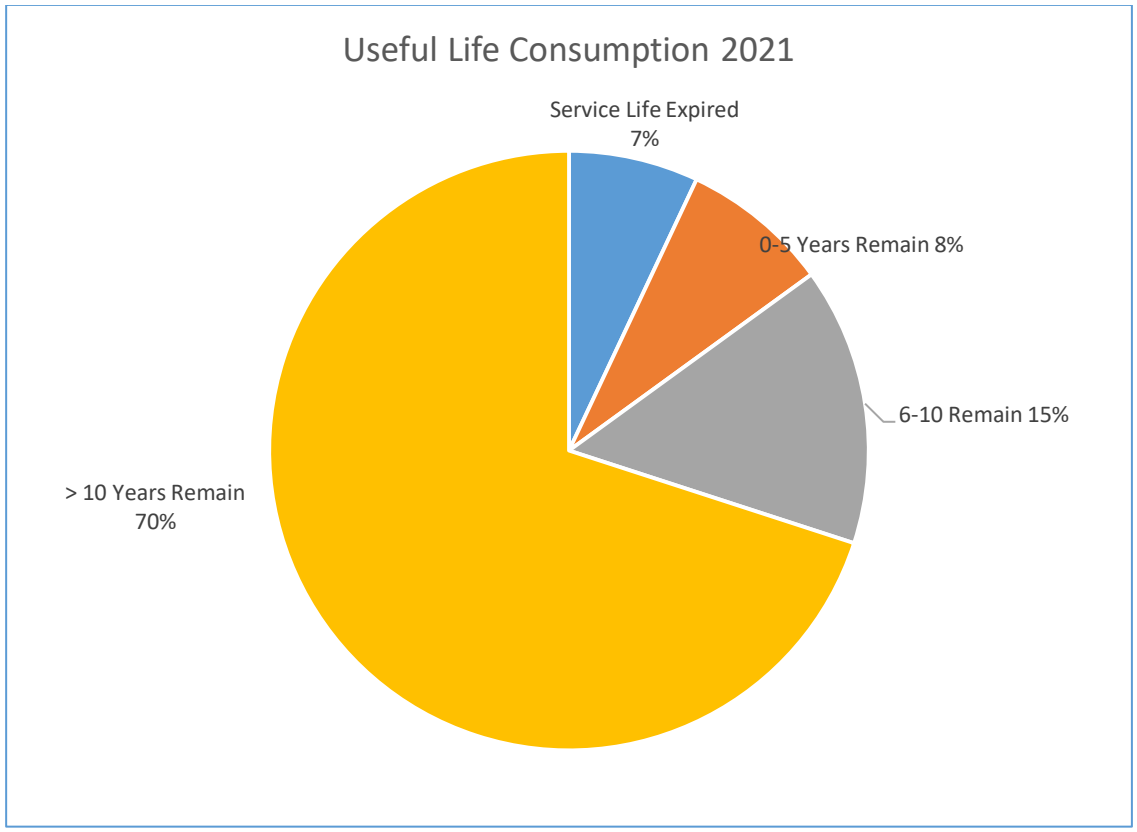


The 7.1% increase in Replacement costs from 2019 to 2021 of all the bridges and culverts in the Town of Erin is primarily due to inflation. This is expected to rise again due to increasing inflationary pressures.

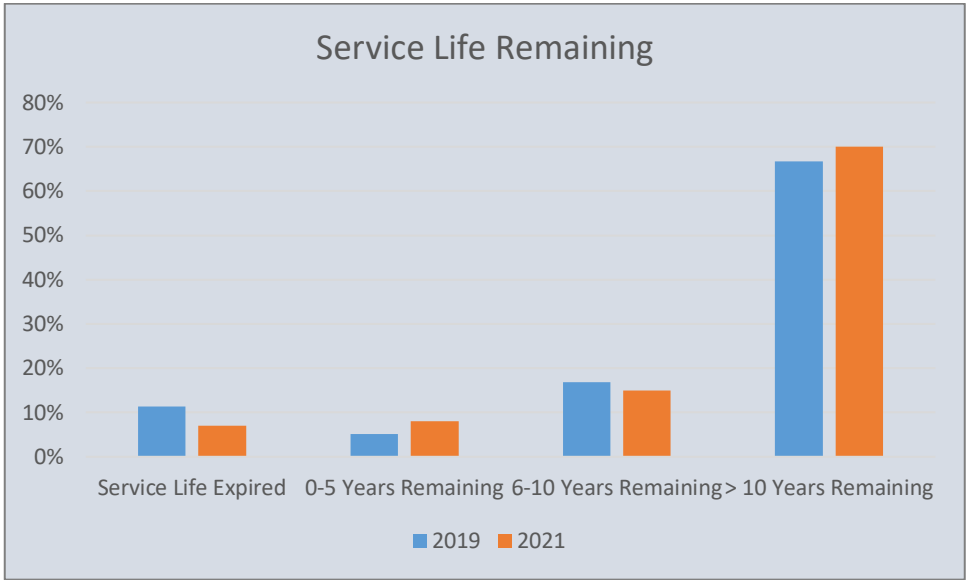
The increase of 55.9% from 2017 to 2019 is the result of inflation as well as several culverts not included in the earlier report. The 2017 Report did not include Culvert 2066 and 2068 located on the Erin-Garafraxa Townline and Culvert 2026 and 2027 located on the Erin-Halton Townline border as well as Culvert 2045 that was planned for and replaced in 2018.

6.2 Useful Life Consumption

A comparison of useful life consumption from 2019 to 2021 gives a more complete profile of the state of the communities' infrastructure. Service life expired has decreased by 4% and Bridges and Culverts with greater than 10 years remaining have increased by 3%. This improvement overall can be attributed to the completed capital projects of Bridge 2064, and Bridge 11 and the completion of Culvert 2051.



A comparison of useful life remaining from 2019 to 2021 in the chart below gives a clear example of the Town of Erin's proactive approach to replacing bridges and culverts.

