2022

ASSET MANAGEMENT PLAN

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List of Acronyms and Abbreviations

ADT	Average Daily Traffic
CCBF	Canada Community-Building Fund (formerly Federal Gas Tax)
CCTV	Closed-Circuit Television
CoF	Consequence of Failure
CPI	Consumer Price Index
DC	Development Charges
DCL	Dedicated Capital Levy
FIR	Financial Information Return
IIMM	International Infrastructure Management Manual
LOS	Levels of Service
m^3	Cubic metres
MPMP	Municipal Performance Measurement Program
NRBCPI	Non-Residential Building Construction Price Index
NWWBI	National Water and Wastewater Benchmarking Initiative
OCI	Overall Condition Index
OCIF	Ontario Community Infrastructure Fund
O.Reg 588/17	Ontario Regulation 588/17 Asset Management Planning for Municipal Infrastructure
OLG	Ontario Lottery and Gaming
OSIM	Ontario Structure Inspection Manual
PoF	Probability of Failure
PRI	Pavement Roughness Index
PSAB	Public Sector Accounting Board
P3	Public-Private Partnership
RFP	Request for Proposal
RFQ	Request for Quotation
RSL	Remaining Service Life
SDI	Surface Distress Index
SO	Statutes of Ontario
UL	Useful Life
VPSC	Victoria Park Seniors Centre
WSIB	Workplace Safety and Insurance Board

EXECUTIVE SUMMARY

The Township of Centre Wellington provides a variety of services to its residents, businesses, and other stakeholders, including the maintenance of roads and other transportation related services, water supply and distribution, wastewater collection and treatment, fire services, various parks, recreation and cultural services, land use and development planning, and a wide range of other services.

Asset management planning is an integrated set of processes and practices that attempts to minimize the lifecycle costs of owning, operating, and maintaining assets, at an appropriate level of risk, while delivering services at established levels. Asset management consists of more than just the development of an asset management plan. Asset management is a process that results in clear and effective decision making regarding the provision of services within the Township. An asset management plan is an output from that process.

State of Township Assets

The Township presently owns and manages tax supported capital assets with a 2022 replacement value of approximately $751.4 million. Approximately 70% of these tax supported assets are roads related (i.e. road base and surface). Approximately 16% relate to bridges and major culverts.

The Township also owns and manages water capital assets with a 2022 replacement value of approximately $126.9 million and wastewater capital assets with a 2022 replacement value of approximately $154.7 million.

Assets within this plan are categorized as follows:

1. Roads Related Assets (inclusive of Stormwater Assets)
2. Bridges and Culvert Assets
3. Facility Assets
4. Vehicles
5. Equipment
6. Land Improvements
7. Water Network Assets
8. Wastewater Network Assets

Levels of Service

The most important outcomes of the Township's asset management planning practices are an understanding of the services and service levels, and balancing these service levels benefits, risk, and costs associated with providing services to residents and businesses. This Asset Management Plan reflects the current services and levels of service delivered as well as the proposed future services and levels of service, including assessments of how the Township will fund changes in services and service levels, in moving from "current levels" to "proposed levels".

Asset Management Strategy

The asset management strategy reviews and quantifies the many costs involved in the management of assets through the asset management planning process. This includes asset specific lifecycle costs as well as more indirect "non-infrastructure solutions", such as studies and master plans that assist in the management of assets. The direct costs associated with asset ownership can be broken down into various lifecycle costing categories, such as operating costs, maintenance costs, rehabilitation costs, replacement costs, and expansion (or growth) related costs.

One of the factors influencing the longevity of Township assets is the demand for the services provided by those assets. Demand will change over time, both in terms of service quality and quantity as well as the types of services required. Demand can be driven by several factors, including population growth, demographic shifts, changes in the types of services provided, the ways in which the Township is expected to provide those services, land-use changes, economic development trends, and environmental changes. Anticipated changes in demand should be considered and accounted for within an asset management plan.

Risk assessments are incorporated into the asset management planning process in order to identify critical (or higher risk) areas to prioritize asset investments. In many cases, the demand for asset investment exceeds the actual funding available, requiring the need to allocate funds based on a risk management approach.

Financing Strategy

The financing strategy for an asset management plan outlines the key funding sources used to finance asset management related costs, including methodologies and strategies proposed for each funding source.

To fund the tax supported needs identified through the asset management planning process, the Township has a number of funding sources, representing both internal and external. There is a level of risk associated with relying on external sources of funding over a long-term forecast. While internal sources are more controllable, external sources are uncontrollable and subject to change. This makes long-term planning more difficult.

While the Township has made significant progress in funding bridges and culverts (reaching 74% of optimal annual investments), only 43% of the optimal annual investment has been achieved for other tax supported assets. An equivalent increase in taxation of at least 2.0% is needed annually to invest in tax supported assets in order to make meaningful progress towards optimal annual asset investment levels. If assessment growth each year falls between 2% and 3%, then the net impact on taxation would be between 1.25% and 1.50% annually.

The Township has made significant progress in funding water and wastewater supported assets, reaching 76% of optimal annual investments for each service segment. Rate increases identified in the Township's Water and Wastewater Rate Study support the ongoing operations of the water and wastewater systems as well as planned increases to asset investment over the forecast period, with the goal of reaching system financial sustainability, including realizing optimal annual asset investments.

Monitoring and Continuous Improvement

The ongoing monitoring and continuous improvement of Township asset management practices ensures that:

- Compliance with asset management legislation is achieved and maintained; and
- Asset management practices are implemented in a methodical way which best serves the interests of the Township and its residents, ensuring efficiencies and integration into day-to-day operations.

Asset management activities at the Township are not conducted in a vacuum. They are integrated with the policies and practices of Wellington County and the other lower-tier municipalities, whose assets overlap with those of the Township.

As an organization, the Township's asset management capacity is at an intermediate level, with informal AM practices in each department. While these practices varied in completeness and complexity, the common theme across the organization is the need to improve the degree of consistency in data collection and management practices, formalize risk assessment procedures, and work toward continually improving data quality.

Conclusion and Recommendations

The backbone of the Township's asset management planning practices is an understanding of the services and service levels expected and how Township assets assist in providing these services. A balance is required between providing high levels of service and the costs associated with those services. From an asset funding perspective, a balance is needed between financing the cost of implementing asset management recommendations and the risk associated with deferring asset lifecycle investment.

Asset management planning is a journey that will evolve over time as new data, assumptions and strategies are brought forward. Recommendations are provided in this document that will assist in this evolution and will ensure the Township is constantly moving forward in its asset management maturity.

The table below provides a summary of recommendations that are outlined in each chapter. It is important to note that these recommendations will need to be brought forward into other processes and initiatives for ultimate approval, such as the annual budget process.

Chapter Reference	Description
Overall	Recognize that asset management planning is a journey that requires continuous improvement and updates.
Chapter 3	Consider the costs associated with providing services at expected levels when developing the annual budget.
Chapter 4	Consider the following when developing the annual budget: a) All asset management related costs (non-infrastructure solutions and lifecycle costs) required to provide Township services. b) The risks (both corporate and asset related) of deferring various asset lifecycle investments.

	c) The impacts of demand on Township assets, including anticipated growth. d) Recognition that "critical assets" play a significant role in providing services and have a high consequence of failure. e) Priority assets represent assets in each category with the highest asset risk, and future short/medium-term lifecycle costs should focus on these assets.
Chapter 5	Consider the following when developing the annual budget: a) Staff to closely monitor external sources of funding trends, given the associated risks of relying on this funding from an asset management perspective. b) Increases in OCIF funding received in 2022 as well as ongoing increases in OCIF funding received going forward will be dedicated to roads related rehabilitation and replacement needs. c) The OLG Allocation Policy is to be reviewed considering the goal to maximize funding available for asset management purposes. d) Planned debt payments over the ten-year capital forecast is not to exceed 15% of Township revenues. e) A proportion of annual taxation assessment growth is to be allocated to asset investment. f) To provide meaningful increases in tax supported asset investment over time, an annual increase equivalent to a 2.0% increase in taxation is needed. Other available funding increases, such as a proportion of assessment growth would reduce the net impact on taxation. g) To continue to follow Water and Wastewater Rate Study recommended rate increases.
Chapter 6	Continue to monitor and continuously improve Township asset management planning practices. a) Continue to work with the County and associated lower-tier municipalities in the advancement of asset management planning. b) Continuous improvement of asset data quality (i.e. completeness and accuracy) for all asset categories over time. c) Progression of short/medium-term and long-term continuous improvement targets.

MESSAGE FROM THE CAO

This 2022 Asset Management Plan represents the first Township staff prepared Plan. This is important for a number of reasons, but I will outline the top two. Firstly, staff take a lot of pride and ownership in this Plan. They have detailed knowledge and understanding of Township assets and the ability for those assets to provide services, which enhances the overall discussions and recommendations contained within this report. Secondly, this is the first step in the overall process of integrating asset management planning practices into day-to-day Township operations. Asset management will play a role in almost everything we do in the future, therefore working these practices into existing corporate, departmental, and staff processes is not only efficient, but very effective.

The Asset Management Plan is one of the most critical Township documents, along with the Strategic Plan and the annual budget. These three documents provide the overall strategic and operational direction for the corporation. Going forward, discussions cannot take place on one of these documents without mentioning the other two.

I would like to thank the members of our Township Asset Management Committee for their efforts in the development of this Asset Management Plan:

- Adam McNabb, Managing Director of Corporate Services & Treasurer (Chair)
- Kaileigh Osburn, Supervisor of Accounting & Capital
- Anil Sigdel, Asset Management Technician
- Greg Wolowich, GIS Coordinator
- Adam Gilmore, Manager of Engineering
- Stephanie Rossi, Asset Management and Capital Project Manager
- Emily Alessio, GIS Technician
- Matt Tucker, Manager of Parks and Facility Operations
- Stephanie Rogers, Payroll & Accounting Clerk

I would also like to thank our Information Technology Team for providing much needed technical support and the Senior Management Team and various other Township staff for their input and assistance in pulling this Plan together.

The recommendations contained within this report are critical to the overall success of the Township in providing services at desired levels over the long-term. Approval of these recommendations as well as a continuous improvement approach to asset management planning are the keys to success.

As the Executive Lead for the Township's asset management planning practices, I endorse this comprehensive 2022 Asset Management Plan.

Dan Wilson CPA, CA
Chief Administrative Officer
Township Asset Management Executive Lead

MESSAGE FROM THE TREASURER

While new to the Township in the 2022 calendar year, I am acutely aware of the time and dedication required to facilitate completion of Asset Management Plans, and the pressures shouldered by Township staff in meeting the regulatory requirements prescribed via O.Reg. 588/17.

Ensuring compliance with regulatory requirements and providing both residents and Council insight into evidence-based priority projects to ensure both service delivery and levels of service are maintained, while balancing risk and cost is the goal of asset management planning, and I believe that this plan executes on these objectives, while also detailing meaningful continuous improvement measures to continue to mature asset management initiatives for the Township.

The Asset Management Plan presented herein represents the culmination of efforts by many team members who have invested significant time and effort collaborating on a document that stands to serve the Township of Centre Wellington for years to come. All contributions from the asset management team should be both recognized and celebrated, as this staff prepared report provides a template for not only own-source reporting of integral asset management data, but also a benchmark for which future asset management efforts and initiatives can be both measured and communicated to residents and Council of Centre Wellington.

Adam McNabb MBA, CPA, CGA
Managing Director of Corporate Services & Treasurer
Asset Management Committee Chair

CHAPTER 1

INTRODUCTION

CHAPTER 1: INTRODUCTION

The Township of Centre Wellington provides a variety of services to its residents, businesses, and other stakeholders, including the maintenance of roads and other transportation related services, water supply and distribution, wastewater collection and treatment, fire services, various parks, recreation and cultural services, land use and development planning, and a wide range of other services.

The Township provides many of these services by maintaining various infrastructure and other assets. Assets are physical things that have potential or actual value to the Township. This includes everything from roads and bridges to parks and equipment. All of these assets contribute to providing services across the Township. Asset management planning analyzes how to provide these services in a cost-efficient and sustainable manner.

Assets are essential to the delivery of Township services. They allow for the efficient flow of people and products, support cultural enrichment and economic development initiatives, and contribute to the quality of life for residents. Fundamentally, assets exist to provide services to the community.

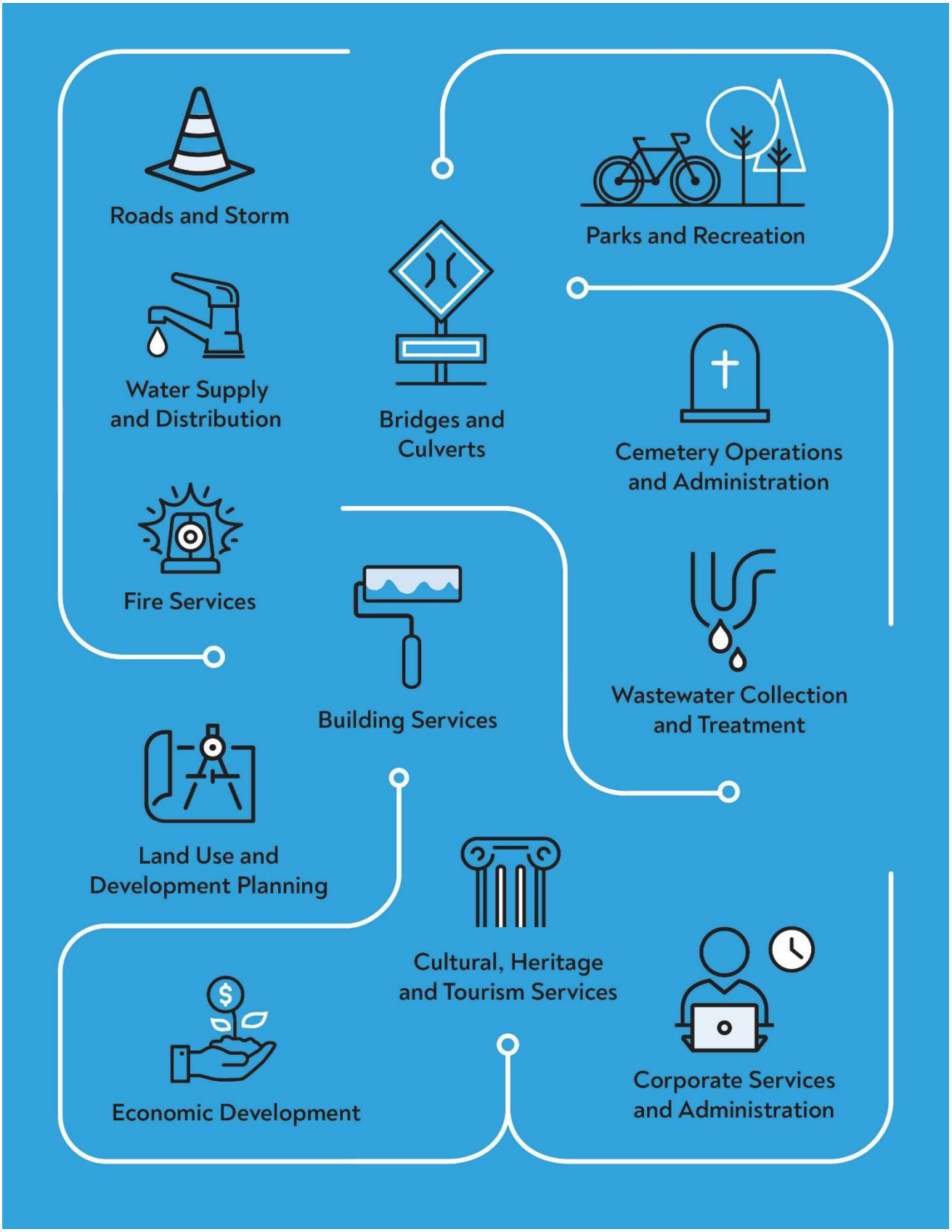
The Township maintains a range of assets, including:

- 463 km of roadways
- 111 bridges and major culverts
- 121 km of watermains
- 112 km of wastewater mains
- 246 acres of parks and open spaces
- 72 facilities
- Various vehicles, machinery, equipment, and land improvements

Construction of infrastructure surged across Canada from the 1950's to 1970's due to growth, modernization, and urbanization following the end of WWII. The following decades saw little investment in infrastructure maintenance, and as a result, a significant proportion of infrastructure across Canada has fallen into disrepair. Poor planning and under-investment have left Ontario with the most serious infrastructure deficit in our history. The burden of this deficit falls largely on municipalities who own roughly 60% of all public infrastructure but receive only $0.08 of every tax dollar collected.

In 2009, all municipalities across Canada were required to incorporate Tangible Capital Asset reporting on their financial statements. This gave municipalities a better understanding of what assets they owned, and their financial value. Accounting for tangible capital assets in annual financial reports assists municipalities in understanding the rate of asset deterioration, or "consumption", from a financial perspective, and helps with anticipating infrastructure investment needs. Asset management planning takes this to the next level by determining future lifecycle needs of each asset.

The Township maintains over $1 Billion in assets (2022 replacement value). Some assets are relatively new, or recently repaired, while others are approaching or are at the end of their estimated useful life and have significant investment needs. The Township is faced with an aging and deteriorating asset base and have limited funding sources to rehabilitate or replace of these assets. The Township must balance the maintenance needs of new assets with the more capital-intensive repair and rehabilitation needs of aging assets.


Roads and Storm
Parks and Recreation
Water Supply and Distribution
Bridges and Culverts
Cemetery Operations and Administration
Fire Services
Building Services
Wastewater Collection and Treatment
Land Use and Development Planning
Cultural, Heritage and Tourism Services
Economic Development
Corporate Services and Administration

WHAT IS ASSET MANAGEMENT PLANNING?

Asset management planning is an integrated set of processes and practices that attempts to minimize the lifecycle costs of owning, operating, and maintaining assets, at an appropriate level of risk, while delivering services at established levels. Beyond the legislated requirement for asset management planning, the core catalysts for establishing Township-wide asset management planning practices include:

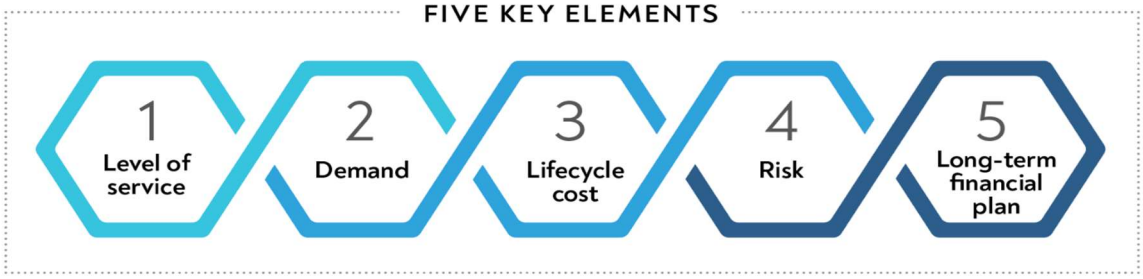
> Asset management planning is the process of making the best possible decisions regarding the building, operation, maintenance, rehabilitation, replacement, and disposition of assets.

