



# Town of Quispamsis

## 2018 State of Infrastructure

June 4, 2019

Prepared for:





## Town of Quispamsis

### 2018 State of Infrastructure



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**RVA 184156**

**June 4, 2019**

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**Town of Quispamsis  
2018 State of Infrastructure**




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**Town of Quispamsis**  
**2018 State of Infrastructure**  
*Report Card*

Category	Replacement Value	Deficit %	Letter Grade	Trend Arrow <sup>2</sup>
Community Services and Administration	\$52.8 M	3%	A	
Public Works	\$272.1 M	1%	A-	
Utility	\$176.1 M	2%	A	
Town of Quispamsis	\$500.9 M	1%	A-	
Kennebecasis Valley Fire Department	\$5.7 M <sup>1</sup>	12%	B-	NA
Kennebecasis Regional Police Force	\$2.7 M <sup>1</sup>	6%	A-	NA
Kennebecasis Public Library	\$3.8 M <sup>1</sup>	7%	A-	NA
Regional Services	\$12.3 M <sup>1</sup>	10%	B	NA

**Legend:**

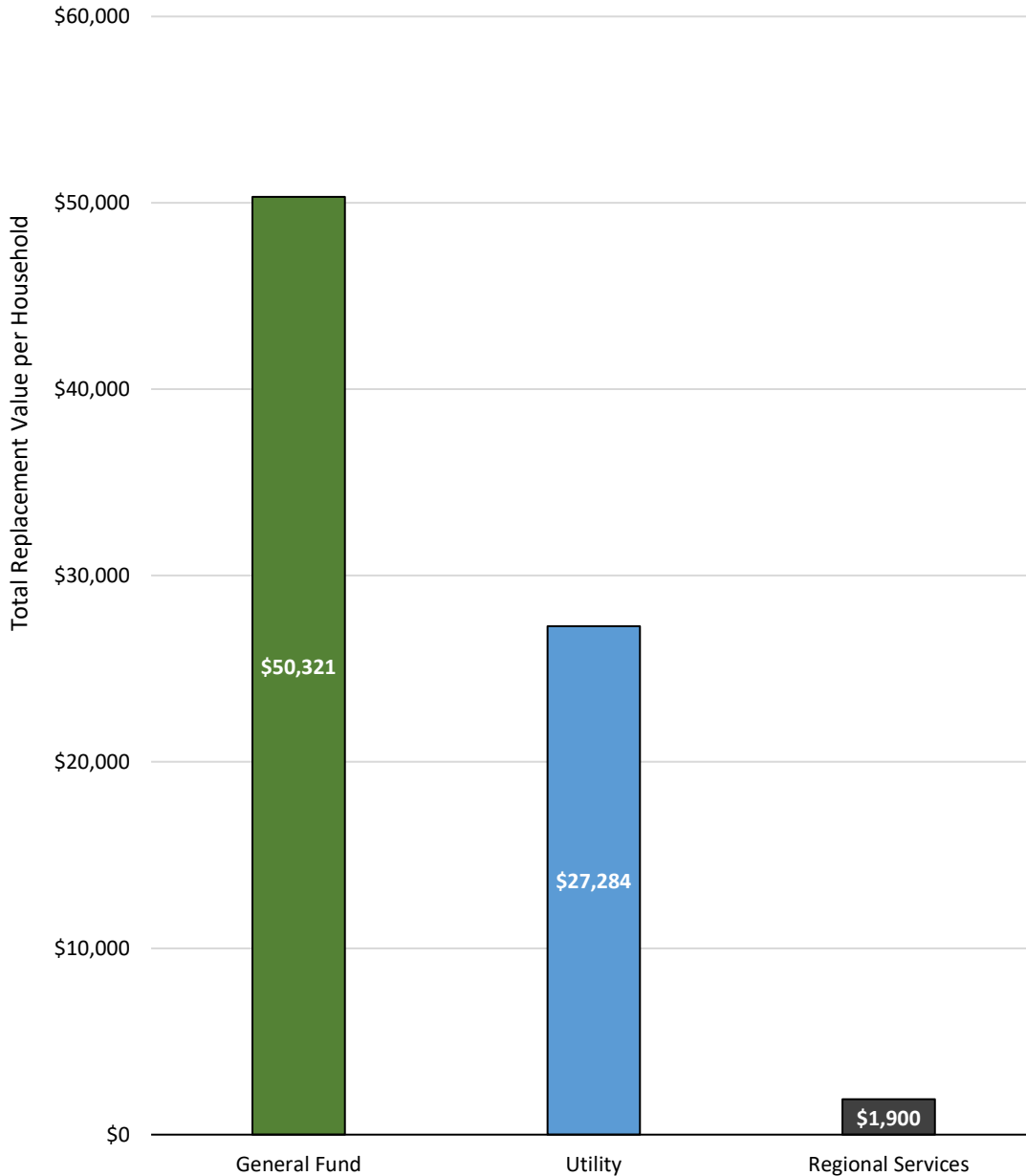
A = Very Good    B = Good    C = Fair    D = Poor    F = Very Poor  
 Improving                       Stable                                       Deteriorating

1 – Regional Services replacement value only includes the portion of the assets which the Town is responsible for (approx. 60% for each organization).  
 2 – Steep downward slope indicates asset is deteriorating more rapidly than a mild downward slope, while a steep upward slope indicates an asset is improving more quickly than a mild upward slope.

# Town of Quispamsis 2018 State of Infrastructure

*Putting Things into Perspective – Per Household Results*

## **Total Asset Replacement Value per Household**



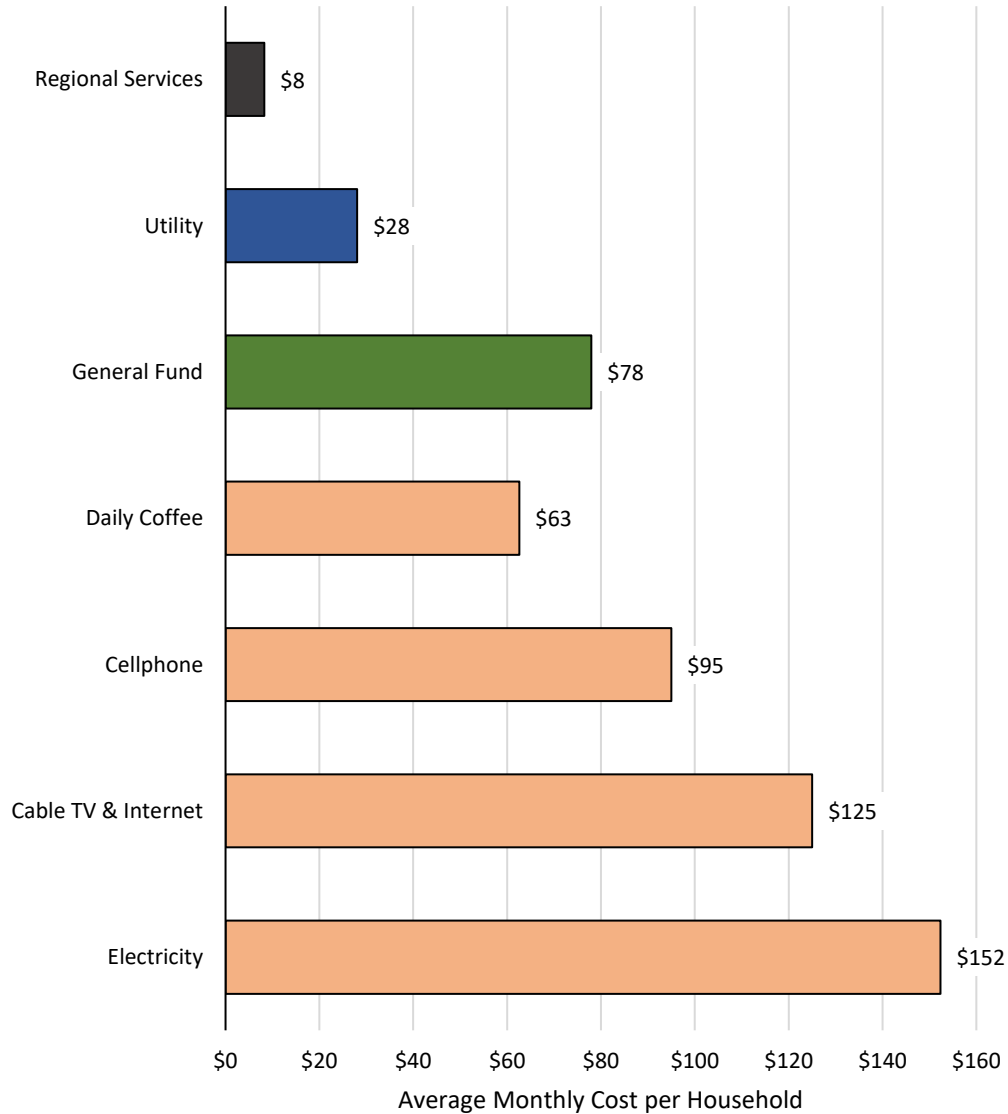
*The Total Asset Replacement Value per Household chart demonstrates what the cost for each household if the Town were to replace all of its assets. This value serves as a proxy for the average amount of “equity” each household has in the Town’s infrastructure.*

\* Total number of households is equal to the 6,455 private dwellings occupied by usual residents (Statistics Canada, 2016)

# Town of Quispamsis 2018 State of Infrastructure

*Putting Things into Perspective – Per Household Results*

## **Average Monthly Cost per Household to Sustainably Finance Infrastructure Renewals**



*The above chart demonstrates the average monthly costs per household to replace all assets at the end of their useful lives over a 100-year period and compares these costs to other common household expenses.*

\* Total number of households is equal to the 6,455 private dwellings occupied by usual residents (Statistics Canada, 2016)

## **1.0 INTRODUCTION**

### **1.1 Background**

In 2018, the Town of Quispamsis retained R.V. Anderson Associates Ltd (RVA) to assist with the development of a comprehensive asset management plan and improve asset management practices within the community. To date, the Town of Quispamsis has completed several key initiatives, listed below.

1. AM Policy – institutionalizes asset management within the municipality and articulates several key elements: Council’s commitment to asset management, objectives Council wishes to meet with the policy and strategic guidance to staff.
2. AM Strategy – outlines the key practices, processes and approaches used to implement the AM policy. Additionally, the AM strategy will articulate the current opportunities for improvement to advance asset management planning in the Town. The AM strategy is prepared by the Town’s Senior Management group and is intended for both internal (municipal staff and Council) and external (public) audiences.
3. Data Review Report – assesses the completeness and accuracy of asset data and information and identifies opportunities for improvement. The data review report is key to determining the level of confidence in the results presented in the State of Infrastructure report.

### **1.2 Purpose**

The purpose of a State of Infrastructure (SOI) report is to communicate the state of repair of the Town of Quispamsis’ infrastructure assets essential to the delivery of public services. The report contains several indicators such as:

- Asset Quantity
- Asset Replacement Value
- Letter Grade
- Trend Arrow
- Infrastructure Deficit
- Condition Rating
- Long-Term Financial Forecasts
- Data Confidence



These indicators will allow the comparison of the state of infrastructure repair across different departments and asset types. In general, the SOI report is intended to provide information to answer the six key asset management questions.

1. What do you have?
2. What is it worth?
3. What condition is it in?
4. What do you need to do to it?
5. When do you need to do it?
6. How much money do you need?

