

TOWNSHIP OF PERTH EAST
2018 ASSET MANAGEMENT PLAN UPDATE



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1. INTRODUCTION:

The first Asset Management Plan (AMP) was produced in 2013 and incorporated the assets required under the Provincial Building Together Infrastructure Strategy; that being roads, bridges, storm, water and wastewater. Subsequent AMP updates have included all asset categories.

In December 2017, the Province passed regulation #588-17, hereinafter referred to as the regulation, under the Infrastructure for Jobs and Prosperity Act, 2015. Under the regulation, municipalities are required to develop and adopt a strategic asset management policy by July 1, 2019. A strategic policy must include;

- Commitment to consider climate change mitigation and adaptation
- Municipality's approach to continuous improvement
- Identification of executive lead and how council will be involved
- Commitment to provide opportunities to engage with the public
- Process for how AMP affects development of the municipal budget
- Principles that guide the Asset Management Plan
- Process for alignment with land-use planning framework
- Which municipal goals, plans, and policies the Asset Management Plan will support

The Council of the Township of Perth East passed resolution #19-029 on February 5, 2019 stating that the Council of the Township of Perth East receive the Township of Perth East Asset Management Plan and presentation dated February 5th, 2019 provided by Hemson Consulting Ltd. for information; and that Council approve the Township of Perth East Asset Management (AM) Plan and Strategic Asset Management Policy (SAMP) as presented by Hemson Consulting Ltd. Carried.

The regulation requires a description of current and proposed levels of service for core infrastructure assets including;

- Community (customer) level – images and/or descriptions of what the end-user experiences
- Technical level – using metrics that describe what the organization provides.

Under the regulation existing levels of service for core assets must be completed by 2021 with completion of existing levels of service for all assets by 2023. Proposed levels of service for all assets must be completed by 2024. The Township is currently working on the current levels of service phase of the regulation project.

The Province is providing funds to deliver tools and supports to meet the requirements of the regulation.

The Township engaged the services of Public Sector Digest to prepare the 2013 and 2015 AMP. The 2016, 2017 and 2018 updates were prepared by Township staff.

The Township currently uses age-based data to determine many condition ratings. This is not the most accurate approach to condition ratings as age is not always the main condition factor. Going forward the Township will improve condition rating data by moving towards actual asset inspection analysis to provide condition ratings. This improvement will change the data in the Asset Management Plan and affect the annual infrastructure deficit number.

2. INFRASTRUCTURE DEFICIT

The infrastructure deficit is the difference between the funding that is raised by the Township for asset replacement versus the funding need or requirement. The following parameters are used to calculate the 2018 infrastructure deficit:

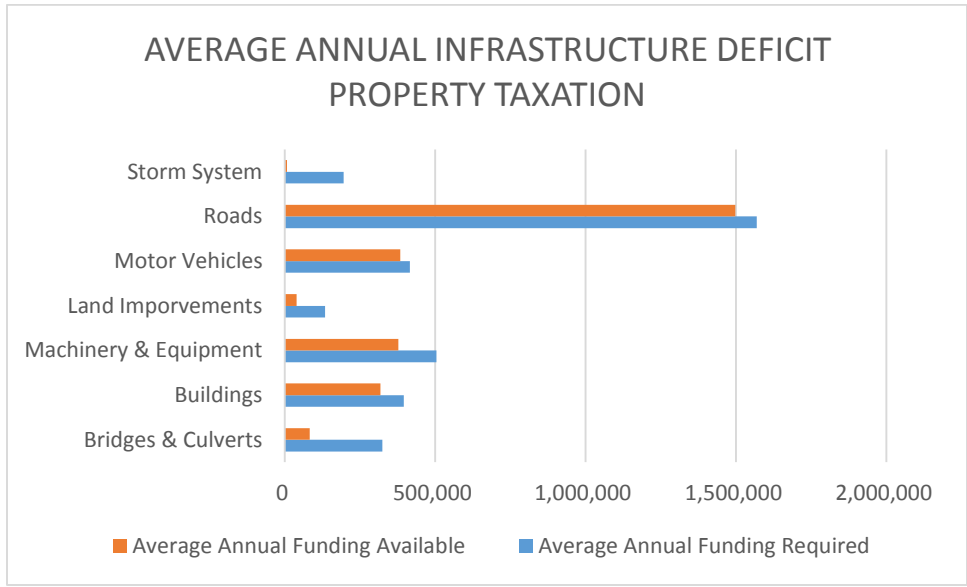
- Replacement values are measured using 2018 dollars.
- Average annual funding is based on 2016 and 2017 actuals and 2018 budget.
- One-time or sporadic funding is not included in the funding to avoid spikes and funding irregularities.
- Funding is prorated to asset categories based on specific funding instructions or pro-rated based on budgeted expenses or historical cost per category, as demonstrated by the examples below;
 - Specific Funding instructions such as a budgeted transfer to fund the furniture and fixtures asset category.
 - Pro-rated funding such as a general transfer to capital, split into several asset categories such as equipment, motor vehicles and roads.
- Annual requirement is calculated by taking the replacement value and dividing over the useful life or planned replacement date. Note that the planned replacement date may change once the move is made to asset inspection analysis versus age-based condition rating which in turn will affect the annual requirement.

2.1 Assets Funded by Property Taxation:

The following chart lists the asset categories funded under property taxation and shows the annual funding available and the annual funding required for each category. There is a total annual deficit of \$832,147 as follows;

- Storm System – Annual Requirement Deficit of \$187,556
- Road System – Annual Requirement Deficit of \$70,648
- Motor Vehicles – Annual Requirement Deficit of \$32,644
- Land Improvements – Annual Requirement Deficit of \$94,913
- Machinery & Equipment – Annual Requirement Deficit of \$126,936
- Buildings – Annual Requirement Deficit of \$78,443