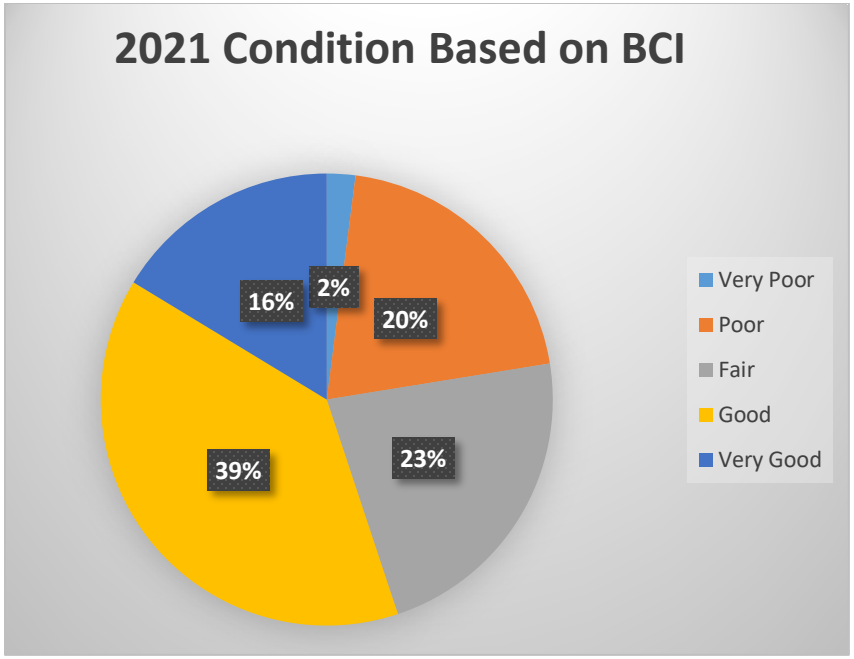


6.3 Asset Condition

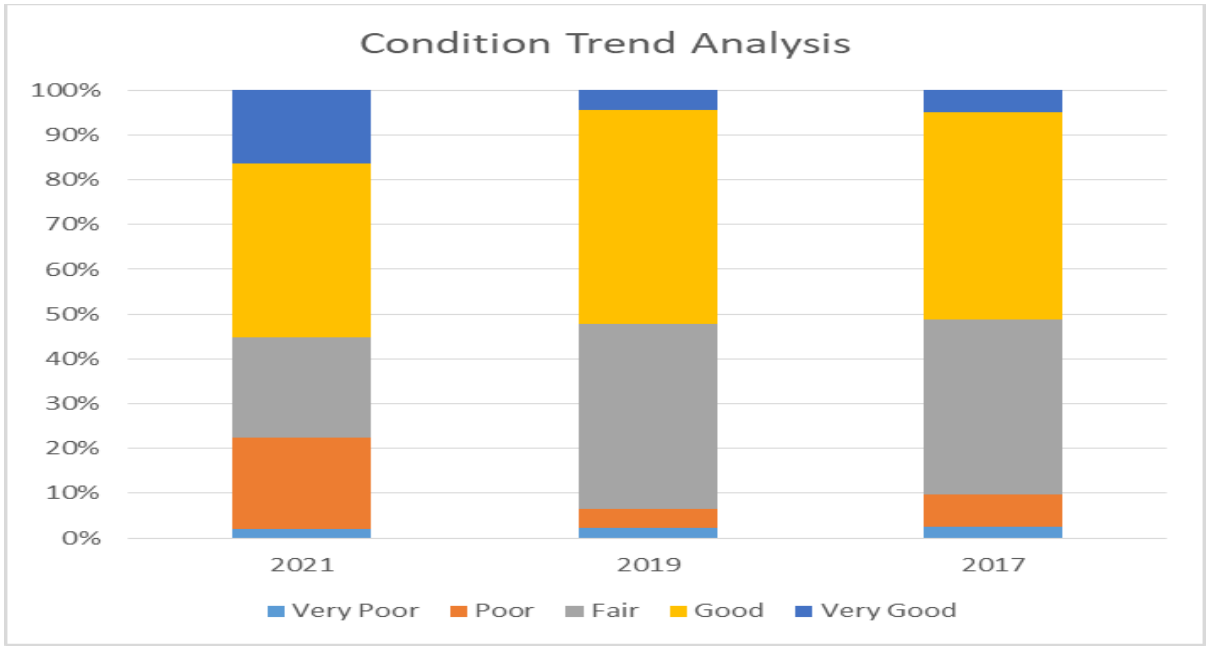
The Town of Erin's Bridge and Culvert Infrastructure is inspected by-annually using the Ontario Structure inspection Manual (OSIM) format. All structures in excess of 3 meters are mandated to be included in the Town's Inspection Inventory. Therefore, the condition date outlined in this section is based on the observed data from the 2021 OSIM inspections. Where a structure is shared with an adjoining municipality, data from their OSIM report has been included.

Condition Scale: Roads/Bridges		
Scale	**Definition**	**BCI**
Very Good (5)	The asset is in very good condition, typically new or recently rehabilitated. Maintenance needs should be minimal until the next assessment of the asset.	> 90
Good (4)	The asset is physically sound and is in good condition, with some elements showing general signs of wear that require attention. Maintenance is minimal, and costs associated with maintenance activities fit within the departmental operating budget. Typically the asset has been used for some time but is still within early to mid-state of its expected life.	70 - 90
Fair (3)	The asset shows general signs of deterioration, and is performing at a lower level than originally intended. Some components of the asset are becoming physically deficient and component replacement may be necessary. Maintenance requirements and cost are increasing. The asset is in need of either minor capital repairs, or additional maintenance.	50 - 70
Poor (2)	The asset is approaching the end of its useful life, and exhibits significant deterioration. Major repairs are required, with significant capital investment.	40 - 50
Very Poor (1)	The asset is in unacceptable condition with widespread signs of advanced deterioration, and has a high probability of failure. Maintenance costs are unacceptable and rehabilitation is not cost-effective. The asset is in need of major replacement or refurbishment.	< 40

The Bridge Condition Index (BCI) for 2021 has the majority of the Bridges and Culverts in the Good range at 39%. The Very Poor Range of 2% indicates that these structures should be replaced.

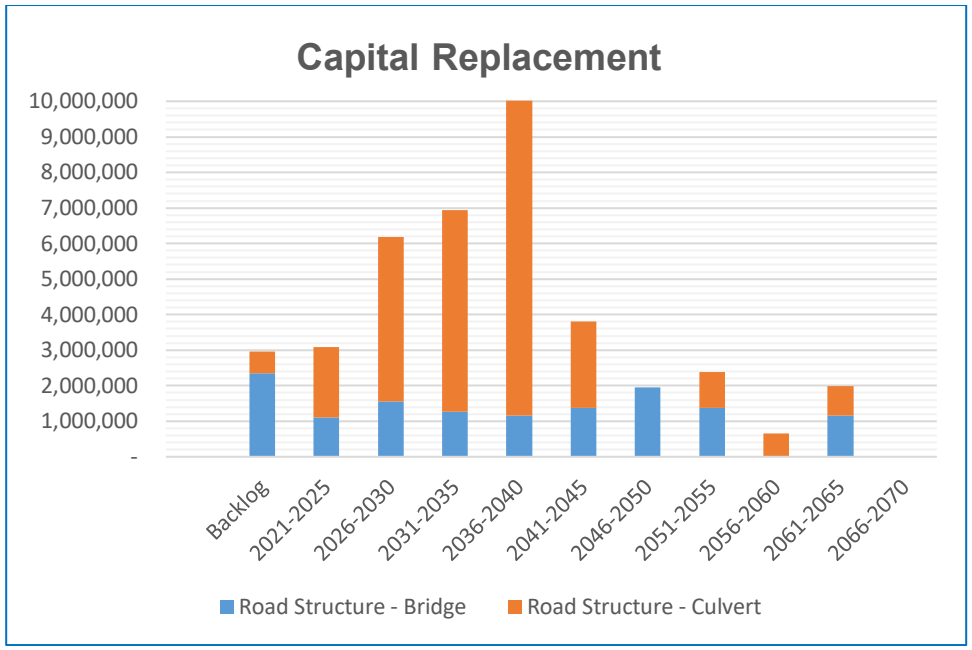


The average Bridge Condition Index (BCI) for 2021 is 69.95, an improvement of 1.85 over the years 2019 and 2017. The comparison of the condition trend below shows the greatest increase in the 2021 'Very Good' Category.



6.4 Forecasting Future Replacement Needs

In this section, the short, medium and long-term infrastructure spending requirements (replacement only) for the Town's Bridges and Culverts are illustrated in the below chart. The backlog is the aggregate investment in infrastructure that was deferred over previous years or decades and represents the value of assets that remain in operation beyond their useful life. The 2021 OSIM report recommends replacements including 2021 and beyond. The recommendations are to clear backlog with the majority of replacements planned over the next 25 years.



The replacement needs visualized in the chart above are based on the 2021 OSIM inspections. This chart assumes full structure replacement based on the 2021 OSIM report values. The OSIM inspections often recommend major or minor rehabilitation along with ongoing maintenance, to create a buffer or postponement of complete structure replacement. Out of the 47 Bridges and Culverts listed in the report, a total of 11 were recommended for Rehabilitation and 6 were recommended to be completed within one year at an estimated cost of 1.68 Million (Appendix D).

6.5 Recommendations

The information from the 2021 OSIM inspection report has been incorporated into the 2021 Asset Management Plan and integrated into the development of the 2021 Capital budget and 2022-2025 Capital Forecast. OSIM inspections will continue to be performed by-annually as required by Province of Ontario Regulation 104/97 with the next one scheduled in 2023.

Key Performance Indicators have been assessed under the direction of a Professional Engineer that identify any material defects, maintenance needs, additional studies and/or repairs/rehabilitation work required on a structure by structure basis, and included in the 2021 OSIM report.

The updated Financial Profile for Bridges and Culverts indicates that the Town's average annual investment is 66% for its long term funding requirements.