## **2.0 APPROACH**

### **2.1 Asset Breakdown**

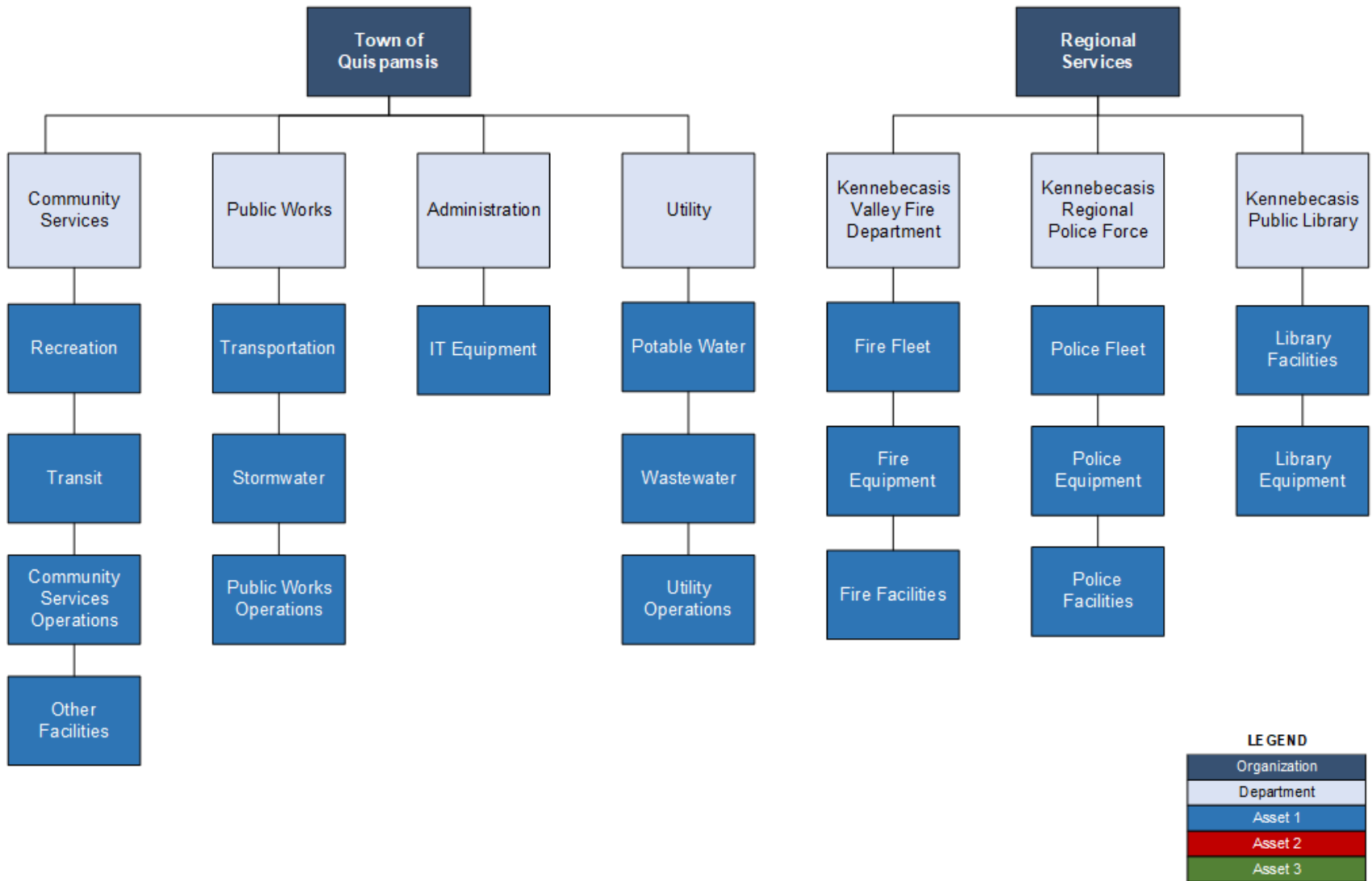
The Town's assets are organized in a hierarchy which arranges assets into various departments (e.g. a watermain > potable water distribution > potable water > Utility). The purpose of the hierarchy is to ensure asset data is collected and organized in a framework that will facilitate data access, information extraction and reporting, and decision-making.

Asset hierarchies can be arranged to reflect organizational structure (e.g. public works, fleet maintenance, facilities management) or services provided (e.g. potable water, transportation, recreation, etc.). To ensure consistency with existing budgeting practices at the Town and streamline asset management decisions with the supporting budgeting process, an organizational structure (department-based) asset hierarchy has been adopted.

The asset hierarchy is broken down into various "levels". Each level of the hierarchy demonstrates a different degree of asset complexity/detail for a department. Additional levels of detail can be added to the hierarchy to improve asset management decision making or incorporate operational requirements.

The departments and level 2 categories of the asset hierarchy are shown in Figure 1 below, while the complete asset hierarchy is presented in Appendix 1. The SOI report results are presented at varying levels of complexity/detail to accommodate each department.

Figure 1 - Town of Quispamsis Asset Hierarchy



## 2.2 Asset Replacement Value

Current replacement values (costs) are estimated for all assets using one of three methods:

1. Historical contracts or tenders
2. Engineering estimates
3. Inflating original acquisition costs

A complete summary of unit replacement costs used for each asset are presented in Appendix 2.

## 2.3 Condition

The condition of each asset represents the current state of physical repair and is often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. A five-point rating scale is used to align the Town of Quispamsis with the 2016 Canadian Infrastructure Report Card. This simplified condition rating scale allows for comparative benchmarking between asset groups and is sufficiently detailed for high-level decision making. Descriptions of each condition rating (from 1 to 5) are shown in Table 1 below.

**Table 1 - Condition Rating Descriptions**

Condition Rating	Physical Condition	Expected Service Life
1 - Very Good	Excellent working condition. No signs of deterioration.	Like new.
2 – Good	Minor signs of deterioration.	At or beyond mid-stage of life.
3 – Fair	Some elements exhibiting major deficiencies.	Approaching end of life.
4 - Poor	Significant deterioration with localized areas of failure.	Needs to be replaced/repared in the short-term.
5 - Very Poor	Asset is beyond repair and, generally, has completed failed.	Needs to be replaced/repared immediately.

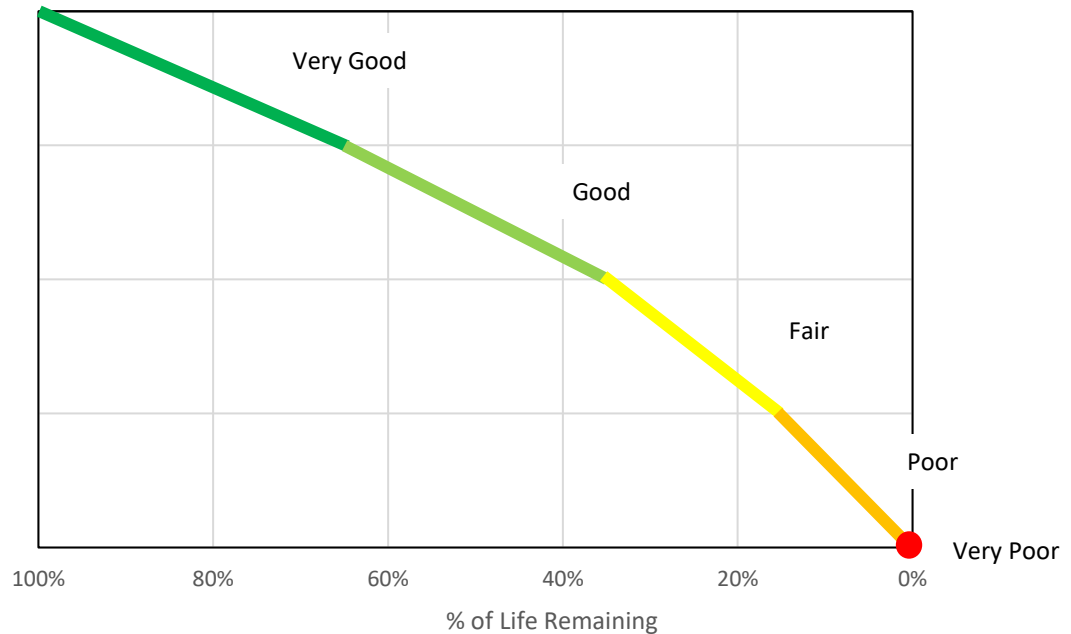
Condition ratings of assets in the SOI report are calculated using one of three methods:

1. Theoretical Condition – using asset age and estimated useful life as a proxy for condition
2. Operator Experience – relying on operator experience and knowledge of the asset

3. Documented Observations – systematic and documented observations of the asset

Most assets included in the SOI report rely on a theoretical condition estimated using age as a proxy. Theoretical condition is calculated for all assets using a generalized asset deterioration curve shown in Figure 2. This curve is intended to mimic the accelerated rate of deterioration an asset experiences towards the end of its useful life.

**Figure 2 - Generalized Asset Deterioration Curve**



Some assets have undergone actual condition assessments. These condition ratings are more reliable than those which were estimated using age as a proxy. The following assets' condition ratings were based on actual, documented observations:

- Road Surfaces
- Culverts
- Stormwater Conduits
- Street Furniture
- Steel Pedestrian Bridge

## 2.4 Long-Term Financial Forecast

In addition to demonstrating the current state of infrastructure repair, the SOI report provides the reader with a high-level understanding of the long-term financial requirements to replace assets at the end of their useful lives. Long-term financial forecasts have been generated to demonstrate the annual investment requirements over

a 100-year period and compare this value to historical funding levels. A 100-year evaluation period is selected to ensure the replacement cycle of the longest lasting assets are captured. From there, the average annual investment requirement is determined. This average is recognized as the **Sustainable Funding Requirement**. This metric is compared to *historical funding levels* to identify the **Investment Gap (or Surplus)**. This measures what increase (or decrease) in average annual funding is required to sustainably replace assets at the end of their useful lives. *Note: Historical funding levels for the regional service Departments could not be accurately estimated and have therefore been omitted from the report.*

Additionally, the long-term financial forecast highlights the current **infrastructure deficit** – the total value of assets which are at or beyond their estimated useful life. The infrastructure deficit is presented throughout the report as a high-level proxy for the “catch-up” requirements of each asset. However, it is important to recognize an asset is only in a deficit position if it has exceeded its estimated useful life. Some assets, such as road surfaces, should never reach the “end” of their useful life if properly maintained. For these assets, timely preventative maintenance and rehabilitation practices will minimize the total life cycle-cost and will ensure the asset never reaches a deficit position and require a complete replacement. For this reason, we caution the reader not to interpret the infrastructure deficit as an indication of the overall condition of an asset type nor as an investment requirement to restore the entire asset type to like-new condition.

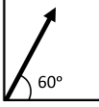
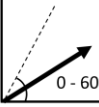

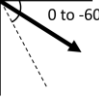
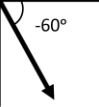
Note, all costs presented in this report are expressed in current year (2018) dollars and inflation is not accounted for in future cash flows. A full list of assumptions used for asset useful lives and replacement costs are presented in Appendix 2.

## 2.5 Trend Arrow

Long-term financial forecasts are used to generate trend arrows to simplify the interpretation of the forecasts. This arrow indicates the expected trend in infrastructure state of repair given planned funding commitments and is determined using the current investment gap (or surplus). Combining the sustainable funding requirement and the historical funding levels determined the funding ratio, defined using the equation below.

$$\text{Funding Ratio} = \frac{\text{Historical Funding Level}}{\text{Sustainable Funding Requirement}}$$

**Table 2 - Trend Arrow Descriptions**

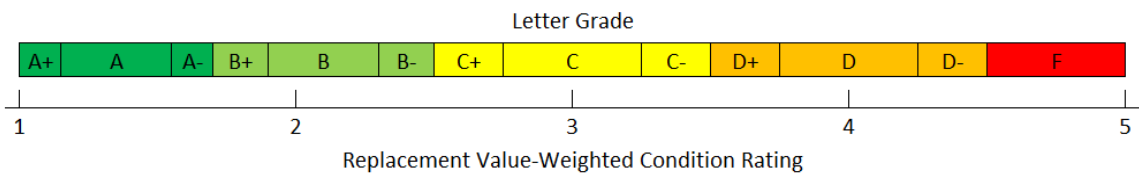
Trend Arrow	Funding Ratio	Description
	> 150%	Asset state of repair rapidly improving. Historical and current funding is well above the sustainable funding requirement.
	150 – 100%	Asset state of repair is improving. Slope of the trend arrow is dependent on the funding ratio.
	100%	No change expected in asset state of repair. Historical and expected funding meets the sustainable funding requirement.
	50 – 100%	Asset state of repair is deteriorating. Slope of the trend arrow is dependent on the funding ratio.
	< 50%	Asset state of repair rapidly deteriorating. Historical and current funding is well below the sustainable funding requirement.

The slope of the trend arrow indicates the degree to which historical funding is above/below the sustainable funding requirement, up to the limits defined above. As an example, if the funding ratio is 125%, the slope of the arrow will be +30°.

## 2.6 Letter Grade

Each department and asset category are assigned a letter grade to communicate the current state of infrastructure repair. These letter grades are determined by converting the **replacement-value weighted** condition rating score to a letter grade as shown in Figure 3.

**Figure 3 - Letter Grade Scoring**



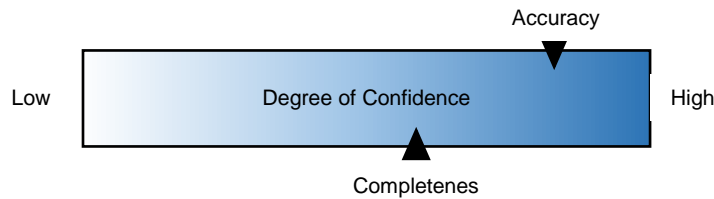
## 2.7 Confidence Band

The information in the SOI report is based on the best readily available data and information for individual assets. As the summary information presented in the SOI

report is sensitive to the accuracy and completeness of the asset data, confidence bands have been produced for all departments in the SOI report.

