

**TOWNSHIP OF PERTH EAST**  
2017 ASSET MANAGEMENT PLAN UPDATE



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Table of Contents

- TOWNSHIP OF PERTH EAST ..... 1
- 1. INTRODUCTION: ..... 4
- 2. INFRASTRUCTURE DEFICIT ..... 4
  - 2.1 Assets Funded by Property Taxation:..... 5
  - 2.2 Assets Funded by User Fees: ..... 6
- 3. ROAD NETWORK ..... 6
  - 3.1. Report Card..... 7
  - 3.2. Inventory:..... 7
  - 3.3. Replacement Value: ..... 7
  - 3.4. Annual Requirement:..... 8
  - 3.5. Useful Life: ..... 8
  - 3.6. Condition Ratings: ..... 9
  - 3.7. Asset Management Plan Regulation Compliance: ..... 9
- 4. BRIDGES AND CULVERTS ..... 10
  - 4.1 Report Card..... 10
  - 4.2 Inventory:..... 10
  - 4.3 Replacement Value: ..... 10
  - 4.4 Annual Requirement..... 11
  - 4.5 Useful Life: ..... 11
  - 4.6 Condition Ratings: ..... 11
  - 4.7 Asset Management Plan Regulation Compliance: ..... 12
- 5. WATER NETWORK ..... 13
  - 5.1 Report Card..... 13
  - 5.2 Inventory..... 13
  - 5.3 Replacement Value: ..... 13
  - 5.4 Annual Requirement:..... 14
  - 5.5 Useful Life: ..... 14

5.6 Condition Ratings: .....	15
5.7 Asset Management Plan Regulation Compliance: .....	15
6. WASTEWATER NETWORK.....	16
6.1 Report Card.....	16
6.2 Inventory.....	16
6.3 Replacement Value: .....	16
6.4 Annual Requirement:.....	17
6.5 Useful Life: .....	18
6.6 Condition Ratings: .....	18
6.7 Asset Management Plan Regulation Compliance: .....	18
7. STORM SEWER NETWORK .....	19
7.1 Report Card.....	19
7.2 Inventory.....	19
7.3 Replacement Value: .....	19
7.4 Annual Requirement:.....	20
7.5 Useful Life: .....	20
7.6 Condition Ratings: .....	21
7.7 Asset Management Plan Regulation Compliance: .....	21
8. FACILITIES.....	22
8.1 Report Card.....	22
8.2 Inventory.....	22
8.3 Replacement Value: .....	22
8.4 Annual Requirement:.....	23
8.5 Useful Life: .....	23
8.6 Condition Ratings: .....	24
8.7 Asset Management Plan Regulation Compliance: .....	24
9. LAND IMPROVEMENTS .....	25
9.1 Report Card.....	25
9.2 Inventory.....	25
9.3 Replacement Value: .....	26
9.4 Annual Requirement:.....	27

9.5 Useful Life: .....	27
9.6 Condition Ratings: .....	28
9.7 Asset Management Plan Regulation Compliance: .....	28
10. MACHINERY AND EQUIPMENT .....	29
10.1 Report Card .....	29
10.2 Inventory .....	29
10.3 Replacement Value:.....	30
10.4 Annual Requirement: .....	30
10.5 Useful Life:.....	30
10.6 Condition Ratings:.....	30
10.7 Asset Management Plan Regulation Compliance: .....	31
11. MOTOR VEHICLES .....	31
11.1 Report Card .....	31
11.2 Inventory .....	32
11.3 Replacement Value:.....	32
11.4 Annual Requirement: .....	32
11.5 Useful Life:.....	33
11.6 Condition Ratings:.....	33
11.7 Asset Management Plan Regulation Compliance: .....	34
12. FINANCIAL INFORMATION.....	34
12.1 Financial Recommendations:.....	34
13. INFRASTRUCTURE REPORT CARD SUMMARY .....	35

## **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 an asset management planning regulation under the Infrastructure for Jobs and Prosperity Act, 2015. Under this 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 adaption
- 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 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.

The Province is providing up to \$25 million 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 and 2017 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 2017 infrastructure deficit:

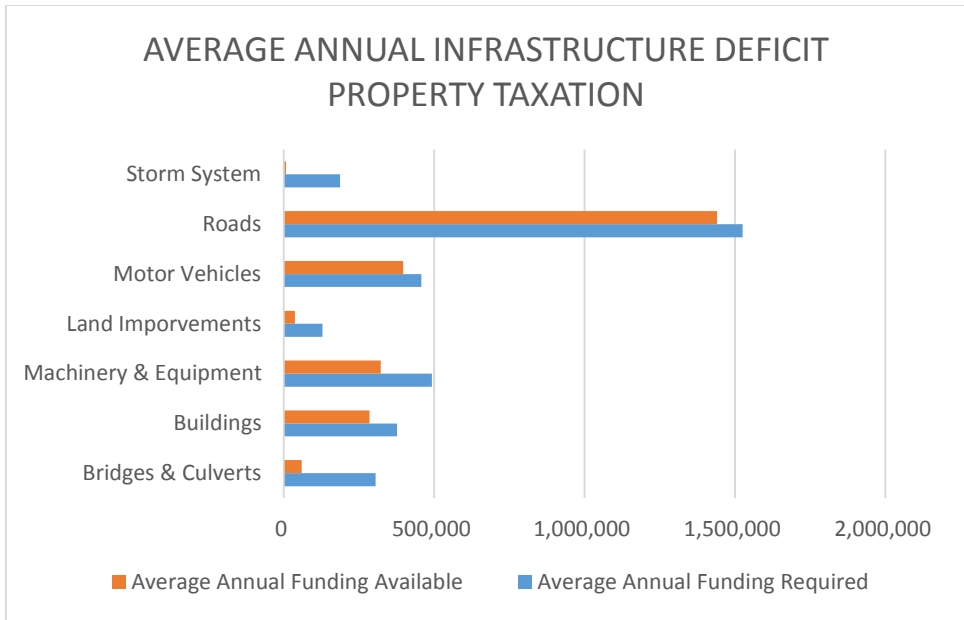
- Replacement values are measured using 2017 dollars.
- Average annual funding is based on 2015 and 2016 actuals and 2017 budget.