LAND IMPROVEMENTS

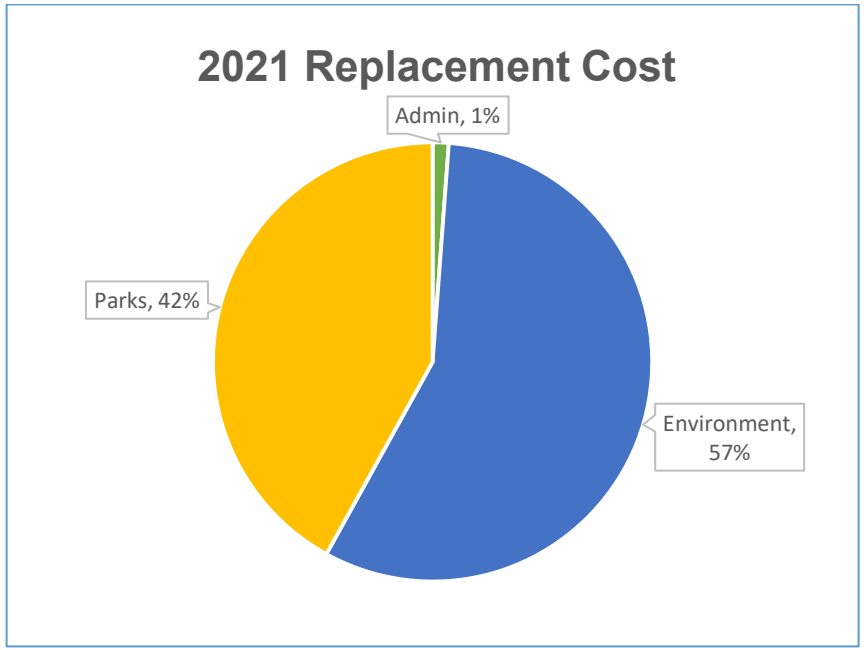
7.0 Land Improvements

7.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

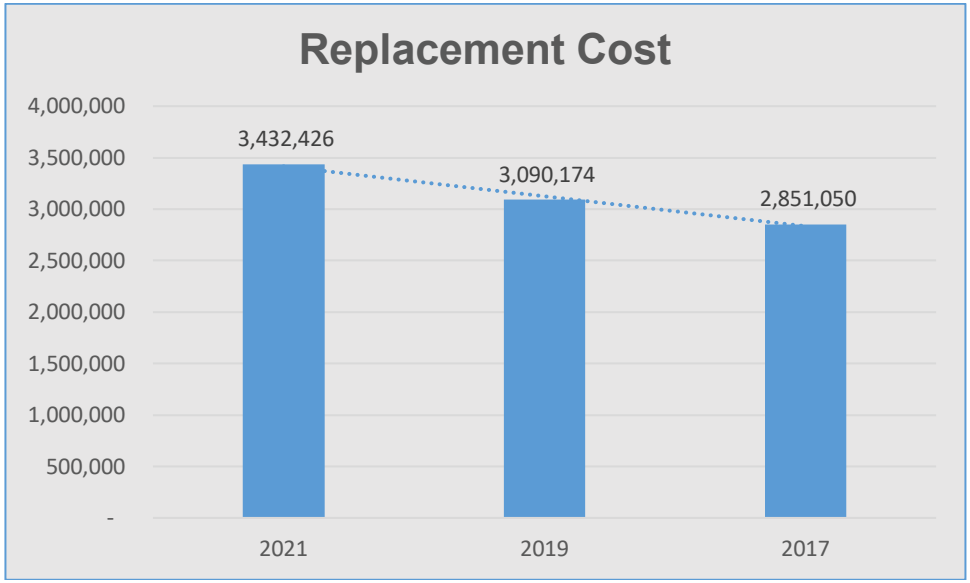
The table below illustrates key asset attributes for the Town's Land improvements, which include parks, tennis courts, playground equipment, and other items. The table outlines quantities, useful life, replacement cost, and the valuation method. In total, the Town's land improvement assets are valued at $3.43 million based on 2021 replacement costs.

Component	QTY	Useful Life	Valuation Method	Replacement Cost		
Land Improvements		(Years)		2021	2019	2017
Admin	2	15	CPI Monthly (ON)	40,535	40,099	38,705
Environmental	1	15	CPI Monthly (ON)	1,951,647	1,760,791	1,699,546
Parks	19	10,20	CPI Monthly (ON)	1,440,244	1,289,284	1,112,799
			TOTAL	3,432,426	3,090,174	2,851,050

The majority of Land Improvement replacement cost is comprised of Environmental and Parks that encompass the larger areas in the chart below.



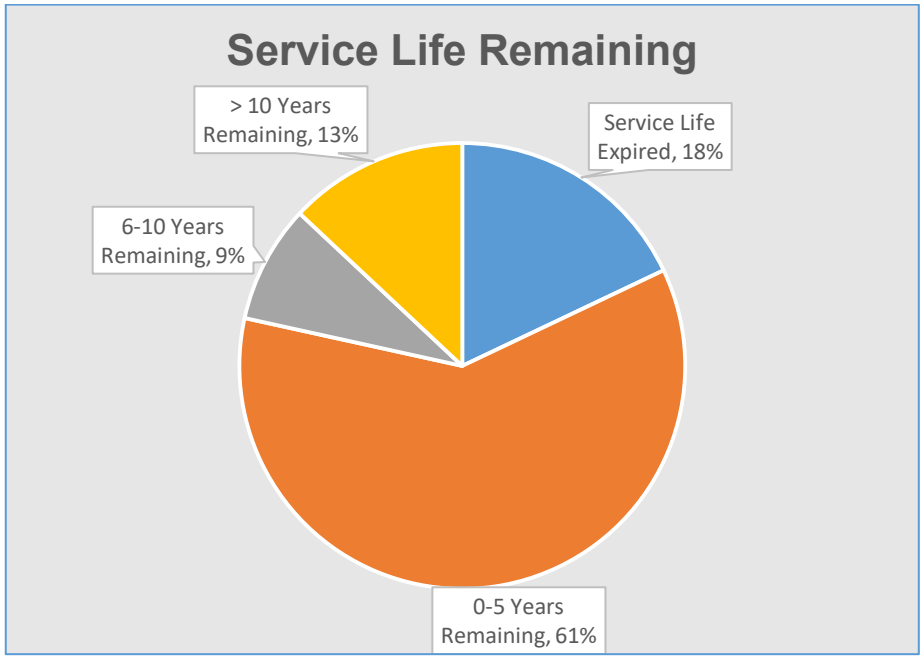
Replacement cost has risen 11.1% from 2019 to 2021, with the increase attributable to inflation (CPI monthly Ontario values were used) as well as the completion of a Drainage Project and Parkland Improvements.



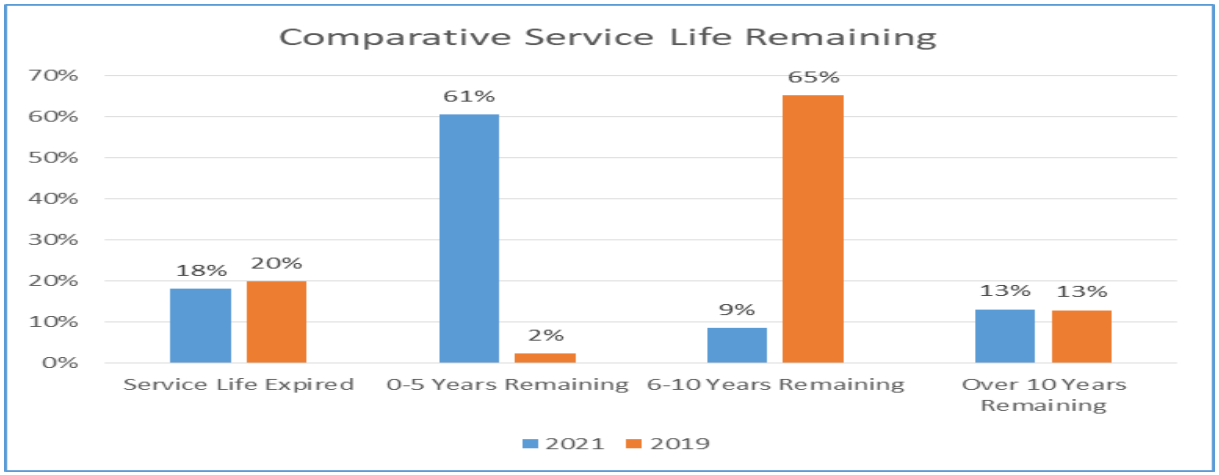
The Erin Rotary River Walk Trail Parkland Project, with a budget of $300,000, is ongoing with the completion of Phase II expected in 2022.

7.2 Useful Life Consumption

The consumption rate of assets based on industry established useful life standards provides a more complete profile of the state of the community's infrastructure. The figure below illustrates the useful life consumption levels as of 2021 for the Town of Erin Land Improvements.

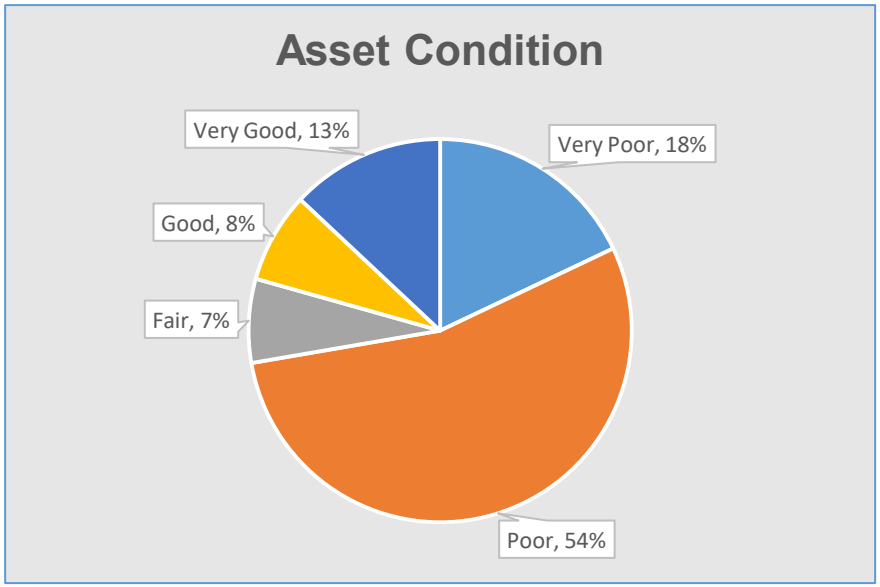


Service Life expired over the 3 years experienced a shift between 0 to 5 years and 6 to 10 years, as assets that were on the borderline (6 years) have moved into the lower category.