The confidence bands illustrate two things. First, as more data is included and more sophisticated methods are used to determine the infrastructure’s state of repair, the results obtained are expected to change. This change will not be due to an increased deterioration or betterment of infrastructure, it will simply be due to an increase in data accuracy and completeness. The confidence bands provide context for these sudden increases or decreases in infrastructure state of repair and results. Secondly, the confidence bands identify areas for data improvement. The Town can use confidence bands to identify which asset groups require improvements in data quality to produce more certain results. An example confidence band is shown in Figure 4 below. To assist in the interpretation of confidence bands, Table 3 and Table 4 have been developed.






**Figure 4 - Example Confidence Band**



**Table 3 - Data Accuracy Descriptions**

Accuracy	Figure	Criteria
Very Low		Assets have limited data available. Replacement cost and useful life are based on generalized unit costs. There are no in-service years available to estimate condition.
Low		Asset data is available for some assets. Where possible, replacement cost and useful life are estimated based on asset properties. Condition is only determined by using age as a proxy
Moderate		Asset data is available for most assets. Where possible, replacement cost and useful life are estimated based on asset properties. Condition is estimated using a combination of age as a proxy and documented observations.
High		Asset data is available for all assets. Replacement cost and useful life are estimated based on asset properties. The majority of asset condition ratings are estimated using documented observations.
Very High		Asset data is available for all assets. Replacement cost and useful life are estimated based on asset properties. All asset condition ratings are based on documented observations.

**Table 4 - Data Completeness Descriptions**

Completeness	Figure	Criteria
Very Low		0 - 20% of assets are included
Low		20 – 40% of assets are included
Moderate		40 – 60% of assets are included
High		60 – 80% of assets are included
Very High		80 – 100% of assets are included



### **3.0 RESULTS**

State of Infrastructure results have been generated for the Town of Quispamsis and each department, listed below.


1. Community Services and Administration
2. Public Works
3. Utility

In addition to the municipal services provided by the Town of Quispamsis, the Town's regional services have been included in the Report. There are three Regional Service groups which provide fire, policing and library services for the community:

1. Kennebecasis Valley Fire Department
2. Kennebecasis Regional Police Force
3. Kennebecasis Public Library

Each category's report contains key information such as total replacement value, percentage of assets in a deficit position, letter grade, condition distribution, long-term financial forecast, trend arrow and confidence band.

## TOWN OF QUISPAMISIS

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$500.9 M	1%	A-	

### Overview

The Town of Quispamsis owns and operates a wide variety of asset types, ranging from facilities, water, wastewater, roads, sidewalks, storm sewers, culverts, fleet, parks, and pedestrian bridges. A summary of each department is shown in Table 5.

**Table 5 - Town of Quispamsis Valuation**

Department	Value	Deficit %	Letter Grade
Community Services and Administration	\$52,771,022	3%	A
Public Works	\$272,052,942	1%	A-
Utility	\$176,116,394	2%	A
<b>Total</b>	<b>\$500,940,357</b>	<b>1%</b>	<b>A-</b>

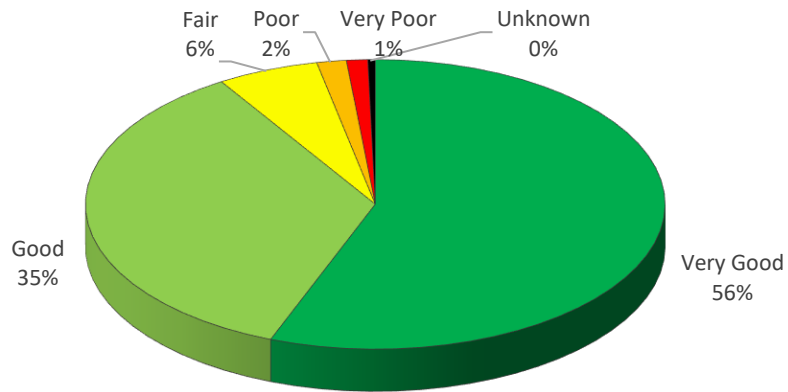
A more detailed breakdown of the assets included in each department is presented in the asset hierarchy (Appendix 1).

### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the Town’s assets is 1.56 out of 5.00 with assets generally being recognized as being in a Very Good to Good condition. 3% of the Town’s assets are in a Poor or worse condition and there is insufficient information to estimate the condition of 0.4% of the Town’s assets, as shown in Figure 5.

**Figure 5 - Distribution of Town Asset Condition Ratings**

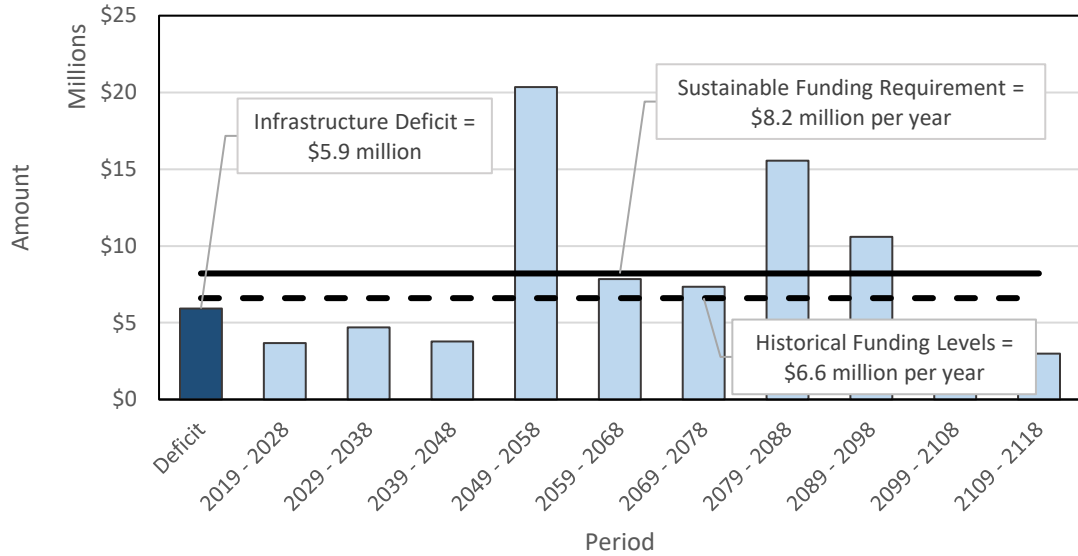


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

The Town of Quispamsis has a current infrastructure deficit of \$5,924,220 and a 100-year sustainable funding requirement of \$8,210,306 per year. Historical funding levels (2014 – 2018) suggest the Town is allocating an average of \$6,602,415 per year for capital renewals or new investments. Compared to the sustainable funding requirement, this equals an investment gap of \$2,598,980 per year. These results are shown in Figure 6.

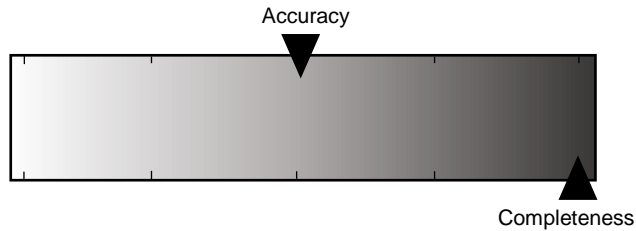
**Figure 6 – Long-Term Financial Forecast**




**Confidence Band**

The results presented for the Town of Quispamsis assets have a very high completeness and moderate accuracy. In summary, 80 - 100% of the Town’s assets are likely included and relevant asset data is available for most assets. Replacement cost and useful life are estimated based on asset properties (where available) and condition is estimated using a combination of age as a proxy and documented observations.

**Figure 7 - Town of Quispamsis Confidence Band**



## COMMUNITY SERVICES AND ADMINISTRATION

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$52.8 M	3%	A	

### Overview

The Community Services Department is committed to enhancing the quality of life of the residents of Quispamsis by offering a variety of well-maintained accessible recreation facilities, places and spaces that offer an assortment of year around services for all residents. These facilities and services have been created and designed to provide opportunities for residents of all ages and stages of life to live healthy active lifestyles, as well as to celebrate and build relationships between families and neighbours and develop civic pride. In addition to the Community Services Department, the IT Equipment assets are included. IT Equipment supports the goals and objectives of the community by providing innovative and reliable technology solutions to support the efficient delivery of municipal services to Quispamsis residents. A summary of the assets in Community Services and Administration is shown in Table 6.

Note, the qplex facility within this department overshadows the rest of the infrastructure included. At a total replacement cost of approximately \$28.8 million, this building represents over 50% of the total value of assets included in this department. As a result, the reader should interpret the overall condition ratings with caution as it is skewed heavily by the results of the qplex. To address the large impact of the qplex on the community services and administration department results, the detail for the assets presented in Table 6 has been significantly increased. The reader is cautioned that this additional level of detail is not fully supported by the data confidence of the underlying information.

**Table 6 – Community Services and Administration Inventory Overview**

Asset	Quantity	Value	Deficit %	Letter Grade
Indoor Recreation				
qplex	1	\$28,828,898	0%	A+
Other Recreation Facilities				
Civic Centre		\$1,985,521	0%	B
Food Bank		\$84,013	100%	F
Parks Office		\$460,171	0%	B
QMA		\$5,016,019	0%	C+

Asset	Quantity	Value	Deficit %	Letter Grade
QMA Storage Shed		NA	NA	NA
Outdoor Recreation				
Parks and Playgrounds				
Bandstand		\$109,835	0%	A
Warehouse		\$95,777	0%	D
Skate Park		\$208,007	0%	A+
Arts & Culture Park		\$823,928	0%	A
Community Garden		\$26,911	0%	A+
Hammond River Park		NA	NA	NA
Qplex Grounds		NA	NA	NA
Meenan's Cove Park		\$354,094	1%	A+
Matthews Cove Park		\$33,163	0%	A
Cedar Ridge Park		NA	NA	NA
Nottingham Park		NA	NA	NA
Ritchie Lake Park		\$195,325	39%	C
HomeStar Off Leash Dog Park		\$95,673	0%	A+
Lila Court		NA	NA	NA
Chelsea Park - Bike Park		\$42,113	0%	A+
Qplex Playground		\$231,863	0%	A+
Goldrush Drive Playground		\$42,734	0%	B
Cedar Ridge Playground		\$41,000	0%	NA
Nottingham Drive Playground		\$24,346	0%	B
Parkside Drive Playground		\$42,500	0%	NA
Firefly Playground		\$31,089	0%	A+
Meenan's Cove Playground		\$20,000	0%	NA
Squire Drive Playground		\$32,704	0%	A+
Ritchie Lake Playground		\$74,745	0%	A+
Outdoor Sports Fields				
Canteen / Press Box				
Meenan's Cove Ballfield		\$291,231	0%	A+
Walter Jewett Ballfield		\$10,000	0%	NA
Centennial Ballfield		\$242,729	100%	F
Memorial Ballfield		NA	NA	NA
James Rolfe Soccer Field		\$30,358	100%	F

Asset	Quantity	Value	Deficit %	Letter Grade
Saunders Field		\$13,059	100%	F
Quispamsis Tennis Courts		\$128,853	0%	A+
Parkside Drive Basketball Court		NA	NA	NA
Firefly Drive Basketball Court		NA	NA	NA
Nottingham Drive Basketball Court		NA	NA	NA
Qplex Basketball Court		NA	NA	NA
Pickleball Court		\$48,484	0%	A+
Beaches and Coastal Facilities				
Beach House / Rec Centre		\$725,396	7%	B
Hammond River Pavilion		\$152,130	100%	F
Meenan's Cove Beach		NA	NA	NA
Gondola Point Beach		NA	NA	NA
Ritchie Lake Beach		NA	NA	NA
Street Furniture	178	\$172,680	0%	B
Trail Network				
Trails	17.2 km	\$1,420,815	37%	C+
Pedestrian Bridges	25	\$1,445,222	1%	A
Transit				
Bus Shelters	8	\$160,000	0%	B
Community Services Operations				
Fleet	28	\$719,836	37%	C
Equipment	15	\$857,210	0%	A
Other				
IT Equipment <sup>1</sup>	130	\$355,495	12%	A-
Administration Facilities				
Town Hall		\$3,020,511	0%	A
Comex		\$400,576	0%	A+
Public Works Facilities				
Office / Works Garage		\$3,012,737	0%	B-
Six Bay Garage		\$506,320	0%	B
Sand / Salt Tarp Shed		\$104,840	0%	NA
Two Bay Garage		NA	NA	NA
<b>Total</b>		<b>\$52,771,022</b>	<b>3%</b>	<b>A</b>

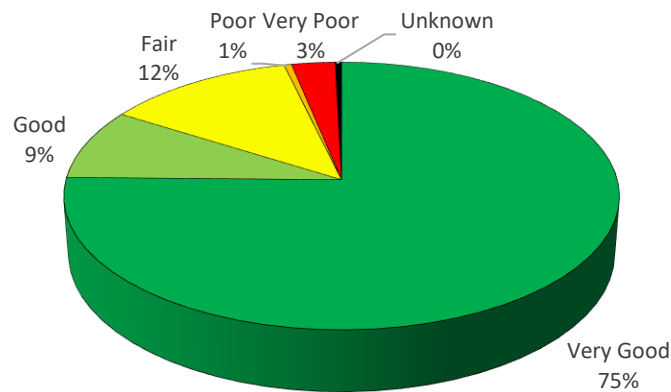
1 – IT Equipment asset does not currently include the wireless access control points found at many of the Town’s facilities. In the future, consideration will be made to include these assets in the IT Equipment asset type.

## Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the Town’s Community Services and Administration assets is 1.46 out of 5.00 with assets generally being recognized as being in a Good condition. 3% of the category’s assets are in a Poor or worse condition, as shown in Figure 8.

**Figure 8 - Distribution of Community Services and Administration Asset Condition Ratings**



## Long-Term Financial Forecast

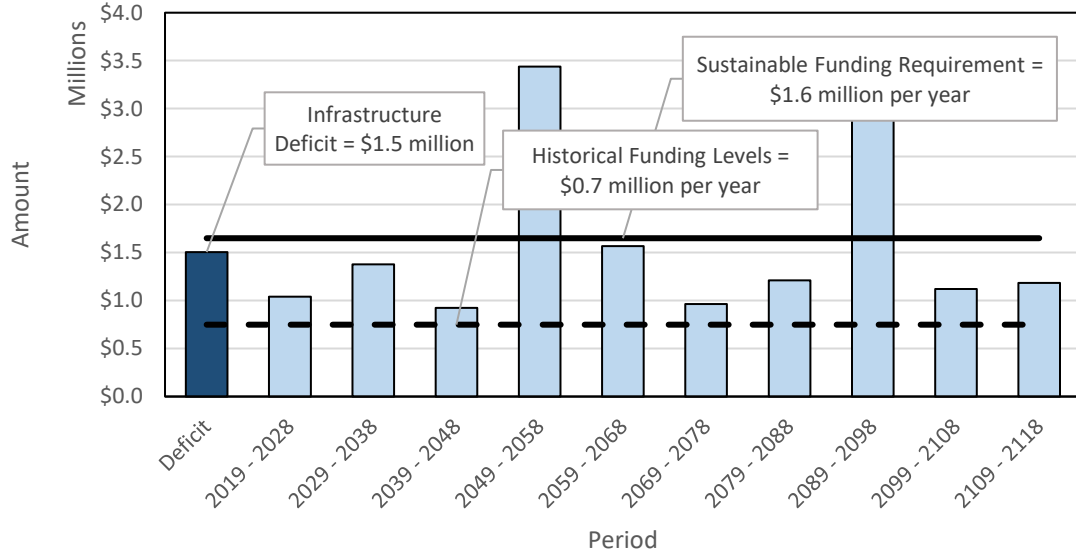
The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

Community Services and Administration has a current infrastructure deficit of \$1,504,983 and a 100-year sustainable funding requirement of \$1,649,741 per year. Historical funding levels (2014 – 2018) suggest the Town’s Community Services and Administration departments are allocating an average of \$748,790 per year for capital



renewals or new investments. Compared to the sustainable funding requirement, this equals an investment gap of \$900,951 per year. These results are shown in Figure 9.

**Figure 9 – Community Services and Administration 100-Year Financial Forecast**

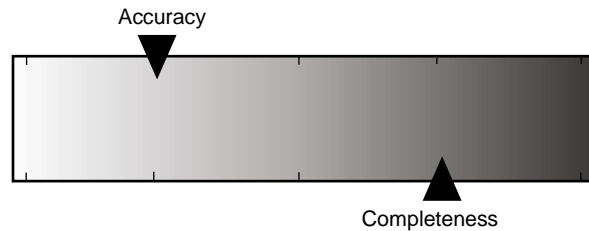


### Confidence Band


The results presented for the Community Services and Administration assets have a high completeness and low accuracy. In summary, 60 - 80% of the category's assets are likely included and relevant asset data is available for some assets. Replacement cost and useful life are estimated based on asset properties (where available) and condition is estimated using a combination of age as a proxy and documented observations.

Major data gaps identified for this department include an incomplete inventory of assets at outdoor recreation sites (e.g. parks, playgrounds, etc.) and poor understanding of the true cost of facility component replacement timing.

**Figure 10 – Community Services and Administration Confidence Band**



## PUBLIC WORKS

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$272.1 M	1%	A-	

### Overview

The Public Works department supports the delivery of services to the community by managing Transportation and Stormwater Management assets. An overview of Public Works assets is shown in Table 7.

**Table 7 – Public Works Overview**

Asset	Quantity	Value	Deficit %	Letter Grade
Transportation				
Sidewalks	17.5 km	\$2,615,418	0%	A+
Roadways	732.5 lane-km	\$160,775,742	0%	B+
Signals	12*	\$499,700	10%	A-
Streetlights	151	\$500,700	12%	B
Stormwater				
Culverts	1,023	\$22,208,159	1%	A
Conduits	75.1 km	\$81,909,765	0%	A
Storm Ponds	1	\$15,000	0%	A+
Public Works Operations				
Public Works Fleet	55	\$2,973,361	17%	B
Public Works Equipment	13	\$555,098	10%	A
<b>Total</b>		<b>\$272,052,942</b>	<b>1%</b>	<b>A-</b>

\* A signal is equivalent to an intersection system, pedestrian crossing system or RRFB system.

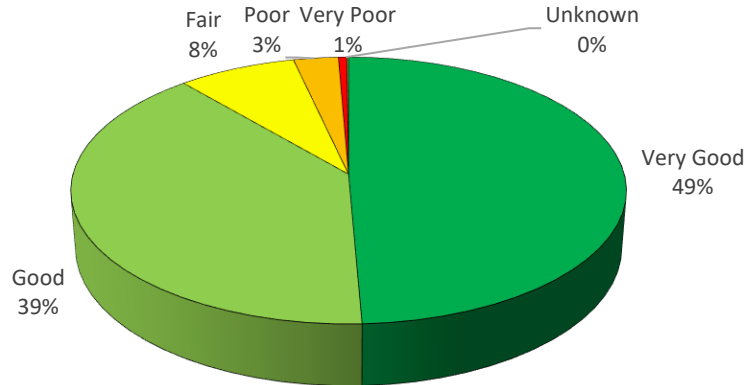
### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the Town’s Public Works assets is 1.66 out of 5.00 with assets generally being recognized as being in a Good condition.

3% of the Public Works assets are in a Poor or worse condition and there is insufficient information to estimate the condition of 0.1% of assets, as shown in Figure 11.

**Figure 11 - Distribution of Public Works Asset Condition Ratings**

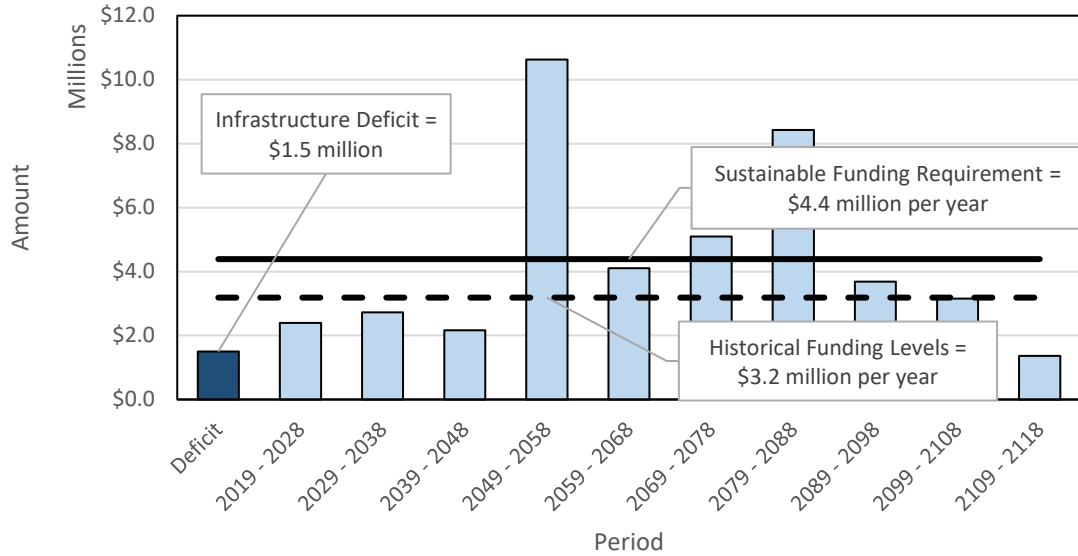


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

Public Works has a current infrastructure deficit of \$1,500,788 and a 100-year sustainable funding requirement of \$4,388,262 per year. Historical funding levels (2014 – 2018) suggest the Town’s Public Works departments is allocating an average of \$3,185,778 per year for capital renewals or new investments. Compared to the sustainable funding requirement, this equals an investment gap of \$1,202,484 per year. These results are shown in Figure 12.

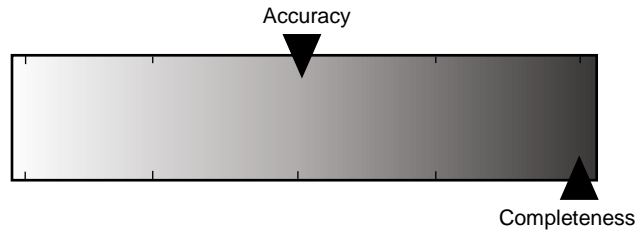
**Figure 12 – Public Works 100-Year Financial Forecast**




**Confidence Band**

The results presented for the Public Works assets have a very high completeness and moderate accuracy. In summary, 80 - 100% of the assets are likely included and relevant asset data is available for most assets. Replacement cost and useful life are estimated based on asset properties (where available) and condition is estimated using a combination of age as a proxy and documented observations.

**Figure 13 – Public Works Confidence Band**



## UTILITY

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$176.1 M	2%	A	

### Overview

The Utility provides Town stakeholders with potable water and wastewater management. An overview of the Utility assets is shown in Table 8.

**Table 8 – Utility Overview**

Asset	Quantity	Value	Deficit %	Letter Grade
Potable Water				
Water Pipes	13 km	\$17,280,695	0%	A+
Hydrants	72	\$504,000	0%	A
Water Reservoirs	1	\$5,160,000	0%	A+
Water Treatment and Pumping Facilities	3*	\$602,569	18%	B
Wastewater				
Sewer Pipes	124 km	\$126,232,930	0%	A
Sewer Force mains	11 km	\$11,479,840	0%	A
Wastewater Pumping Stations	14	\$11,515,346	23%	B
Wastewater Treatment Facilities	2	\$2,098,200	2%	A
Utility Operations				
Fleet	10	\$206,962	80%	D-
Equipment	3	\$879,063	0%	A+
Facilities	1	\$121,457	0%	C
Control Systems	2**	\$35,332	0%	A+
<b>Total</b>		<b>\$176,116,394</b>	<b>2%</b>	<b>A</b>

\* One (1) water treatment and pumping facility is a decommissioned well (Edwards) and is only used for water monitoring.

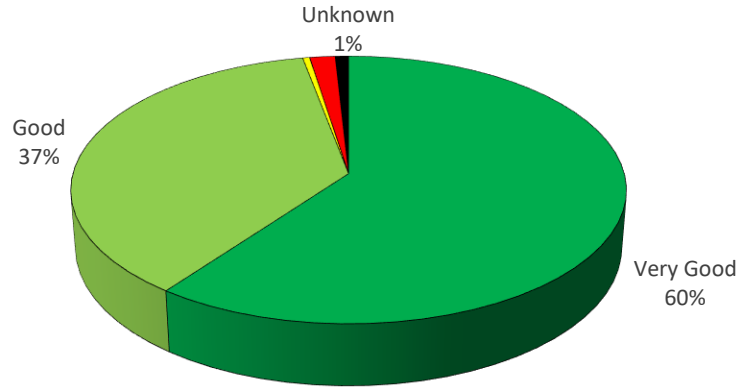
\*\* The two control system assets include a SCADA Tower and antennas located on the water reservoir. All SCADA components at water and wastewater facilities are included in the respective facility.

### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the Utility's assets is 1.45 out of 5.00 with assets generally being recognized as being in a Very Good condition. 1.7% of the Utility assets are in a Poor or worse condition, as shown in Figure 14.