- 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:**

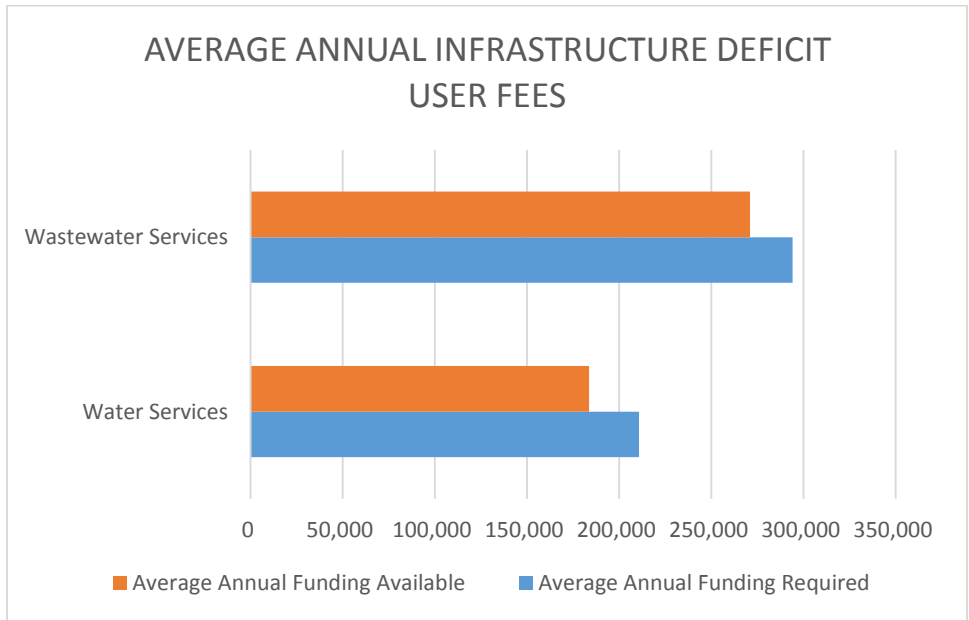
The following chart lists the asset categories funded under property taxation and shows the annual funding available and the annual funding required for each category. There is a total annual deficit of \$924,242 as follows;

- Storm System – Annual Requirement Deficit of \$179,346
- Road System – Annual Requirement Deficit of \$85,310
- Motor Vehicles – Annual Requirement Deficit of \$60,554
- Land Improvements – Annual Requirement Deficit of \$91,401
- Machinery & Equipment – Annual Requirement Deficit of \$170,251
- Buildings – Annual Requirement Deficit of \$91,950
- Bridges & Culverts – Annual Requirement Deficit of \$245,430



## 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 \$50,139.



## 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.

Roads Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Road	A	A	Based on a 2012 Roads Needs Study & subsequent inspections & age deterioration calculations, the majority of the Road Network category assets are in Very Good condition. The annual requirement is \$1,525,342. Based on Perth East's annual funding of \$1,440,033, the annual deficit is \$85,309.

### 3.2. Inventory:

The summary table below shows the road network inventory.

Asset Type	Asset Component	Quantity
Roads	Curb and Gutter	921.82
	Gravel	798.74 km
	Hot Mix	320.46 km
	Hydrants	70
	RAP Recycled Pavement	3 km
	Road Signage	N/A
	Sidewalk	25.74
	Street Lights	594
	Traffic Signals	3

### 3.3. Replacement Value:



The estimated replacement value of the road network in 2017 dollars is \$30.6 million. The cost per household for the road network is \$7,380 based on 4155 households.

Asset Component	Quantity	2016 Unit Replacement Cost	2017 Overall Replacement Cost
Curb and Gutter	921.82m	CPI (ON)	\$900,577
Gravel	798.74	Not Planned For Replacement	\$0
Hot Mix	320.46 km	CPI (ON)	\$26,480,836
Hydrants	70	CPI (ON)	\$349,541
RAP Recycled Pavement	3 km	CPI (ON)	\$223,233
Road Signage	N/A	CPI (ON)	\$110,624
Sidewalk	25.74	CPI (ON)	\$1,802,739
Street Lights	594	CPI (ON)	\$607,786
Traffic Signals	3	CPI (ON)	\$188,387
			<b>\$30,663,723</b>

### 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	2016 Overall Replacement Cost	Annual Lifecycle Requirement
Curb and Gutter	921.82m	20	\$900,577	\$60,105
Gravel	798.74 km	75	Not Planned For Replacement	\$0
Hot Mix	320.46 km	20	\$26,102,352	\$1,324,041
Hydrants	70	75	\$447,118	\$4,165
RAP Recycled Pavement	3 km	10	\$217,922	\$22,323
Road Signage	N/A	10	\$111,734	\$11,062
Sidewalk	25.74	30	\$1,919,728	\$62,198
Street Lights	594	27	\$566,936	\$22,608
Traffic Signals	3	10	\$180,855	\$18,839
				<b>\$1,525,342</b>