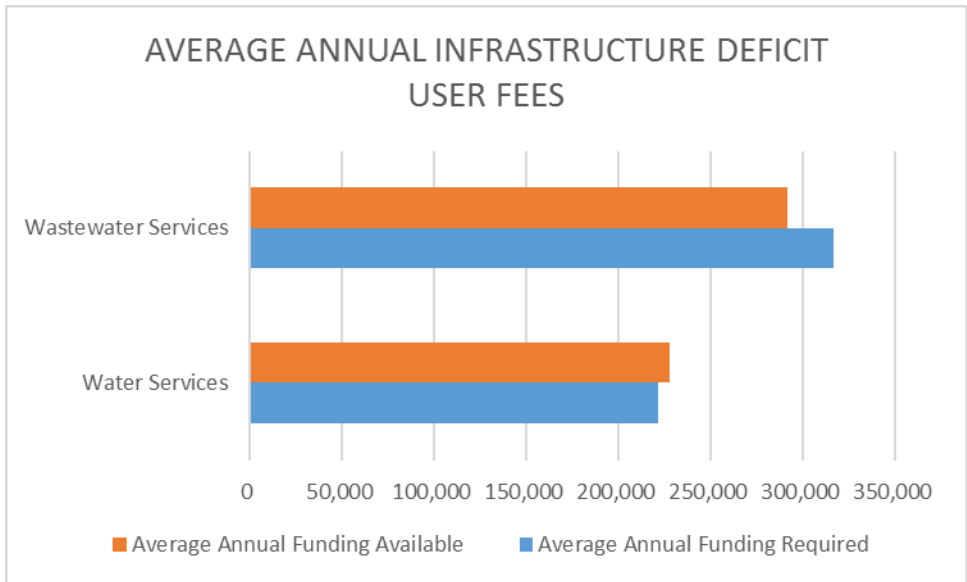
- Bridges & Culverts – Annual Requirement Deficit of \$241,007



2.2 Assets Funded by User Fees:

The following chart lists the asset categories funded under user fees and shows the annual funding available and the annual funding required for each category. There is a total annual deficit of \$19,007.

- Water Services – Annual Requirement Surplus of \$6,299
- Wastewater Services – Annual Requirement Deficit of \$25,307



3. ROAD NETWORK

3.1. Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. The Road Network received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Road	B	A	Based on a 2012 Roads Needs Study & subsequent inspections, the majority of the Road Network category assets are in good condition. The annual requirement is \$1,568,717. Based on Perth East's annual funding of \$1,498,069, the annual deficit is \$70,648. Based on age, the Road category condition rating has changed from an A to a B.

3.2. Inventory:

The summary table below shows the road network inventory.

Asset Type	Asset Component	Quantity
Roads	Curb and Gutter	11367.33m
	Gravel	798.74km
	Hot Mix	320.46 km
	Hydrants	70
	RAP Recycled Pavement	3 km
	Road Signage	N/A
	Sidewalk	25.74
	Street Lights	596
	Traffic Signals	3

3.3. Replacement Value:

The estimated replacement value of the road network in 2017 dollars is \$31.4 million. The cost per household for the road network is \$7,530 based on 4182 households.

Asset Component	Quantity	2018 Unit Replacement Cost	2018 Overall Replacement Cost
Curb and Gutter	11367.33m	CPI (ON)	\$949,972
Gravel	798.74km	Not Planned For Replacement	\$0
Hot Mix	320.46 km	CPI (ON)	\$27,021,575
Hydrants	70	CPI (ON)	\$475,244
RAP Recycled Pavement	3 km	CPI (ON)	\$231,250
Road Signage	N/A	CPI (ON)	\$118,500
Sidewalk	25.74	CPI (ON)	\$1,868,480
Street Lights	596	CPI (ON)	\$629,880
Traffic Signals	3	CPI (ON)	\$192,458
			\$31,487,359

3.4. Annual Requirement:

The road annual requirement is the annual amount of money that the Township should put away for the future replacement of the road network to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Quantity	Useful Life	2017 Overall Replacement Cost	Annual Lifecycle Requirement
Curb and Gutter	N/A	20	\$949,972	\$69,185
Gravel	798.74	75	Not Planned For Replacement	\$0
Hot Mix	320.46 km	20	\$27,021,575	\$1,351,078.73
Hydrants	70	75	\$475,244	\$6,337
RAP Recycled Pavement	3 km	10	\$231,250	\$23,125
Road Signage	N/A	10	\$118,500	\$11,850
Sidewalk	25.74	30	\$1,868,480	\$64,467
Street Lights	594	27	\$629,880	\$23,429
Traffic Signals	3	10	\$192,458	\$19,246
			\$31,487,359	\$1,568,717

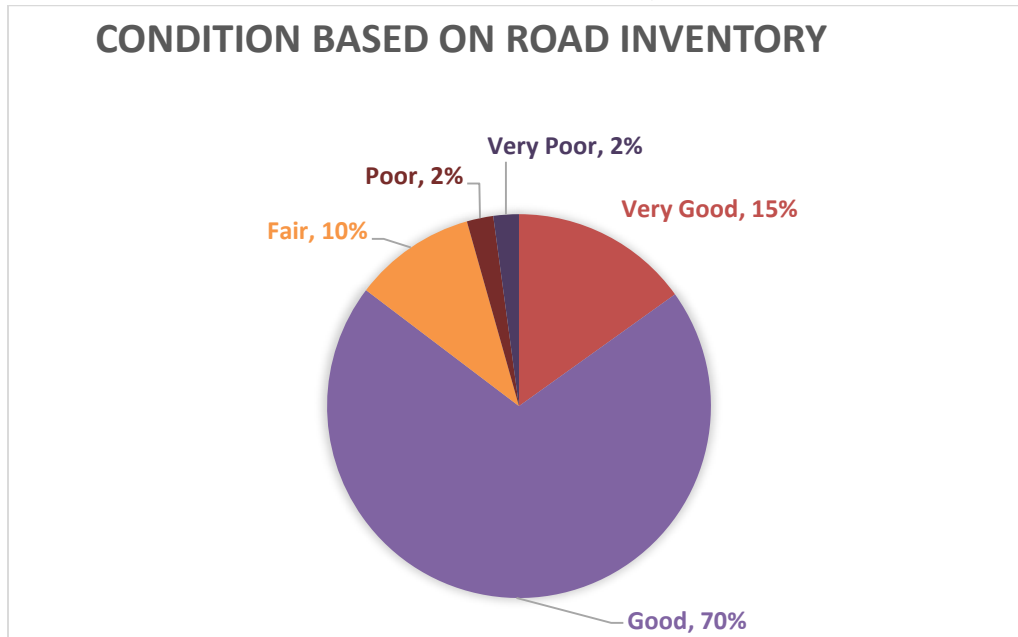
3.5. Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Quantity	Useful Life (Years)
Curb and Gutter	11367.33m	20
Gravel	798.74km	75
Hot Mix	320.46 km	20
Hydrants	70	75
RAP Recycled Pavement	3 km	10
Road Signage	N/A	10
Sidewalk	25.74	30
Street Lights	596	27
Traffic Signals	3	10

3.6. Condition Ratings:

The following chart illustrates the road network condition ratings as determined through a 2012 Roads Needs Study prepared by B.M. Ross and as updated by internal manual inspections and subsequent age deterioration calculations.