**Figure 14 - Distribution of Utility Asset Condition Ratings**

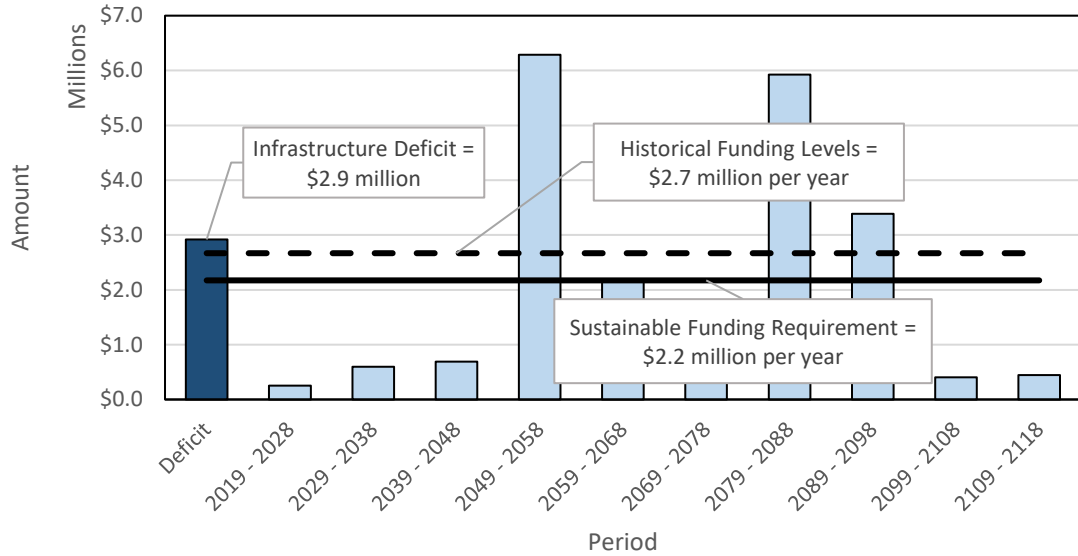


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

The Utility has a current infrastructure deficit of \$2,918,448 and a 100-year sustainable funding requirement of \$2,172,303 per year. Historical funding levels (2014 – 2018) suggest the Town's Utility is allocating an average of \$2,667,848 per year for capital renewals or new investments. Compared to the sustainable funding requirement, this equals an investment surplus of \$495,545 per year. However, the majority of the Utility's investments are to accommodate growth in the water system. These results are shown in Figure 15.

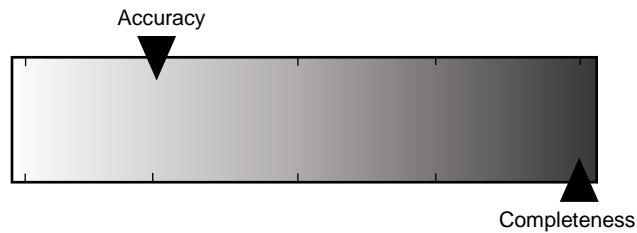
**Figure 15 – Utility 100-Year Financial Forecast**



**Confidence Band**

The results presented for the Utility assets have a very high completeness and low accuracy. In summary, 80 - 100% of the Town’s assets are likely included and relevant asset data is available for most assets. Replacement cost and useful life are estimated based on asset properties (where available) and condition is only estimated using age as a proxy.

**Figure 16 - Utility Confidence Band**



## REGIONAL SERVICES

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$12.3 M	10%	B	NA

### Overview

In addition to providing a summary of the state of repair of the Town’s municipal services, the SOI report includes preliminary results for the regional services which the Town supports and is financially responsible for. The Town is responsible for approximately 60% of the financial requirements of each regional service organization and this portion is expressed in the results below. These organizations provide essential services to the community such as fire protection and rescue, policing and library access. A summary of each regional service is shown in Table 10.

**Table 9 – Regional Services Overview**

Regional Service	Value	Deficit %	Letter Grade
Kennebecasis Valley Fire Department	\$5,731,555	12%	B-
Kennebecasis Regional Police Force	\$2,739,405	6%	A-
Kennebecasis Public Library	\$3,790,544	7%	A
<b>Total</b>	<b>\$12,261,504</b>	<b>10%</b>	<b>B</b>

A more detailed breakdown of the assets included in each department is presented in the asset hierarchy (Appendix 1).

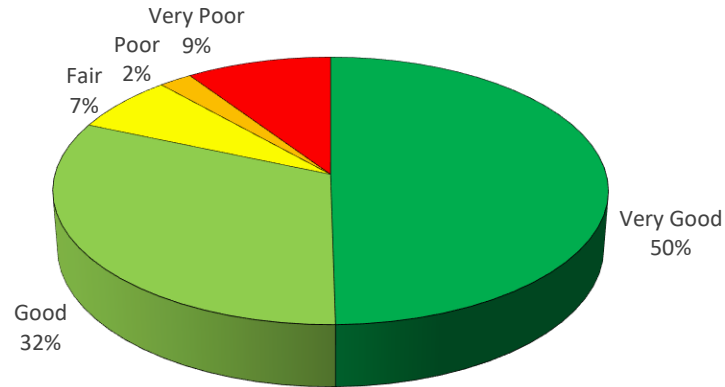
### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for regional service assets is 1.90 out of 5.00 with assets generally being recognized as being in a Good condition. 12% of the regional service assets are in a Poor or worse condition, as shown in Figure 20.



**Figure 17 - Distribution of Regional Service Asset Condition Ratings**



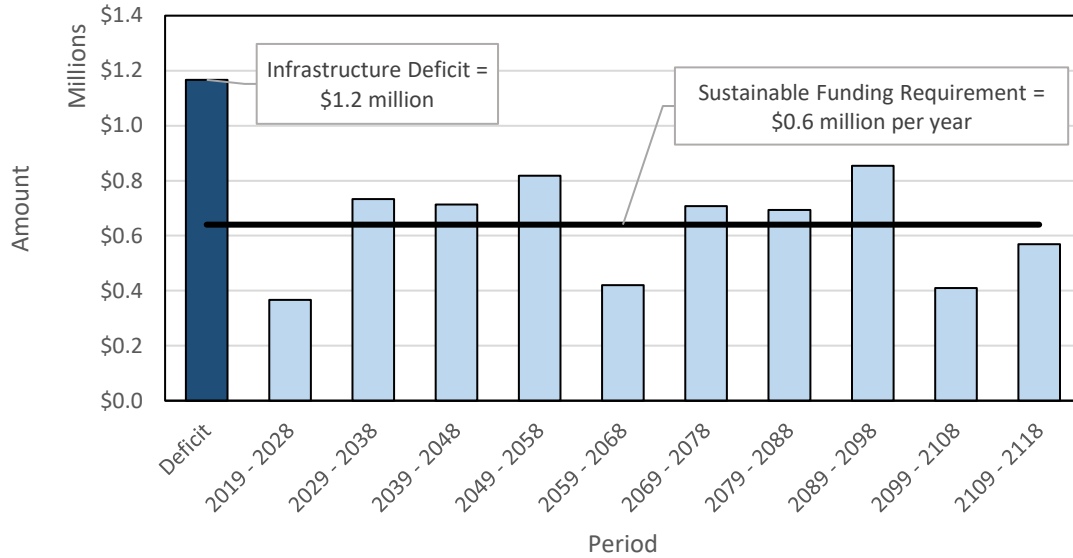
### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

The regional services have a total infrastructure deficit of \$1,166,599 and a 100-year sustainable funding requirement of \$640,087 per year. These results are shown in Figure 21.

Note, we are unable to accurately estimate what percentage of the Town's contributions to each regional service are committed to capital renewal or new investments. As a result, we are unable to make a comparison between historical funding levels and the sustainable funding requirement for these organizations.

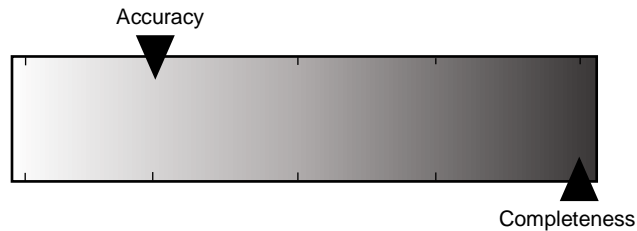
**Figure 18 –Regional Services 100-Year Financial Forecast**



### Confidence Band

The results presented for regional services have a very high completeness and low accuracy. In summary, 80 - 100% of the assets are likely included and relevant asset data is available for most assets. Replacement cost is estimated by inflating original acquisition costs and useful life is assumed equal to the amortization period of an asset. Condition is only estimated using age as a proxy.

**Figure 19 – Regional Services Confidence Band**



## KENNEBECASIS VALLEY FIRE DEPARTMENT

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$5.7 M	12%	B-	NA

### Overview

The Kennebecasis Valley Fire Department (KV Fire) provides residents of the Kennebecasis Valley with fire protection, vehicle, off-road, ice and water rescue, and responds to medical emergencies. The department also has an active fire prevention division that conducts fire code inspections, provides fire and life safety educational programs, and has a child car seat installation program. In total, the Town of Quispamsis is responsible for 59% of the financial requirements of their assets. An overview of KV Fire assets is shown in Table 10.

**Table 10 – KV Fire Overview**

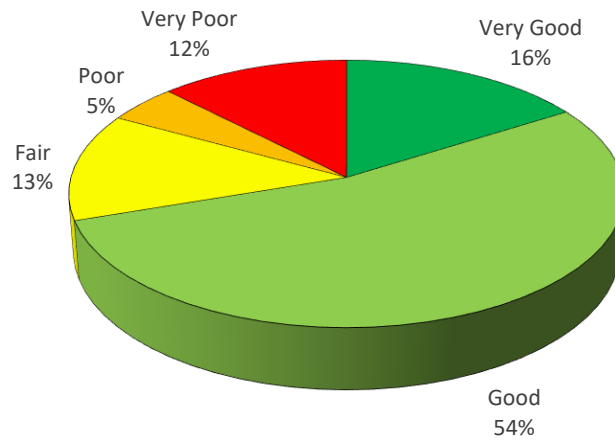
Asset	Quantity	Value	Deficit %	Letter Grade
Fleet	17	\$4,825,000	24%	C+
Equipment	230	\$681,044	5%	B+
Facilities	1	\$4,169,100	0%	B
<b>Total</b>		<b>\$5,731,555</b>	<b>12%</b>	<b>B-</b>

### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for KV Fire’s assets is 2.43 out of 5.00 with assets generally being recognized as being in a Good to Fair condition. 17% of the KV Fire assets are in a Poor or worse condition, as shown in Figure 20.

**Figure 20 - Distribution of KV Fire Asset Condition Ratings**

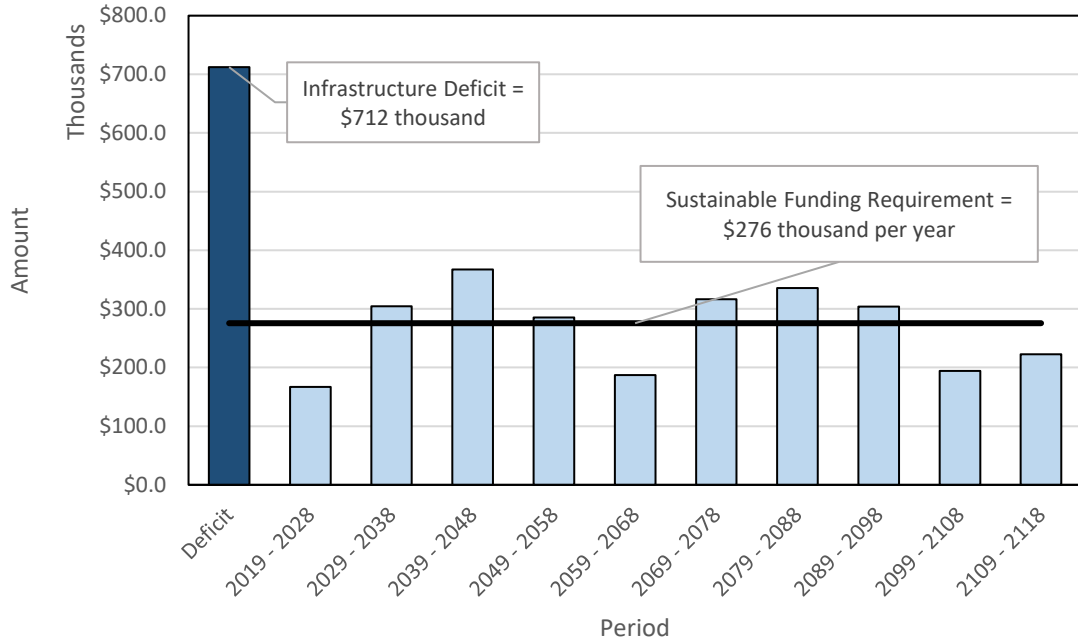


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

KV Fire has a current infrastructure deficit of \$712,228 and a 100-year sustainable funding requirement of \$275,595 per year. These results are shown in Figure 21.