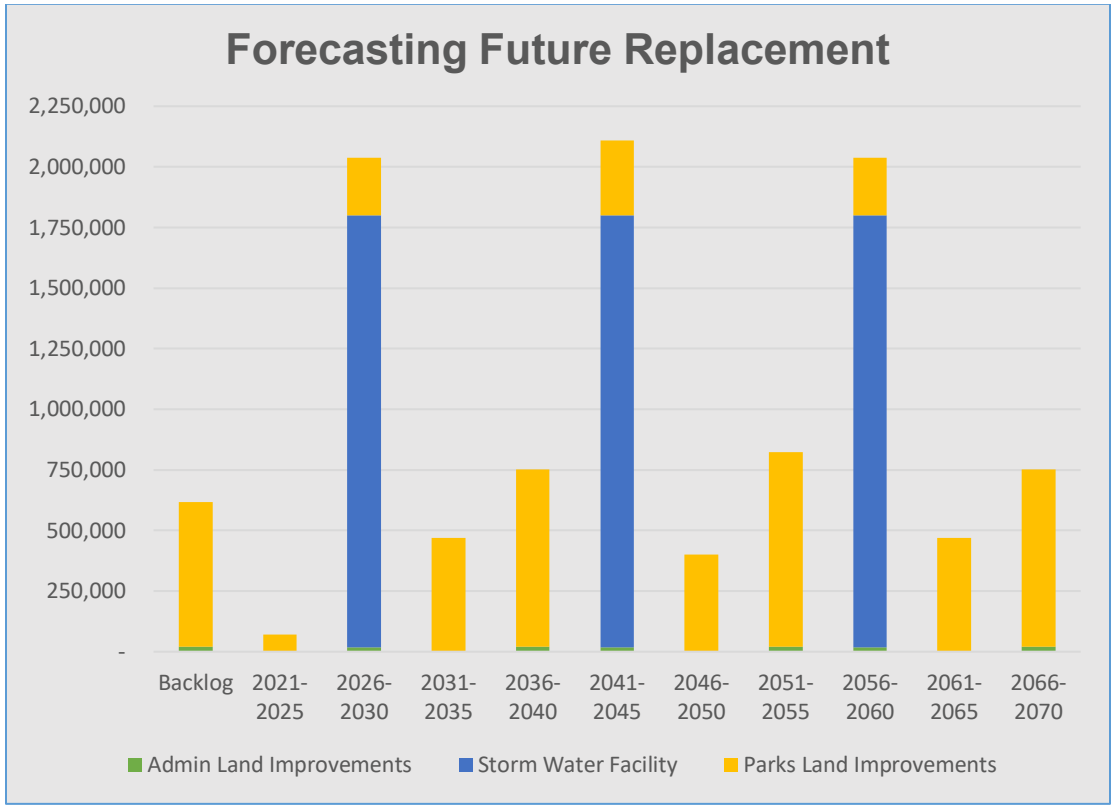
7.3 Asset Condition

Using replacement cost, the condition of the Town of Erin's Land Improvement assets is summarized as of 2021.



7.4 Forecasting Future Replacement Needs

In this section, Short, medium and long-term infrastructure spending requirements (replacement only) for the Town of Erin's Land Improvement Assets are illustrated. The backlog is the aggregate investment in infrastructure that has been deferred over previous years. In the absence of observed data, the backlog represents the value of assets that remain in operation beyond useful life.



7.5 Recommendations

The 2019 Parks, Recreation and Culture Masterplan provided the Town of Erin with a long-term plan. The Town is following these recommendations with budgeted upgrades to parks equipment, fencing and bleachers.

Immediate needs are addressed with ongoing Condition assessment of Land Improvement Assets that is currently performed by Town of Erin staff, who annually inspect playgrounds and trails, as well as Town residents input.

Engineers and architects have designed the Riverwalk Trail project and the construction is ongoing with a budget of $300,000.

The Town of Erin is setting aside an annual amount to address immediate needs in land improvement assets. For the 2021 AMP, funding of approximately 25% of the Average Annual Investment Required has been set aside.

WATER SYSTEM

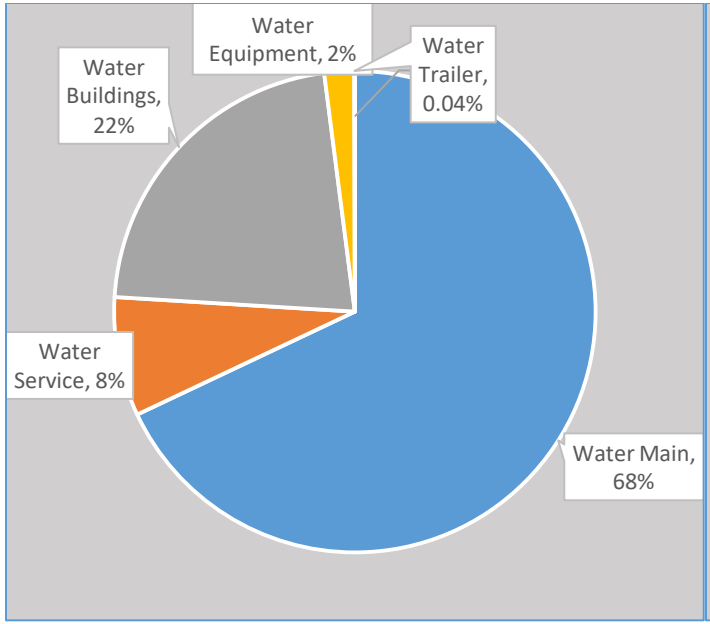
8.0 Water System

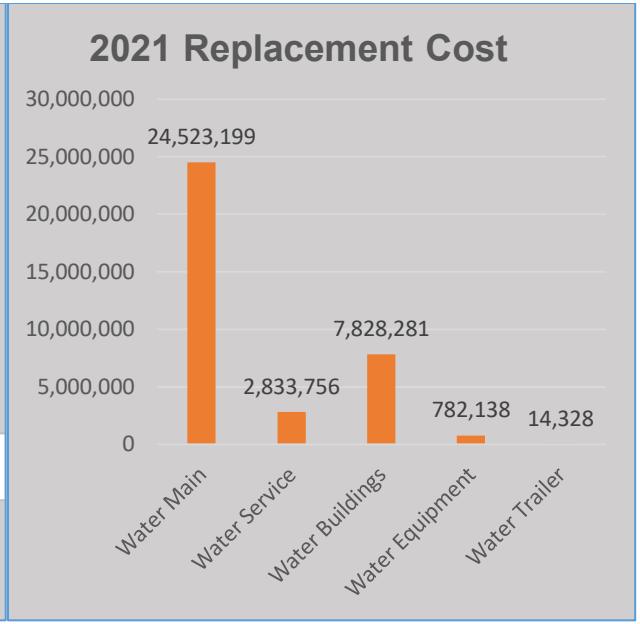
8.1 Asset Portfolio: Quantity, Useful Life, & Replacement Cost

The table below illustrates key asset attributes for the Town's Water Assets that exist in the water mains and water service. The Valuation Method used for Water Mains and Service was NRBCPI Quarterly, and Water Buildings, Equipment and Trailer was CPI Monthly (Ontario). To be consistent, the Valuation Method used in 2017 has been used for all updates.

Component Water	Useful Life Years	QTY 2017	Replacement Cost	QTY 2019	Replacement Cost	QTY 2021	Replacement Cost
Water Main	50,75	113	20,785,428	113	22,321,217	113	24,523,199
Water Service	50,75	117	2,558,390	117	2,747,374	117	2,833,756
Water Buildings	20,40	11	8,292,829	10	7,744,827	10	7,828,281
Water Equipment	5,10,20	11	531,479	13	603,848	15	782,138
Water Trailer	15	2	13,680	2	14,174	2	14,328
Water Vehicles	10	4	161,395	0	0	0	0
		113	32,343,201		33,431,440		35,981,702

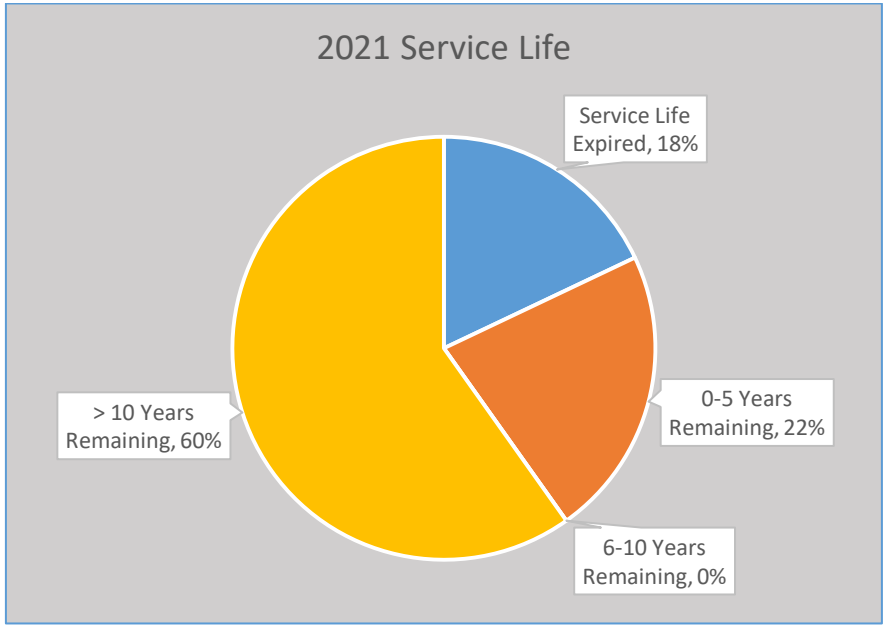
The majority of replacement cost is comprised of the Water Mains.