- Anticipated growth and the demand on assets/services.
- The impacts of climate change.
- The increasing costs associated with providing services to stakeholders, such as residents.
- A challenging municipal funding model, and the need to increase asset investment.

Asset management planning allows the Township to make informed asset investment decisions, prioritize asset investments, enhance financial performance, manage risk, progress organizational sustainability, and improve the overall efficiency and effectiveness of providing services.

The key elements of asset management planning[1] are:

1. Providing a defined level of service and monitoring performance.
2. Managing the impact of demand changes (growth as well as decline) through demand management, infrastructure investment, and other strategies.
3. Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet that defined level of service.
4. Identifying, assessing, and appropriately controlling risks.
5. Having a long-term financial plan which identifies required expenditures and how they will be funded.



The Township has always been conducting asset management planning practices. It is in the nature of the responsibilities of providing services. Formally, the Township has been creating Asset Management Plans since 2013. Asset Management Plans have been presented and approved by Township Council in 2013, 2014, and 2016 prior to this Plan.

[1] International Infrastructure Management Manual (IIMM) page 1.8

ASSET MANAGEMENT LEGISLATION

Asset planning has been identified by the Province of Ontario as a priority for a number of years. The following timeline illustrates the progression of asset management planning in Ontario municipalities since the year 2000.

Year	Action
2000	Province communicates the need to start asset planning.
2002	The Walkerton Inquiry outlines the need to have full cost pricing (water).
2009	Public Sector Accounting Board (PSAB) section 3150 is approved, requiring municipalities to maintain an inventory of capital assets owned.
2012	Asset Management "Building Together" guide is published, providing asset management best practices to Ontario municipalities.
2014	The Province starts linking grant funding to the requirement to have an asset management plan.
2016	The Infrastructure for Jobs and Prosperity Act is passed, making asset management a legislated requirement for public sector entities in Ontario.
2017	Ontario Regulation 588/17 is passed, providing more detailed asset management requirements for municipalities in Ontario.
2019	Strategic Asset Management Policy required to be implemented in all municipalities in Ontario (as per Ontario Regulation 588/17).

Ontario Regulation 588/17 relating to asset management planning for municipal infrastructure was passed in December 2017, providing specifics regarding asset management planning requirements for Ontario municipalities. A phased in approach to compliance was established by the province from 2019 to 2024. A Strategic Asset Management Policy was required to be in place in 2019, representing the first requirement of the regulation. In March 2021, due to the impacts of COVID-19 on municipalities, the province provided a 1-year extension for all remaining compliance due dates. The updated due dates are as follows:

Date	Requirement	Description
July 1, 2019	Strategic Asset Management Policy	The policy identifies municipal goals the asset management plan supports, how the budget is informed, asset management planning principles, considerations for climate change, and a commitment to provide opportunities for stakeholder input.
July 1, 2022	Asset Management Plan (Core Assets)	The plan must address current levels of service and the associated costs of maintaining that service for water, wastewater, roads, bridges, culverts and storm water assets.
July 1, 2024	Asset Management Plan (All Township Assets)	The plan must address current levels of service and the associated costs of maintaining that service for all municipal assets.
July 1, 2025	Proposed Levels of Service	Builds on the 2024 requirement by including a discussion of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund those activities

This Asset Management Plan is compliant with the July 1, 2022, and July 1, 2024 regulatory requirements and meets most requirements required by July 1, 2025.

ASSET MANAGEMENT PLANNING AS A PROCESS

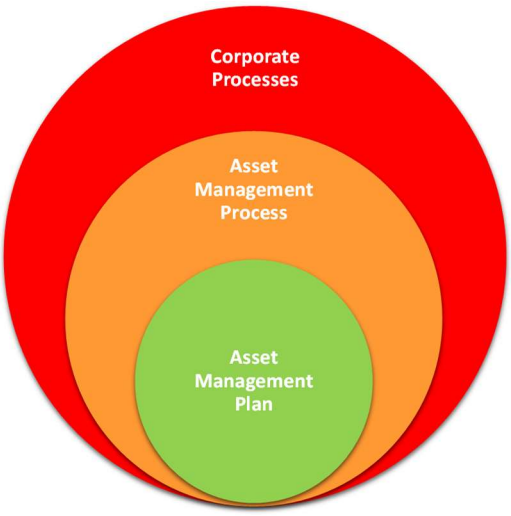
Asset management consists of more than just the development of an asset management plan. Asset management is a process that results in clear and effective decision making regarding the provision of services within the Township. An asset management plan is an output from that process. The asset management process is integrated with other corporate processes, so that decisions are made based on the strategic direction of the Township.

The asset management process includes the following key areas:

- ✓ Policies and strategies.
- ✓ Integration with day-to-day operations.
- ✓ Plans for updates and continuous improvements to the planning process.
- ✓ Use of tools, such as best practices and software.
- ✓ An internal governance structure.
- ✓ Council approval and support.
- ✓ Public engagement and communication.
- ✓ Asset management plan development.

An advanced asset management planning program consists of:

1. Knowing what assets the Township owns, and having confidence in asset inventory data.
2. Accurately reflecting the levels of service expected by residents and businesses, and their willingness to pay for these services. Ensuring that the Township provides services in the most cost-effective manner.
3. Ability to predict future demand, so that the impact on assets and future asset investment requirements can be planned.
4. Knowledge of physical condition of assets, to predict future maintenance and renewal requirements, costs, liabilities, and risks.
5. Knowledge of the performance of Township assets, and how reliable they are: being able to track the type of asset failure, the number of customers affected, and being able to predict when performance will drop to an unacceptable level.



6. Knowledge of current utilization and ultimate capacity: knowing when to upgrade or augment existing assets
7. Ability to analyze alternative options to address performance gaps.
8. Being able to set priorities that align with available budgets

With limited available funding, municipalities must make key decisions, including:

- Choosing between fixing assets immediately or delaying maintenance.
- Reducing levels of service or eliminating services that are currently provided.
- Increasing tax rates and user fees to help bridge the funding gap.
- Delaying new projects.
- Defining critical infrastructure and prioritizing urgent needs.

STRATEGIC ASSET MANAGEMENT POLICY

The Township has a Council approved Strategic Asset Management Policy, outlining the approach to asset management planning across the corporation. The following provides a high level summary of this document.

Approach: *Asset management planning is an integrated approach, involving all Township departments, to deliver services to the community through the effective management of assets.*

Ensure integration of the following:

Strategic Alignment: *Asset management planning will be integrated and aligned with Township goals, objectives, plans and processes.*

Ensure alignment of the following:

Guiding Principles: *Asset management planning shall be conducted following key guiding principles:*

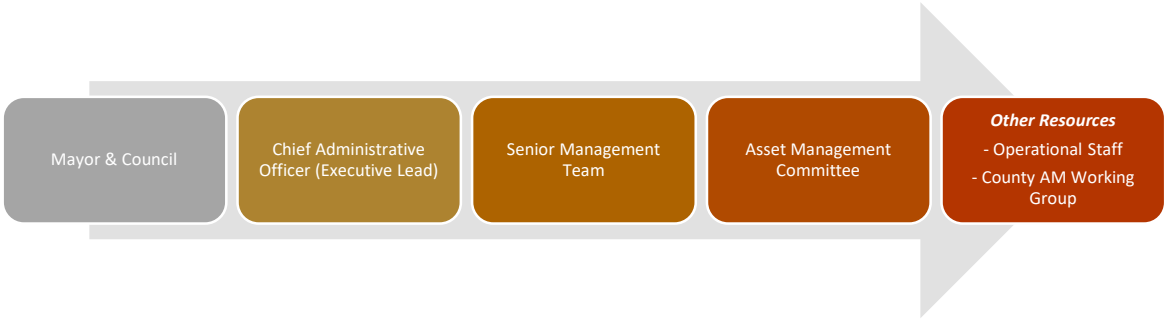
- Forward looking.
- Take into account any budgets or fiscal plans.
- Investment decisions will be based on clearly identified priorities.
- The Township will promote economic competitiveness, productivity, job creation and training.
- Be evidence based and transparent.
- Consistency of core public services.
- Environmentally conscious.
- Ensure health and safety in the construction, maintenance, use, and operation of assets.
- Community focused.
- Opportunities for innovative technologies, services, and practices.
- Ensure integration with other municipal and provincial plans.
- Assets will be considered from a service context and consider their interrelationships.
- A risk-based approach will be used.
- Focus on the reduction of lifecycle costs.

- Consider the impacts of climate change.

Governance: *Asset Management Planning requires the commitment of key stakeholders across the Organization.*

- **Council:** Overseeing the provision of services, final decision maker for asset management planning.
- **Chief Administrative Officer:** Executive Lead of the asset management process. Emphasizes a corporate approach.
- **Senior Management Team:** Overseeing asset management planning activities. Promotes the process to their staff.
- **Asset Management Committee:** Coordinating the asset management planning activities of the Township. Includes representatives from all departments.

Asset Management Governance Structure:



Stakeholder Engagement: *The Township will foster informed dialogue and engagement with relevant stakeholders throughout the asset management planning process.*

Engagement that will be developed over time, including:

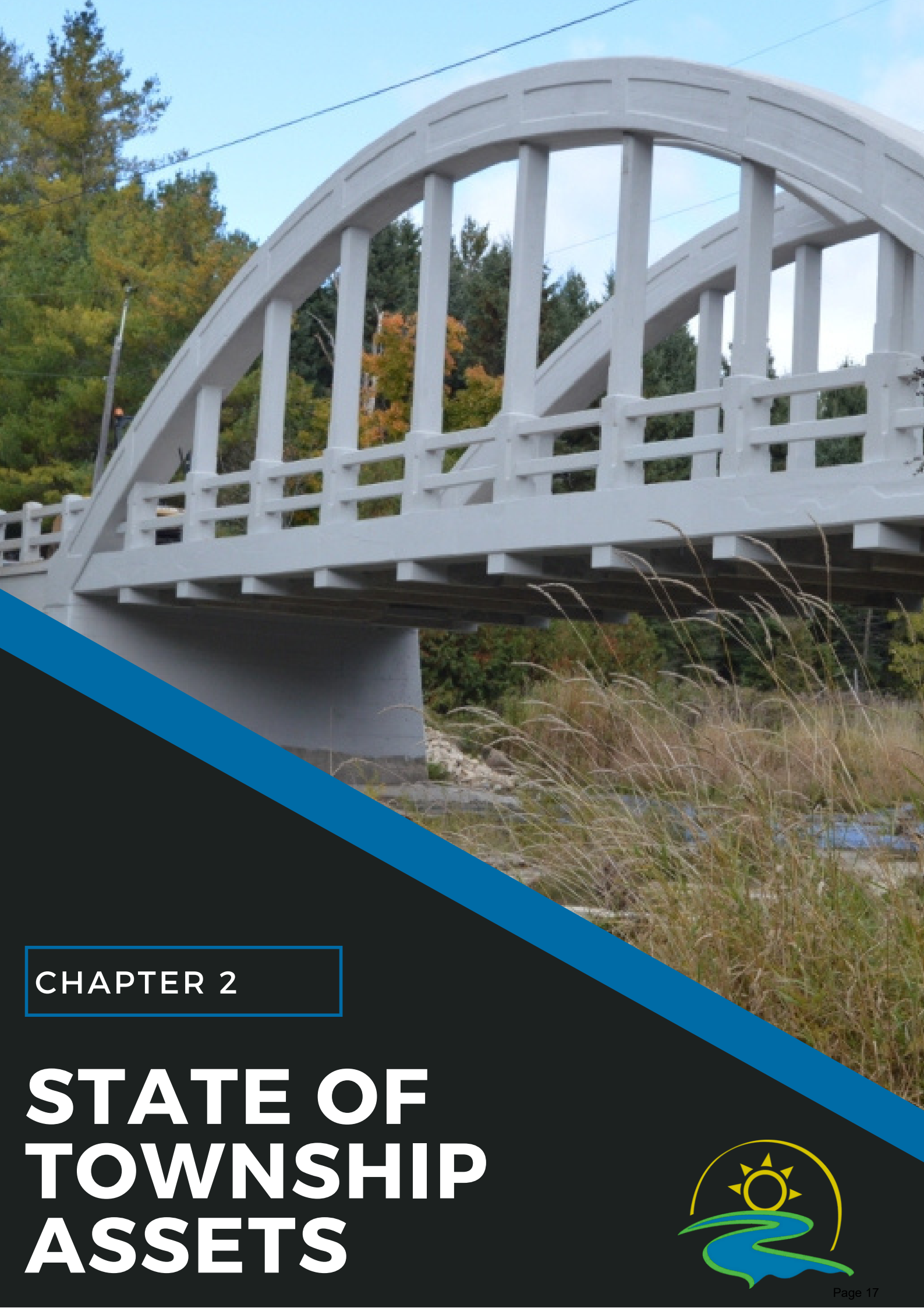
Development: *The Township will prepare Asset Management Plans at a minimum, every 5 years, using up-to-date asset data and a refined levels of service analysis.*

TOWNSHIP 2022 ASSET MANAGEMENT PLAN

This Asset Management Plan builds upon the foundation of asset management planning that was included in the 2016 Plan. However, many improvements have been made. With an initial goal of meeting legislative requirements, this Plan evolved into a tool that will benefit staff operationally as well as strategically through the annual budget process. For the first time, this Plan was developed internally by Township staff, providing not only a level of ownership but also pride.

The remainder of the Asset Management Plan is divided into the following chapters:

1. Chapter 2: State of Township Assets – A snapshot of the overall state of Township assets, including replacement cost, condition, risk assessments and long-term funding needs, by asset category.
2. Chapter 3: Levels of Service – A review of the services and service levels provided as well as the impacts of progressing towards expected service levels.
3. Chapter 4: Asset Management Strategy – A summary of the costs associated with maintaining Township assets, including a look into demands on assets/services.
4. Chapter 5: Financing Strategy – An overview of the funding sources available to fund asset management needs including recommendations on funding increases.
5. Chapter 6: Monitoring and Continuous Improvement – An outline of ways in which the Township's asset management process can be improved over time.
6. Chapter 7: Conclusion and Recommendations – A summary of recommendations provided in each chapter of the Asset Management Plan.
7. Appendices – Key information that supports the Asset Management Plan, including key concepts, maps, detailed levels of service tables, and listing of priority assets from each category.
8. Technical Appendix (separate cover) – A detailed listing of Township assets.



CHAPTER 2

STATE OF TOWNSHIP ASSETS

CHAPTER 2: STATE OF TOWNSHIP ASSETS

ASSET SUMMARY

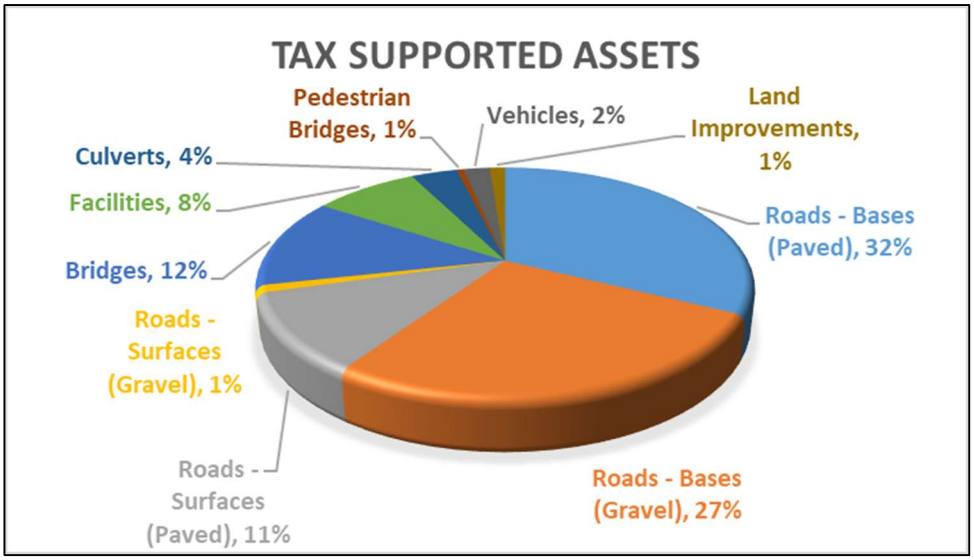
The Township presently owns and manages tax supported capital assets with a 2022 replacement value of approximately $751.4 million.

Table 2-1
Tax Supported Assets (2022$)

Asset Type	Replacement Cost (2022$)
Roads - Bases (Paved)	239,215,909
Roads - Bases (Gravel)	201,077,623
Roads - Surfaces (Paved)	81,405,359
Roads - Surfaces (Gravel)	1,906,064
Bridges	93,460,089
Facilities	61,324,166
Culverts	26,887,790
Pedestrian Bridges	4,140,627
Vehicles	15,261,500
Land Improvements	9,056,895
Equipment & Machinery	9,152,525
Stormwater Ponds	8,556,239
Total Tangible Capital Assets (Tax Supported)	**751,444,784**

Approximately 70% of these tax supported assets are roads related (i.e. road base and surface). Approximately 16% relate to bridges and major culverts.

Figure 2-1
Tax Supported Assets Distribution Based on Replacement Cost



In addition to the tax supported assets, the Township owns, operates, and maintains rate supported infrastructure to deliver water and sewer services for residents and businesses of Centre Wellington – these are detailed next.

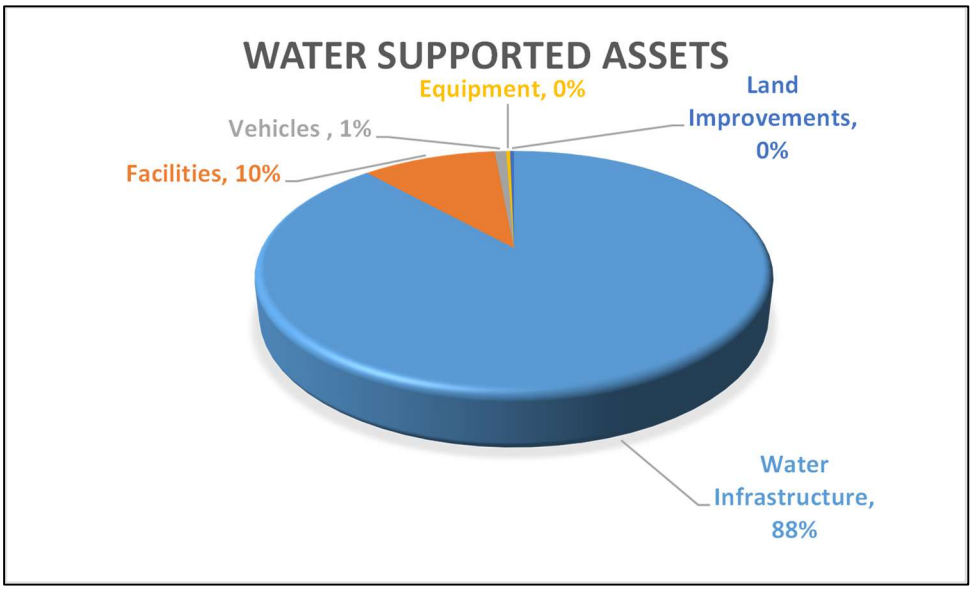
The Township presently owns and manages water capital assets with a 2022 replacement value of approximately $126.9 million.