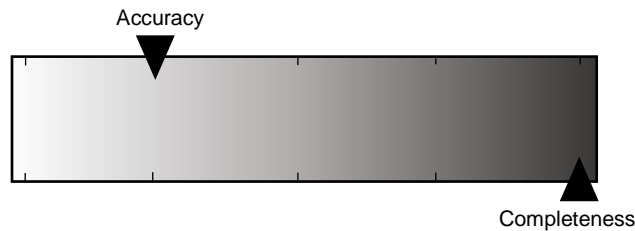
**Figure 21 – KV Fire 100-Year Financial Forecast**



**Confidence Band**

The results presented for KV Fire assets have a very high completeness and low accuracy. In summary, 80 - 100% of the assets are likely included and relevant asset data is available for most assets. Replacement cost is estimated by inflating original acquisition costs and useful life is assumed equal to the amortization period of an asset. Condition is only estimated using age as a proxy.

**Figure 22 – KV Fire Confidence Band**



## KENNEBECASIS REGIONAL POLICE FORCE

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$2.7 M	6%	A-	NA

### Overview

The Kennebecasis Regional Police Force (KV Police) provides residents of the Kennebecasis Valley with many policing services such as major crime, emergency response, patrol, traffic, court and victim services. In total, the Town of Quispamsis is responsible for 60% of the replacement cost of KV Police assets. An overview of the KV Police assets is shown in Table 11.

**Table 11 – KV Police Overview**

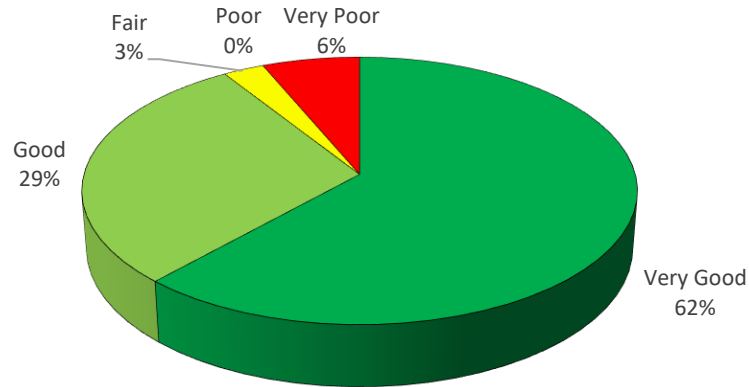
Asset	Quantity	Value	Deficit %	Letter Grade
Fleet	21	\$677,508	18%	B-
Equipment	110	\$501,140	33%	C+
Facilities	1	\$3,401,532	0%	A
<b>Total</b>		<b>\$2,739,405</b>	<b>6%</b>	<b>A-</b>

### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the KV Police assets is 1.60 out of 5.00 with assets generally being recognized as being in a Good condition. 6% of the KV Police assets are in a Poor or worse condition, as shown in Figure 23.

**Figure 23 - Distribution of KV Police Asset Condition Ratings**

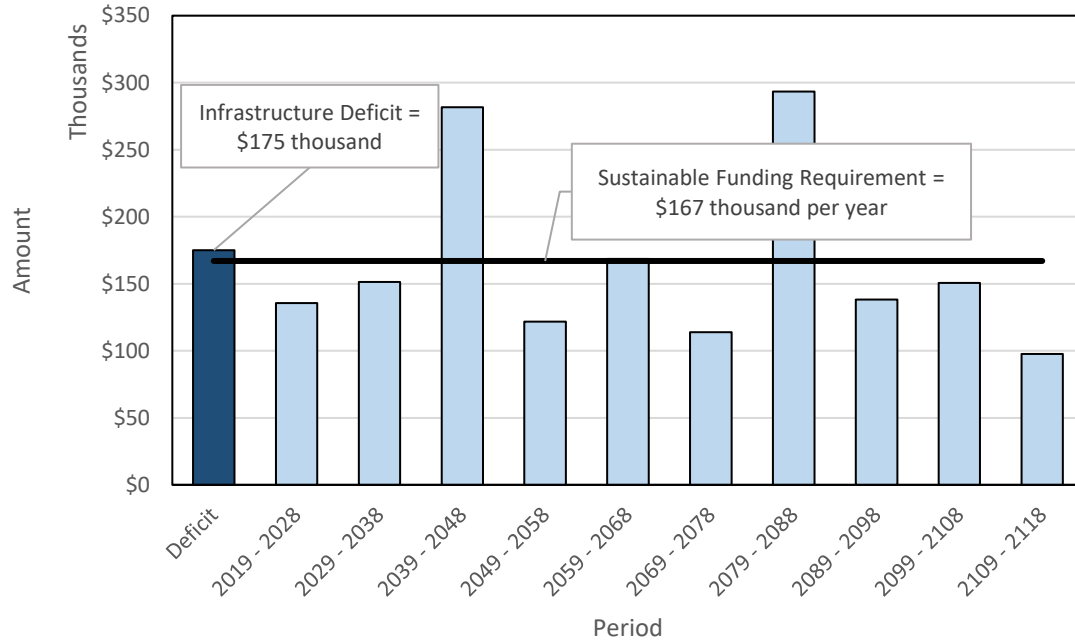


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

KV Police has a current infrastructure deficit of \$175,023 and a 100-year sustainable funding requirement of \$167,004 per year. These results are shown in Figure 24.

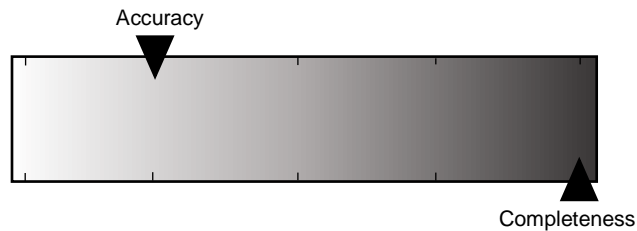
**Figure 24 – KV Police 100-Year Financial Forecast**



**Confidence Band**

The results presented for KV Police assets have a very high completeness and low accuracy. In summary, 80 - 100% of the assets are likely included and relevant asset data is available for most assets. Replacement cost is estimated by inflating original acquisition costs and useful life is assumed equal to the amortization period of an asset. Condition is only estimated using age as a proxy.

**Figure 25 – KV Police Confidence Band**





## KENNEBECASIS PUBLIC LIBRARY

VALUATION	DEFICIT %	LETTER GRADE	TREND
\$3.8 M	7%	A	NA

### Overview

The Kennebecasis Public Library (KV Library) provides residents of the Kennebecasis Valley with public library services such as access books, periodicals and other information. In total, the Town of Quispamsis is responsible for 61% of the financial requirements of their assets. An overview of KV Library assets is shown in Table 12.

**Table 12 – KV Library Overview**

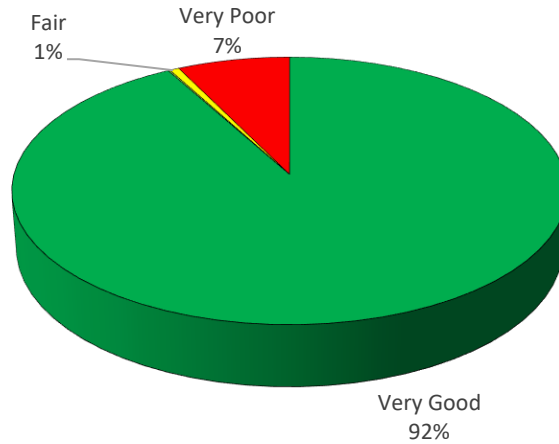
Asset	Quantity	Value	Deficit %	Letter Grade
Equipment	29	\$522,804	87%	F
Facilities	1	\$5,647,705	0%	A+
<b>Total</b>		<b>\$3,790,544</b>	<b>7%</b>	<b>A</b>

### Condition

Condition ratings represent the current state of physical repair and are often used as an indicator for the relative time until corrective action (rehabilitation or replacement) is required. Condition ratings for the Town of Quispamsis assets are scored on a 1 – 5 scale, with 1 indicating an asset in Very Good condition and 5 indicating an asset in Very Poor condition.

The replacement value-weighted average condition for the KV Library assets is 1.31 out of 5.00 with assets generally being recognized as being in a Very Good condition. 7% of the KV Library assets are in a Poor or worse condition as shown in Figure 26.

**Figure 26 - Distribution of KV Library Asset Condition Ratings**

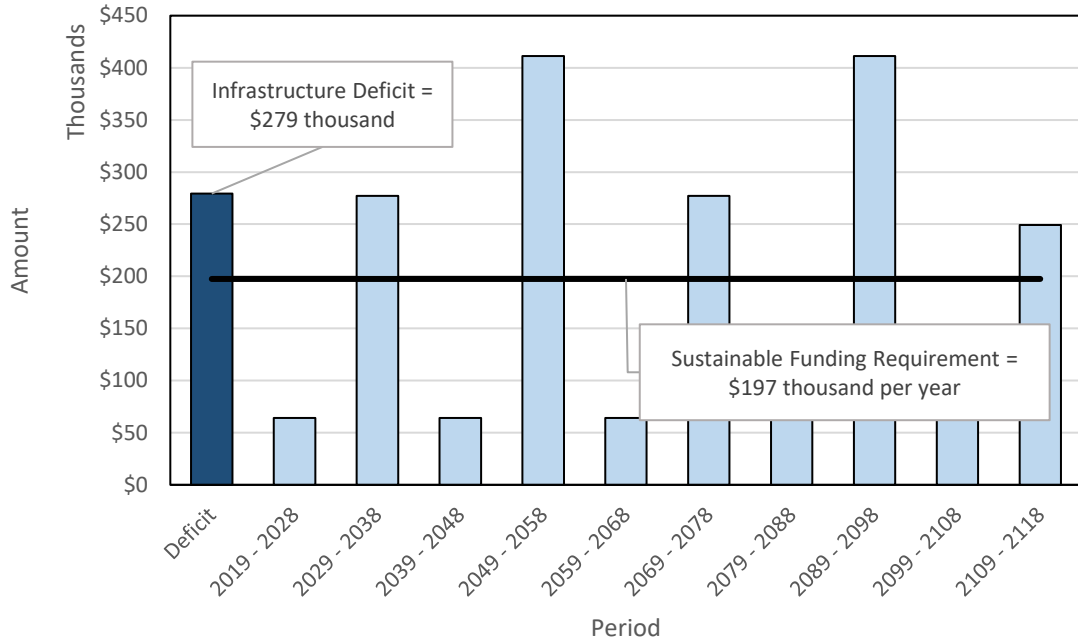


### Long-Term Financial Forecast

The long-term financial forecast presents the total replacement costs for all existing assets in the Town of Quispamsis over a 100-year period and compares this value to historical funding levels. The forecast highlights the current infrastructure deficit (value of assets which are at or beyond the end of their useful lives), the average annual investment requirement, and the sustainable funding requirement over a 100-year period. A summary of replacement costs and useful life estimates for all assets is presented in Appendix 2.

KV Library has a current infrastructure deficit of \$279,348 and a 100-year sustainable funding requirement of \$197,488 per year. These results and the average annual funding requirement are shown in Figure 27.

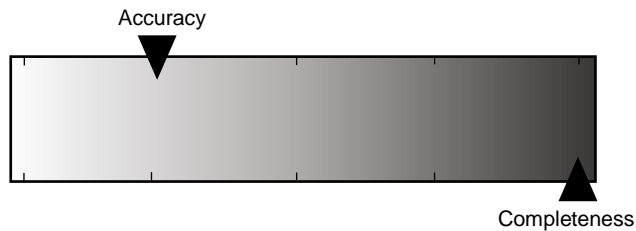
**Figure 27 – KV Library 100-Year Financial Forecast**



**Confidence Band**

The results presented for KV Library assets have a very high completeness and low accuracy. In summary, 80 - 100% of the assets are likely included and relevant asset data is available for most assets. Replacement cost is estimated by inflating original acquisition costs and useful life is assumed equal to the amortization period of an asset. Condition is only estimated using age as a proxy.

**Figure 28 – KV Library Confidence Band**



## 4.0 CONCLUSIONS

The 2018 State of Infrastructure Report provides Town staff, Council and residents with a better understanding of the current state of infrastructure repair essential to the delivery of public services, as well as a high-level understanding of the financial requirements to sustainably replace assets at the end of their useful lives. The 2018 SOI Report is the inaugural version of this report and will serve as a foundation for future report versions.

In the interpretation of the SOI Report results it is important to note the information presented is based on current readily available asset data and information. While the confidence in the Town's asset data is high the accuracy and completeness of data can be substantially improved. It is expected results will continue to change as additional improvements are made. While the accuracy of information presented can still be improved, the general conclusions are suitable to provide guidance and communicate the overall current state of infrastructure repair of the Town's assets.