Water Equipment, 2%
Water Trailer, 0.04%
Water Buildings, 22%
Water Service, 8%
Water Main, 68%


2021 Replacement Cost
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
24,523,199
2,833,756
7,828,281
782,138
14,328
Water Main
Water Service
Water Buildings
Water Equipment
Water Trailer

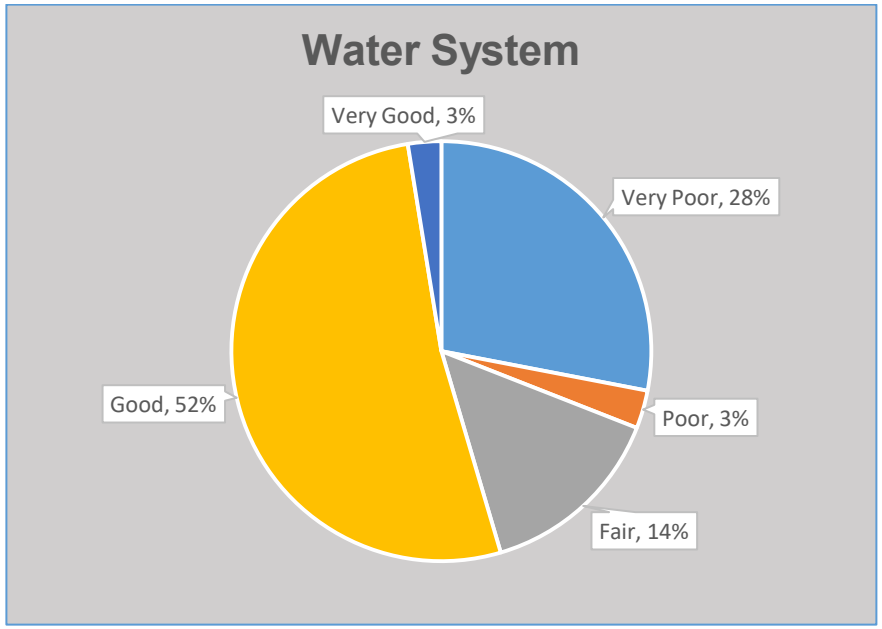
8.2 Useful Life Consumption

In conjunction with historical spending patterns and observed condition data, understanding the consumption rate of asset based on industry established useful life standards provides a more complete profile of the state of a community's infrastructure. The figure below illustrates the Useful life consumption levels as of 2021 for the Towns Water Service and Water Mains. 60% of the water assets have at least 10 years of useful life remaining while 18% with a value of $2.1 million remain in operation beyond their useful life. An additional 22% will reach the end of their useful life within the next five years.



8.3 Current Asset Condition

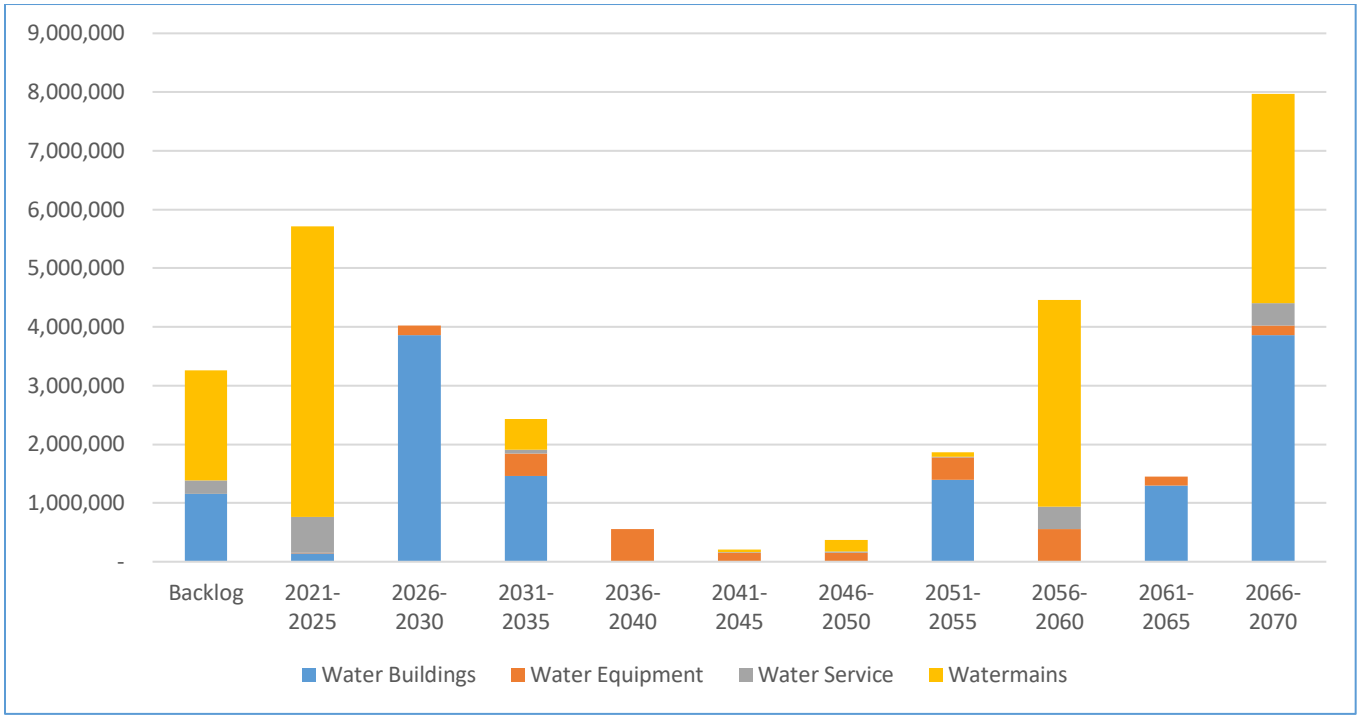
Using 2021 replacement cost, in this section, the condition of the Town's Water Service and Water Mains is classified from Very Poor to Very Good. The Town does not have a mechanism for tracking asset condition so age-based data is used as a proxy.



Based on Age Data, 55% of assets are in good to very good condition with a replacement cost of 14.9 million, and 45% in very poor to fair condition with a replacement cost of 12.4 million.

8.4 Forecasting Future Replacement Needs

In this section, the short, medium and long-term infrastructure spending requirements (replacement only) for the Towns Water System Assets. The backlog is the aggregate investment in infrastructure that was deferred over previous years or decades. In the absence of observed data, the backlog represents the value of assets that remain in operation beyond their useful life.



In addition to a backlog of $3.1 million, replacements needs will total $9.0 million in the next five years, with an additional $4 million between 2026 and 2030.

8.5 Financial Profile: Rate Funded Assets

The Towns annual requirements (CityWide) for its Water System in 2020 and 2021 AMP is summarized below. Values are based on historical costs, updated to Replacement using CPI indexes. The table below shows that the Town is not allocating sufficient funds by $228, on an annual basis to meet replacement needs and projects may need to be deferred or incur debt. Injection of additional revenues from projected growth will help mitigate infrastructure backlogs.

Asset Class	Average Annual Investment Required	Total Funding Available in 2022			Surplus (Deficit)
		Revenue	Operations	Available Funding	
Water Network	420,796	1,336,528	(881,508)	455,020	$ 34,224
Water Facilities	200,259				$ (200,259)
Machinery & Equip.	62,332				$ (62,332)
Total	**683,387**	**1,336,528**	**(881,508)**	**455,020**	**$ (228,367)**

8.6 Recommendations – Water System

1. Age-based data show a backlog of $3 million and 10 year replacement needs of 1.3 million. Based on the Asset Management Plan (AMP) condition assessments and the annual Deficit of available funding, a Grant has been applied for to address these needs.
2. The data collected through the (AMP) condition assessments has been integrated into a risk management framework (8.2 and 8.3), that will guide prioritization of short, medium and long term replacement needs. It was determined that the cost of a formal assessment would outweigh the benefit.
3. A tailored lifecycle activity framework was recommended and developed during the 2020 budget process. This framework will continue to be updated annually.
4. Key Performance indicators have been established and must continue to be tracked annually as part of the overall level of service model.
5. The short, medium and long-term capital, operations and maintenance needs need to be annually assessed. The Town has outsourced this to the Ontario Clean Water Agency (OCWA) who have provided a 5 year capital plan that has been incorporated into long term needs and annual budgets.
6. An appropriate percentage of replacement costs should be allocated for the Town's operating and maintenance requirements. Currently, the Town is legislated and has followed the requirements of O. Reg. 453/07 that stipulates financial plans have been approved and impacts have been considered.
7. The Town needs to set aside an annual amount to fund long term requirements. The grant applied for (point 1) has been approved with construction and replacement to begin in 2023.