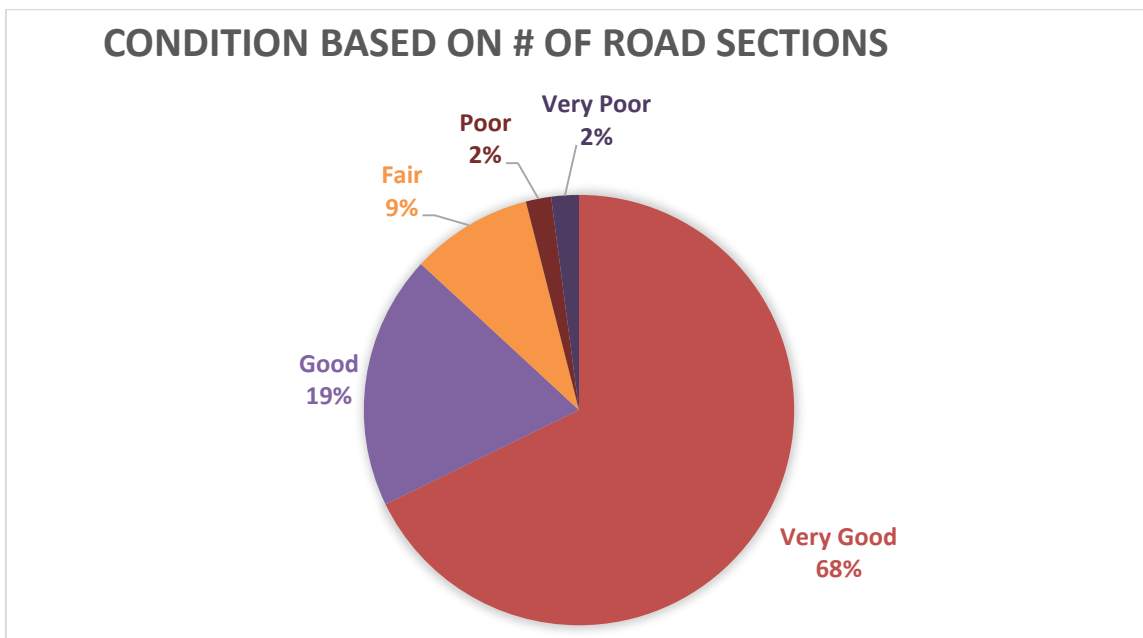
### 3.5. Useful Life:

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	921.82m	20
Gravel	798.74 km	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	594	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 within six years.

## 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.

Bridges & Culverts Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Bridges & Culverts	A	F	Based on the Township's 2013 OSIM inspection completed by B.M. Ross, & subsequent age deterioration calculations, Bridges & Culverts are overall rated in Very Good condition. The annual requirement is \$305,197. Based on Perth East's annual funding of \$59,766, the annual deficit is \$245,431.

### 4.2 Inventory:

As shown in the summary table below the Township owns 39 bridges and 62 culverts.

Asset Type	Asset Component	Quantity
Bridges and Culverts	Bridges	39
	Rails on Bridges	3
	Culverts	62
	Total	104

### 4.3 Replacement Value:

The estimated replacement value of the bridges and culverts in 2017 dollars is \$22.1 million. The cost per household for bridges and culverts is \$5,325 based on 4,155 households.

Asset Type	Asset Component	Quantity	2017 Unit Replacement Cost	2017 Overall Replacement Cost
<b>Bridges and Culverts</b>	Bridges	39	CPI (ON)	\$12,467,399
	Rails on Bridges	3	CPI (ON)	\$55,956
	Culverts	62	CPI (ON)	\$9,602,990
				<b>\$22,126,345</b>

#### 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	Useful Life	2017 Overall Replacement Cost	Annual Lifecycle Requirement
Bridges	39	75	\$12,467,399	\$165,486
Rails on Bridges	3	30	\$55,956	\$1,865
Culverts	62	75/30/12	\$139,709	\$137,845
				<b>\$305,197</b>

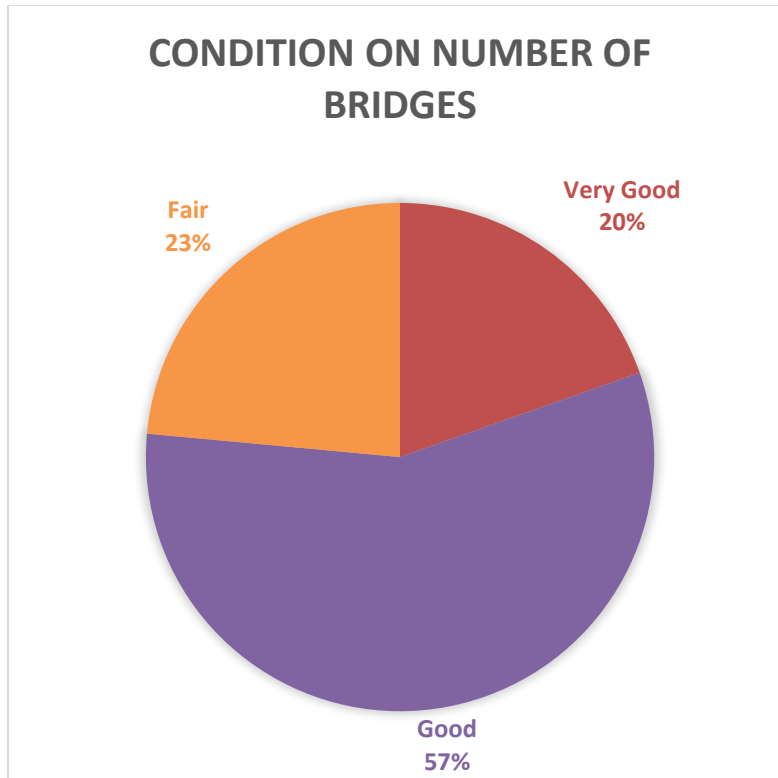
#### 4.5 Useful Life:

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)
<b>Bridges and Culverts</b>	Bridges	39	75
	Rails on Bridges	3	30
	Culverts	62	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 within six years.

## 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.

Water Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Water	B	A	Over 50% of the Township's water network are rated in Very Good to Good condition. The condition rating is based on age and may change once the Water Master Plan is completed with condition ratings based on actual inspection analysis. The annual requirement is \$210,914. Based on Perth East's annual funding of \$183,785, the annual deficit is \$27,128.

### 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	748
	Watermain Pipe	15,614.10m
	Watermain Valves	99
	Milverton Water Facility	1 Facility (18 Components)
	Shakespeare Water Facility	1 Facility (17 Components)

### 5.3 Replacement Value:

The estimated replacement value of the water network in 2017 dollars is \$12.6 million. The cost per household for the water network is \$16,967 based on 747 households.