The following general conclusions are drawn for the **Town of Quispamsis** from the results presented above:

1. The total replacement cost of all Town assets is \$500.9 million, while the infrastructure deficit (assets which are at or beyond their useful lives) is \$5.9 million, roughly 1% of the total asset valuation.
2. The Town's assets are generally in a Good or Very Good condition. An estimated \$14.2 million (3% of the total asset valuation) of the Town's assets are in a condition of Poor or worse.
3. The sustainable funding requirement of the Town's existing assets is approximately \$8.2 million per year. This value only includes capital investments and does not include other asset lifecycle costs such as operations, maintenance or rehabilitation work, nor does it accommodate any new assets constructed/purchased as the Town continues to grow.
4. The Town of Quispamsis is currently underfunding its infrastructure renewal requirements. Historical funding (from 2014 – 2018) suggests the Town is allocating approximately \$6.6 million per towards capital renewals or new investments. When compared to the sustainable funding requirement, this represents a funding gap of \$2.6 million per year.

The following general conclusions are drawn for the **Town's Regional Services** from the results presented above:

1. The total replacement cost of the regional service assets (which the Town is responsible for) is \$12.3 million, while the infrastructure deficit is \$1.2 million, roughly 10% of the total asset valuation.
2. The Regional Services are generally in a Good condition. An estimated \$1.4 million (12% of the total asset valuation) of the regional service assets are in a condition of Poor or worse.
3. The sustainable funding requirement of the regional service assets is approximately \$640 thousand per year. This value only includes capital investments and does not include other asset lifecycle costs such as operations, maintenance or rehabilitation work, nor does it accommodate any new assets constructed/purchased as the Town continues to grow.

In summary, the Town of Quispamsis assets are generally in a Good state of repair, with a limited number of assets at or beyond their useful lives. The Town has experienced significant growth over the past decade which has enabled the Town to continuously expand its municipal services and asset portfolio.

However, the Town is currently underfunding its long-term infrastructure renewal requirements. While the Town has been allocating enough resources to sustainably replace assets over the next 30 years, we estimate a large portion of these historical investments made in the community have been to accommodate growth, with limited investments made for renewal. Additionally, there is a significant increase in the financial requirements anticipated as the Town's relatively young infrastructure begins to reach the end of its useful life.

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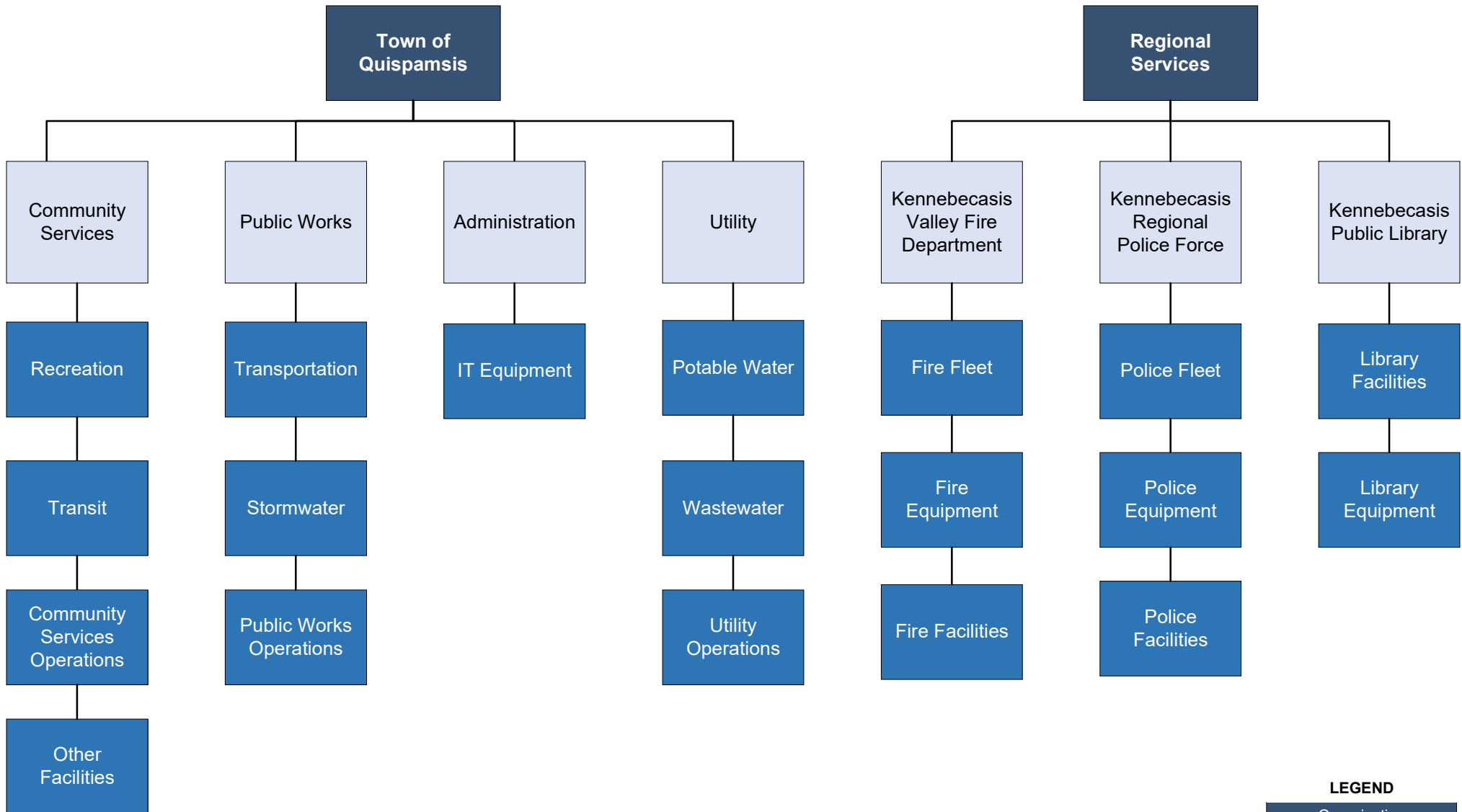
**APPENDIX 1**

**ASSET HIERARCHY**

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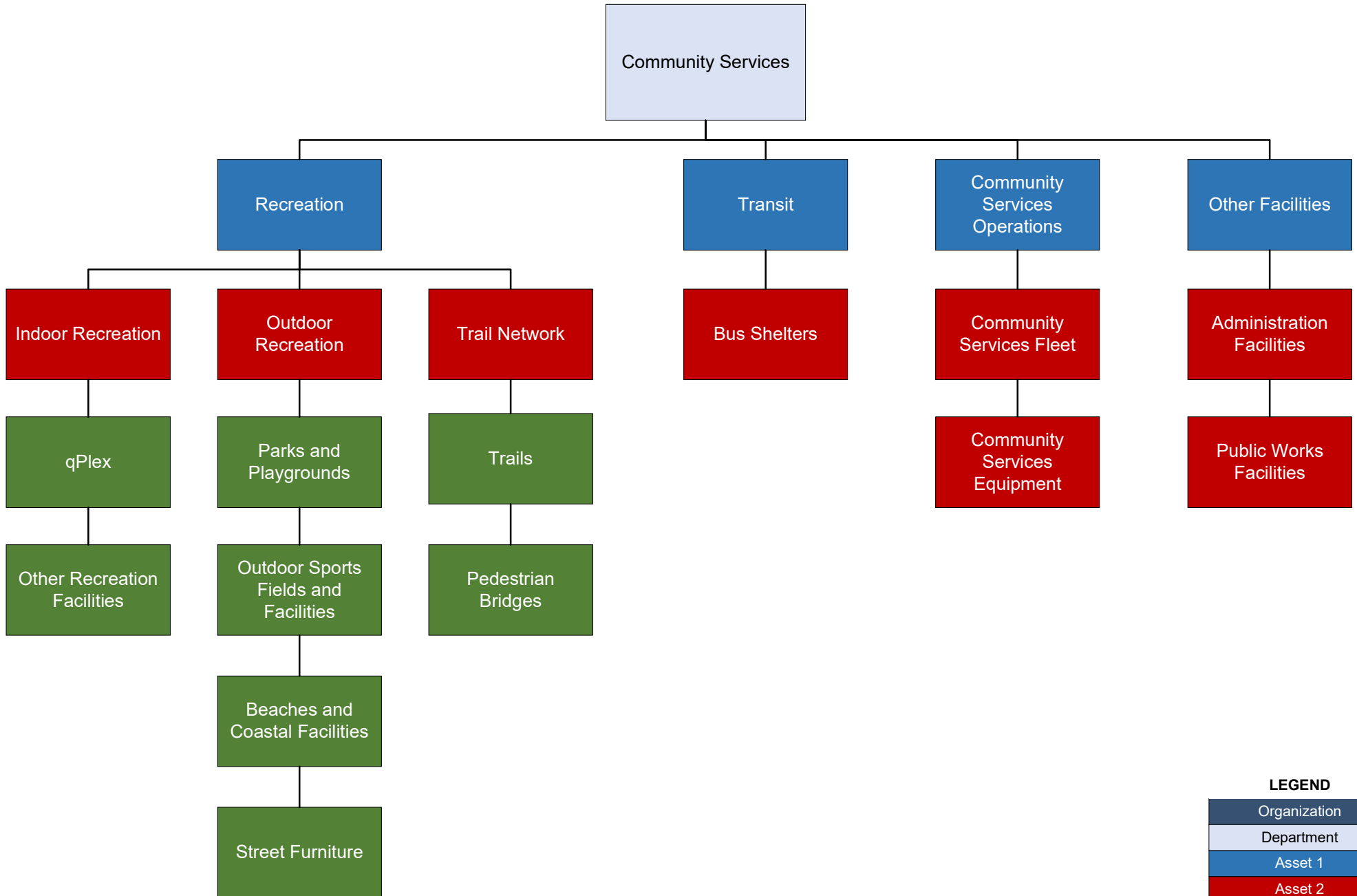
# Town Overview