Appendix A – Town of Erin Vehicles

Roads Vehicles

Vehicle Type	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Vehicle License	International Paystar 5500 2005	1/1/2005	198,613	198,613	-	263,620
	International 7600 SBA 2010 Sander,Plow	1/1/2005	245,318	245,318	-	325,612
	International 7600 Tandem Plow 2012	1/1/2012	225,920	225,920	-	261,325
	Ford F450 2015 4X4 1 Ton Pickup with dump box	1/1/2014	66,090	52,864	13,226	74,773
	GMC Sierra Pickup 2014	1/1/2014	30,472	24,374	6,098	34,476
	Dodge Ram 2500 Pickup 2015, Plate:AL46686	1/1/2015	38,794	27,150	11,644	43,191
	International 7000 Series 7600 2007	1/1/2007	197,012	147,741	49,271	253,068
	Chev Silverado 4x4 Pickup, Plate:AF38834	1/1/2018	26,299	21,036	5,263	29,754
	Chevrolet Express Cube Van 2007	1/1/2018	42,627	42,627	-	54,957
	2017 GMC Savana Cargo Van RWD 2500 135"	1/1/2019	30,200	15,094	15,106	32,209
	International HV607	1/1/2019	239,086	71,726	167,360	246,690
	International 7400 2021	1/1/2021	30,036	3,004	27,032	30,036
Vehicle Unlicensed	Bandit Brush Chipper	1/1/2009	41,649	41,649	-	51,690
	Excavator - Hydraulic Thumb	1/1/2011	9,680	9,680	-	11,463
	Rolloff Bins x 2	1/1/2011	10,369	10,369	-	12,279
	John Deere Grader 2012	1/1/2013	324,163	291,724	32,439	372,800
	Roller / Gravel Packer 8' drum	1/1/2013	18,317	16,484	1,833	21,065
	Gravel packer / roller	1/1/2014	13,127	10,500	2,627	14,852
	John Deere Grader 870 GP2014	1/1/2014	361,779	218,495	143,284	409,311
	Volvo Motor Grader G976 2015	1/1/2017	313,962	156,922	157,040	334,845
	New Holland 4WD Tractor T6050	1/1/2009	97,526	97,526	-	121,040
	Trackless - attachments 2006	1/1/2007	11,192	11,192	-	14,377
	Sidewalk Machine Trackless	1/1/2016	121,603	48,625	72,978	132,736
	Caterpillar 314CR Excavator 2005	1/1/2005	170,975	145,316	25,659	226,936
	Thompson Steamer	1/1/2009	12,237	7,953	4,284	15,187
	Case Wheel Loader 621FXT	1/1/2016	209,269	62,753	146,516	228,428
	Road Shoulder Reclaimer	1/1/2018	15,244	6,098	9,146	15,966
	Roadside Flail Mower KT0214 KUHN	1/1/2020	19,992	3,998	15,994	20,209
Roads Trailer	Float King Tandem 24 ton 2007	1/1/2006	26,082	26,082	-	33,627
			3,147,633	2,240,832	906,801	3,686,522

Fire Vehicles

Vehicle Type	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Fire Vehicle Licensed	Freightliner Dependable Pumper, P12, 750 Gallon Water Tank	1/1/2003	288,238	273,816	14,422	394,594
	Freightliner Dependable Pumper, P52, 750 Gallon Water Tank	1/1/2000	284,721	269,304	15,417	400,049
	Freightliner C-Max Rescue Van, R55	1/1/1994	187,769	187,769	0	307,800
	Freightliner Metalfab Tanker, T17, 2300 Gallon Water Tank	1/1/1994	225,323	225,323	0	369,360
	GMC Sentinal Rescue Van, R15	1/1/1992	184,617	184,617	0	312,171
	International Dependable Tanker, T57, 1500 Gallon Water Tank	1/1/1990	210,770	210,770	0	380,860
	Freightliner C-Max Tanker, T17, 1500 Gallon Water Tank	1/1/2008	369,126	258,350	110,776	464,320
	Spartan Dependable Pumper Rescue Truck, P51	1/1/2012	422,317	189,536	232,781	472,750
	Fire Pumper - Dependable P11	1/1/2019	599,436	89,915	509,521	618,000
	FGFT Model M2112 Red	1/1/2021	424,243	21,212	403,031	424,243
	Dependable Heavy duty mini Rescue Station 10	1/1/2021	204,620	10,231	194,389	204,620
	Dependable Heavy duty mini Rescue Station 50	1/1/2021	204,620	10,231	194,389	204,620
Fire Trailer	Moritz 6x12 Tilt Black 2015	1/1/2015	4,216	1,967	2,249	4,694
Fire Vehicle Unlicensed	Kubota ATV TV-X1120D	1/1/2015	21,524	15,064	6,460	23,963
			3,631,540	1,948,105	1,683,435	4,582,044

Building Vehicles

Vehicle Type	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Building Vehicle Licensed	Ford F150 Pickup 2013 Red Crew Cab, Unit:101	1/1/2018	36,185	36,185	0	41,856

Parks Vehicles

Vehicle Type	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Parks Vehicle Licensed	Dodge Ram Pickup 1500 RTR	1/1/2016	29,444	17,661	11,783	32,140
	GMC Sierra Pick up 2015	1/1/2018	51,359	35,944	15,415	57,180
			80,803	53,605	27,198	89,320

Appendix B – Town of Erin Machinery & Equipment

Administration

Category	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Computer Software	Keystone Software 2016	1/1/2016	41,343	41,343	0	45,128
Computers & Equipment	Computer Upgrades Pooled 2010	1/1/2010	49,568	49,568	0	60,390
	Computer Upgrades Pooled 2011	1/1/2011	19,714	19,714	0	23,346
	Desktops x 6 2012	1/1/2012	5,465	5,465	0	6,321
	Colour Digital Copier	1/1/2012	10,116	10,116	0	11,701
	Desktops x 6 2013	1/1/2013	8,516	8,510	6	9,793
	Servers x 3, rack mounted	1/1/2013	24,416	24,400	17	28,080
	Network Server upgrade	1/1/2014	7,408	7,408	0	8,381
	Audio-Visual System- Council Chambers	1/1/2014	14,926	14,926	0	16,887
	Storage Area Network SAN	1/1/2016	35,707	35,707	0	38,976
	Hardware Upgrades	1/1/2017	20,672	20,672	0	22,047
	Security Cameras, Access Control	1/1/2017	15,884	15,884	0	16,941
	LED Entrance Sign	1/1/2017	25,756	25,756	0	27,469
	Telephone system	1/1/2018	25,169	20,135	5,034	26,360
	Municipal building Security	1/1/2018	20,098	16,078	4,020	21,049
	Server Room A/C	1/1/2018	2,193	1,754	439	2,296
			326,951	317,437	9,514	365,165

Building

Category	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Computer Software	Keystone Software 2010	1/1/2010	18,061	18,061	0	22,004
Computers & Equip.	Monitor, Adapter, Keystone Upgrade	1/1/2011	1,033	1,033	0	1,223
			19,094	19,094	0	23,227

Fire

Category	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Fire Equipment	Fire Pagers	1/1/2008	1,117	1,117	0	1,405
	Fire Pagers	1/1/2007	18,426	18,426	0	23,669
	Fire Pagers	1/1/2006	16,654	16,654	0	21,471
	Fire Pagers	1/1/2011	4,771	4,771	0	5,649
	Radio System Mobile XPR5550	1/1/2016	84,568	84,568	0	92,310
	Thermal Cameras	1/1/2009	21,051	21,051	0	26,127
	Defibrillators (AED)	1/1/2004	18,883	18,883	0	25,475
	Hurst Hydraulic Pump	1/1/2015	11,189	7,830	3,358	12,456
	Protective Equipment x 7	1/1/2008	14,547	14,542	5	18,299
	Protective Equipment x 7	1/1/2007	14,301	14,301	0	18,371
	Protective Equipment x 7	1/1/2006	14,033	14,033	0	18,092
	Protective Equipment x 7	1/1/2005	13,809	13,809	0	18,329
	Protective Equipment x 15	1/1/2004	29,048	29,048	0	39,190
	Protective Equipment x 20	1/1/2003	38,120	38,120	0	52,186
	Breathing Apparatus SCBA	1/1/2016	266,793	106,681	160,112	291,218
	Command Lights	1/1/2006	28,700	22,958	5,742	37,002
	Extrication Equipment - H. Pumps	1/1/2005	56,673	48,168	8,505	75,222
	Extrication Equipment - Jaws	1/1/2003	25,920	24,623	1,297	35,484
	Extrication Equipment - Cutters	1/1/2003	26,568	25,239	1,329	36,371
	Extrication Equipment - Rams	1/1/2003	25,272	24,008	1,264	34,597
	Portable Pumps	1/1/2008	15,500	10,848	4,652	19,497
	Portable Pumps	1/1/2004	4,750	4,275	475	6,408
	Portable Pumps	1/1/1995	15,000	15,000	0	24,360
	Portable Pumps	1/1/1985	7,500	7,500	0	17,236
	Generators	1/1/2008	5,335	3,734	1,601	6,711
	Generators	1/1/1995	12,725	12,725	0	20,665
	Generators	1/1/1985	1,700	1,700	0	3,907
	SCBA Compressors	1/1/2009	48,886	31,771	17,116	60,673
	Emergency Plan - Generators	1/1/2009	86,352	56,119	30,233	107,172
	Bunker Gear Racks	1/1/2012	15,749	7,872	7,876	18,217
	Generator 50kw Diesel	1/1/2016	37,763	11,324	26,439	41,220
	Radio System Multi Site	1/1/2018	89,153	71,322	17,831	93,369