Table 2-2
Water Supported Assets (2022$)

Asset Type	Replacement Cost (2022$)
Water Infrastructure	112,137,451
Facilities	12,960,409
Vehicles	1,062,500
Equipment	373,000
Land Improvements	370,622
Total Tangible Capital Assets (Water)	**126,903,983**

The majority of water capital asset value resides in underground linear infrastructure.

Figure 2-2
2022 Water Assets Distribution
Based on Replacement Cost



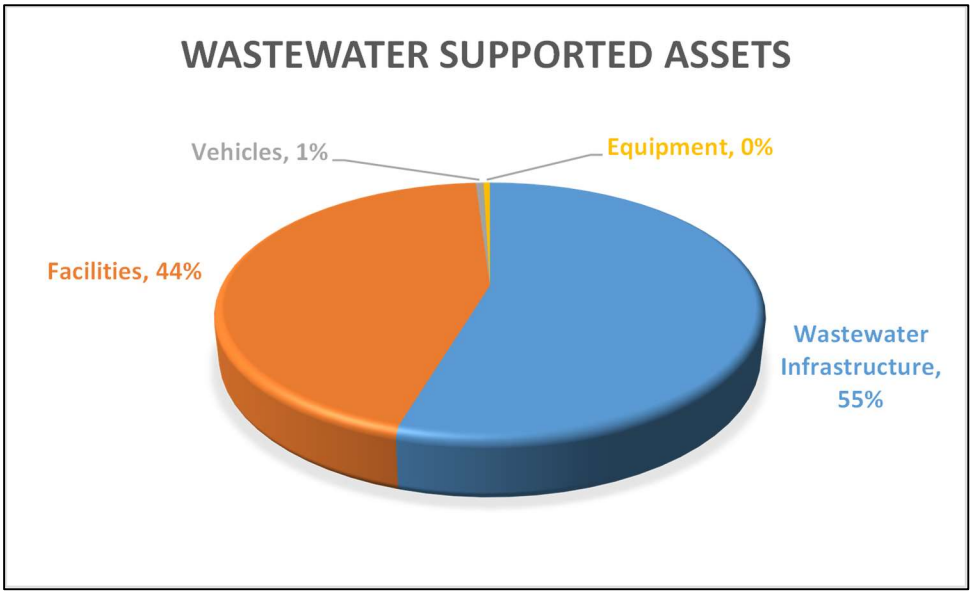
The Township presently owns and manages wastewater capital assets with a 2022 replacement value of approximately $154.7 million.

Table 2-3
Wastewater Supported Assets (2022$)

Asset Type	Replacement Cost (2022$)
Wastewater Infrastructure	84,538,312
Facilities	68,655,536
Vehicles	840,000
Equipment	686,800
Total Tangible Capital Assets (Wastewater)	**154,720,649**

The majority of wastewater capital asset value resides in underground linear infrastructure and facilities.

Figure 2-3
2022 Wastewater Assets Distribution
Based on Replacement Cost



As evidenced in the in the above tables and graphs, the Township owns and operates a variety of assets to provide services to residents of Centre Wellington. The Township is responsible for keeping and maintaining records on each of the in-service assets in its inventory and control.

The Township is in the process of implementing asset management related software and developing internal processes to assist in the ongoing maintenance of owned assets, enhancing the data contained in the consolidated asset register, collecting data in support of maintenance activities, and leveraging decision support analytics.

The remainder of this chapter will focus on key asset information in each of the following categories:

1. Roads Related Assets
2. Bridges and Culvert Assets
3. Facility Assets
4. Vehicles
5. Equipment
6. Land Improvements
7. Water Network Assets
8. Wastewater Network Assets
9. Stormwater Network Assets

Roads Related Assets

The Roads Related Asset category includes the Township's paved roads, gravel roads, and road bases. Included within applicable road base assets are curbs, gutters, storm drains, streetlights, and sidewalks. This network of transportation infrastructure is critical to ensuring the safe and efficient movement of people and goods within and through the Township via the roads and related network. The Township regularly inspects these transportation assets and maintains a detailed condition inventory, which is used to inform the scope and timing of capital works needed to keep assets in a state-of-good-repair and deliver on the Township's desired Level of Service.

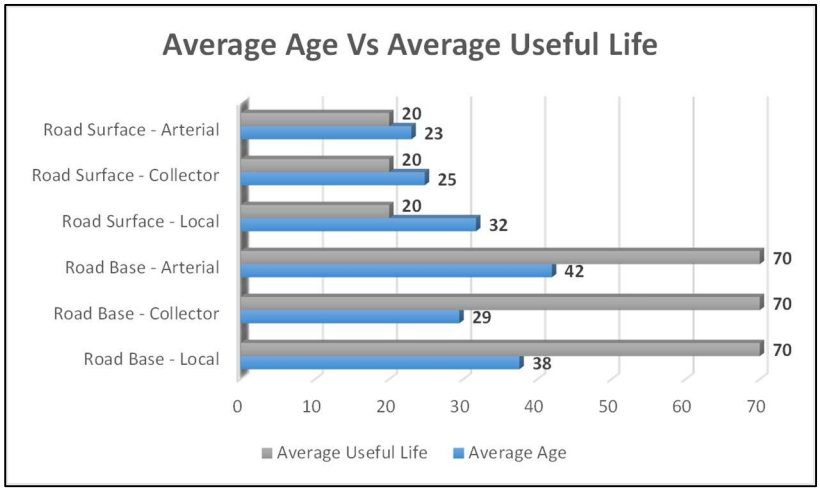
Road related assets are made up of the following:

Table 2-4
2022 Road Assets Components

Asset Type	Segment Count	Length (m)
Road Base*	984	463,311
Asphalt Surface Road	823	253,736
Gravel Surface Road	177	209,575
Sidewalk	1,043	113,843
Street Lights	2,386	
*Road base includes curb and gutter		

Table 2-5 below illustrates the average age of road surface and road base assets in comparison to the average useful life. This is a useful indicator, however it does not consider the condition of each asset.

Figure 2-4
Average Age vs Average Useful Life for Road Assets
By Road Type



CONDITION

The condition of road base assets is not as immediately evident as the road surface given the below grade nature of the asset. Therefore, the condition of road base assets is dependant on the age of the road base, and also takes the average daily traffic (ADT) into account. The pictures below are provided to illustrate examples of roads that fit into each of the condition categories – from "Very Good" to "Very Poor".

The following figures detail the current condition of road base assets; however, it should be noted the these are strictly a proxy of condition based on assumptions, and may not be inciditive of actual condition.

Figure 2-5
Gravel Road Base Condition

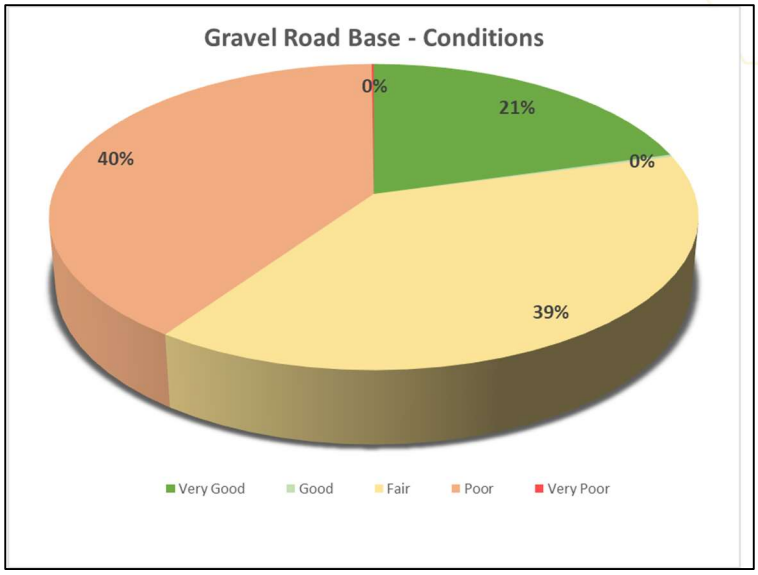


Figure 2-6
Paved Road Base Condition

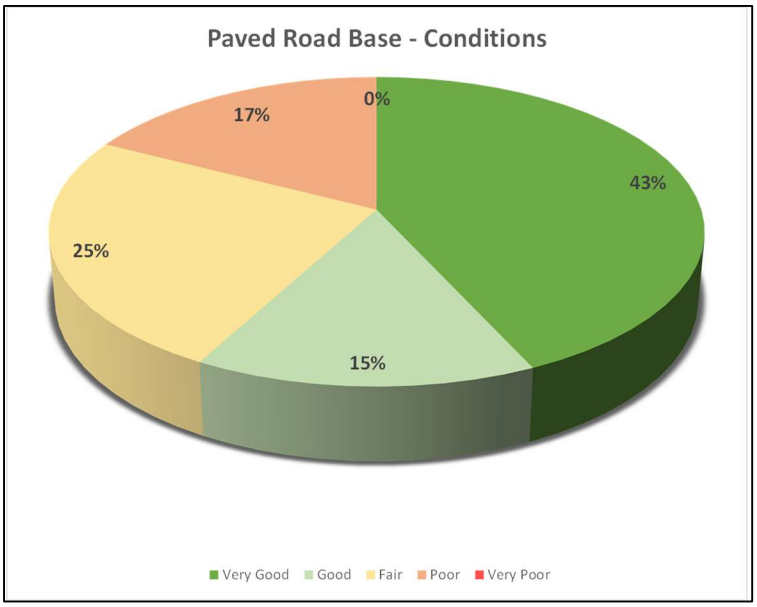
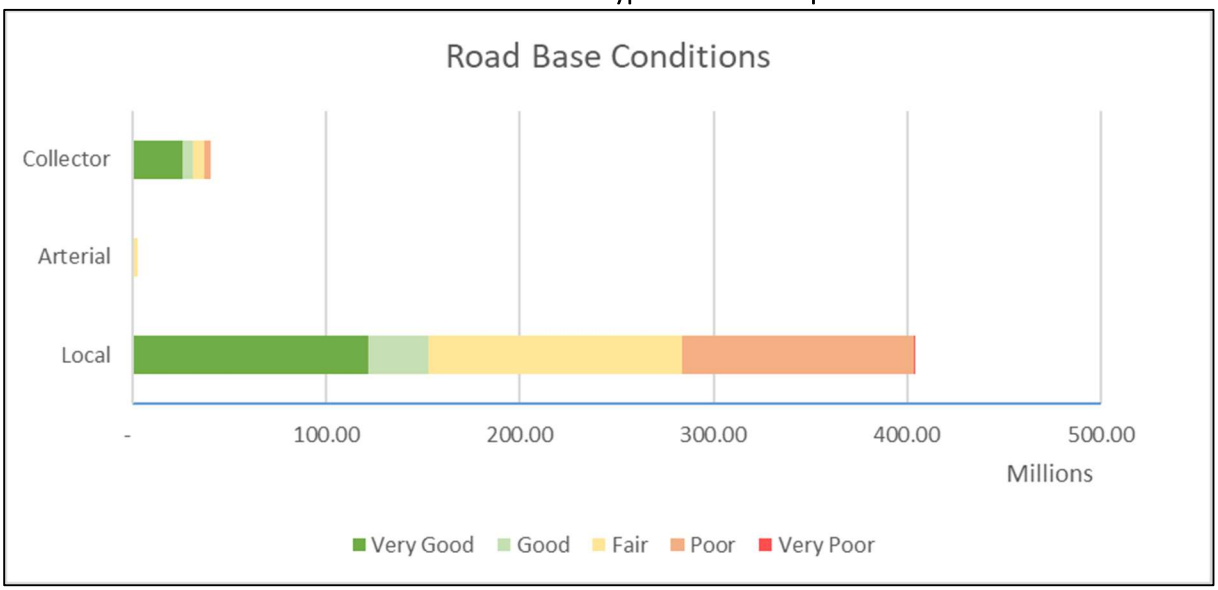


Figure 2-7
Road Base Conditions based on Type and Total Replacement Cost



The condition of road surface assets is more readily available / assessable thus better metrics are available to more accurately report on condition. Condition and Probability of Failure of road surfaces are based on the Overall Condition Index (OCI) of the road. The OCI is determined using a number of factors relating to specific assets, for roads, the factors involved in calculating a OCI typcially include: Average Daily Traffic Counts (ADT), Pavement Roughness Index (PRI), and Surface Distress Index (SDI). The following tables detail the current condition of Township road surface assets.

Figure 2-8
Gravel Road Surface Condition

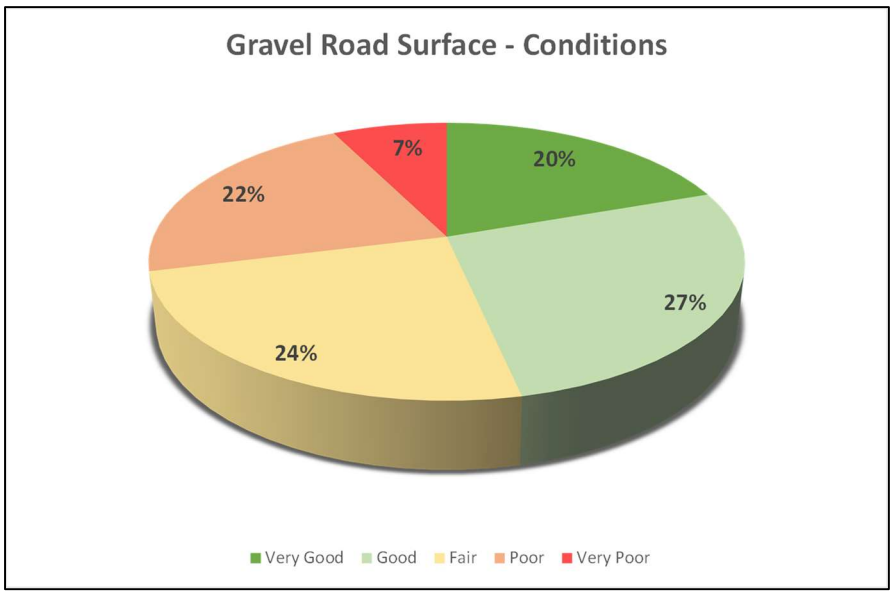


Figure 2-9
Paved Road Surface Condition

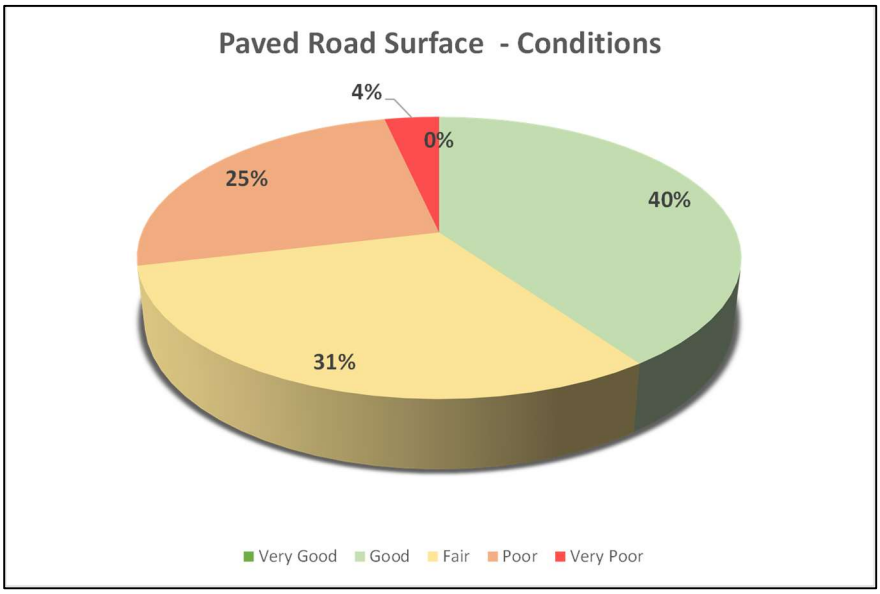
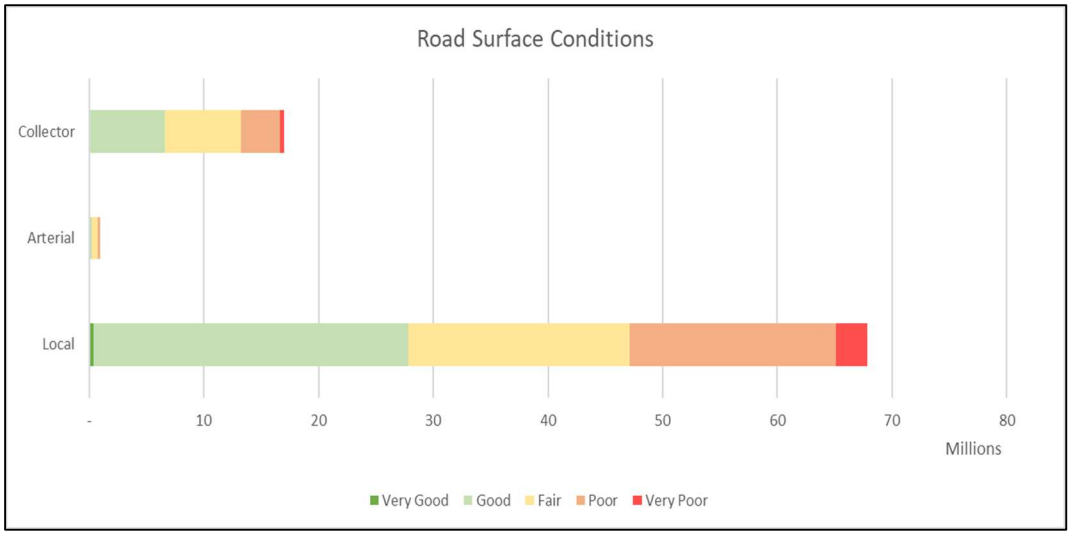


Figure 2-10
Road Surface Conditions based on Type and Total Replacement Cost



ASSET RISK

Table 2-5
Risk Matrix
for Road Assets

	Risk
PoF	Very Low
	Low
	Moderate
	High
	Critical

Risk of failure of road base and road surface assets has been determined using the probability of failure (PoF) of each asset. While it is typical to measure both probability and consequence when measuring risk, this is an area that will be further developed in future Asset Management Plans as the Township's data in this segment further develops and matures. The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

The probability of failure of a road base is based on a calculation including the age of the asset and the average daily traffic flows on the asset.