## LEGEND

Organization
Department
Asset 1
Asset 2
Asset 3

# Community Services

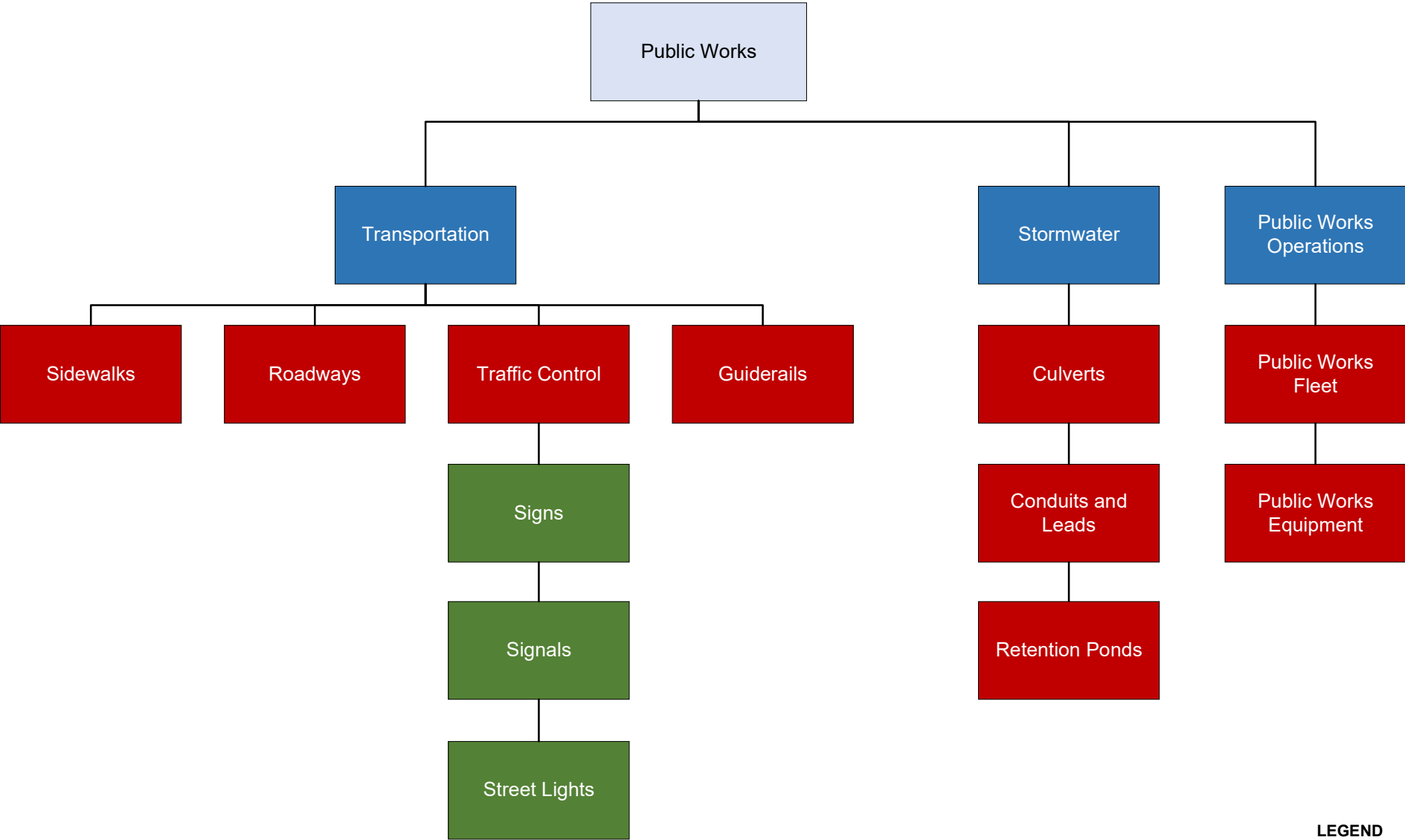


## LEGEND

Organization
Department
Asset 1
Asset 2
Asset 3



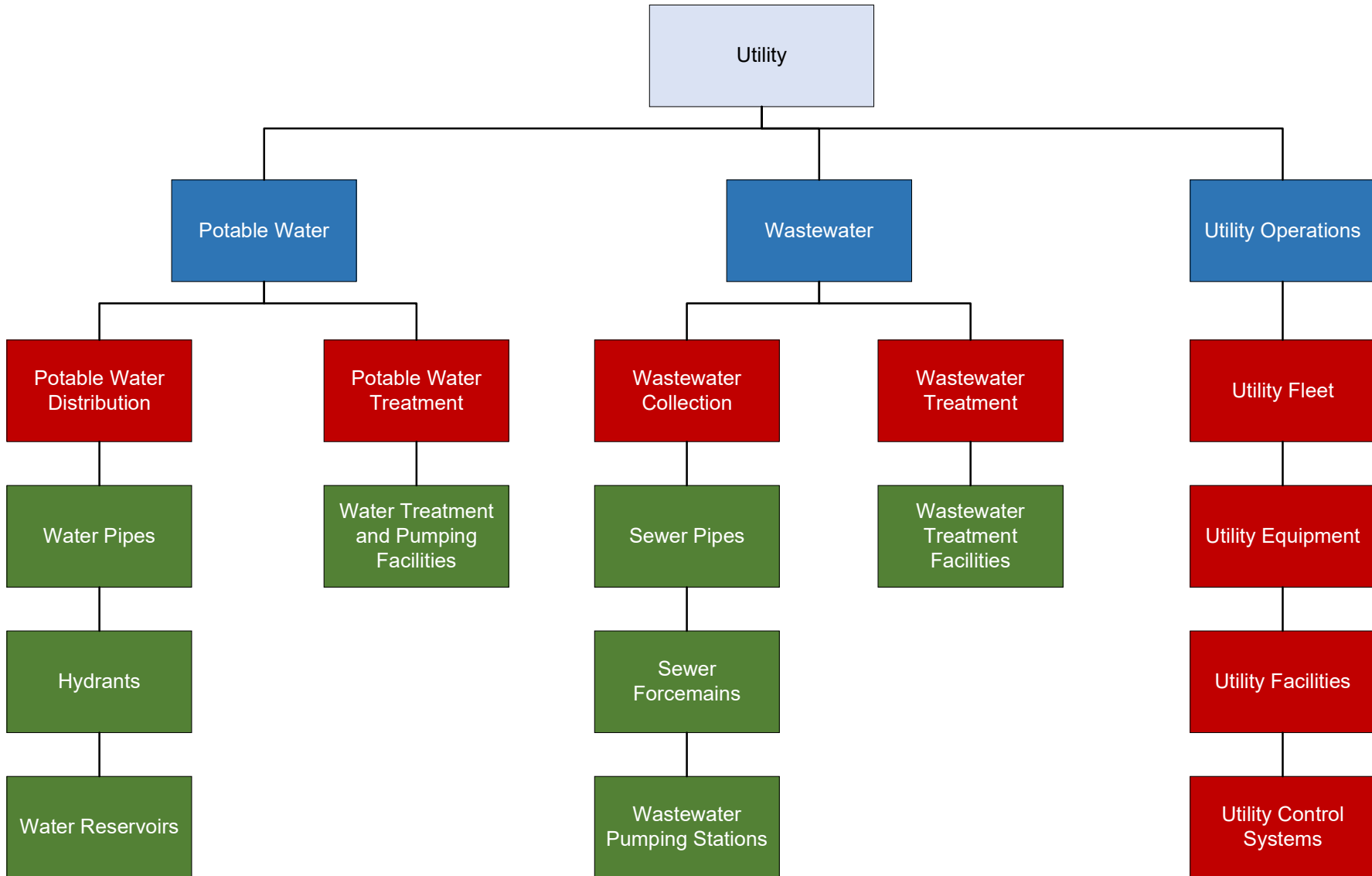
# Public Works



**LEGEND**

Organization
Department
Asset 1
Asset 2
Asset 3

# Utility



## LEGEND

Organization
Department
Asset 1
Asset 2
Asset 3

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**APPENDIX 2**

**ASSUMPTIONS**

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## TOWN OF QUISPAMISIS - ASSUMPTIONS

Asset	Inventory Source	Replacement Cost		Estimated Useful Life				
Roadways	GIS			\$/m2				
		Road Surface	All	\$25	Road Surface	All	25	
		Road Base	All	\$70	Road Base	All	80	
General Facilities	TCA Registry	Inflate original cost using NRBCPI		Roof		25		
				Mechanical		40		
				Envelope		40		
				Electrical		40		
				Other		40		
Water and Wastewater Facilities	Pump Station Data As-built drawings	Engineering estimate, varies by facility		Building Architectural		25		
				Building Electrical		25		
				Building Mechanical		25		
				Building Roof		25		
				Building Structural		80		
				Process Structural		80		
				Process Electrical		25		
				Process Instrumentation and Controls		15		
				Process Mechanical Piping and Equipment		40		
				Site Works		20		
Traffic Signals	Staff input	Controller	each	\$25,000	Controller	All	20	
		Desktop Breakdown						
			Sensors			Sensors	All	10
			Loops and buttons	each	\$2,500	Electrical	All	40
			GridSmart Camera	each	\$25,000	Signals	All	10
			Signal Head			Structure	All	40
			2 signal light	each	\$600			
			3 signal light	each	\$650			
			4 signal light	each	\$700			
			RA-5 Crosswalk Sign	each	\$2,500			
			RRFB System	each	\$10,000			
			Structure					
			Poles	each	\$3,000			
			Mast Arms	each	\$1,000			
		Electrical	each	\$5,000				
Watermains	GIS	Diameter (mm)		\$/m All		80		
		100		\$1,000				
		150		\$1,000				
		200		\$1,170				
		250		\$1,470				
		300		\$1,690				
Hydrants	GIS	All		\$/each All		40		
				\$7,000				
Forcemains and Gravity Sewers	GIS	Diameter (mm)		\$/m All		80		

## TOWN OF QUISPAMISIS - ASSUMPTIONS

Asset	Inventory Source	Replacement Cost	Estimated Useful Life
		32.6	\$480
		40.8	\$480
		50	\$480
		75	\$640
		100	\$640
		150	\$800
		200	\$960
		250	\$1,100
		300	\$1,280
		325	\$1,320
		350	\$1,360
		375	\$1,400
		400	\$1,420
		450	\$1,450
		500	\$1,470
		525	\$1,480
		530	\$1,480
		550	\$1,490
		600	\$1,510
		750	\$1,600
		900	\$2,440
Sidewalks	Material		\$/m2 Material
	Concrete		\$100 Concrete 80
	Asphalt		\$50 Asphalt 25
Culverts and Conduits	Material	Diameter (mm)	\$/m Driveway Culverts 40
	Metal (CMP)	100	\$610
		150	\$630 Other types
		200	\$730 Wood 80
		250	\$800 CMP 60
		300	\$830 DIP 80
		375	\$890 HDPE 80
		450	\$980 OD 80
		600	\$1,200 PVC 80
		750	\$1,300 RCP 80
		900	\$1,390 Unknown 80
		1200	\$1,800
		1500	\$2,490
		1800	\$2,960
		2000	\$3,100
		2700	\$4,217
		3000	\$4,686

**TOWN OF QUISPAMISIS - ASSUMPTIONS**

Asset	Inventory Source	Replacement Cost	Estimated Useful Life
		3600	\$5,624
		Concrete (RCP)	
		100	\$650
		150	\$700
		200	\$720
		250	\$810
		300	\$880
		350	\$920
		375	\$960
		450	\$1,020
		525	\$1,150
		600	\$1,260
		750	\$1,660
		900	\$2,000
		1050	\$2,340
		1200	\$2,510
		1500	\$3,560
		1800	\$5,010
		2100	\$6,070
		2400	\$7,350
		Plastic (DIP, HDPE, OD, PVC, V	
		100	\$650
		150	\$700
		200	\$720
		250	\$810
		300	\$850
		375	\$1,000
		450	\$1,140
		525	\$1,220
		600	\$1,290
		750	\$1,470
		900	\$1,720
		1050	\$2,270
		1200	\$2,910
		1350	\$3,450
		1500	\$3,880
Trails	GIS	Material	\$/m2
		Concrete	Material
		Asphalt	Concrete
		Asphalt	Asphalt
		Gravel	Gravel
		Gravel	Boardwalk
		Boardwalk	Natural
		Boardwalk	
		Natural	
		Natural	
Utility Controls	TCA Regsity	Escalate original cost using CPI.	Tower

## TOWN OF QUISPAMISIS - ASSUMPTIONS

Asset	Inventory Source	Replacement Cost	Estimated Useful Life
	Staff input		Antennas 20
Street Lights	GIS	Type	\$/each Pole 40
	Photos	1 Pole	\$900 Fixture 20
		1 Fixture	\$1,200 Foundation 40
		1 Foundation	\$1,000
		2 Pole	\$900
		2 Fixture	\$1,200
		2 Foundation	\$1,000
		3 Pole	\$900
		3 Fixture	\$2,600
		3 Foundation	\$1,000
		4 Pole	\$900
		4 Fixture	\$2,600
		4 Foundation	\$1,000
		5 Pole	\$1,500
		5 Fixture	\$500
		5 Foundation	\$1,000
		6 Pole	\$900
		6 Fixture	\$2,600
		6 Foundation	\$1,000
		7 Pole	\$1,400
		7 Fixture	\$1,800
		7 Foundation	\$1,000
		8 Pole	\$1,400
		8 Fixture	\$1,800
		8 Foundation	\$1,000
		9 Pole	\$1,700
		9 Fixture	\$1,000
		9 Foundation	\$1,000
		10 Pole	\$0
		10 Fixture	\$1,500
		10 Foundation	\$500
		11 Pole	\$1,700
		11 Fixture	\$1,000
		11 Foundation	\$1,000
		12 Pole	\$1,700
		12 Fixture	\$1,000
		12 Foundation	\$1,000
Pedestrian Bridges	GIS	Material	\$/m2 Type Structural Material
		Concrete	\$3,769 Covered 50
		Other	\$2,725 Steel 40

## TOWN OF QUISPAMISIS - ASSUMPTIONS

Asset	Inventory Source	Replacement Cost	Estimated Useful Life
			Timber 20
Street Furniture	GIS	Type	\$/each Type
		Bench	\$990 Bench 10
		Bike Rack	\$700 Bike Rack 10
		Garbage Can	\$730 Garbage Can 10
		Monument	\$0 Monument 10
		Planter	\$900 Planter 10
		Recycling Receptacle	\$2,290 Recycling Receptacle 10
		Sculpture	\$0 Sculpture 10
		Table	\$1,190 Table 10
IT Equipment	Audit	Escalate original acquisition cost	Type
			Physical FW 10
			Physical Host 10
			Virtual 5
			Workstation 5
Bus Shelter	GoogleMaps	All	\$20,000 All 25
Fleet	Fleet List	Escalate original acquisition cost	Fire
	TCA Registry	Staff input	ATV 7
	Staff input		Boat 10
			Fire Engine 20
			Forestry Unit 15
			Light Vehicle 7
			Quint 20
			Tanker 20
			Trailer 20
			Police
			Light Vehicle 7
			Equipment 7
			Trailer 20
			Public Works
			Equipment 15-20
			Heavy 10
			Light Vehicle 7
			Trailer 15-20



## TOWN OF QUISPAMISIS - ASSUMPTIONS

Asset	Inventory Source	Replacement Cost	Estimated Useful Life
			Community Services
			ATV
			Equipment
			Heavy
			Light Vehicle
			Specialty
			Trailer
			Utility
			Equipment
			Heavy
			Light Vehicle
			Trailer
Machinery and Equipment	TCA Registry	Escalate original acquisition cost	Fire
	Staff input	Staff input	Library
			Police
			Guns
			Misc. Equipment
			CC Equipment
			Digital Equipment
			Computers
			Community Services
			Furniture & Fixtures
			Machinery & Equipment
			Public Works
			Utility