3.7. Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

4. BRIDGES AND CULVERTS

4.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Bridges and Culverts received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Bridges & Culverts	C	F	Based on the Township's OSIM inspection completed by B.M. Ross, Bridges & Culverts are overall in fair condition. The annual requirement is \$324,219. Based on Perth East's annual funding of \$83,212, the annual deficit is \$241,007. Note that the condition rating has changed from an A- to a C+ with the note that 42% of the bridges & culverts are rated good.

4.2 Inventory:

As shown in the summary table below the Township owns 39 bridges, and 63 culverts.

Asset Type	Asset Component	Quantity
Bridges and Culverts	Bridges	39
	Rails on Bridges	4
	Culverts	63
	Total	106

4.3 Replacement Value:

The estimated replacement value of the bridges and culverts in 2018 dollars is \$22.9 million. The cost per household for bridges and culverts is \$5,499 based on 4,182 households.

Asset Component	Quantity	2018 Unit Replacement Cost	2018 Overall Replacement Cost
Bridges	39	CPI (ON)	\$12,842,292
Rails on Bridges	4	CPI (ON)	\$79,214
Culverts	63	CPI (ON)	\$10,074,570
			\$22,996,076

4.4 Annual Requirement:

The bridge and culvert annual requirement is the annual amount of money that the Township should put away for the future replacement of the bridges and culverts to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Quantity	2018 Overall Replacement Cost	Annual Lifecycle Requirement
Bridges	39	\$12,842,292	\$171,230.56
Rails on Bridges	4	\$79,214	\$2,640.47
Culverts	63	\$10,074,570	\$150,348
			\$324,219

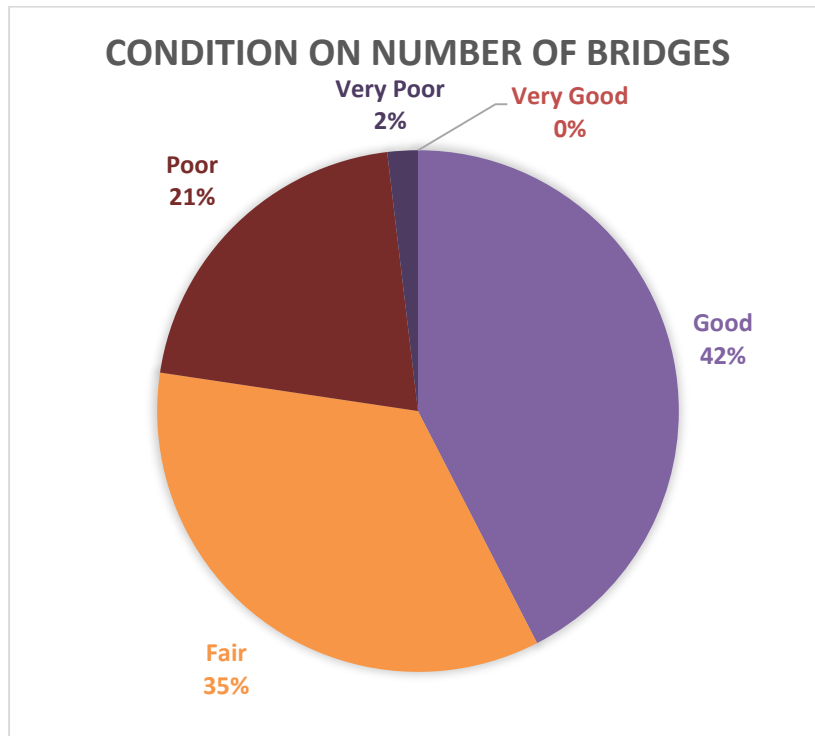
4.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Type	Asset Component	Quantity	Useful Life (Years)
Bridges and Culverts	Bridges	39	75
	Rails on Bridges	4	30
	Culverts	63	75/30/12

4.6 Condition Ratings:

The following chart illustrates the bridge and culvert condition ratings as determined through the bridge condition report prepared by external engineering services and as updated by internal manual inspections and subsequent age deterioration calculations.



4.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

5. WATER NETWORK

5.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Water System received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Water	B	A	The Township's water network is rated in good condition. The condition rating is based on age and may change with the move towards condition ratings based on actual inspection analysis. The annual requirement is \$221,059. Based on Perth East's annual funding of \$227,359, there is an annual surplus of \$6,299.

5.2 Inventory

As shown in the summary table below the Township has 15,614 meters of water main pipe.

Asset Type	Asset Component	Quantity
Water System	Service Connections	755
	Watermain Pipe	15,614.10m
	Watermain Valves	110
	Milverton Water Facility	1 Facility (19 Components)
	Shakespeare Water Facility	1 Facility (17 Components)

5.3 Replacement Value:

The estimated replacement value of the water network in 2018 dollars is \$13.0 million. The cost per household for the water network is \$16,921 based on 771 households.

Asset Component	Quantity	2018 Unit Replacement Cost	2018 Overall Replacement Cost
Watermains (50mm)	118.28m	CPI (ON)	\$32,419
Watermains (100mm)	2,189.96	CPI (ON)	\$1,012,470
Watermains (150mm)	9973.16m	CPI (ON)	\$5,124,628
Watermains (200mm)	3,491.17m	CPI (ON)	\$1,953,131
Watermains (250mm)	341.36m	CPI (ON)	\$212,548
Service Connections	748	CPI (ON)	\$1,274,371
Watermain Valves	110	CPI (ON)	\$995,098
Milverton Water Facility	1 Facility (19 Components)	CPI (ON)	\$2,029,771
Shakespeare Water Facility	1 Facility (17 Components)	CPI (ON)	\$411,799
			\$13,046,235

5.4 Annual Requirement:

The water system annual requirement is the annual amount of money that the Township should put away for the future replacement of the water system to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Annual Lifecycle Requirement
Watermains	\$111,136
Service Connections	\$16,992
Watermain Valves	\$13,268
Milverton Water Facility	\$46,786
Shakespeare Water Facility	\$17,067
Subtotal	\$205,249
Buildings	\$3,298
Computers	\$3,677
Equipment	\$0
Furniture/Tools Equipment	\$5,547
Land Improvements	\$0
Motor Vehicles	\$3,288
Total Water Assets	\$221,059