	Extrication Equipment - Cutters	1/1/2018	43,782	7,816	35,966	45,853
	Exhaust System - Portable	1/1/2019	86,347	12,952	73,395	89,093
	Hose Cache/Suction X 32	1/1/2019	20,703	3,105	17,597	21,361
	Thermal Imaging Camera	1/1/2020	13,235	2,647	10,588	13,379
	Dress Uniforms x 10	1/1/2020	4,712	942	3,769	4,763
	Dress Uniforms x 10	1/1/2020	33,492	6,698	26,793	33,856
	Hose Cache	1/2/2021	20,000	1,000	19,000	20,000
			1,293,125	818,181	474,944	1,530,663

Parks and Recreation

Category	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Parks Equipment	ECC - Score Clock	1/1/2007	10,704	10,704	0	13,749
	HCC - Score Clock	1/1/1999	8,791	8,791	0	13,476
	Centre 2000 - Projector	1/1/2002	62,832	62,832	0	89,714
	Tractor Mower John Deere 1445 Series 2 4WD with 72" Front Mower	1/1/2012	14,990	14,990	0	17,339
	New Holland Compact Tractor TZ18 + 60" Mower Deck MC60 + Loader 10LA	1/1/2007	15,984	15,984	0	20,532
	HCC - Olympia	1/1/2004	71,181	71,181	0	96,032
	Kubota Tractor F3680 + Mower Deck, rear discharge RCK72RF36	1/1/2008	19,494	18,194	1,300	24,521
	ECC - Zamboni	1/1/2009	83,681	72,518	11,163	103,856
	ECC - Replace 50 HP Compressor	1/1/2010	57,052	34,225	22,827	69,509
	Desuperheater - Burnside Report	1/1/2017	27,915	6,975	20,940	29,772
	Replace 30hp Compressor #2 ECC	1/1/2017	32,071	8,013	24,058	34,204
	ECC Security Cameras	1/1/2019	42,456	25,474	16,982	43,806
	McMillan Park Picnic Tables	1/1/2019	3,745	2,247	1,498	3,864
	ECC Brine Pump & Motor	1/1/2020	17,255	1,726	15,530	17,443
	Fusion Software 2020	1/1/2020	38,315	13,580	24,735	38,732
	ECC - Zamboni	1/1/2021	96,879	6,459	90,420	96,879
	HCC - Olympia	1/1/2021	87,503	5,834	81,670	87,503
			690,848	379,725	311,124	800,931

Roads

Category	Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Roads Equipment	Fuel Management System	1/1/2010	22,983	22,983	0	28,001
	Snow Plough blade 8.5	1/1/2018	9,871	5,921	3,950	10,774
			32,853	28,903	3,950	38,775

Appendix C – Town of Erin Building & Facilities

Erin Community Centre

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Centre 2000 - Expansion	1/1/2000	2,163,342.34	1,189,686.85	973,655.49	3,238,050.00
Centre 2000 Community Centre	1/1/1975	652,655.81	652,655.81	0.00	3,323,787.00
Centre 2000 - Arena	1/1/1975	957,985.71	957,985.71	0.00	4,796,870.00
Centre 2000 - Arena expansion project	1/1/2011	1,215,097.28	334,060.39	881,036.89	1,438,931.00
Sewage Flow Meter	1/1/2012	21,170.00	10,582.41	10,587.59	24,488.00
ECC - Rooftop HVAC Units	1/1/2017	23,795.00	5,945.54	17,849.46	25,378.00
ECC - Replace Rubber Flooring	1/1/2017	29,360.00	7,336.04	22,023.96	31,313.00
ECC Carpet Theatre & Cafeteria	1/1/2019	11,517.15	1,727.57	9,789.58	11,883.00
Erin CC Water Heater	1/1/2019	12,912.13	3,873.64	9,038.49	13,323.00
Erin Community Centre		5,087,835.42	3,163,853.96	1,923,981.46	12,904,023.00

Hillsburgh Community Centre

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Hillsburgh Community Centre	1/1/1975	712,233.85	712,233.85	0.00	3,587,280.00
HCC - ice surface floor replacement	1/1/2000	198,864.96	198,864.96	0.00	297,657.00
HCC - refrigeration system replacement	1/1/2001	294,093.02	294,093.02	0.00	425,140.00
HCC - lobby flooring	1/1/2002	23,266.00	23,266.00	0.00	33,220.00
HCC - Roof Replacement (Betterment)	1/1/2010	33,990.00	20,390.12	13,599.88	41,411.00
HCC -Lobby & Dressing Room floor Replacement	1/1/2011	25,398.68	13,966.26	11,432.42	30,077.00
HCC Dasher Board Replacement	1/1/2015	130,280.62	45,581.17	84,699.45	145,045.00
Condenser Evaporative HCC	1/1/2016	49,391.50	14,810.88	34,580.62	53,913.00
Accessibility Renovations	1/1/2016	11,200.00	3,358.51	7,841.49	12,225.00
HCC - Rooftop HVAC Unit	1/1/2017	8,995.00	2,247.53	6,747.47	9,593.00
HCC - Ice surface lighting	1/1/2017	10,969.57	2,740.91	8,228.66	11,699.00
HCC Water Heater	1/1/2019	11,198.00	3,359.40	7,838.60	11,554.00
Hillsburgh Community Centre		1,509,881.20	1,334,912.61	174,968.59	4,658,814.00

Ballinafad Community Centre

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Ballinafad Community Centre	1/1/1975	60,028.52	60,028.52	0.00	318,368.00
Ballinafad Community Centre	1/1/1987	139,707.35	122,237.29	17,470.06	294,398.00
Ballinafad Community Centre - Roof Replacement	1/1/2019	14,392.13	10,074.49	4,317.64	14,850.00
Ballinafad Community Centre		214,128.00	192,340.30	21,787.70	627,616.00

Parks Buildings

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Victoria Park: booth	1/1/1975	24,242.40	24,242.40	0.00	121,388.00
Barbour Field: Booth, Pavilion	1/1/1997	74,665.00	46,660.58	28,004.42	116,507.00
McMillan Park Pavilion	1/1/2009	155,569.73	50,548.57	105,021.16	193,078.00
Washrooms at Victoria Park	1/1/2011	14,634.36	5,920.74	8,713.62	17,330.00
Parks Buildings		269,111.49	127,372.29	141,739.20	448,303.00

Roads Buildings

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Roads Shop	1/1/1992	84,893.82	63,665.18	21,228.64	143,548.00
Roads Shop Energy Conservation	1/1/2020	3,286.84	328.68	2,958.16	3,323.00
Roads Shop Roof	1/1/2018	64,138.23	6,413.82	57,724.41	67,172.00
Sand Dome	1/1/1983	249,677.05	159,893.38	89,783.67	535,845.00
Equipment Depot	1/1/1992	434,518.31	325,862.17	108,656.14	734,731.00
Salt Storage Structure	1/1/2017	29,845.63	3,728.41	26,117.22	31,881.00
Roads Shop Vehicle Exhaust System	1/1/2016	32,463.48	9,734.72	22,728.76	35,435.00
Roads Shop		898,823.36	569,626.36	329,197.00	1,551,935.00

Municipal Office

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Municipal Office	1/1/1994	508,016.52	350,657.17	157,359.35	837,721.00
Municipal Office - Basement Offices	1/1/1999	36,680.99	21,089.04	15,591.95	56,231.00
Municipal Office Renovations	1/1/2018	207,889.87	11,474.50	196,415.37	23,099.00
Municipal Office - Roof Replacement	1/1/2019	22,387.21	7,835.52	14,551.69	351,418.00
Municipal Office Elevator	1/1/2019	340,585.44	25,543.91	315,041.53	155,891.00
Municipal Office		1,115,560.03	416,600.14	698,959.89	1,424,360.00