Asset Component	Quantity	2017 Unit Replacement Cost	2017 Overall Replacement Cost
Watermains (50mm)	118.28m	CPI (ON)	\$31,275
Watermains (100mm)	2,189.96	CPI (ON)	\$977,247
Watermains (150mm)	9973.16m	CPI (ON)	\$4,946,917
Watermains (200mm)	3,491.17m	CPI (ON)	\$1,884,210
Watermains (250mm)	341.36m	CPI (ON)	\$205,200
Service Connections	748	CPI (ON)	\$1,227,582
Watermain Valves	110	CPI (ON)	\$960,416
Milverton Water Facility	1 Facility (18 Components)	CPI (ON)	\$2,029,771
Shakespeare Water Facility	1 Facility (17 Components)	CPI (ON)	\$411,799
			<b>\$12,674,417</b>

**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	\$107,265
Service Connections	\$16,368
Watermain Valves	\$12,806
Milverton Water Facility	\$46,426
Shakespeare Water Facility	\$16,845
<b>Subtotal</b>	<b>\$199,708</b>
Buildings	\$3,185
Computers	\$3,180
Equipment	\$0
Furniture/Tools Equipment	\$1,669
Land Improvements	\$0
Motor Vehicles	\$3,172
<b>Total Water Assets</b>	<b>\$210,914</b>

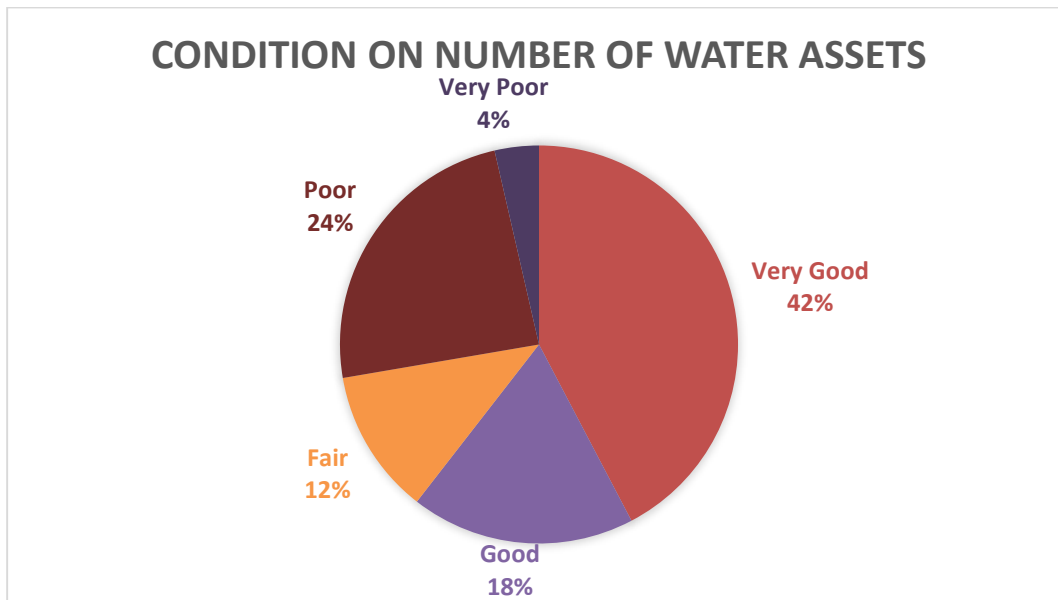
**5.5 Useful Life:**

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 within six years.



## 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.

<b>Wastewater Report Card</b>			
<b>Asset Category</b>	<b>Condition Rating</b>	<b>Funding Rating</b>	<b>Comments</b>
<b>Wastewater</b>	<b>A</b>	<b>A</b>	Over 70% of the Township's wastewater network are 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 \$294,180. Based on Perth East's annual funding of \$271,169, the annual deficit is \$23,011.

### 6.2 Inventory

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

<b>Asset Type</b>	<b>Asset Component</b>	<b>Quantity</b>
<b>Sewer System</b>	Forcemains	1,388.93m
	Manholes	243
	Service Connections	376
	Sewerlines	18017.356 m
	Milverton Sewer Facility	1 Facility (26 Components)
	Shakespeare Sewer Facility	1 Facility (10 Components)

### 6.3 Replacement Value:

The estimated replacement value of the wastewater network in 2017 dollars is \$16.3 million. The cost per household for wastewater is \$16,779 based on 970 households.

Asset Component	2017 Overall Replacement Cost
Forcemains	\$204,365
Sewermains (150mm)	\$183,901
Sewermains (200mm)	\$6,454,402
Sewermains (250mm)	\$535,999
Sewermains (300mm)	\$637,443
Sewermains (350mm)	\$187,373
Sewermains (375mm)	\$279,996
Sewermains (400mm)	\$88,094
Sewermains (450mm)	\$5,482
Sewermains (1200mm)	\$55,865
Manholes	\$1,307,069
Service Connections	\$1,201,040
Milverton Sewer Facility	\$2,494,510
Shakespeare Sewer Facility	\$2,640,409
	<b>\$16,275,948</b>

#### 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	2017 Overall Replacement Cost	Annual Lifecycle Requirement
Forcemains	\$204,365	\$2,725
Manholes	\$1,307,069	\$17,305
Service Connections	\$1,201,040	\$14,636
Sewerlines	\$8,428,555	\$109,665
Milverton Sewer Facility	\$2,494,510	\$34,969
Shakespeare Sewer Facility	\$2,640,409	\$98,960
<b>Subtotal</b>		<b>\$278,260</b>
Buildings	263229	\$6,057
Computers		\$0
Equipment	96188	\$4,809
Furniture/Tools Equipment	34569	\$3,457
Land Improvements	38077	\$1,597
Motor Vehicles		\$0
<b>Total Sewer Assets</b>	<b>\$16,708,011</b>	<b>\$294,181</b>