5.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

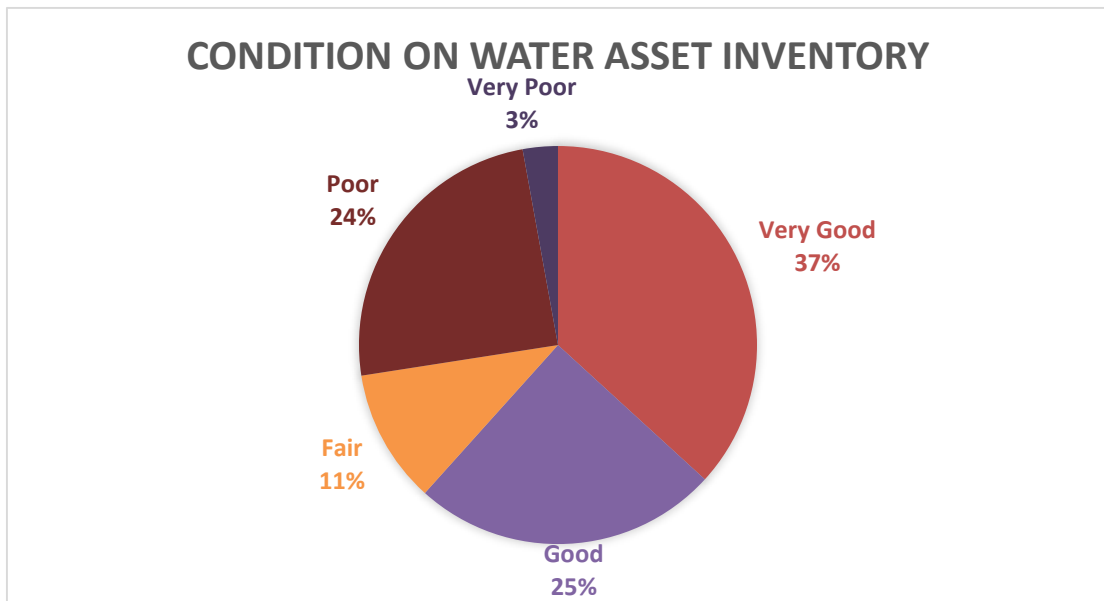
Asset Component	Useful Life (Years)
Watermains (50mm)	75
Watermains (100mm)	75
Watermains (150mm)	75
Watermains (200mm)	75
Watermains (250mm)	75
Service Connections	75
Watermain Valves	75
Milverton Water Facility	100/75/60/50/40/25/20/10
Shakespeare Water Facility	100/75/60/40/25/20/10

5.6 Condition Ratings:

The following chart illustrates the water system condition ratings as determined through age-based analysis.

5.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure of Jobs and Prosperity Act, 2015. Compliance to Regulation 588/17 is mandatory by 2024.



6. WASTEWATER NETWORK

6.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. The Wastewater Network received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Wastewater	A	A	The Township's wastewater network is rated in very good condition based on age. Condition ratings based on actual inspection analysis are difficult for sewer as camera shots are not possible. The annual requirement is \$316,578. Based on Perth East's annual funding of \$291,271, the annual deficit is \$25,307.

6.2 Inventory

As shown in the summary table below the Township has 18,017 meters of sewer lines.

Asset Type	Asset Component	Quantity
Sewer System	Forcemains	1,388.93m
	Manholes	243
	Service Connections	377
	Sewerlines	18017.356 m
	Milverton Sewer Facility	1 Facility (26 Components)
	Shakespeare Sewer Facility	1 Facility (11 Components)

6.3 Replacement Value:

The estimated replacement value of the wastewater network in 2018 dollars is \$16.9 million. The cost per household for wastewater is \$16,923 based on 998 households.

Asset Component	2018 Overall Replacement Cost
Forcemains	\$211,713
Sewermains (150mm)	\$190,424
Sewermains (200mm)	\$6,687,793
Sewermains (250mm)	\$555,190
Sewermains (300mm)	\$660,048
Sewermains (350mm)	\$194,019
Sewermains (375mm)	\$290,056
Sewermains (400mm)	\$91,218
Sewermains (450mm)	\$5,682
Sewermains (1200mm)	\$57,847
Manholes	\$1,354,437
Service Connections	\$1,253,331
Milverton Sewer Facility	\$2,593,366
Shakespeare Sewer Facility	\$2,744,288
	\$16,889,412

6.4 Annual Requirement:

The wastewater system annual requirement is the annual amount of money that the Township should put away for the future replacement of the wastewater system to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	2018 Overall Replacement Cost	Annual Lifecycle Requirement
Forcemains	\$211,713	\$2,823
Manholes	\$1,354,437	\$17,932
Service Connections	\$1,253,331	\$16,711
Sewerlines	\$8,732,277	\$113,747
Milverton Sewer Facility	\$2,593,366	\$37,112
Shakespeare Sewer Facility	\$2,744,288	\$107,129
Subtotal		\$295,454
Buildings	\$272,842	\$6,279
Computers		\$0
Equipment	\$99,707	\$4,985
Furniture/Tools Equipment	\$82,040	\$8,204
Land Improvements	\$39,469	\$1,656
Motor Vehicles		\$0
Total Sewer Assets	\$17,383,470	\$316,578

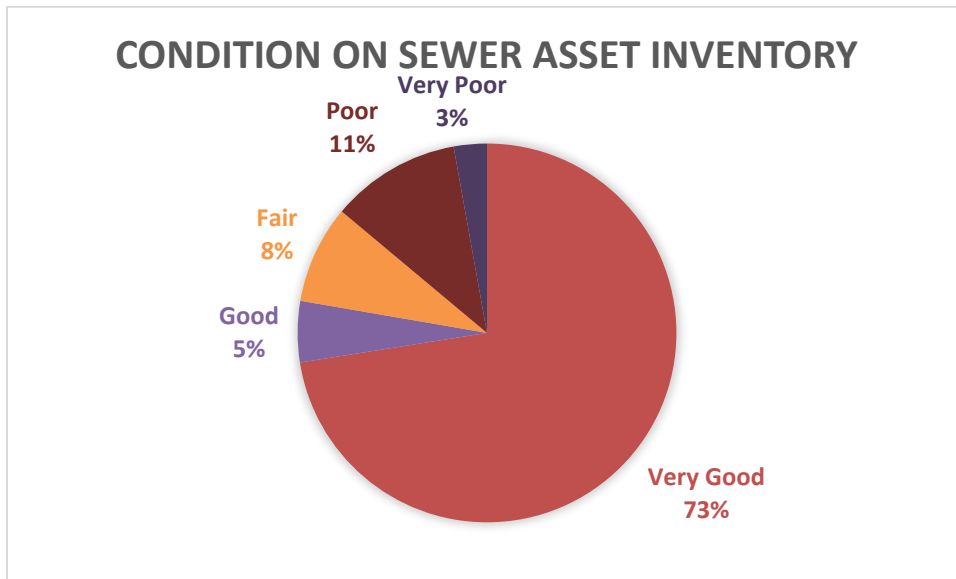
6.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Quantity	Useful Life
Forcemains	1,388.93m	75
Manholes	243	75
Service Connections	377	75
Sewerlines	18017.356 m	75
Milverton Sewer Facility	1 Facility (26 Components)	100/75//60/40/30/25/20/15
Shakespeare Sewer Facility	1 Facility (10 Components)	75/50/40/25/20/15