Figure 2-11
Average Risk of Road Base – Gravel

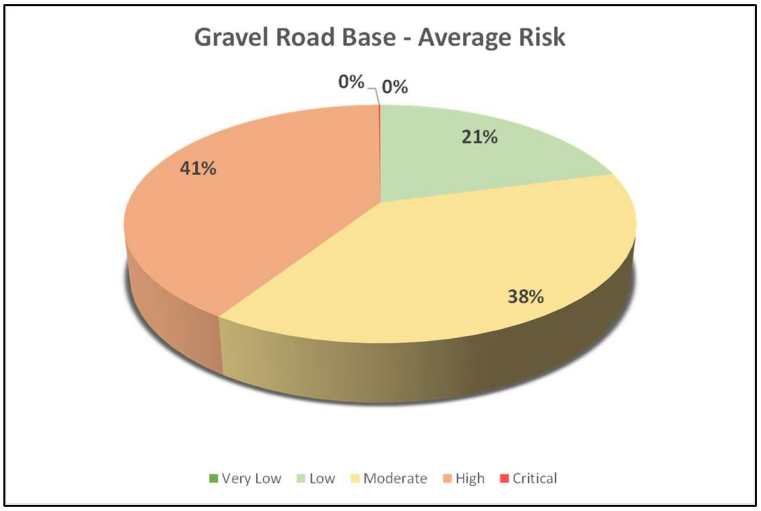
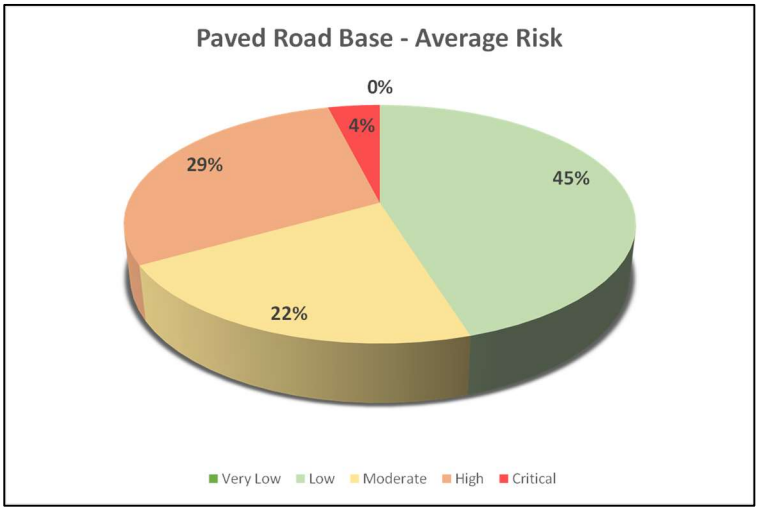


Figure 2-12
Average Risk of Road Base - Paved



The probability of failure of a road surface, and thus the risk involved in the failure of that road surface is based only on the OCI score of that surface. It has been determined that as the Township can assess the condition of each road surface easily, this value is critical in the decision of the risk of the asset. Average daily traffic is not utilized in the calculation of risk for road surfaces as there are many Township roads that have high daily traffic and by utilizing this value, it would unfairly skew the risk of that asset despite the fact that the condition of the road surface may be significantly better than the surface of a lesser utilized road. See Figures B-7, B-8, B-9 and B-10 in Appendix B for mapping of road risk within the Township.

Figure 2-13
Average Risk of Road Surface (Gravel)

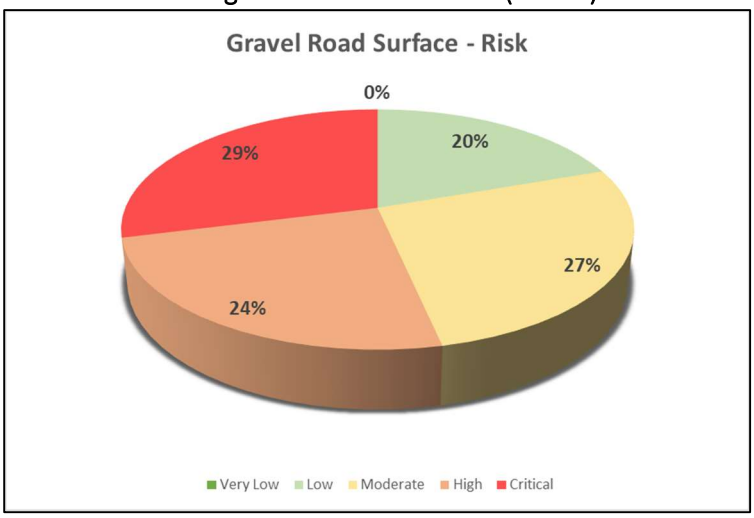
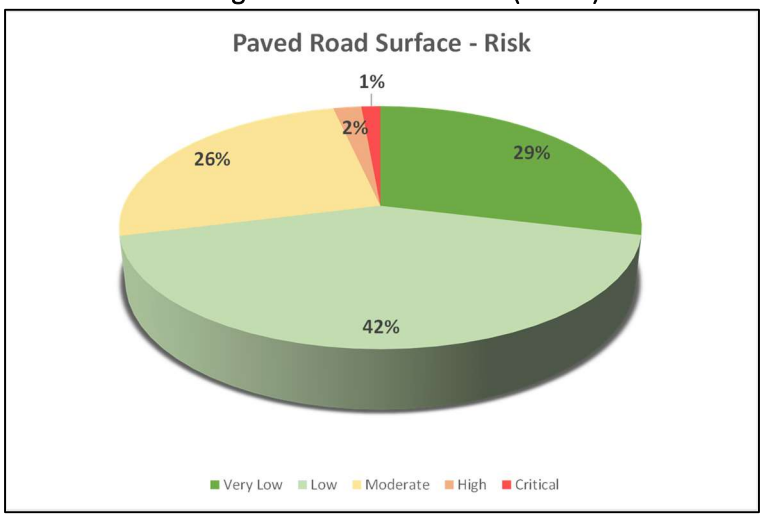


Figure 2-14
Average Risk of Road Surface (Paved)



See figures B-7 through B-10 in Appendix B for mapping of road network risk conditions throughout the Township.

FINANCIAL

The Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's road assets, the annual investment required to maintain the Township's road system (assuming current level of service is maintained) is depicted in the below tables, and interpreted as follows:

Asset Type – description of the assets being categorized

Annual Investment (Based on Useful Life) – This value indicates the annual investment that should be directed to the asset type to ensure future funding is available to conduct rehabilitation or replacement if investment had begun on the original in-service date of the asset.

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Backlog – This is the underserviced spending need for assets that are beyond their expected useful lives but have not been rehabilitated or replaced, nor have funds been established for the maintenance or rehabilitation of same. This value represents the investment required today to replace these assets.

Recommended Annual Investment – This value indicates the recommended annual investment over the remaining lives of the assets within each of the classes and is calculated as the replacement cost divided by the expected remaining useful life but does not take into consideration Backlog. By investing this amount, the Township is ensuring that sufficient dollars will be available in the future to address lifecycle intervention needs.

Table 2-6
2022 Annual Investment in Road Assets

	Annual Investment			
Asset Type	**Based on Useful Life**	**Based on Remaining Life**	**Backlog**	**Recommended Annual Investment (2022 $)**
Road Base - Paved	3,417,370	10,203,842	-	**2,551,000**
Road Surface - Paved	4,070,270	5,519,459	47,463,216	**5,519,459**
Total	**$ 7,487,640**	**$ 15,723,301**	**$ 47,463,216**	**$ 8,070,459**

Table 2-7
2022 Annual Investment in Gravel Roads

	Annual Investment			
Asset Type	**Based on Useful Life**	**Based on Remaining Life**	**Proposed Increase in Level of Service**	**Recommended Annual Investment (2022 $)**
Road Base - Gravel	2,872,538	12,152,877	-	**2,000,000**
Road Surface - Gravel	462,637	616,849	1,030,000	
Total	**$ 3,335,175**	**$ 12,769,726**	**$ 1,030,000**	**$ 2,000,000**

* Recommended annual investment amount for Gravel Roads is based on the 4 Roads Management Services state of the local infrastructure and AMP study, dated September 29, 2021.

Bridges and Culvert Assets

In accordance with the Canadian Highway Bridge Design Code, a bridge is defined as "a structure that provides a roadway or walkway for the passage of vehicles, pedestrians, or cyclists across an obstruction, gap, or facility and is greater than 3 metres in span."

Culverts are defined as "a structure that forms an opening through soil", as per the Canadian Highway Bridge Design Code. Culverts included in the OSIM inspection have a span greater than or equal to 3 meters, and more than 600 mm of cover. Smaller culverts are not assessed based on OSIM methodology, but are included as part of the Stormwater network.

The Township maintains 111 bridges/culverts with a total replacement value of over $124 million. Township bridges and culverts are maintained by the Engineering division, and provide critical services throughout the Township. Substantial future capital investments are required for bridge and culvert assets which are nearing the end of their service life.

Figure 2-15
Average Age VS Average Useful Life of Bridge Assets

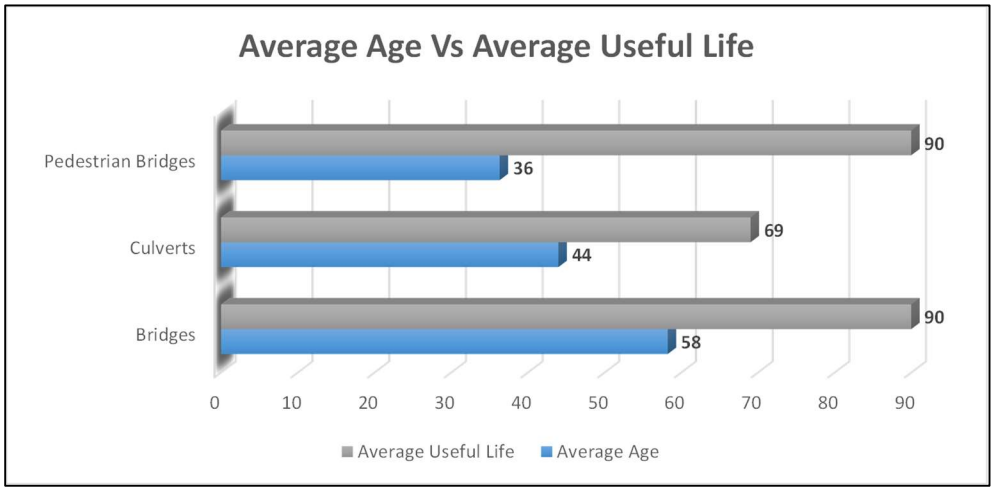


Table 2-8
2022 Bridge Assets

Asset Type	Count
Bridges	53
Culverts	52
Pedestrian Bridges	6

CONDITION

The condition of Township bridges and large culverts is assessed every two years, in accordance with the Ontario Structure Inspection Manual (OSIM), by external consultants. The inspection reports produce a list of priority investments through a recommended Time of Need (TON) assessment.

Bridges are made up of various components, each of which deteriorate at different rates. The OSIM inspections visually evaluate each component of the structure and classify it by condition. These individual component condition scores are compiled into a summary metric, the Bridge Condition Index (BCI). In addition to a visual inspection, the need for further detailed inspection of structures is defined within the OSIM report, which would provide more information on the rehabilitation requirements of the structure.

Each structure is assigned a condition rating based on the Bridge Condition Index (BCI). The BCI ranges from 0, indicating that a bridge is in poor condition and requires replacement, to 100, indicating that a bridge is in excellent condition. The BCI takes into consideration a weighted average condition of the components in each structure, and is classified into one of three categories[1]:

Condition	BCI	Maintenance Schedule
Good	70 – 100	Maintenance is not usually required within the next five years.
Fair	60 – 70	Maintenance work is usually scheduled within the next five years. This is the ideal time to schedule major bridge repairs to get the most out of bridge spending.
Poor	Less than 60 BCI	Maintenance work is usually scheduled within one year.

The following is the standardized five-point scale:

Scale	BCI	Associated Work
Very Good	>80	Deck cleaning, drainage outlets cleanout
Good	60 – 79	Deck cleaning, drainage outlets cleanout
Fair	40 – 59	Deck cleaning, drainage outlets cleanout, new asphalt deck surface, waterproofing, rehabilitation
Poor	20 – 39	Rehabilitation, Reconstruction
Very Poor	<20	Reconstruction

[1] http://www.mto.gov.on.ca/english/highway-bridges/ontario-bridges.shtml

The table to the right provides a visual depiction of bridges and culverts with varying BCIs:

Summary of condition ratings for this asset class are detailed below.

Figure 2-16
Bridge Condition

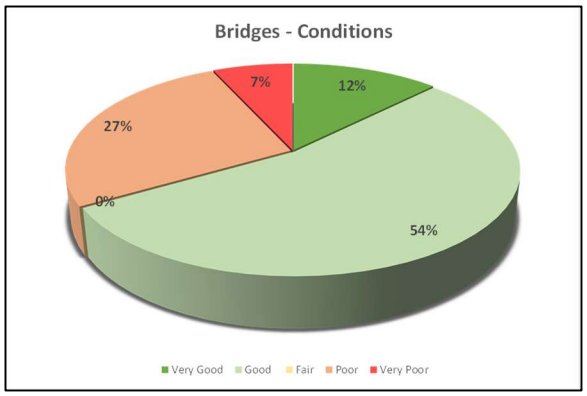


Figure 2-17
Culvert Condition

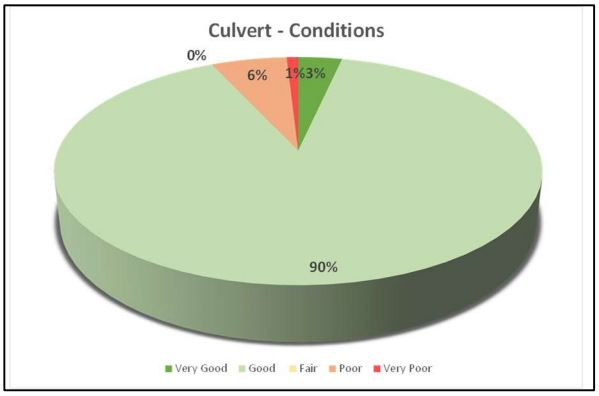
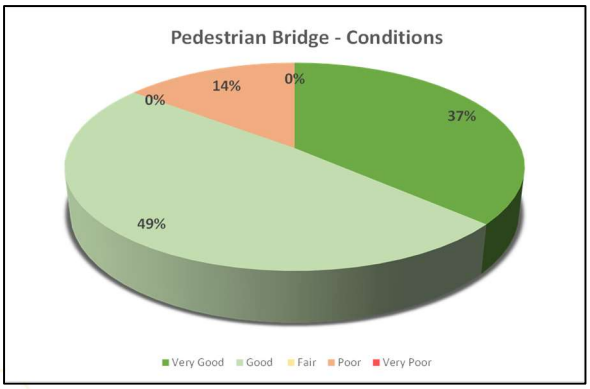
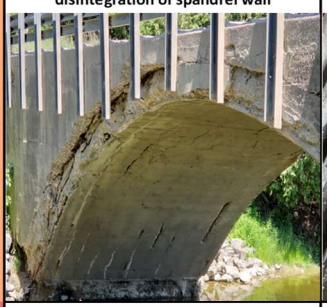
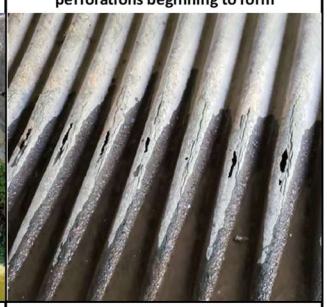


Figure 2-18
Pedestrian Bridge Condition



Condition	Bridges	Culverts
Very Good (80-100)	9-WG (BCI 95) Prestressed concrete girder bridge 	6-E (BCI 83) Precast quickspan culvert 
Good (BCI 70 - 80)	18-WG (BCI 75) Acrow panel bridge 	14-WG (BCI 75) Structural plate corrugated steel arch 
Fair (BCI 60 - 70)	4-E (BCI 66) Spalls with exposed corroded rebar at soffit 	9-P (BCI 66) Moderate raveling with some erosion at waterline on outlet component 
Poor (BCI 50 - 60)	16-WG (BCI 56) Concrete spall and disintegration of spandrel wall 	22-N (BCI 56) Severe corrosion and perforations beginning to form 
Very Poor (BCI 0 - 50)	32-P (BCI 37) Large spall with exposed corroded reinforcement of exterior girder 	7-WG (BCI 25) Wide cracks with efflorescence on wingwall, fascia, and curb 

ASSET RISK

Risk of maintaining bridge assets has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) of the asset. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure. The matrix used for the risk assessment of Bridge & Culvert assets for the Township of Centre Wellington is detailed below:

Table 2-9
Risk Matrix for Core Infrastructure
Bridges and Culvert Assets

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Critical	Critical	Critical	Critical	Critical

Using the risk matrix above and applying it to the bridge inventory maintained by the Township, we can determine the average risk by asset type within this class. Average risk by asset type within this class is detailed in the following figures:

Figure 2-19
Bridge – Average Risk

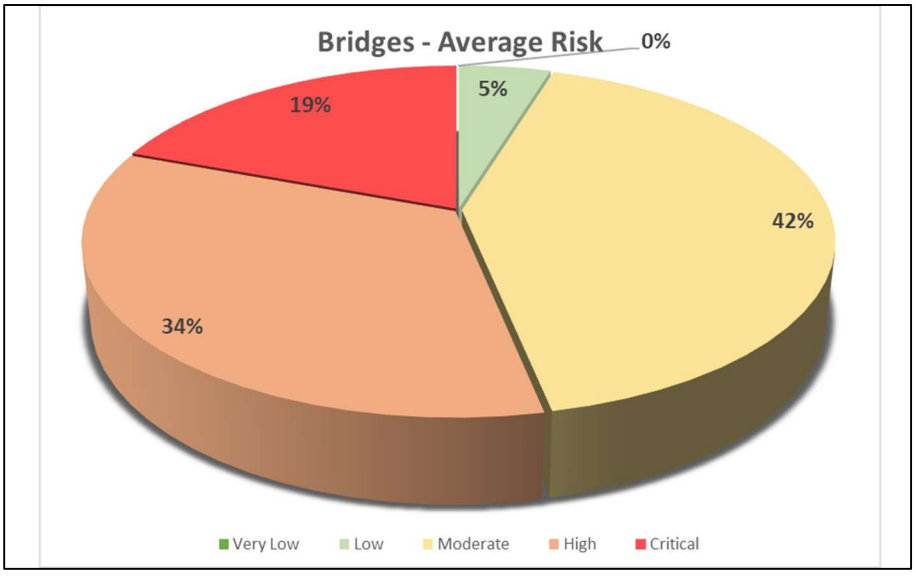


Figure 2-20
Culvert – Average Risk

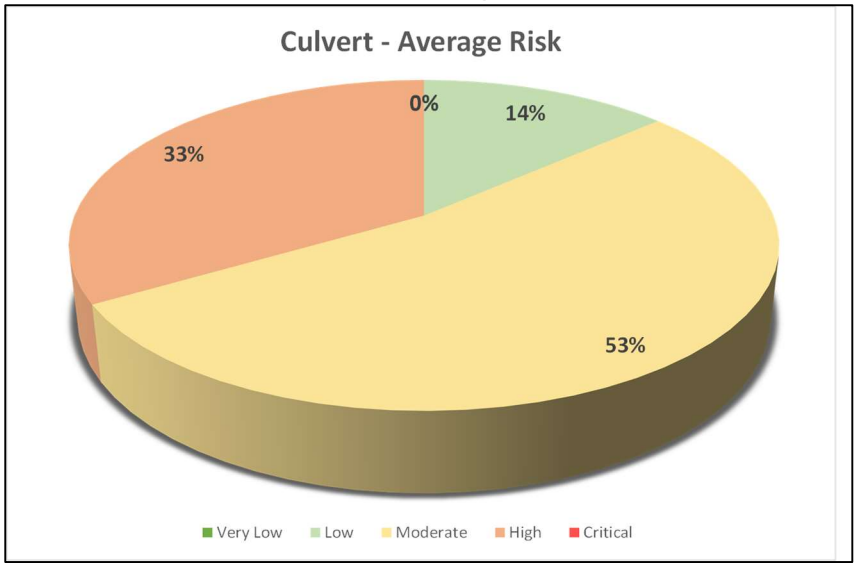
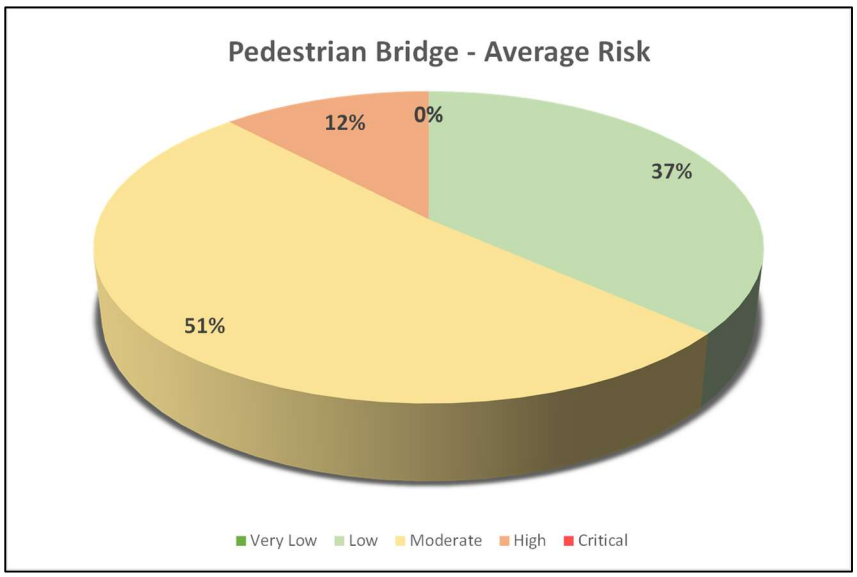


Figure 2-21
Pedestrian Bridge – Average Risk



See figure B-12 in Appendix B for mapping of bridge & culvert risk conditions throughout the Township.

FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's bridge and culvert assets, the annual investment required to maintain the Township's transportation system (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Asset Type – description of the assets being categorized

Annual Investment (Based on Useful Life) – This value indicates the annual investment that should be directed to the asset type to ensure future funding is available to conduct rehabilitation or replacement if investment had begun on the original in-service date of the asset.

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Backlog – This is the underserviced spending need for assets that are beyond their expected useful lives but have not been rehabilitated or replaced, nor have funds been established for the maintenance or rehabilitation of same. This value represents the investment required today to replace these assets.

Recommended Annual Investment – This value indicates the recommended annual investment over the remaining lives of the assets within each of the classes and is calculated as the replacement cost divided by the expected remaining useful life but does not take into consideration Backlog. By investing this amount, the Township is ensuring that sufficient dollars will be available in the future to address lifecycle intervention needs.

Table 2-10
Annual Investment in Bridges and Culverts

	Annual Investment			
Asset Type	**Based on Useful Life**	**Based on Remaining Life**	**Backlog**	**Recommended Annual Investment (2022 $)**
Bridge	1,034,439	2,109,986	26,977,293	**2,109,986**
Culvert	390,289	1,620,856	1,113,173	**1,677,000**
Pedestrian Bridge	46,008	50,592	496,501	**75,000**
Total	**$ 1,470,736**	**$ 3,781,434**	**$ 28,586,966**	**$ 3,861,986**

Facility Assets

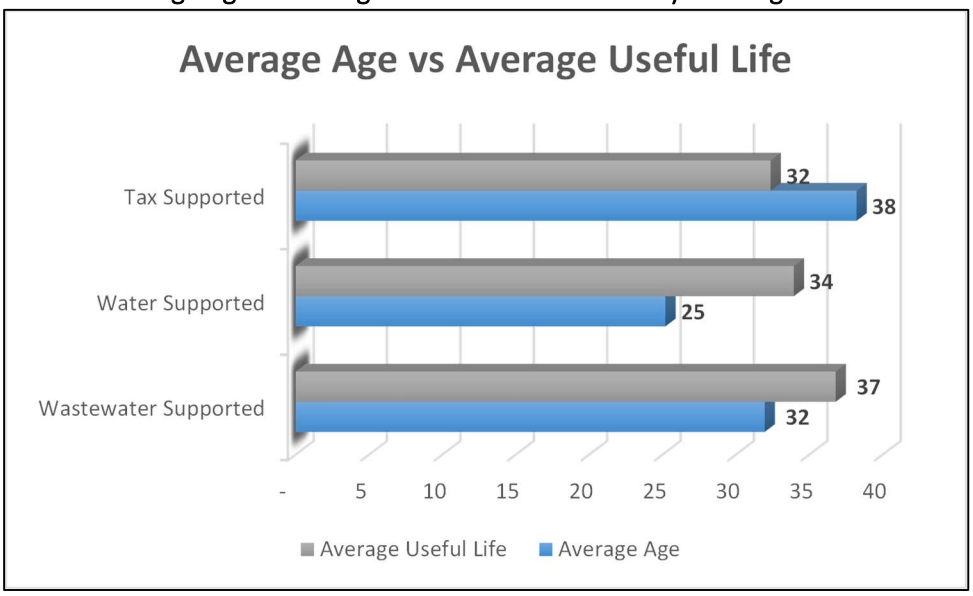
The Township, like all organizations, requires faciltiies from which staff can work to manage the Township services and operations. In addition, the Township offers administration, recreational, cultural and tourism activities and requires buildings to provide these services to residents, taxpayers and visitors.

The buildings and facilities that the Township owns and maintains range in size and age. The management of these facilities fall under multiple service areas.

In 2021 a Building Condition Audit was completed for most Township owned buildings. This audit broke out the Township's facilities by components as in relation to asset management, buildings are not considered a single asset. Each building contains many components that vary by age, condition, risk and treatment in regards to type of lifecycle intervention.

See Figure B-13 in Appendix B for a map of Township owned facilties.

Figure 2-22
Average Age vs Average Useful Life of Facilties by Funding Source



CONDITION

The condition of Township owned facilities are based on the intervention year of the components of each building. An average was taken of all the components of each building to formulate an average condition score for Township owned facilities. These facilities and conditions are detailed below by funding source.

Figure 2-23
Tax Supported Buildings
Average Condition Rating

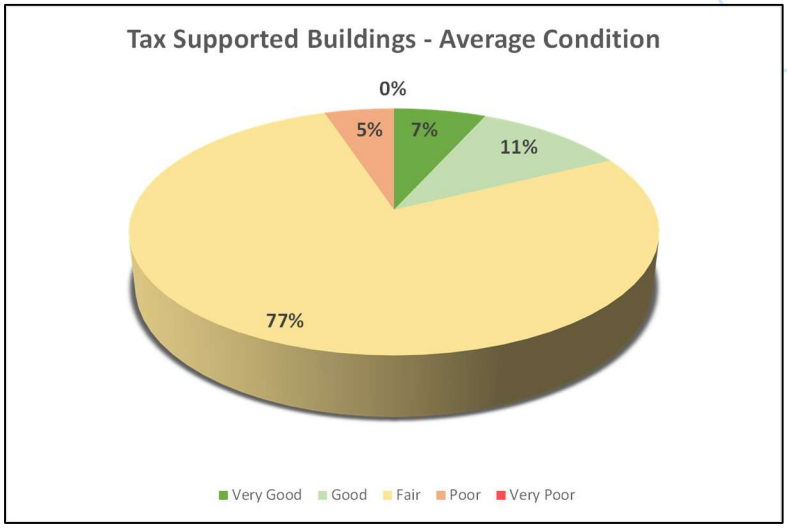


Figure 2-24
Water Supported Buildings
Average Condition Rating

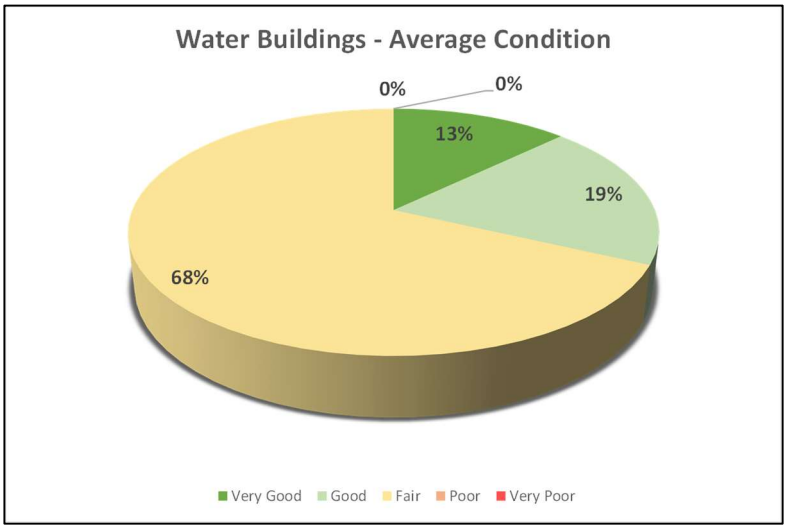


Figure 2-25
Wastewater Supported Buildings
Average Condition Rating

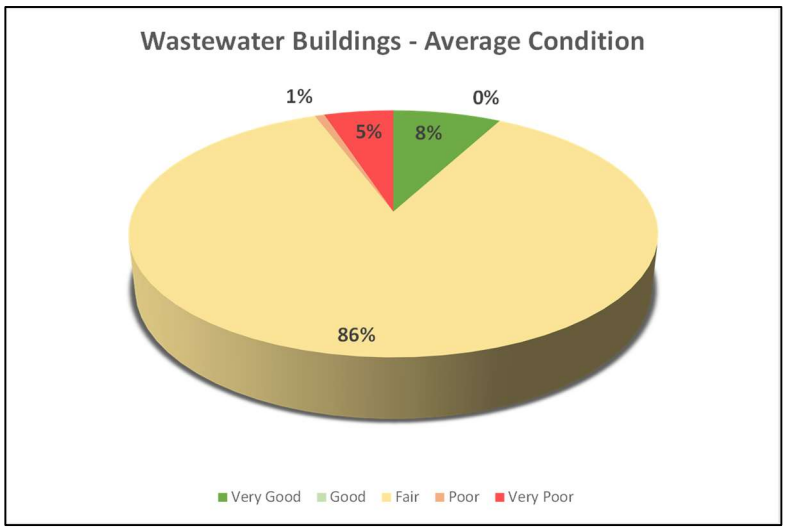
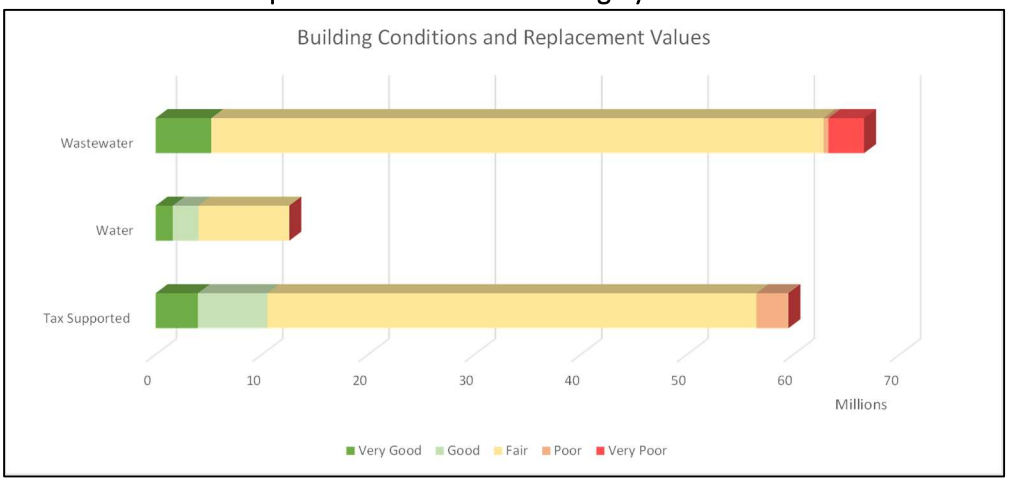


Figure 2-26
Replacement Values of Building by Condition



ASSET RISK

Risk of owning / operating Township facilities has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) of each building component. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

Average risk, for Township owned facilities was calculated based on all components of each building. The below figures provide an overview of the average risk for all Township facilities, and are segmented by funding source.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

Figure 2-27
Tax Supported Buildings
Average Risk Rating

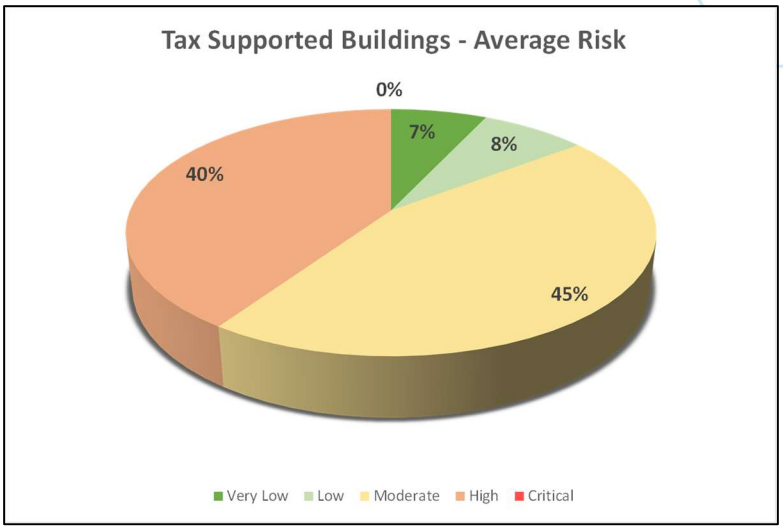


Figure 2-28
Water Supported Buildings
Average Risk Rating

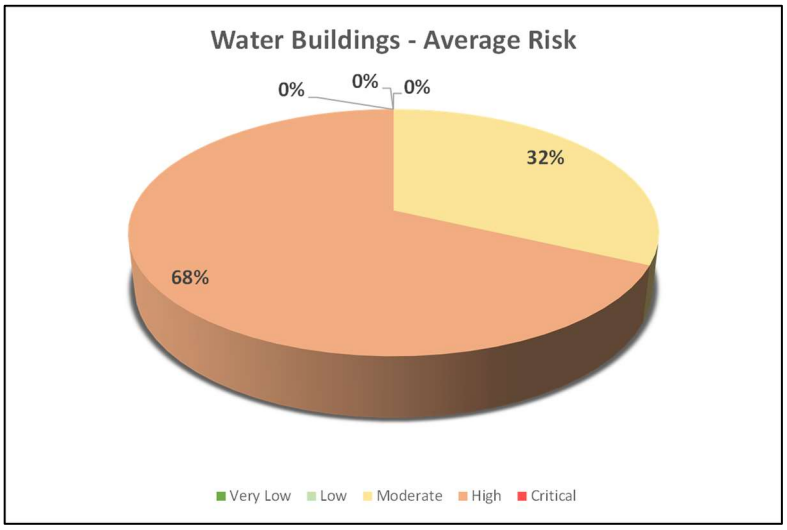
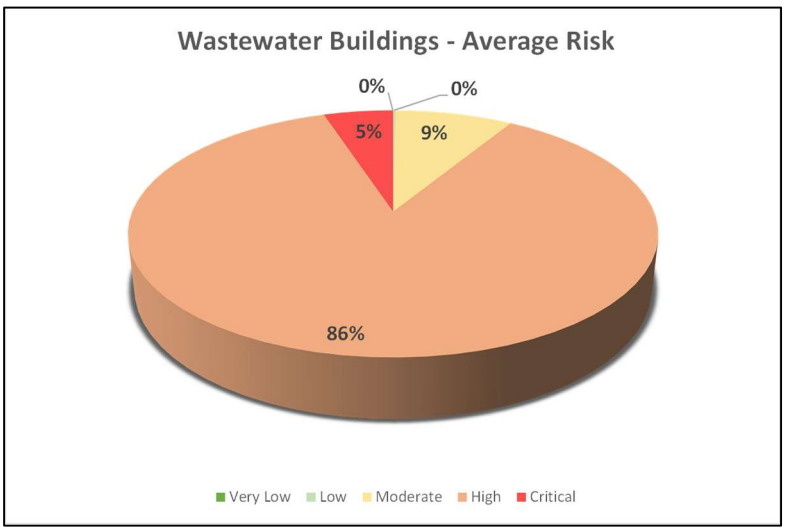


Figure 2-29
Wastewater Supported Buildings
Average Risk Rating



FINANCIAL

It was determined during our Building Condition Audit that there are several components in Township buildings that ideally would be replaced or repaired in 2021. As this amount of work would not be feasible, 2021 costs have been shown as a backlog in the annual investment chart. The remaining annual investment is based on the average cost needed per year over a 20-year horizon.

Based on the replacement values contained within this dataset, and specific to the Township's facilities assets, the annual investment required to maintain the Township's assets (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Asset Type – description of the assets being categorized

Annual Investment (Based on Useful Life) – This value indicates the annual investment that should be directed to the asset type to ensure future funding is available to conduct rehabilitation or replacement if investment had begun on the original in-service date of the asset.

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Backlog – This is the underserviced spending need for assets that are beyond their expected useful lives but have not been rehabilitated or replaced, nor have funds been established for the maintenance or rehabilitation of same. This value represents the investment required today to replace these assets.

Recommended Annual Investment – This value indicates the recommended annual investment over the remaining lives of the assets within each of the classes and is calculated as the replacement cost divided by the expected remaining useful life but does not take into consideration Backlog. By investing this amount, the Township is ensuring that sufficient dollars will be available in the future to address lifecycle intervention needs.