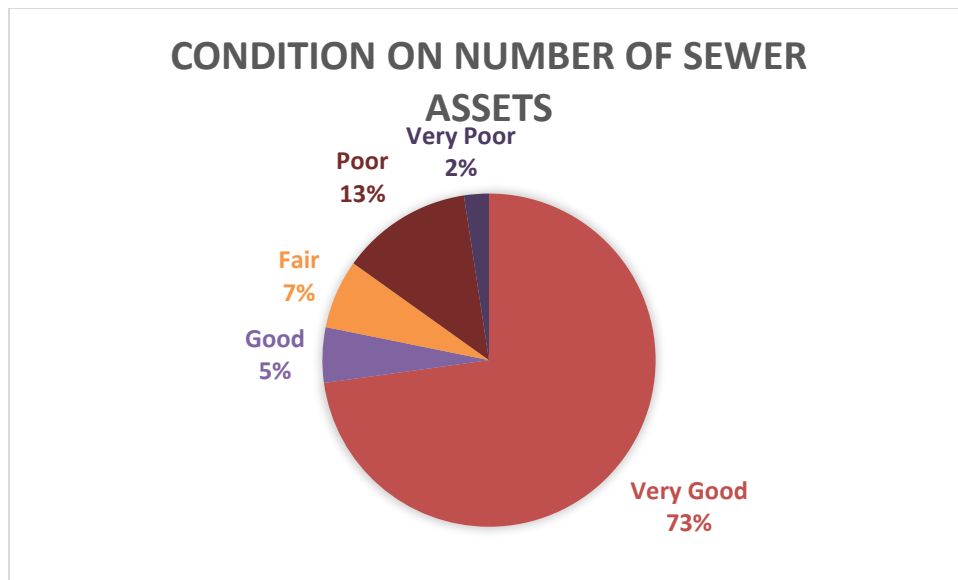
### 6.5 Useful Life:

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	Useful Life (Years)
Force mains	75
Manholes	75
Service Connections	75
Sewerlines	75
Milverton Sewer Facility	100/75//60/40/30/25/20/15
Shakespeare Sewer Facility	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 within six years.

## 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.

Storm Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Storm	C	F	54% of the Storm System category assets are rated in Good to Very Good condition. The condition rating is based on age. The 2016 Condition Rating for Storm has been adjusted from A to C due to a re-statement in the 2016 inventory units. The annual requirement is \$182,000. Based on Perth East's annual funding of \$7,000, the annual deficit is \$175,000.

### 7.2 Inventory

As shown in the summary table below the Township has 19,873 meters of storm pipe.

Asset Type	Asset Component	Quantity
Storm System	Manholes & Manhole Catch Basins	8
	Catch Basins	165
	Outlets	7
	Rural Storm Culverts	261
	Storm Pipe	19873.47m
	Storm Pond	1

### 7.3 Replacement Value:

The estimated replacement value of the storm sewer network in 2017 dollars is \$12.6 million. The cost per household for storm water is \$3,036 based on 4,155 households.

Asset Component	2017 Overall Replacement Cost
Manholes & Manhole Catch Basins	\$32,184
Catch Basins	\$292,359
Outlets	\$13,688
Rural Storm Catch Basin	\$3,894
Rural Storm Culverts	\$1,552,554
Storm Pipe	\$10,690,537
Storm Pond	\$29,078
	\$12,614,294

#### 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	\$429
Catch Basins	\$3,898
Outlets	\$183
Rural Storm Catch Basin	\$52
Rural Storm Culverts	\$38,842
Storm Pipe	\$143,303
Storm Pond	\$388
	<b>\$187,094</b>

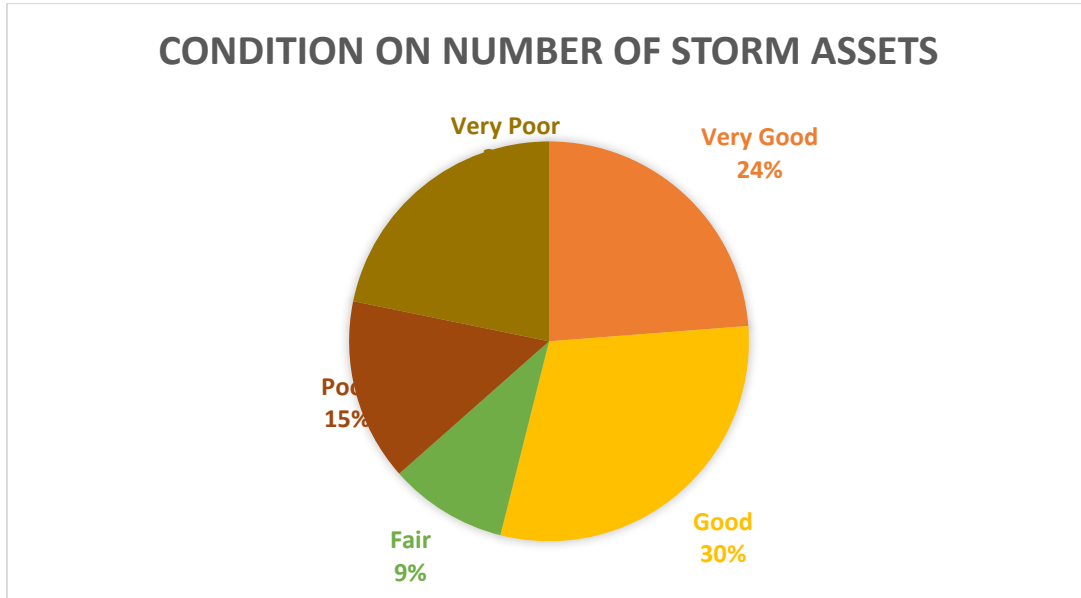
#### 7.5 Useful Life:

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
Manholes	75
Catch Basins	75
Outlets	75
Rural Storm Culverts	40
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 within six years.

## 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.

Facility Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Facility	A	B	Based on a 2009 Building Condition Assessment Report and subsequent age deterioration calculations, over 50% of the Township's Buildings category assets are rated in Very Good condition. The annual requirement is \$376,697. Based on Perth East's annual funding of \$284,747, the annual deficit is \$91,949. The funding rating has improved from a C in 2016 with the 1.3% Capital levy.

### 8.2 Inventory

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

Asset Type	Asset Component	Quantity
Buildings	Administration Building	1 (6 Components)
	Fire Halls	3 (8 Components)
	Library	1 (4 Components)
	Recreation	4 (20 Components)
	Public Works	31 (36 Components)

### 8.3 Replacement Value:

The estimated replacement value of Township facilities in 2017 dollars is \$15.4 million. The cost per household for facilities is \$3,695 based on 4,155 households.