6.6 Condition Ratings:

The following chart illustrates the wastewater system condition ratings as determined through age-based analysis.



6.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

7. STORM SEWER NETWORK

7.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. The Storm Sewer Network received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Storm	C	F	The Storm System category assets are rated in fair condition. The condition rating is based on age. The annual requirement is \$195,416. Based on Perth East's annual funding of \$7,859, the annual deficit is \$187,556.

7.2 Inventory

As shown in the summary table below the Township has 20,230 meters of storm pipe.

Asset Type	Asset Component	Quantity
Storm System	Manholes & Manhole Catch Basins	10
	Catch Basins	178
	Outlets	8
	Rual Storm Catch Basin	2
	Rural Storm Culverts	265
	Storm Pipe	20,230.174m
	Storm Pond	1

7.3 Replacement Value:

The estimated replacement value of the storm sewer network in 2018 dollars is \$13.2 million. The cost per household for storm water is \$3,151 based on 4,182 households.

Asset Component	2018 Overall Replacement Cost
Manholes & Manhole Catch Basins	\$41,368
Catch Basins	\$317,875
Outlets	\$15,549
Rual Storm Catch Basin	\$4,037
Rural Storm Culverts	\$1,645,403
Storm Pipe	\$11,124,833
Storm Pond	\$30,142
	\$13,179,207

7.4 Annual Requirement:

The storm sewer system annual requirement is the annual amount of money that the Township should put away for the future replacement of the storm sewer system to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Annual Lifecycle Requirement
Manholes & Manhole Catch Basins	\$552
Catch Basins	\$4,238
Outlets	\$208
Rual Storm Catch Basin	\$54
Rural Storm Culverts	\$40,841
Storm Pipe	\$149,121
Storm Pond	\$402
	\$195,416

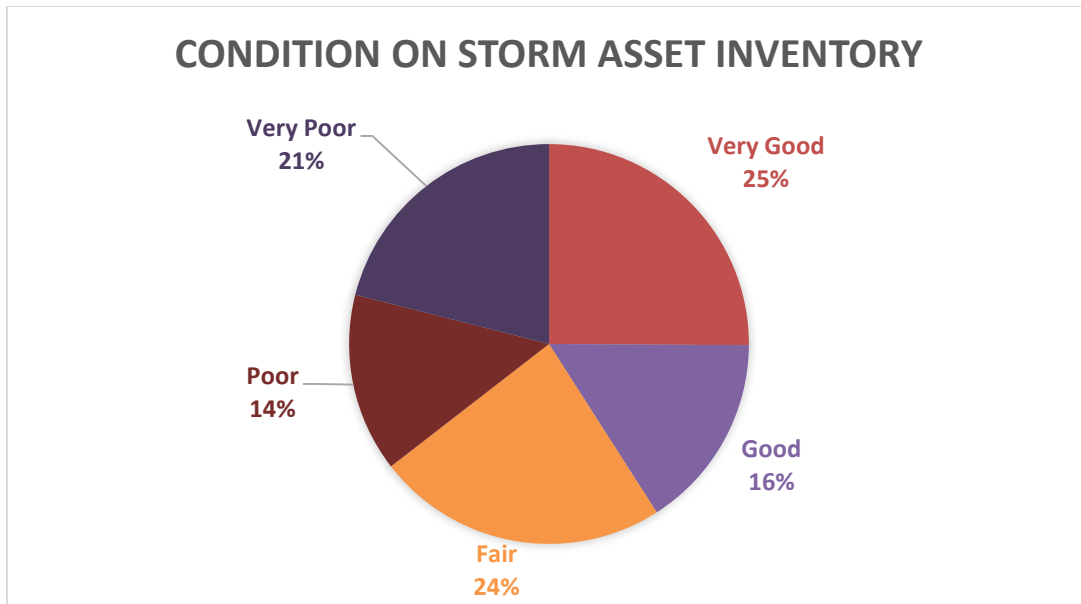
7.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life (Years)
Manholes & Manhole Catch Basins	75
Catch Basins	75
Outlets	75
Rual Storm Catch Basin	40
Rural Storm Culverts	75
Storm Pipe	75
Storm Pond	75

7.6 Condition Ratings:

The following chart illustrates the storm water system condition ratings as determined through age-based analysis.



7.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

8. FACILITIES

8.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Facilities received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Facilities	B	A	Based on a 2009 Building Condition Assessment Report with new buildings rated on age, the Township's Buildings category assets are rated in good condition. The annual requirement is \$396,139. Based on Perth East's annual funding of \$317,696, the annual deficit is \$78,443. The condition rating has dropped from an A in 2017 as buildings age. The funding rating has improved from a B to an A.

8.2 Inventory

The facilities owned by the Township are summarized in the table below.

Asset Type	Asset Component	Quantity
Buildings	Administration Building	1 (7 Components)
	Fire Halls	3 (8 Components)
	Library	1 (5 Components)
	Recreation	4 (27 Components)
	Public Works	31 (38 Components)

8.3 Replacement Value:

The estimated replacement value of Township facilities in 2018 dollars is \$16.1 million. The cost per household for facilities is \$3,845 based on 4,182 households.