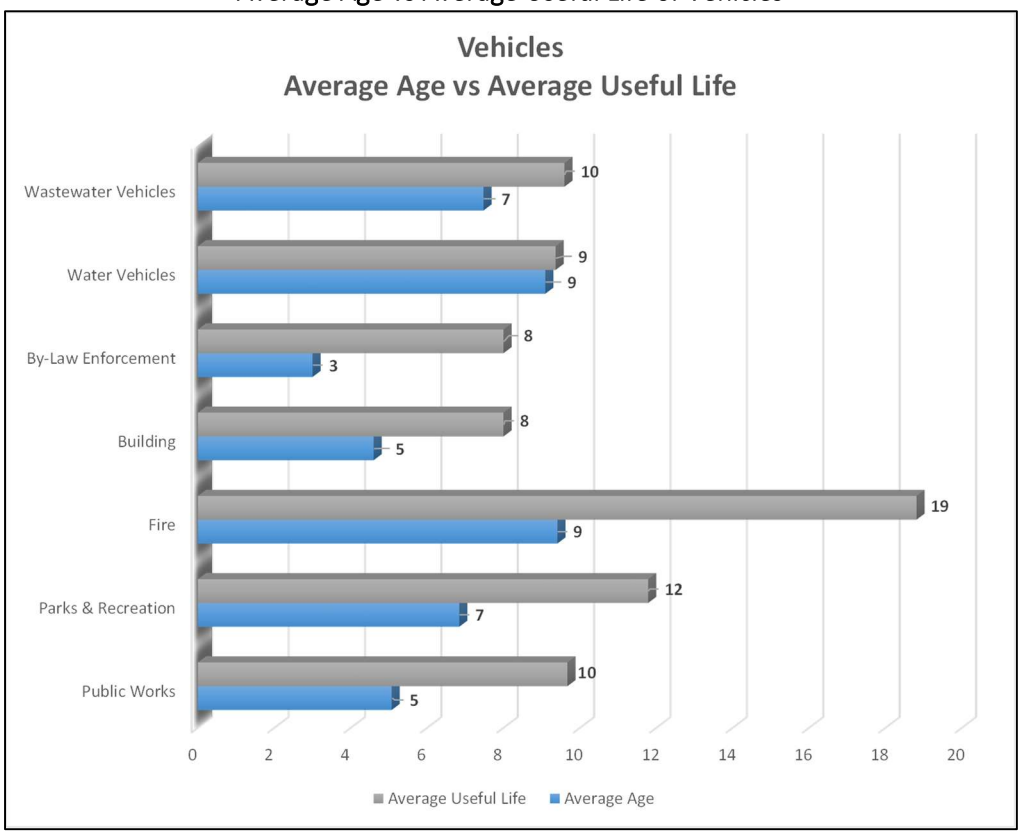
Table 2-11
Annual Investment in Facilties

	Annual Investment		
Asset Type	**Based on 20 Year Forecast**	**Backlog**	**Recommended Annual Investment (2022 $)**
Buildings - Tax Supported	1,525,772	2,019,791	**1,626,761**
Buildings - Water Supported	144,425	66,693	**147,760**
Buildings - Wastewater Supported	797,360	835,845	**839,152**
Total	**$ 2,323,132**	**$ 2,855,636**	**$ 2,613,673**

Vehicles

Many Township departments require vehicles in order to perform their duties and provide various services. The types of vehicles that the Township owns and maintains range from small passenger vehicles to heavy equipment for construction operations and snow removal. There is also specialized equipment such as fire trucks, lawn mowers and ice resurfacers. These vehicles carry useful lives that vary by department, and use. The following figure depicts the useful lives of the vehicles in servce across the Township's business segments.

Figure 2-30
Average Age vs Average Useful Life of Vehicles



CONDITION

The Township of Centre Wellington does not have a formal mechanism for tracking vehicle condition. Therefore the Township uses age as a proxy for condition. Age-based condition can only be used as a proxy to guide replacement decisions and knowledge of vehicles usage, mileage and maintenance expenditures is utilized when making the decision to replace a vehicle.

Figure 2-31
Average Condition of Vehicles
Tax Supported

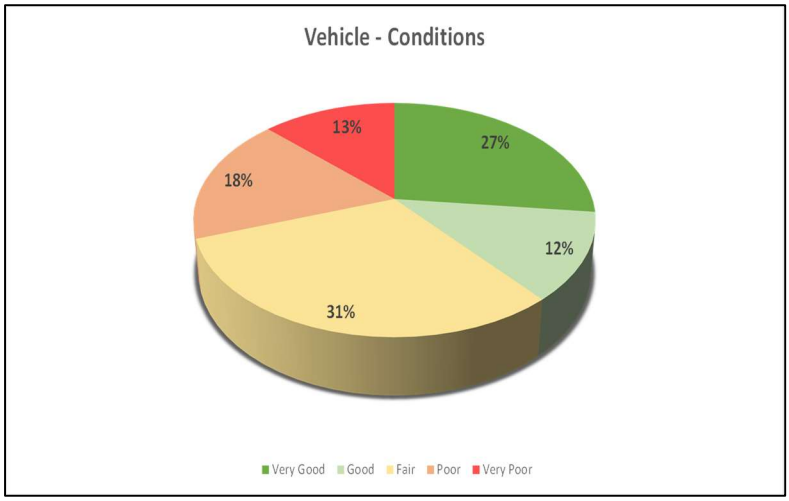
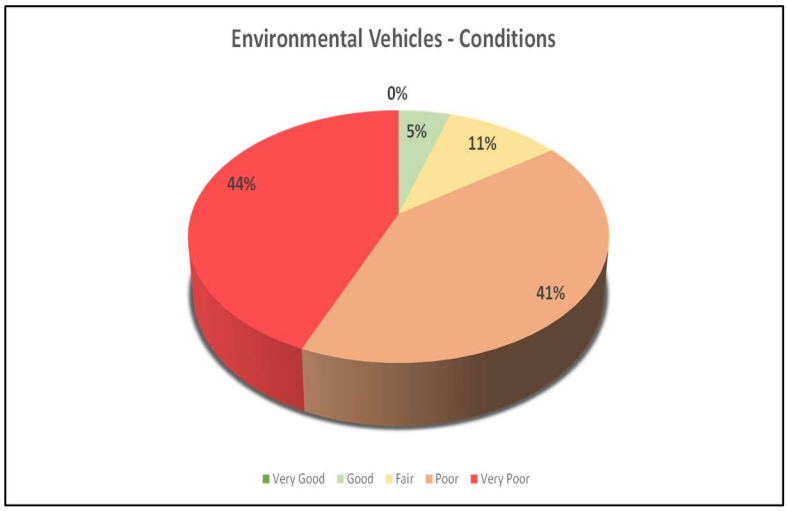


Figure 2-32
Average Condition of Vehicles
Environmental Supported



ASSET RISK

Risk of owning / operating Township vehicles has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) each service department. Each PoF and CoF are comprised of several factors in determining the score associated with each asset. Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

The matrix used for the risk assessment of vehicle assets for the Township of Centre Wellington is detailed below:

Table 2-12
Risk Matrix for Vehicles

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Moderate	Moderate	High	Critical	Critical

Using the risk matrix above and applying it to the vehicle inventory maintained by the Township, we can determine the average risk of vehicle ownership in both the tax and rate supported assets in this class. Average risk by funding source within this class is detailed in the following figures:

Figure 2-33
Average Risk of Vehicles
Tax Supported

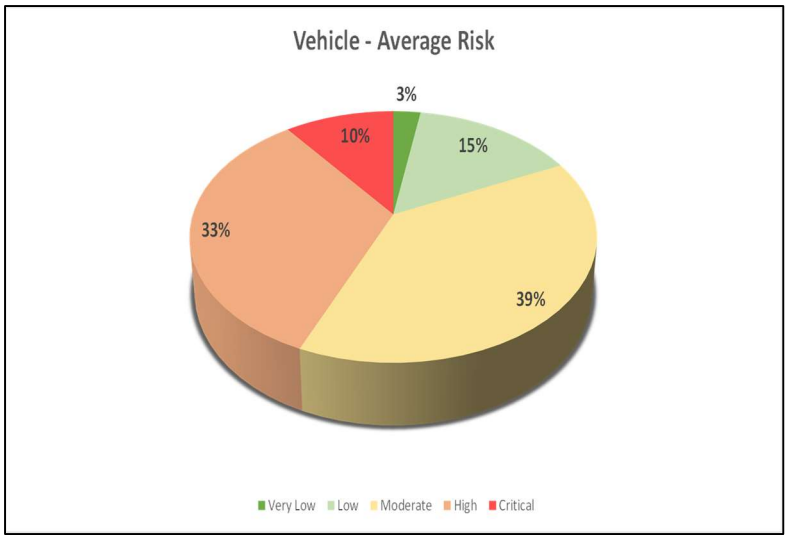
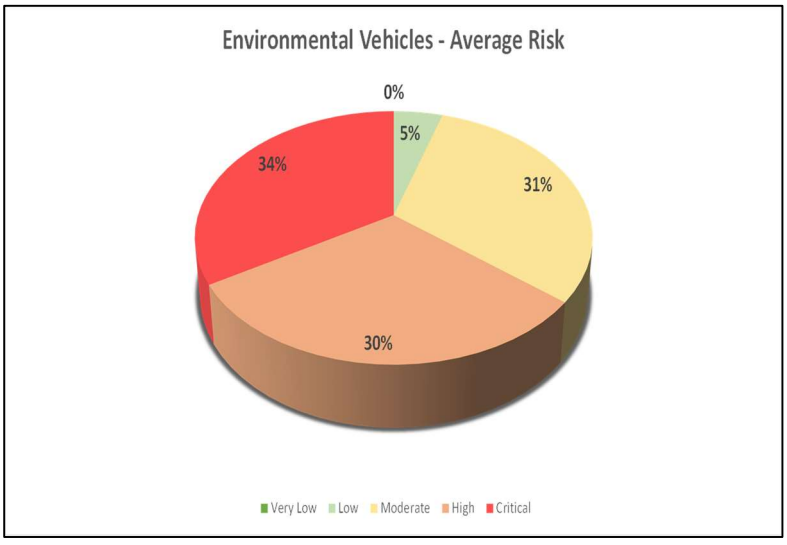


Figure 2-34
Average Risk of Vehicles
Environmental



FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's vehicle assets, the annual investment required to maintain the Township's vehicle inventory (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Estimated annual investment in vehicles is $1,235,550 for tax supported assets and $202,938 for environmental supported assets, for a total of $1,438,488 per year.

Table 2-13
Annual Investment of Vehicles

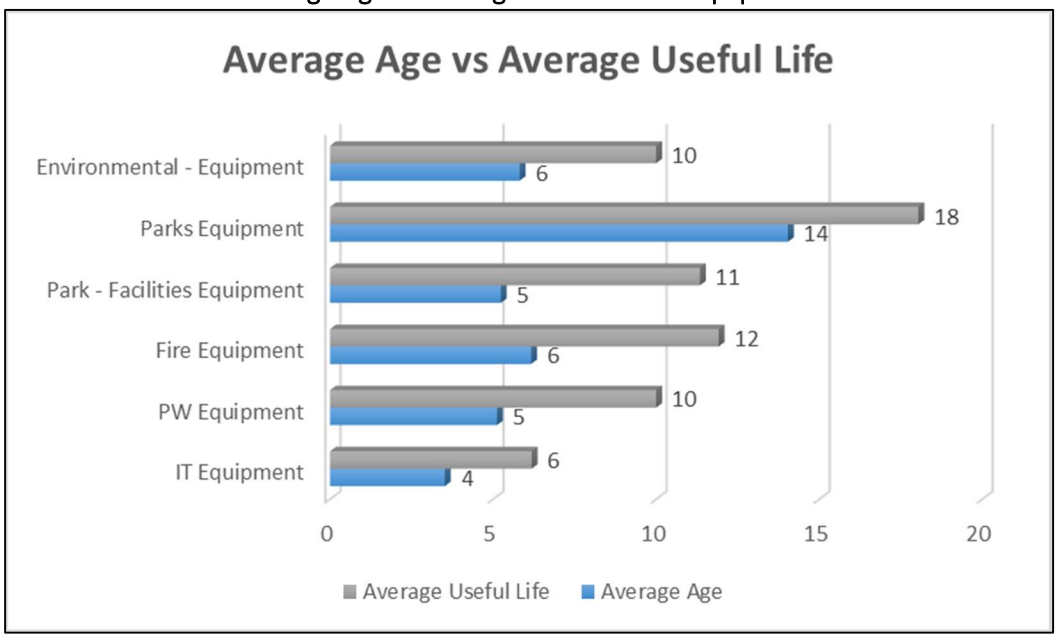
Annual Investment of Vehicles	
Public Works	757,250
Parks & Recreation	97,246
Fire	351,054
Building	25,000
By-Law	5,000
Environmental	202,938
Total	**$ 1,438,488**

ASSET SUMMARY

Equipment

The Township owns and maintains a large amount of equipment. Equipment varies in useful life and value depending on the type of equipment and what it is used for. Examples of Township equipment include computers, servers, weed eaters, snow blowers, fire equipment, tables and chairs; and playgrounds.

Figure 2-35
Average Age vs Average Useful Life of Equipment



CONDITION

Average condition for Township equipment is based on age in relation to useful life. Condition ratings are not typically maintained on smaller equipment, but annual replacments are included as part of the budget process. Condition has been based on how imminent the replacement of these items are.

Figure 2-36
Average Condition of Equipment – Tax Supported

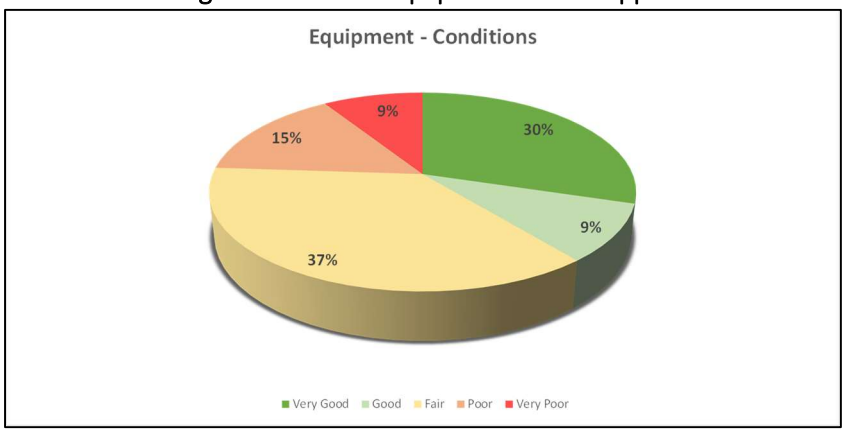
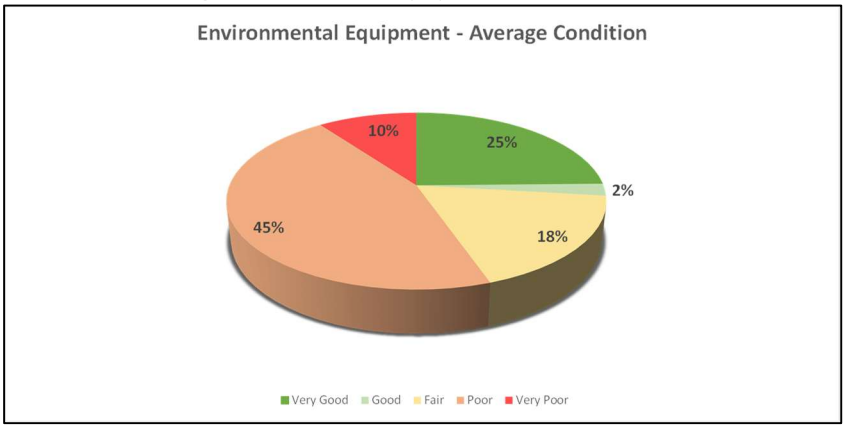


Figure 2-37
Average Condition of Equipment – Environmental



ASSET RISK

Risk of owning / operating Township equipment has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) for each service department. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

The matrix used for the risk assessment of equipment assets for the Township of Centre Wellington is detailed below:

Table 2-14
Risk Matrix - Equipment

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Moderate	Moderate	High	Critical	Critical

Using the risk matrix above and applying it to the equipment inventory maintained by the Township, we can determine the average risk of equipment ownership in both the tax and rate supported assets in this class. Average risk by funding source within this class is detailed in the following figures:

Figure 2-38
Average Risk of Equipment – Tax Supported

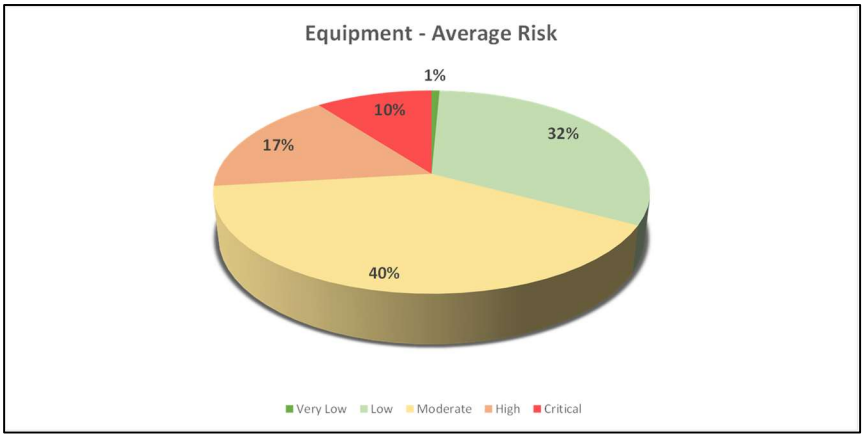
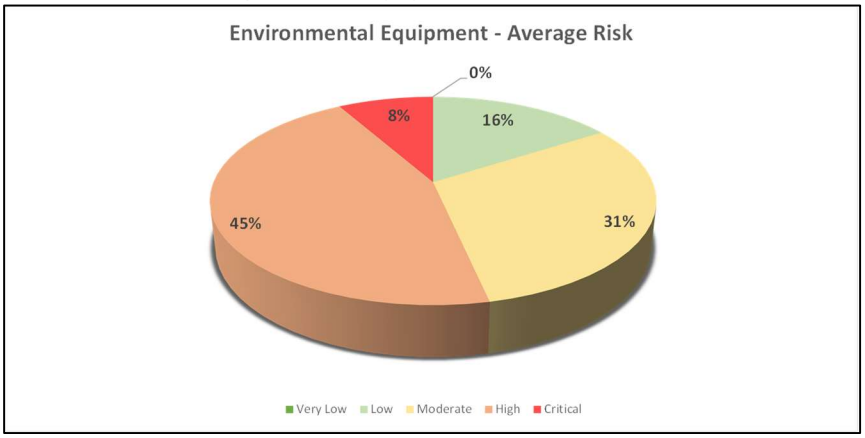


Figure 2-39
Average Risk of Equipment – Environmental



FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's equipment assets, the annual investment required to maintain the Township's equipment inventory (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Estimated annual investment in equipment for tax supported assets is $731,372 and for environmental supported assets is $78,560, for a total of $809,932 per year.

Table 2-15
Annual Investment of Equipment

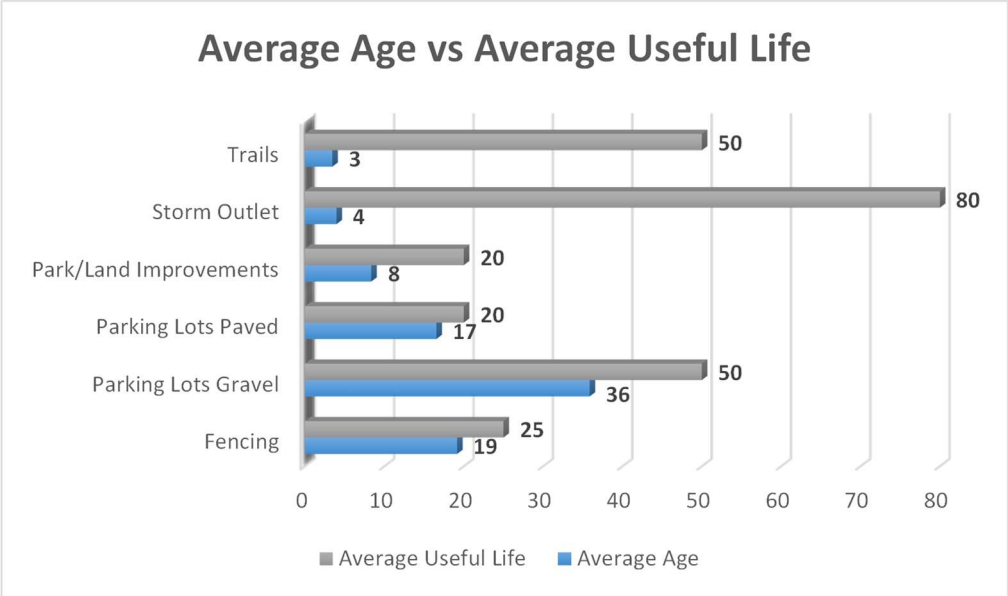
Annual Investment of Equipment	
Information Technology	122,360
Public Works	28,000
Fire	151,931
Parks & Recreation	
- Facilities Equipment	94,233
- Parks Equipment	334,848
Environmental	78,560
Total	**$809,932**

ASSET SUMMARY

Land Improvements

The Township tracks various types of land improvements. Land improvements in this section include: fencing, parking lots, park & land improvements, storm outlets and trails. These assets vary in useful life and are limited in ability to analyse their conditions.