Asset Component	Quantity	Useful Life	2017 Overall Replacement Cost
Administration Building	1 (6 Components)	50/30/20/15/10	\$1,260,807
Fire Halls	3 (8 Components)	50/25/20/10	\$2,130,871
Library	1 (4 Components)	50/25/15	\$1,015,102
Recreation	4 (20 Components)	50/30/25/15/10/5	\$6,234,252
Public Works	31 (36 Components)	100/50/35/30/25/20/15/10	\$4,711,004
			\$15,352,036

#### 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 Type	Asset Component	Annual Lifecycle Requirement
<b>Buildings</b>	Administration Building	\$28,808
	Fire Halls	\$50,333
	Library	\$29,789
	Recreation	\$145,564
	Public Works	\$122,204
		\$376,697

#### 8.5 Useful Life:

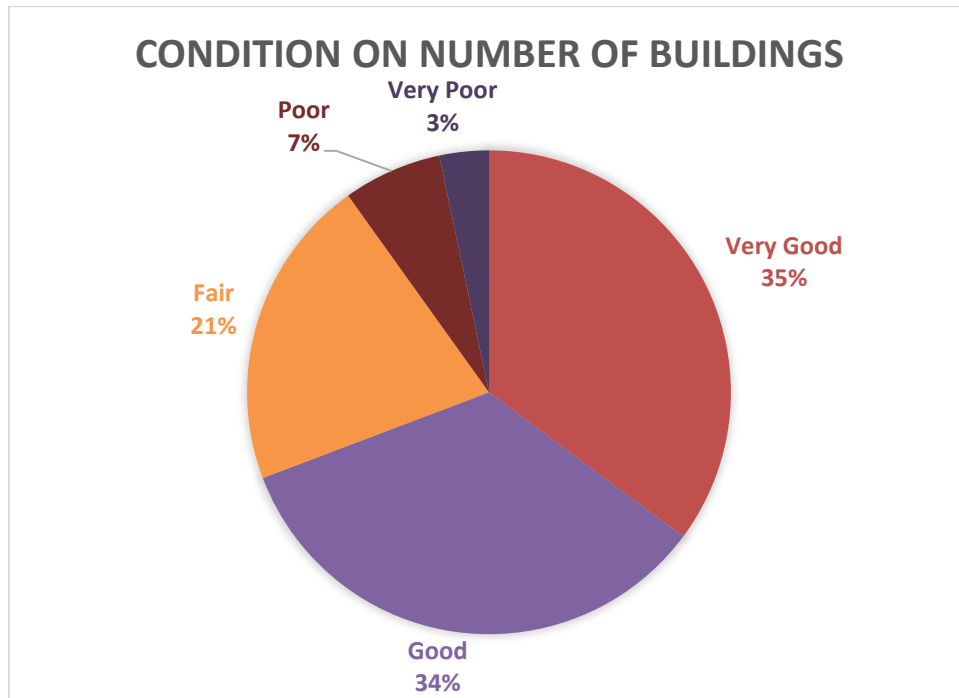
The useful life is used to determine replacement needs of individual assets. The useful lives were based on OMBI benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life
Administration Building	50/30/20/15/10
Fire Halls	50/20/10
Library	50/25/15
Recreation	50/30/25/15/12/10/5
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 within six years.

## 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.

Land Improvements Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Land Improvements	D	F	Over 50% of the Township's Land Improvements category assets range between Fair to Very Poor condition. The annual requirement is \$128,603. Based on Perth East's annual funding of \$37,261, the annual deficit is \$91,401.

### 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	43
	Picnic Tables/Benches	30
	Playground Equipment	9
	Pool	1 (3 Components)
	Soccer Pitch	1
Walking Path	3	

### 9.3 Replacement Value:

The estimated replacement value of Township land improvements in 2017 dollars is \$3.8 million. The cost per household for land improvements is \$920 based on 4,155 households.

<b>Asset Component</b>	<b>2017 Overall Replacement Cost</b>
Ball Diamonds	\$795,549
Bleachers	\$119,829
Columbarium	\$43,908
Fencing	\$175,515
Fire Water Tanks	\$70,313
Gravel Pit Scale	\$62,954
Landscaping	\$31,158
Light Standards	\$334,660
Parking Lots	\$1,071,134
Picnic Tables/Benches	\$26,698
Playground Equipment	\$619,785
Pool	\$372,432
Soccer Pitch	\$51,356
Walking Path	\$46,430
	<b>\$3,821,721</b>

#### 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	\$27,564
Bleachers	\$2,901
Columbarium	\$878
Fencing	\$8,776
Fire Water Tanks	\$1,406
Gravel Pit Scale	\$3,201
Landscaping	\$1,039
Light Standards	\$15,594
Parking Lots	\$19,278
Picnic Tables/Benches	\$1,780
Playground Equipment	\$30,989
Pool	\$10,500
Soccer Pitch	\$1,712
Walking Path	\$4,643
<b>Subtotal</b>	<b>\$130,260</b>
Less Sewer Fencing and Landscaping	<b>\$1,597</b>
<b>Total</b>	<b>\$128,663</b>