Asset Component	Quantity	2018 Overall Replacement Cost
Administration Building	1 (7 Components)	\$1,308,740
Fire Halls	3 (8 Components)	\$2,207,938
Library	1 (5 Components)	\$1,053,350
Recreation	4 (27 Components)	\$6,623,935
Public Works	31 (36 Components)	\$5,327,179
Less Water Buildings	Remove 2 from Public Works	\$164,895
Less Sewer Buildings	Remove 7 from Public Works	\$272,842
		\$16,083,405

8.4 Annual Requirement:

The annual requirement for Township facilities is the annual amount of money that the Township should put away for the future replacement of the buildings to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Annual Lifecycle Requirement
Administration Building	\$30,223
Fire Halls	\$52,156
Library	\$31,101
Recreation	\$155,676
Public Works	\$136,560
Less Water Buildings	\$3,298
Less Sewer Buildings	\$6,279
	\$396,139

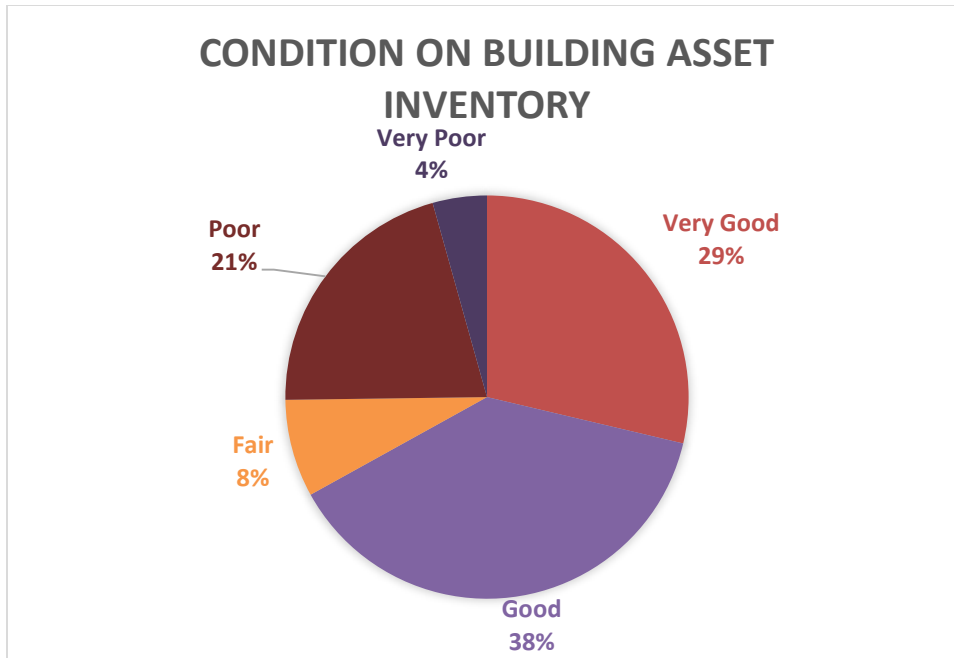
8.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life (Years)
Administration Building	50/30/20/15/10
Fire Halls	50/25/20/10
Library	50/25/15
Recreation	50/30/25/15/10/5
Public Works	100/50/35/30/25/20/15/10

8.6 Condition Ratings:

The following chart illustrates the Township facilities condition ratings as determined through a 2009 Building Condition Assessment prepared by ECMS Consulting & Management and subsequent age deterioration calculations. For buildings that were replaced after 2009, the condition ratings are determined through age-based analysis.



8.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

9. LAND IMPROVEMENTS

9.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Land Improvements received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Land Improvements	D	F	The Township's Land Improvements category assets range between fair to very poor condition. The annual requirement is \$134,465. Based on Perth East's annual funding of \$39,552, the annual deficit is \$94,913.

9.2 Inventory

The land improvements owned by the Township are summarized in the table below.

Asset Type	Asset Component	Quantity
Land Improvements	Ball Diamonds	5 Diamonds (2 Components)
	Bleachers	4
	Columbarium	2
	Fencing	14
	Fire Water Tanks	7
	Gravel Pit Scale	1
	Landscaping	4
	Light Standards	34
	Parking Lots	42
	Picnic Tables/Benches	30
	Playground Equipment	9
	Pool	1 (6 Components)
	Soccer Pitch	1
	Walking Path	3

9.3 Replacement Value:

The estimated replacement value of Township land improvements in 2018 dollars is \$3.8 million. The cost per household for land improvements is \$912 based on 4,182 households.

Asset Component	2018 Overall Replacement Cost
Ball Diamonds	\$824,655
Bleachers	\$124,198
Columbarium	\$45,514
Fencing	\$181,936
Fire Water Tanks	\$72,887
Gravel Pit Scale	\$65,258
Landscaping	\$32,297
Light Standards	\$358,038
Parking Lots	\$945,340
Picnic Tables/Benches	\$20,639
Playground Equipment	\$661,700
Pool	\$419,747
Soccer Pitch	\$53,235
Walking Path	\$48,129
	\$3,853,573
Less Sewer Fencing and Landscaping	\$39,469
	\$3,814,104

9.4 Annual Requirement:

The annual requirement for Township land improvements is the annual amount of money that the Township should put away for the future replacement to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Annual Lifecycle Requirement
Ball Diamonds	\$28,572
Bleachers	\$3,006
Columbarium	\$910
Fencing	\$9,097
Fire Water Tanks	\$1,458
Gravel Pit Scale	\$3,318
Landscaping	\$1,077
Light Standards	\$16,721
Parking Lots	\$17,783
Picnic Tables/Benches	\$1,376
Playground Equipment	\$33,085
Pool	\$13,130
Soccer Pitch	\$1,775
Walking Path	\$4,813
Subtotal	\$136,121
Less Sewer Fencing and Landscaping	\$1,656
Total	\$134,465