Figure 2-40
Average Age vs Average Useful Life for Land Improvements



CONDITION

Condition of land improvements is based on remaining useful life of these assets. The useful life varies by asset type.

Table 2-16
Average Condition of Land Improvement Assets

Average Condition of Land Improvements	
Fencing	Poor
Parking Lots Gravel	Poor
Parking Lots Paved	Poor
Park/Land Improvements	Fair
Storm Outlet	Very Good
Trails	Very Good

ASSET RISK

Risk of owning / operating Township land improvements has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) for each service department. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

The matrix used for the risk assessment of land improvement assets for the Township of Centre Wellington is detailed below:

Table 2-17
Risk Matrix for Land Improvements

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Moderate	Moderate	High	Critical	Critical

Using the risk matrix above and applying it to the Land Improvements inventory maintained by the Township, we can determine the average risk of Land Improvements. Average risk within this class is detailed in the following table:

Table 2-18
Average Risk of Land Improvement Assets

Average Risk of Land Improvements	
Fencing	Moderate
Parking Lots Gravel	High
Parking Lots Paved	Moderate
Park/Land Improvements	Low
Storm Outlet	Moderate
Trails	Very Low

FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's land improvement assets, the annual investment required to maintain the Township's land improvement inventory (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Table 2-19
Annual Investment of Land Improvement Assets

Annual Investment in Land Improvements	
Fencing	54,671
Parking Lots Gravel	58,579
Parking Lots Paved	177,129
Park/Land Improvements	25,675
Storm Outlet	10,044
Trails	5,443
TOTAL ANNUAL INVESTMENT	$ 331,542

Estimated annual investment for land improvements is $319,700 for tax supported assets and $11,842 for environmental supported assets for a total of $331,542 per year.

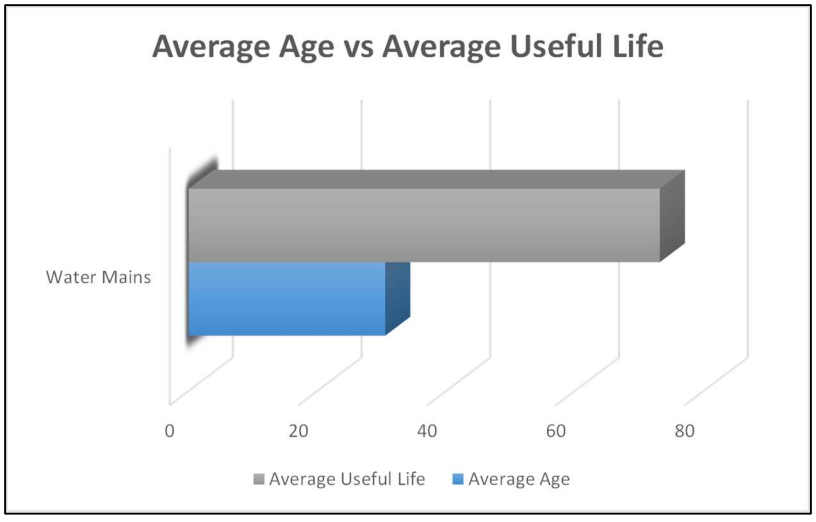
Water Network Assets

The Township's potable water supply and distribution network consists of municipal groundwater wells, water treatment stations, pumping stations, reservoirs, and watermains. The Township supplies residents with safe, high-quality drinking water 24-hrs a day, 365 days a year, and plans for future water supply to ensure that this high level of service will carry-on into the future. The excellent quality of water supplied to the residents of Centre Wellington is attributed to the high-quality bedrock aquifer relied on for supply, and to investments in pumping, treatment, storage, and distribution infrastructure. The Township relies mainly on asset age and watermain break history to prioritize investments in water infrastructure. Further details and specifics regarding the inventory are outlined in following sections.

Table 2-20
Summary of Waterworks Assets

Asset Type	Segment Count	Length (m)
Watermain	1,150	121,140
Water Valve	1,229	
Hydrant	742	
Air Release Valve	6	
Pressure Reducing Chamber	2	
Municipal Well	9	
Water Tower	4	
Booster Station	1	

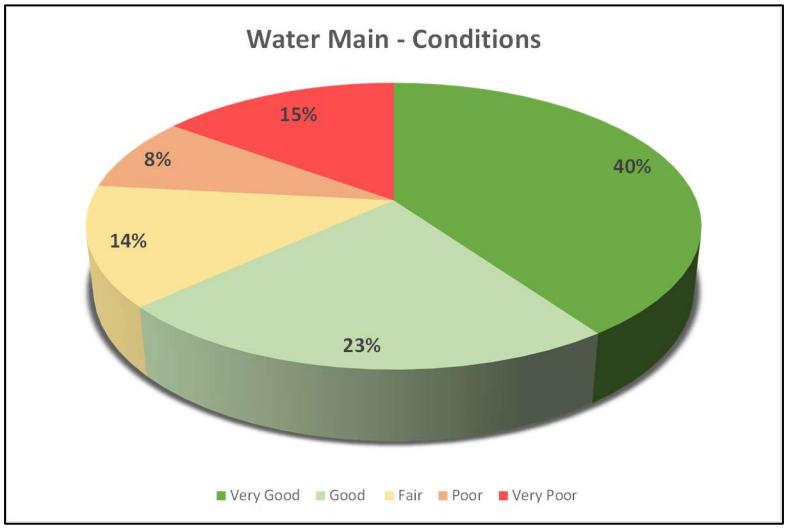
Figure 2-41
Average Age vs Average Useful Life for Water Mains



CONDITION

Condition of water main assets is based on the age of the water main. See Figure B-16 in Appendix B for mapping of the condition of watermains within the Township.

Figure 2-42
Condition of Water Mains



ASSET RISK

Risk of owning / operating Township water distribution assets has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) for these assets. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

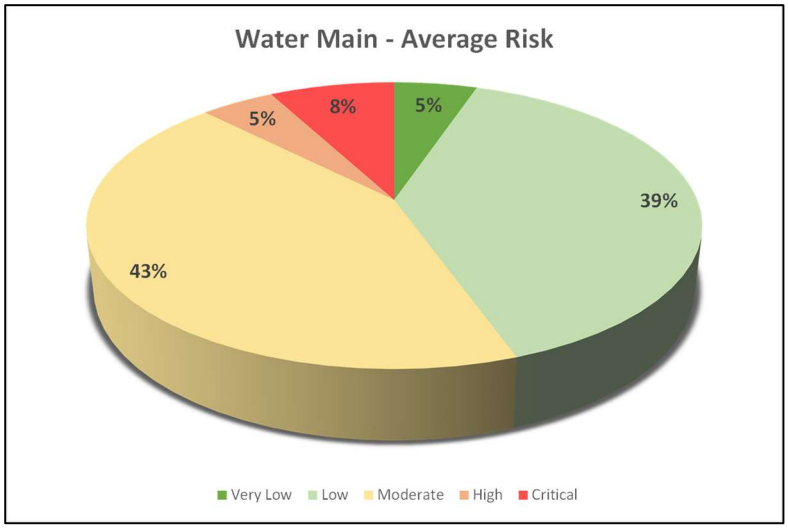
The matrix used for the risk assessment of water network assets for the Township of Centre Wellington is detailed below:

Table 2-21
Risk Matrix for Water Mains

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Critical	Critical	Critical	Critical	Critical

Using the risk matrix above and applying it to the water network inventory maintained by the Township, we can determine the average risk of water main failure. Average risk within this class is detailed in the following figure

Figure 2-43
Average Risk of Water Mains



See Figure B-17 in Appendix B for mapping of the risk of watermains within the Township.

FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's Water Network assets, the annual investment required to maintain the Township's water network inventory (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Asset Type – description of the assets being categorized

Annual Investment (Based on Useful Life) – This value indicates the annual investment that should be directed to the asset type to ensure future funding is available to conduct rehabilitation or replacement if investment had begun on the original in-service date of the asset.

Annual Investment (Based on Remaining Life) – This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Backlog – This is the underserviced spending need for assets that are beyond their expected useful lives but have not been rehabilitated or replaced, nor have funds been established for the maintenance or rehabilitation of same. This value represents the investment required today to replace these assets.

Recommended Annual Investment – This value indicates the recommended annual investment over the remaining lives of the assets within each of the classes and is calculated as the replacement cost divided by the expected remaining useful life but does not take into consideration Backlog. By investing this amount, the Township is ensuring that sufficient dollars will be available in the future to address lifecycle intervention needs.

Table 2-22
Annual Investment in Water Mains

	Annual Investment			
Asset Type	**Based on Useful Life**	**Based on Remaining Life**	**Backlog**	**Recommended Annual Investment (2022 $)**
Water Main	1,557,516	2,667,455	16,700,018	**2,667,455**

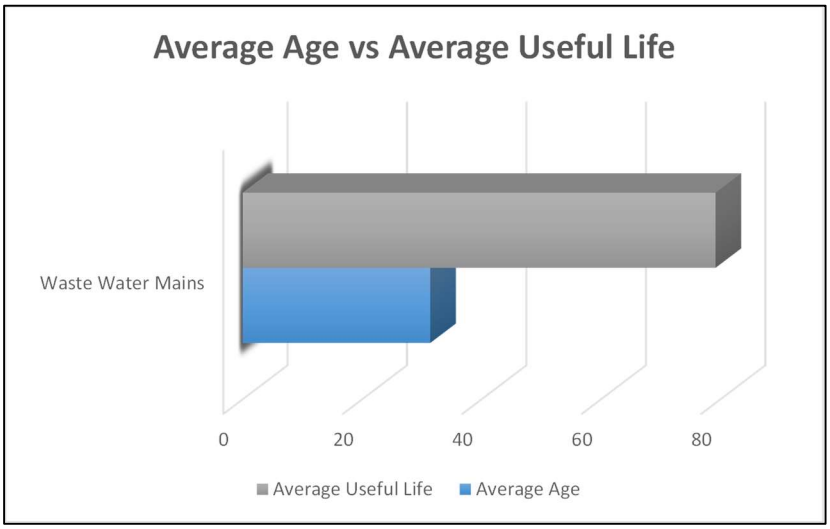
Wastewater Network Assets

The Township collects and treats sanitary wastewater through a system of sanitary sewers, pumping stations, and Wastewater Treatment Plants (WWTP). The Fergus WWTP and Elora WWTP use rigorous processes to treat wastewater and discharge it safely to the Grand River. The Township's wastewater collection systems consist of a series of sewer pipes, some of which were installed almost 100 years ago. Although older pipes can still function very well, they may be more prone to stormwater and groundwater infiltration during wet weather events, which increases flows to WWTPs and puts pressure on the treatment infrastructure. It is therefore advantageous to repair or replace these older pipes to optimize the function of the entire wastewater collection and treatment system. Similar to potable water infrastructure, the Township relies mainly on asset age data to prioritize investments in the sanitary sewer system; however, the Township plans to improve this dataset in future asset management plans through a pipe video inspection program scheduled to start in 2022. Further details and specifics regarding the inventory are outlined in following sections.

Table 2-23
Summary of Wastewater Assets

Asset Type	Segment Count	Length (m)
Wastewater Gravity Main	1,686	104,483
Wastewater Pressure Main	21	2,409
Wastewater Low Pressure Main	54	5,314
Maintenance Hole	1,570	
LPS Air Release Valve	6	
LPS Cleanout Valve	53	
LPS Shutoff Valve	223	
Pumping Stations	7	
Treatment Plants	2	

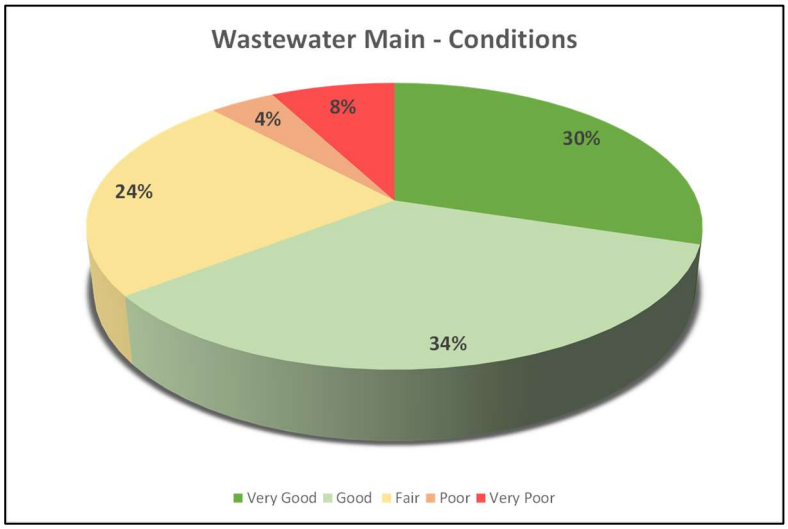
Figure 2-44
Average Age vs Average Useful Life for Wastewater Mains



CONDITION

Condition of wastewater assets is based on the age of the sanitary sewer. See Figure B-20 in Appendix B for mapping of the condition of wastewater mains within the Township.

Figure 2-45
Condition of Wastewater Mains



ASSET RISK

Risk of owning / operating Township wastewater distribution assets has been determined using a matrix framework taking into consideration both the Probability of Failure (PoF) and Consequence of Failure (CoF) for these assets. Each PoF and CoF are comprised of several factors in determining the score associated with each asset.

Improvements to asset and system capacity, function and condition are often limited by available funding and resources. It thus becomes necessary to prioritize asset investments and improvements based on risk exposure.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

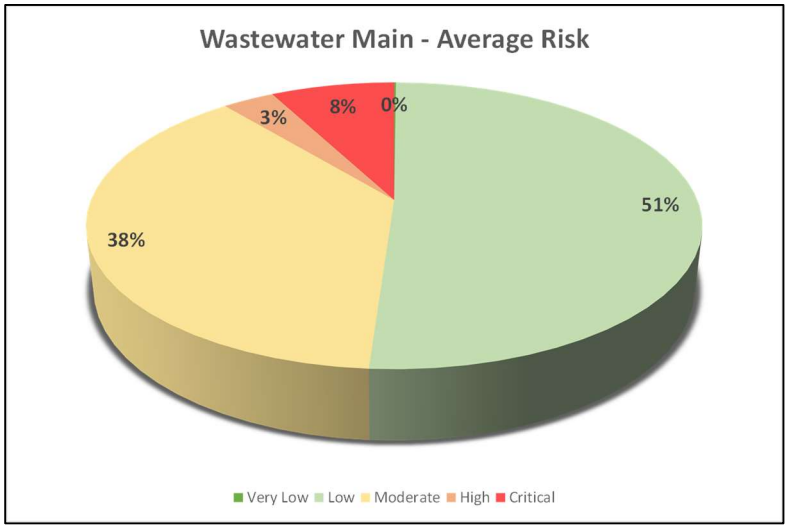
The matrix used for the risk assessment of wastewater network assets for the Township of Centre Wellington is detailed below:

Table 2-24
Risk Matrix for Wastewater Mains

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Critical	Critical	Critical	Critical	Critical

Using the risk matrix above and applying it to the wastewater network inventory maintained by the Township, we can determine the average risk of wastewater main failure. Average risk within this class is detailed in the following figure:

Figure 2-46
Average Risk of Wastewater Mains



See Figure B-21 in Appendix B for mapping of the risk of wastewater mains within the Township.

FINANCIAL

As mentioned in other sections within the Asset Management Plan, the Township of Centre Wellington maintains a robust dataset as it pertains to its asset inventory including replacement costs indicative of current market conditions.

Based on the replacement values contained within this dataset, and specific to the Township's wastewater network assets, the annual investment required to maintain the Township's wastewater inventory (assuming current level of service is maintained) is depicted in the below table, and interpreted as follows:

Asset Type – description of the assets being categorized

Annual Investment (Based on Useful Life) – This value indicates the annual investment that should be directed to the asset type to ensure future funding is available to conduct rehabilitation or replacement if investment had begun on the original in-service date of the asset.

Annual Investment (Based on Remaining Life) - This value indicates the annual investment that should be directed to the asset type to ensure appropriate funds are available to conduct lifecycle interventions, inclusive of replacement, with investment beginning now, and maintained over the remaining useful life of the assets.

Backlog – This is the underserviced spending need for assets that are beyond their expected useful lives but have not been rehabilitated or replaced, nor have funds been established for the maintenance or rehabilitation of same. This value represents the investment required today to replace these assets.

Recommended Annual Investment – This value indicates the recommended annual investment over the remaining lives of the assets within each of the classes and is calculated as the replacement cost divided by the expected remaining useful life but does not take into consideration Backlog. By investing this amount, the Township is ensuring that sufficient dollars will be available in the future to address lifecycle intervention needs.

Table 2-25
Annual Investment in Wastewater Mains

	Annual Investment			
Asset Type	**Based on Useful Life**	**Based on Remaining Life**	**Backlog**	**Recommended Annual Investment (2022 $)**
Wastewater Main	1,069,684	1,915,646	6,531,009	**2,242,000**

Stormwater Network Assets

OVERVIEW

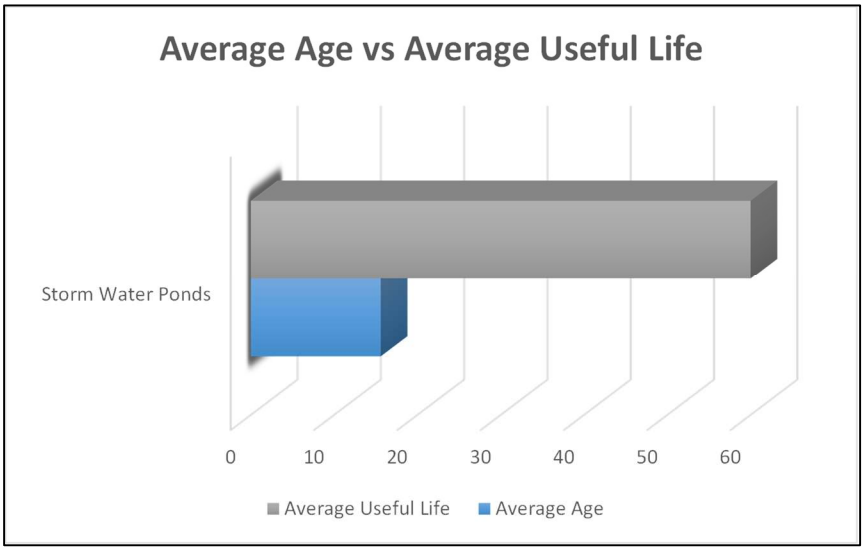
The stormwater management system protects public and private property from flooding by conveying runoff from rainstorms. The stormwater system includes storm sewers, catch basins, maintenance holes and storm ponds. Worth noting here is that the rural ditching system(s) are included in road assets.