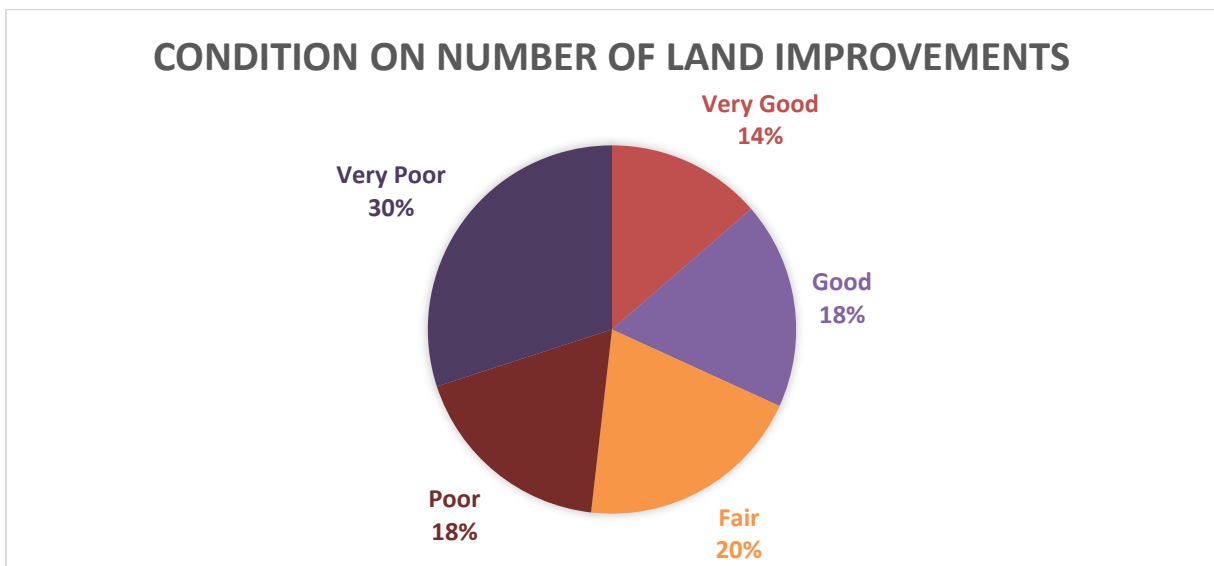
#### 9.5 Useful Life:

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
<b>Subtotal</b>	
Less Sewer Fencing and Landscaping	

### 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 within six years.

## 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.

<b>Machinery &amp; Equipment Report Card</b>			
<b>Asset Category</b>	<b>Condition Rating</b>	<b>Funding Rating</b>	<b>Comments</b>
<b>Machinery &amp; Equipment</b>	<b>F</b>	<b>C</b>	Over 50% of the Township's Machinery & Equipment range between Poor to Very Poor age based condition. Computer hardware and Software make up 31% of the annual requirement. Condition is aged based. The annual requirement is \$492,266. Based on Perth East's approximate annual funding of \$322,015, the annual deficit is \$170,251. The funding rating has improved from a D in 2016 with the 1.3% Capital levy.

### 10.2 Inventory

The machinery and equipment owned by the Township are summarized in the table below.

<b>Asset Type</b>	<b>Asset Component</b>	<b>Quantity</b>
<b>Machinery &amp; Equipment</b>	Computer Hardware	112 units
	Computer Software	39 units
	Equipment	71 units
	Furniture/Tools Equipment	155 units

### 10.3 Replacement Value:

The estimated replacement value of Township machinery and equipment in 2017 dollars is \$5.3 million. The cost per household for machinery and equipment is \$1,277 based on 4,155 households.

Asset Type	Asset Component	2017 Overall Replacement Cost
Machinery & Equipment	Computer Hardware	\$179,225
	Computer Software	\$435,815
	Equipment	\$3,348,115
	Furniture/Tools Equipment	\$1,342,212
		<b>\$5,305,367</b>

### 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 Component	Annual Lifecycle Requirement
Computer Hardware	\$45,056
Computer Software	\$108,954
Equipment	\$193,543
Furniture/Tools Equipment	\$144,713
	<b>\$492,266</b>

### 10.5 Useful Life:

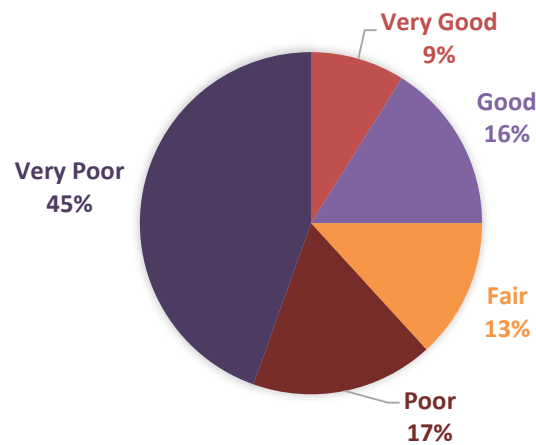
The useful life is used to determine replacement needs of individual assets. The useful lives were based on Ontario Municipal Benchmark Initiatives (OMBI) benchmarks and best practices as approved by the Township auditor.

Asset Component	Useful Life (Years)
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 NUMBER OF MACHERY AND EQUIPMENT



### 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 within six years.

## 10. 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.



Motor Vehicle Report Card			
Asset Category	Condition Rating	Funding Rating	Comments
Motor Vehicle	B	A	Over 60% of the Township's Motor Vehicles range between Very Good to Fair condition based on age. The annual requirement is \$457,683. Based on Perth East's annual funding of \$397,129, the annual deficit is \$60,554. The condition rating has improved from a C in 2016 which is cyclical.

## 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	10 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 2017 dollars is \$7.3 million. The cost per household for motor vehicles is \$1,764 based on 4,155 households.

Asset Component	2017 Overall Replacement Cost
Aerial Truck	\$800,447
Fire Tanker	\$2,550,000
Pickup Truck	\$381,880
Pumper	\$1,350,000
Rescue Truck	\$350,000
Tandem Axle Dump Truck	\$525,229
Tri Axle Dump Truck	\$1,370,271
	<b>\$7,327,827</b>