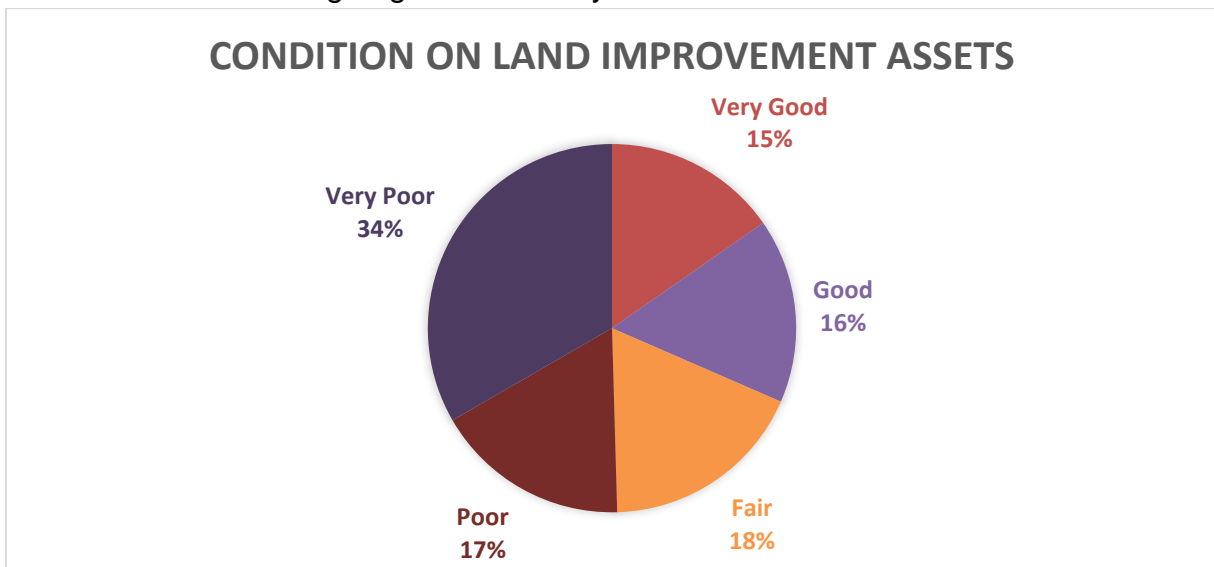
9.5 Useful Life:

The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life (Years)
Ball Diamonds	30/20
Bleachers	50/30
Columbarium	50
Fencing	20
Fire Water Tanks	50
Gravel Pit Scale	30/4
Landscaping	30
Light Standards	25/20
Parking Lots	75/25/20
Picnic Tables/Benches	15
Playground Equipment	20
Pool	50/10/5
Soccer Pitch	30
Walking Path	10

9.6 Condition Ratings:

The following chart illustrates the Township facilities condition ratings as determined through age-based analysis.



9.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

10. MACHINERY AND EQUIPMENT

10.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Machinery and Equipment received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Machinery & Equipment	F	B	Overall the Township's Machinery & Equipment range between poor to very poor age based condition. Computer hardware and Software make up 33% of the annual requirement. Condition is aged based. The annual requirement is \$504,160. Based on Perth East's approximate annual funding of \$377,224, the annual deficit is \$126,936. The funding rating has improved from a C in 2017.

10.2 Inventory

The machinery and equipment owned by the Township are summarized in the table below. Note that the water and sewer inventory is included in the quantity but segregated from the annual lifecycle requirement and overall replacement cost.

Asset Type	Asset Component	Quantity
Machinery & Equipment	Computer Hardware	123 units
	Computer Software	47 units
	Equipment	72 units
	Furniture/Tools Equipment	163 units

10.3 Replacement Value:

The estimated replacement value of Township machinery and equipment in 2018 dollars is \$5.2 million. The cost per household for machinery and equipment is \$1,256 based on 4,182 households.

Asset Type	Asset Component	2018 Overall Replacement Cost
Machinery & Equipment	Computer Hardware	\$197,306
	Computer Software	\$317,309
	Equipment	\$3,463,673
	Furniture/Tools Equipment	\$1,272,797
		\$5,251,085

10.4 Annual Requirement:

The annual requirement for Township machinery and equipment is the annual amount of money that the Township should put away for the future replacement to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Type	Asset Component	Annual Lifecycle Requirement
Machinery & Equipment	Computer Hardware	\$46,290
	Computer Software	\$118,578
	Equipment	\$201,382
	Furniture/Tools Equipment	\$137,910
		\$504,160

10.5 Useful Life:

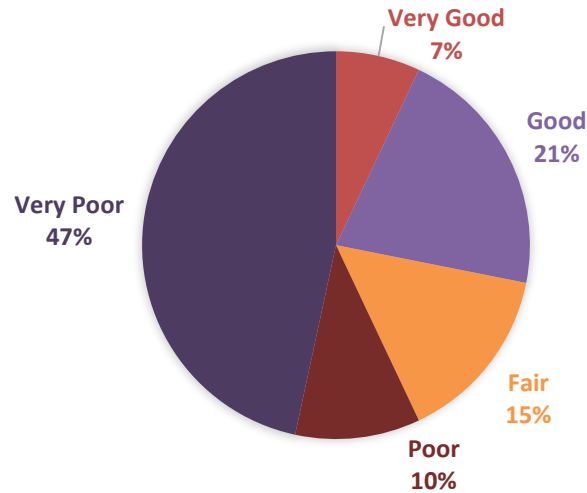
The useful life is used to determine replacement needs of individual assets. The useful lives were based on Ontario Municipal Benchmark Initiatives (OMBI) benchmarks and best practices as approved by the Township auditor.

Asset Type	Asset Component	Useful Life (Years)
Machinery & Equipment	Computer Hardware	4/2
	Computer Software	4
	Equipment	50/30/25/20/15/10/5/3/2
	Furniture/Tools Equipment	10/7

10.6 Condition Ratings:

The following chart illustrates the Township facilities condition ratings as determined through age-based analysis.

CONDITION ON MACHERY AND EQUIPMENT ASSETS



10.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

11. MOTOR VEHICLES

11.1 Report Card

Each asset group is rated under two categories. The first category grades the condition of the asset and the second category grades the funding raised versus the funding need for that asset group. The grade descriptions can be found in Section 13 of this Report. Motor Vehicles received the following grades.

Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Motor Vehicles	B	A	The Township's Motor Vehicles overall condition rating is good and is based on age. The annual requirement is \$416,480. Based on Perth East's annual funding of \$383,837, the annual deficit is \$32,644.

11.2 Inventory

The motor vehicles owned by the Township are summarized in the table below.

Asset Type	Asset Component	Quantity
Motor Vehicles	Aerial Truck	1 unit
	Fire Tanker	6 units
	Pickup Truck	11 units (2 Componets)
	Pumper	2 units
	Rescue Truck	2 units
	Tandem Axle Dump Truck	2 units (2 Components)
	Tri Axle Dump Truck	5 units (5 Components)

11.3 Replacement Value:

The estimated replacement value of Township motor vehicles in 2018 dollars is \$8.4 million. The cost per household for motor vehicles is \$2,006 based on 4,182 households.

Asset Type	Asset Component	2018 Overall Replacement Cost
Motor Vehicles	Aerial Truck	\$829,732
	Fire Tanker	\$3,494,700
	Pickup Truck	\$399,728
	Pumper	\$1,350,000
	Rescue Truck	\$350,000
	Tandem Axle Dump Truck	\$544,444
	Tri Axle Dump Truck	\$1,420,402
		\$8,389,006

11.4 Annual Requirement:

The annual requirement for Township motor vehicles is the annual amount of money that the Township should put away for the future replacement to be able to fund the replacement of the asset once it has reached the end of the useful life.