Hillsburgh Fire Hall

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Hillsburgh Fire Station 50	1/1/2014	2,511,141.95	502,037.42	2,009,104.53	2,841,073.00
Rooftop Solar MicroFit	1/1/2015	26,966.40	9,434.71	17,531.69	30,022.00
Hillsburgh Fire Station		2,538,108.35	511,472.13	2,026,636.22	2,871,095.00

Erin Fire Hall

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Erin Fire Station 10	1/1/1985	286,293.15	264,810.67	21,482.48	661,612.00
Station 10 Energy Conservation	1/1/1920	7,530.24	753.02	6,777.22	7,612.00
Erin Fire Station 10 - Metal Roof Replacement on Shed	7/1/2019	5,058.49	252.92	4,805.57	5,084.00
Erin Fire Station		298,881.88	265,816.61	33,065.27	674,308.00

Appendix D – Town of Erin Bridge & Culvert 10-Year Needs

2021 OSIM Report					
Name	Activity	Within 1 Year	1-5 Years	6-10 Years	10-Year Total
Bridge 2	Rehabilitate	239,500	0	0	239,500
Bridge 5	Replace	917,500	0	0	917,500
Bridge 6	Rehabilitate	405,500	0	0	405,500
Bridge 9	Rehabilitate	358,000	0	0	358,000
Bridge 15	Rehabilitate	0	305,000	0	305,000
Culvert 13	Rehabilitate	0	228,500	0	228,500
Culvert 14	Rehabilitate	185,000	0	0	185,000
Culvert 2011	Rehabilitate	0	0	205,000	205,000
Culvert 2018	Replace	0	917,500		917,500
Culvert 2027	Replace	0	0	617,500	617,500
Culvert 2033	Replace	0	0	677,500	677,500
Culvert 2052	Rehabilitate	187,000	0	0	187,000
Culvert 2053	Replace	0	857,500	0	857,500
Culvert 2057	Replace	0	0	557,500	557,500
Culvert 2059	Replace	598,500	0	0	598,500
Culvert 2060	Replace	0	0	617,500	617,500
Culvert 2066	Rehabilitate	0	0	200,000	200,000
Culvert 2072	Rehabilitate	305,000	0	0	305,000
Culvert 16	Rehabilitate	0	168,000	0	168,000
Culvert 10	Replace	0	1,138,500	0	1,138,500
		3,196,000	3,615,000	2,875,000	9,686,000

Appendix E – Town of Erin Water Assets

Water Buildings

	In-Service Date	Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Water Tower	1/1/1990	738,005.00	590,361.91	147,643.09	1,333,571.00
Erin Well E5	1/1/1983	54,615.00	53,248.69	1,366.31	138,272.00
Erin Well E7	1/1/1986	534,953.00	481,434.82	53,518.18	1,177,065.00
Erin Well E8	1/1/1991	697,230.78	521,454.86	175,775.92	1,144,192.00
Hillsburgh Well H2	1/1/1988	640,689.00	544,552.76	96,136.24	1,295,306.00
Hillsburgh Well H3	1/1/1969	160,338.00	160,338.00	0.00	1,154,100.00
BelErin Well	1/1/1995	83,125.00	56,103.93	27,021.07	134,993.00
Delerin Pressure Building	1/1/1987	27,852.53	24,369.64	3,482.89	58,692.00
Frank Smedley Booster Pumping Station	1/1/2014	1,069,494.83	213,817.63	855,677.20	1,210,012.00
Glendevon High Lift Pump Replacement	1/1/2013	158,323.33	71,225.64	87,097.69	182,078.00
Water Buildings		4,164,626.47	2,716,907.88	1,447,718.59	7,828,281.00

Water Equipment

Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Radio Meter Reading Device - Neptune	1/1/2016	8,597	8,597	0	9,384
Scada System - Hillsburgh sites	1/1/2017	165,723	41,408	124,315	176,746
Water Meters x 30	1/1/2015	28,826	4,609	24,217	10,196
Scada System - 3 Erin Village sites	1/1/2015	155,848	54,526	101,321	173,509
Data Loggers - 4 sites	1/1/2015	40,501	14,170	26,331	45,090
Generator 100kw Diesel Perkins Silent - Mobile Trailer	1/1/2016	48,000	14,394	33,607	52,395
Generator 100kw Diesel Perkins Silent	1/1/2016	38,883	11,660	27,223	42,442
Fire Hydrants x 2	1/1/2016	45,171	7,205	37,966	20,891
Water Meters x 36	1/1/2016	12,269	3,644	8,626	13,392
Well #2 Retrofit Control Panel	1/1/2017	1,684	421	1,263	1,796
Generator Upgrade Well #8	1/1/2018	29,655	5,931	23,724	31,058
Generator Upgrade Hillsburgh Heights	1/1/2018	27,279	5,456	21,823	28,569
Security Cameras	1/1/2018	4,721	3,777	944	4,944
Chlorine CL2 Analyzers	1/1/2020	30,884	3,088	27,795	31,219
Equipment life extension	1/2/2021	140,507	28101	112,406	140507
		778,546	206,986	571,560	782,138

Water System

Name	In-Service Date	Historical Cost	Accumulated Amortization	Net Book Value	Replacement Cost
Water Mains	1/1/1990	8,939,238	3,473,023	5,466,215	24,523,199
Water Service	1/1/2010	1,115,204	424,290	690,914	2,833,756
Water System		10,054,442	3,897,313	6,157,129	27,356,955

Appendix F – Town of Erin Funding

WITH CAPTURING CHANGES

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Annual Funding Deficit	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161	1,953,161
Less:Debt Payment Decrease	-	-	-	-	-	-	(167,095)	(167,008)	(167,087)	(167,299)	(166,648)	(167,126)	(331,838)	(332,597)	(332,418)	(332,379)	(432,483)	(432,483)	(432,483)	(432,483)
Add: OCIF Decrease	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545	548,545
Net Annual Funding Deficit	2,501,706	2,501,706	2,501,706	2,501,706	2,501,706	2,501,706	2,334,611	2,334,698	2,334,619	2,334,407	2,335,058	2,334,580	2,169,868	2,169,109	2,169,288	2,169,327	2,069,223	2,069,223	2,069,223	2,069,223

TAX LEVY SUMMARY (CAPTURING CHANGES)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Prior Year Levy	7,689,659	7,779,872	7,871,144	7,963,487	8,056,912	8,151,434	8,247,065	8,343,818	8,441,706	8,540,742	8,640,940	8,742,313	8,844,876	8,948,642	9,053,626	9,159,841	9,267,302	9,376,024	9,486,021	9,597,309
Increase (at 1.2%)	90,213	91,272	92,342	93,426	94,522	95,631	96,753	97,888	99,036	100,198	101,374	102,563	103,766	104,983	106,215	107,461	108,722	109,997	111,288	112,593
	7,779,872	7,871,144	7,963,487	8,056,912	8,151,434	8,247,065	8,343,818	8,441,706	8,540,742	8,640,940	8,742,313	8,844,876	8,948,642	9,053,626	9,159,841	9,267,302	9,376,024	9,486,021	9,597,309	9,709,903
Increase Dedicted to AMP	90,213	181,485	273,828	367,253	461,775	557,406	654,159	752,047	851,083	951,281	1,052,654	1,155,217	1,258,983	1,363,967	1,470,182	1,577,643	1,686,365	1,796,362	1,907,650	2,020,244
Annual Funding Deficit	(2,411,493)	(2,320,221)	(2,227,878)	(2,134,453)	(2,039,931)	(1,944,300)	(1,680,452)	(1,582,652)	(1,483,537)	(1,383,127)	(1,282,404)	(1,179,363)	(910,885)	(805,143)	(699,107)	(591,684)	(382,858)	(272,861)	(161,573)	(48,980)

PERCENTAGE FUNDED BY YEAR

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Annual Average Investment Required	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888	5,161,888
Funding Available																				
2022 Funding	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727	3,208,727
OCIF Decrease	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)	(548,545)
Debt Payment Decrease	0	0	0	0	0	0	167,095	167,008	167,087	167,299	166,648	167,126	331,838	332,597	332,418	332,379	432,483	432,483	432,483	432,483
Tax Levy Increase Required (1.2%)	90,213	181,485	273,828	367,253	461,775	557,406	654,159	752,047	851,083	951,281	1,052,654	1,155,217	1,258,983	1,363,967	1,470,182	1,577,643	1,686,365	1,796,362	1,907,650	2,020,244
Total Funding	2,750,395	2,841,667	2,934,010	3,027,435	3,121,957	3,217,588	3,481,436	3,579,236	3,678,351	3,778,761	3,879,484	3,982,525	4,251,003	4,356,745	4,462,781	4,570,204	4,779,030	4,889,027	5,000,315	5,112,908
Percentage Funded	53%	55%	57%	59%	60%	62%	67%	69%	71%	73%	75%	77%	82%	84%	86%	89%	93%	95%	97%	100%