## 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.

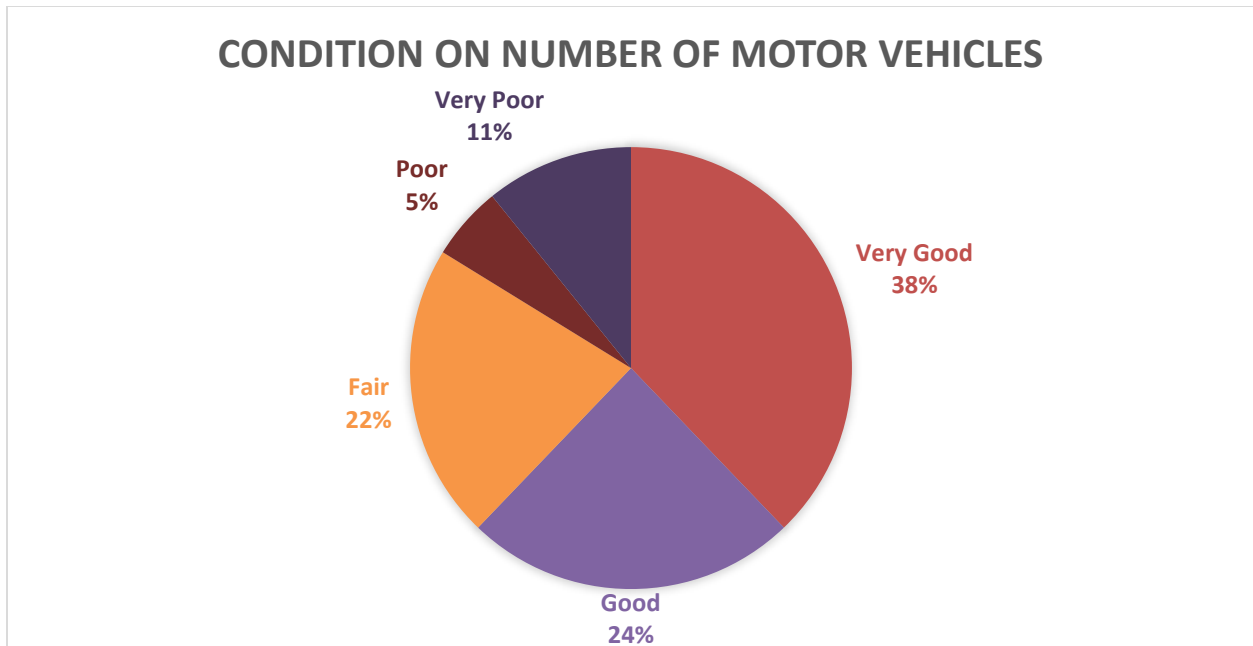
**11.5 Useful Life:**

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.



## 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 within six years.

## 11. 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:

The following table lists the 2015 Asset Management Plan recommendations as presented by Public Sector Digest and the Township progress or action on the recommendations.

FINANCIAL RECOMMENDATIONS		
	2015 AMP RECOMMENDATION	PROGRESS
1	Recommendation for full funding of the annual requirement.	Capital levy increase of 1.3% authorized for 10 years to reach full funding under the annual requirement for Township assets funded under the property tax levy. Water and Wastewater capital surcharges are calculated on full lifecycle replacement.
2	Sustainable funding models that include debt need to incorporate the risk of rising interest rates.	To be considered under capital plans.
3	Determination should be made as to what the long-term reserve balance requirements are and a plan to achieve such balances.	Schedule A to the Township Reserve Policy states the purpose and long term goals of reserves along with balance requirements.
4	Allocate gas tax revenue and Ontario Community Infrastructure Fund revenue to asset management.	Council approved an annual transfer of \$10,000 from the Federal Gas Tax Fund to an Asset Management Reserve. Consideration will be given to use a share of the formula based OCIF for AMP purposes.
5	Increase existing and future infrastructure budgets by the applicable inflation index on an annual basis in addition to the deficit phase in.	Capital transfers are increased by CPI annually.

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.

## **12. INFRASTRUCTURE REPORT CARD SUMMARY**

The following table lists the 2017 Infrastructure Report Card for the Township of Perth East. Each asset category was rated on Condition and Funding Need. Changes from 2016 are noted in red and an explanation included in the comment section.

Summary of Report Card			
Changes from Prior Year Noted in Red			
Asset Category	Condition Rating	Funding Rating	Comments
Road	A	A	Based on a 2012 Roads Needs Study & subsequent inspections, the majority of the Road Network category assets are in Very Good condition. The annual requirement is \$1,525,342. Based on Perth East's annual funding of \$1,440,033, the annual deficit is \$85,309.
Bridges & Culverts	A	F	Based on the Township's 2013 OSIM inspection completed by B.M. Ross, Bridges & Culverts are overall in Very Good condition. The annual requirement is \$305,197. Based on Perth East's annual funding of \$59,766, the annual deficit is \$245,431.
Water	B	A	Over 50% of the Township's water network are rated in Very Good to Good condition. The condition rating is based on age and may change once the Water Master Plan is completed with condition ratings based on actual inspection analysis. The annual requirement is \$210,914. Based on Perth East's annual funding of \$183,785, the annual deficit is \$27,128.
Wastewater	A	A	Over 70% of the Township's wastewater network are 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 \$294,180. Based on Perth East's annual funding of \$271,169, the annual deficit is \$23,011.
Storm	C	F	54% of the Storm System category assets are rated in Good to Very Good condition. The condition rating is based on age. The 2016 Condition Rating for Storm has been adjusted from A to C due to a re-statement in the 2016 inventory units. The annual requirement is \$182,000. Based on Perth East's annual funding of \$7,000, the annual deficit is \$175,000.
Facilities	A	B	Based on a 2009 Building Condition Assessment Report with new buildings rated on age, over 50% of the Township's Buildings category assets are rated in Very Good condition. The annual requirement is \$376,697. Based on Perth East's annual funding of \$284,747, the annual deficit is \$91,949. The funding rating has improved from a C in 2016 with the 1.3% Capital levy.
Land Improvements	D	F	Over 50% of the Township's Land Improvements category assets range between Fair to Very Poor condition. The annual requirement is \$128,603. Based on Perth East's annual funding of \$37,261, the annual deficit is \$91,401.
Machinery & Equipment	F	C	Over 50% of the Township's Machinery & Equipment range between Poor to Very Poor age based condition. Computer hardware and Software make up 31% of the annual requirement. Condition is aged based. The annual requirement is \$492,266. Based on Perth East's approximate annual funding of \$322,015, the annual deficit is \$170,251. The funding rating has improved from a D in 2016 with the 1.3% Capital levy.
Motor Vehicles	B	A	Over 60% of the Township's Motor Vehicles range between Very Good to Fair condition based on age. The annual requirement is \$457,683. Based on Perth East's annual funding of \$397,129, the annual deficit is \$60,554. The condition rating has improved from a C in 2016 which is cyclical.

## Report Card Calculation

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

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