Asset Component	Annual Lifecycle Requirement
Aerial Truck	\$41,487
Fire Tanker	\$139,788
Pickup Truck	\$39,973
Pumper	\$67,500
Rescue Truck	\$20,417
Tandem Axle Dump Truck	\$36,296
Tri Axle Dump Truck	\$71,020
	\$416,480

11.5 Useful Life:

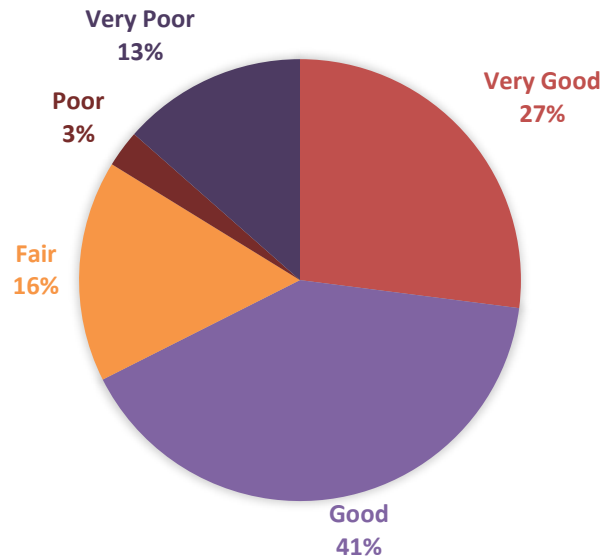
The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life (Years)
Aerial Truck	20
Fire Tanker	25
Pickup Truck	10
Pumper	20
Rescue Truck	20/15
Tandem Axle Dump Truck	15
Tri Axle Dump Truck	20

11.6 Condition Ratings:

The following chart illustrates the Township facilities condition ratings as determined through age-based analysis.

CONDITION ON MOTOR VEHICLE ASSETS



11.7 Asset Management Plan Regulation Compliance:

The Township will move towards compliance under Regulation 588/17 of the Infrastructure for Jobs and Prosperity Act, 2015. Total compliance to Regulation 588/17 is mandatory by 2024.

12. FINANCIAL INFORMATION

In order for an AMP to be effectively put into action it must be integrated with financial planning and long-term budgeting.

12.1 Financial Recommendations:

Going forward the Township must comply with Regulation 588-17 for lifecycle management and financial strategies. The regulations require a 10-year forecast of lifecycle activities required to achieve proposed levels of service and the costs associated with those activities will need to be provided in the asset management plan. This analysis will require an assessment of the full lifecycle of assets (i.e. activities beyond straight replacement of assets), as well as options for lifecycle activities that could potentially be undertaken, and risks associated with each of these options. The 10-year forecast should be premised on lifecycle activity options that can achieve and sustain the proposed level of service at the lowest cost.

The asset management plan will need to identify estimated annual costs of undertaking the lifecycle activities. The funding that is expected to be available to carry out proposed lifecycle activities will need to be identified and municipalities will need to examine options to maximize available funding. Options could include increases to property taxes, user fees, grants etc.

If a municipality identifies a funding shortfall relative to the projected costs of lifecycle activities, then the asset management plan will need to identify which lifecycle activities will actually be undertaken during the forecast period. Additionally, the asset management plan will need to include an explanation of how the municipality will manage risks associated with not undertaking any of these activities.

13. INFRASTRUCTURE REPORT CARD SUMMARY

The following table lists the 2018 Infrastructure Report Card for the Township of Perth East. Each asset category was rated on Condition and Funding Need. Changes from 2017 are noted in red and an explanation included in the comment section.

Report Card

Changes from Prior Year Noted in Red

Asset Category	Condition Rating	Funding Rating	Comments
Road	B	A	Based on a 2012 Roads Needs Study & subsequent inspections, the majority of the Road Network category assets are in good condition. The annual requirement is \$1,568,717. Based on Perth East's annual funding of \$1,498,069, the annual deficit is \$70,648. Based on age, the Road category condition rating has changed from an A to a B.
Bridges & Culverts	C	F	Based on the Township's OSIM inspection completed by B.M. Ross, Bridges & Culverts are overall in fair condition. The annual requirement is \$324,219. Based on Perth East's annual funding of \$83,212, the annual deficit is \$241,007. Note that the condition rating has changed from an A- to a C+ with the note that 42% of the bridges & culverts are rated good.
Water	B	A	The Township's water network is rated in good condition. The condition rating is based on age and may change with the move towards condition ratings based on actual inspection analysis. The annual requirement is \$221,059. Based on Perth East's annual funding of \$227,359, there is an annual surplus of \$6,299.
Wastewater	A	A	The Township's wastewater network is rated in very good condition based on age. Condition ratings based on actual inspection analysis are difficult for sewer as camera shots are not possible. The annual requirement is \$316,578. Based on Perth East's annual funding of \$291,271, the annual deficit is \$25,307.
Storm	C	F	The Storm System category assets are rated in fair condition. The condition rating is based on age. The annual requirement is \$195,416. Based on Perth East's annual funding of \$7,859, the annual deficit is \$187,556.
Facilities	B	A	Based on a 2009 Building Condition Assessment Report with new buildings rated on age, the Township's Buildings category assets are rated in good condition. The annual requirement is \$396,139. Based on Perth East's annual funding of \$317,696, the annual deficit is \$78,443. The condition rating has dropped from an A in 2017 as buildings age. The funding rating has improved from a B to an A.
Land Improvements	D	F	The Township's Land Improvements category assets range between fair to very poor condition. The annual requirement is \$134,465. Based on Perth East's annual funding of \$39,552, the annual deficit is \$94,913.
Machinery & Equipment	F	B	Overall the Township's Machinery & Equipment range between poor to very poor age based condition. Computer hardware and Software make up 33% of the annual requirement. Condition is aged based. The annual requirement is \$504,160. Based on Perth East's approximate annual funding of \$377,224, the annual deficit is \$126,936. The funding rating has improved from a C in 2017.
Motor Vehicles	B	A	The Township's Motor Vehicles overall condition rating is good and is based on age. The annual requirement is \$416,480. Based on Perth East's annual funding of \$383,837, the annual deficit is \$32,644.

Report Card Calculation

Range of Grade	Letter Grade
80-100	A
70-79	B
60-69	C
50-59	D
0-49	F