The Township maintains 130.6 km of storm sewer pipes, 4760 related point assets, such as catch basins and maintenance holes and 25 stormwater ponds. The inventory of stormwater pond assets has an estimated replacement value of $8.6 million dollars.

Table 2-26
Summary of Stormwater Assets

Asset Type	Segment Count	Length
Stormwater Main	4760	130,627
Stormwater Pond	25	

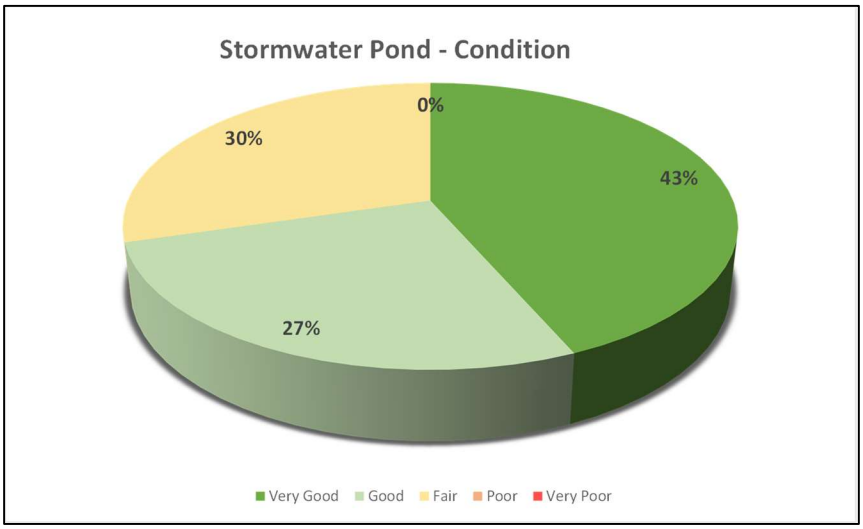
Figure 2-47
Average Age vs Average Useful Life for Stormwater Ponds



CONDITION

The condition of stormwater ponds is based on their age. The Township currently does not track the condition of stormwater mains.

Figure 2-48
Condition of Stormwater Ponds



ASSET RISK

Risk for stormwater ponds is based on the below risk matrix which considers Probability of Failure (PoF) and Consequence of Failure (CoF). The probability of failure is a function of condition, which is based on age.

The concept of risk is further elaborated in Chapter 4 of this Asset Management Plan.

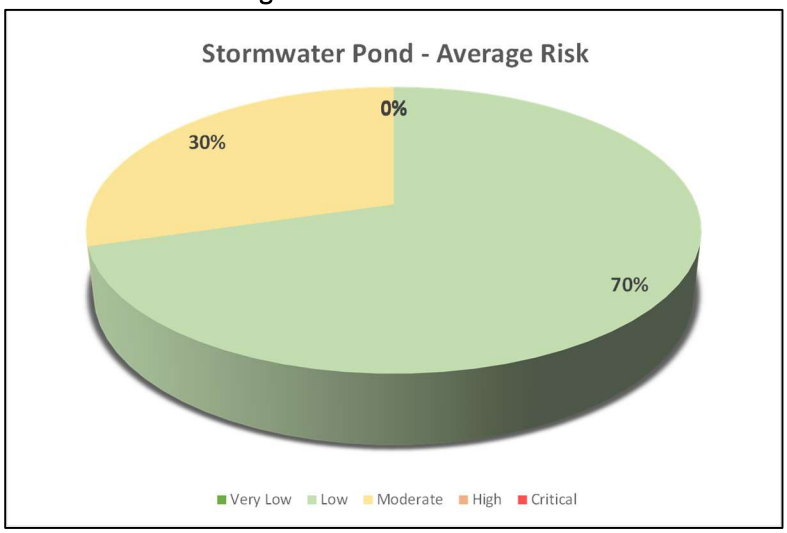
The consequence of failure for all stormwater ponds has been set at low.

Table 2-27
Risk Matrix for Stormwater Mains

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Critical	Critical	Critical	Critical	Critical

Using the risk matrix above and applying it to the stormwater pond inventory maintained by the Township, we can determine the average risk of failure. Average risk within this class is detailed in the following figure:

Figure 2-49
Average Risk of Stormwater Ponds



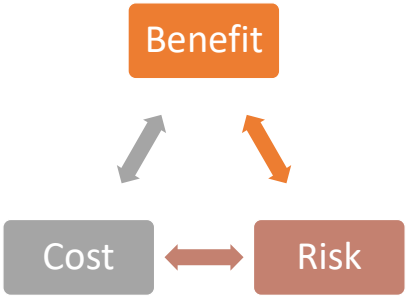
CHAPTER 3

LEVELS OF SERVICE

CHAPTER 3: LEVELS OF SERVICE

OVERVIEW

The most important outcomes of the Township's asset management planning practices are an understanding of the services and service levels to be provided, and balancing these service levels with risk, and the cost associated with providing these services to residents and businesses. Assets are used by municipalities to provide services.



Asset investment decisions are based on the types of services that residents and businesses are (and will be) receiving, as well as the quality (or "level") of those services. The Township strives to strike a balance between providing a breadth of services, at the appropriate levels, while keeping costs and associated risks as low as possible. This balancing of service benefit, risk, and cost is considered the ultimate goal of asset management planning.

This asset management plan reflects the current services and levels of service delivered as well as the proposed future services and levels of service, including assessments of how the Township will fund changes in services and service levels, in moving from "current levels" to "proposed levels". These changes may include enhancing levels of existing services, reduced service levels, or the provision of new services.

There are many factors that play a role in determining what services the Township provides and at what levels. These include various legislative requirements, community expectations, financial constraints, available resources, as well as strategic planning goals and objectives.

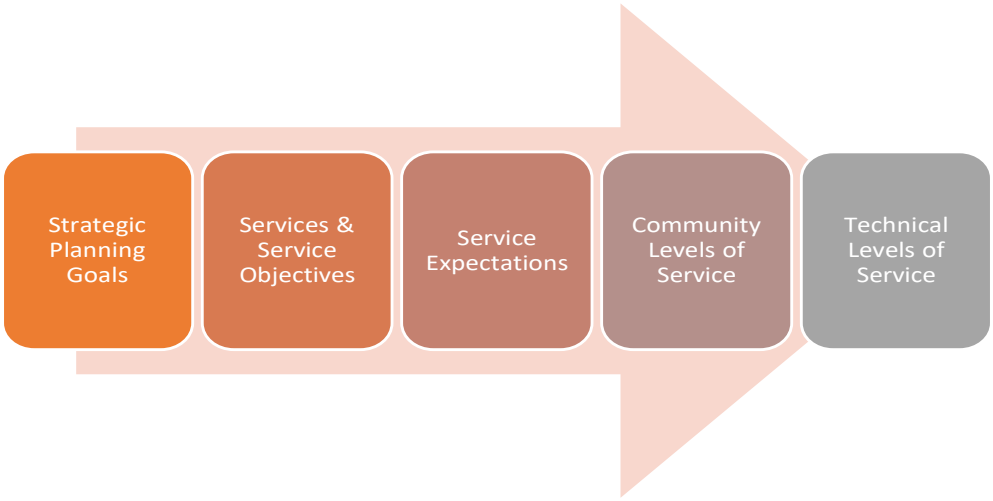
STRATEGIC PLANNING

The primary source of direction for Township services comes from the approved Strategic Plan. Centre Wellington's Strategic Plan is the foundation for decision making across the Township, providing direction for not only the asset management planning process, but also for master plan development, staff reports brought forward to Council, and the annual Township Budget process.

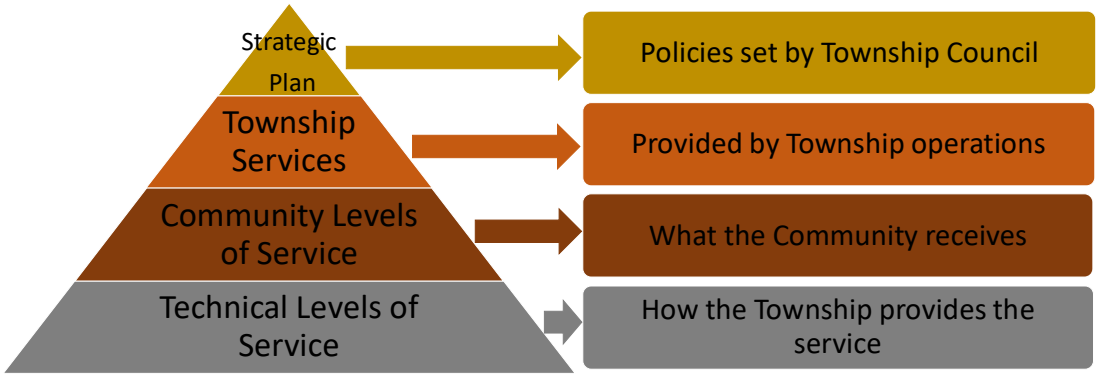
The 2018 to 2022 Strategic Plan outlines the following six overarching goals:

1. Good Financial Management
2. Strong Local Economy
3. Safe & Well-Maintained Roads & Infrastructure
4. Good Government
5. Healthy Growth
6. Active & Caring Community

Each one of these strategic goals are represented within this asset management plan. What's more, this chapter will outline the "line of sight" from strategic planning goals to the technical measures or metrics that Township staff utilize in performing their day-to-day responsibilities in providing services.



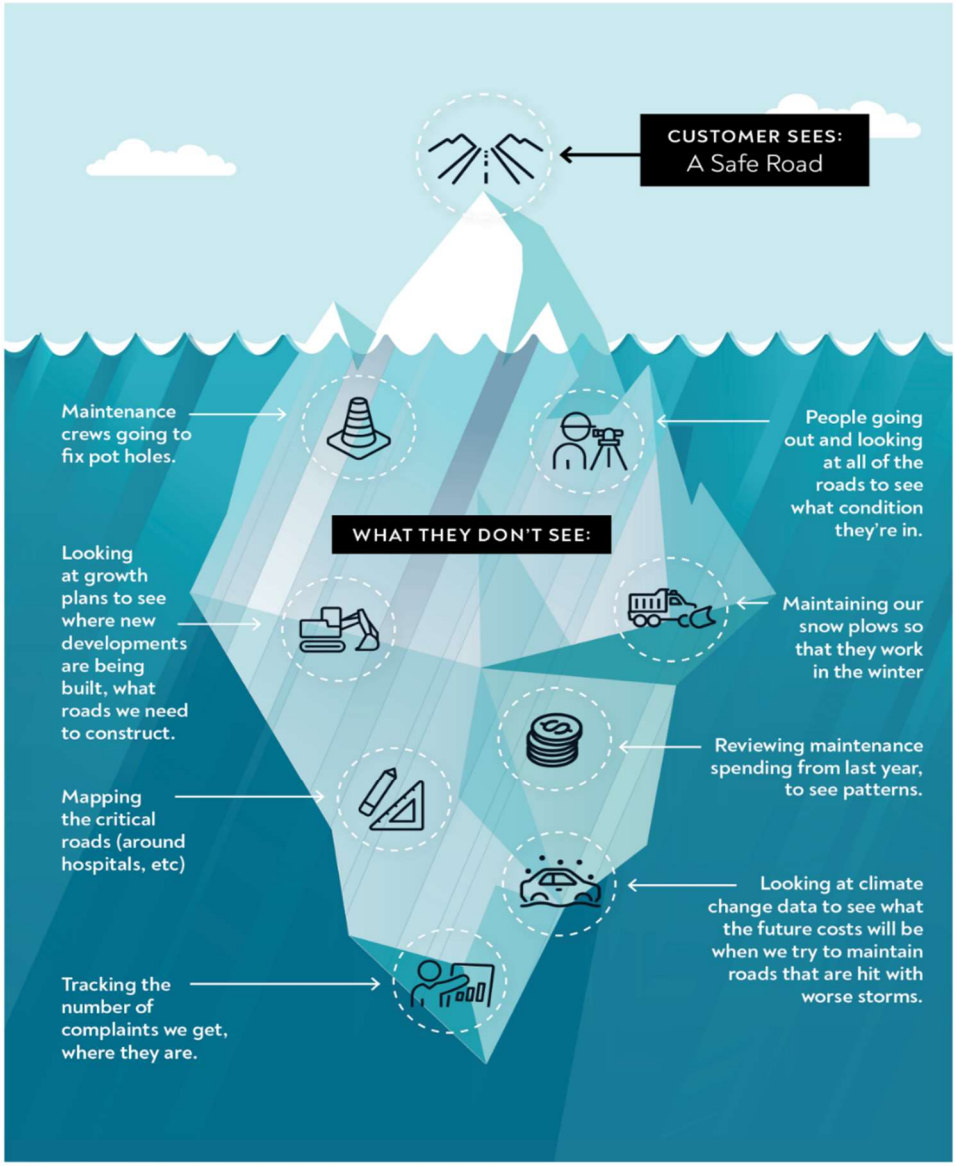
"Line of sight" from a service perspective refers to the alignment of strategic planning goals with the services that are provided, both in terms of what the community is receiving (community levels of service) and what the Township is providing (technical levels of service). Through this exercise, Township staff can see the impacts of their efforts in achieving strategic planning initiatives.



COMMUNITY vs. TECHNICAL LEVELS OF SERVICE

This chapter provides a link between higher-level strategic goals at the Township and the more technical, day-to-day activities completed at the departmental or divisional level. The Township measures progress toward delivering services through performance measurement programs across the organization. Performance is measured from both the community perspective, as well as a technical perspective.

Community levels of service measures reflect services provided from the resident perspective and give us (Township Staff and Council) an idea of service quality, reliability, and sustainability. Technical levels of service are used to evaluate how effectively the Township is delivering services, using metrics and performance measures. A good visualization of this is comparing services to an iceberg. The community levels of service (what the customer sees) is only the tip of the iceberg, with the technical levels of service (what the Township does to provide that service) representing everything that happens below the water, out of view from the customer.



Customer Research and Expectations

This asset management plan has been developed to facilitate consultation prior to endorsement by the Township of Centre Wellington. Future revisions of the asset management plan will incorporate community consultation on service levels and costs of providing the service. This consultation will assist the Township and its stakeholders in matching the level of service required, service risks and consequences with the community's ability and willingness to pay for the service.

Table 3-1
2022 Township Budget Allocator Survey

Service Area	Service Satisfaction Level		
	Increase Budget by 2%	Maintain Existing Budget	Decrease Budget by 2%
Roads & Sidewalk Maintenance	**55%**	45%	0%
Winter Snow Plowing & Removal	12%	**79%**	9%
Winter Sidewalk Maintenance	27%	**52%**	21%
Roads: Brush, Tree Removal & Planting	9%	**61%**	30%

Community satisfaction information is used in developing the Strategic Plan and in the allocation of resources in the budget. Based on the survey results, and as can be gleaned by reviewing Table 3-1 above, in most instances customer expectations and service satisfaction is consistent with maintaining budget (and thus service levels); however, roads and sidewalk maintenance is an area when customers would be willing to increase budget in order to obtain an increased level of service.

TRENDING OF AVERAGE CONDITION OF ASSETS

The tables below detail the weighted average condition of in-service assets by service segment and are broken-out between both tax supported and rate supported services. These condition tables provide indication of past performance and level of service delivered by the Township utilizing condition as a proxy, and help identify trends which indicate areas of stable, increasing or decreasing service delivery.

Table 3-2
Weighted Average Condition of Tax Supported Assets

Tax Supported Assets

Asset Type	Weighted Average Condition (/5)				Trend
	2013	2014	2016	2022	
Bridges	3.0	3.0	3.4	2.6	↓
Culverts	3.9	3.9	3.6	2.1	↓
Pedestrian Bridges	1.3	2.5	3.0	1.9	↓
Roads - Bases	1.8	1.7	1.7	2.5	↑
Roads - Surfaces (Paved)	3.2	3.2	3.3	3.7	↑
Vehicles	n/a	n/a	3.0	3.0	↔
Facilities	3.9	3.8	2.3	3.2	↑
Equipment & Machinery	n/a	n/a	3.1	3.0	↓
Land Improvements	n/a	n/a	2.7	2.4	↓

Table 3-3
Weighted Average Condition of Water Assets

Water Assets

Asset Type	Weighted Average Condition (/5)				Trend
	2013	2014	2016	2022	
Water Infrastructure	2.9	3.0	3.3	2.3	↓
Facilities	3.7	3.8	3.4	3.4	↔
Vehicles	n/a	n/a	3.7	1.0	↓
Equipment & Machinery	n/a	n/a	3.0	2.0	↓

Table 3-4
Weighted Average Condition of Wastewater Assets

Wastewater Assets

Asset Type	Weighted Average Condition (/5)				Trend
	2013	2014	2016	2022	
Sewer Infrastructure	3.0	2.8	3.2	2.3	↓
Facilities	3.0	3.0	3.2	3.0	↓
Vehicles	n/a	n/a	3.7	2.0	↓
Equipment & Machinery	n/a	n/a	2.8	3.0	↑

LEVELS OF SERVICE (LOS) ANALYSIS

The analysis below provides a high-level representation of services and service levels for the following areas:

- Roads Related
- Bridges & Culverts
- Stormwater
- Water Network
- Wastewater Network
- Parks
- Indoor Recreation
- Fire Services

Legislative requirements currently only require this section to include core infrastructure (roads, storm, bridges/culverts, water, and wastewater services); however, parks, indoor recreation and fire services were added as significant service areas. In future asset management plans, other service areas / asset types will be added.

Each service area will be outlined below, indicating the "line of sight" of the service to the Township Strategic Plan as well as the Community Levels of Service and Technical Levels of Service provided. Where asset management legislation requires a specific reference or metric, reference to Ontario Regulation 588/17 has been provided.

When considering levels of service, by service segment, Township staff have detailed Service Objectives, Service Attributes & Expectations, Community Levels of Service, Technical Levels of Service – Performance Measures, Historical Measures for the years 2019-2021, and the Target for each measure. These items are defined as follows:

Service Objective – the service objectives are the macro level of service objective within each service segment which detail the goal of the service being provided, which include outputs and objectives the Township intends to deliver to its citizens, businesses, and other stakeholders.

Service Attributes & Expectations – are the corporate levels of service commitments defined by Township staff and endorsed by Council – these are further defined as follows:

> Capacity & Use: Assessing whether services have enough capacity and are accessible to the customers
>
> Function: Assessing whether services meet customer needs while limiting health, safety, security, natural and heritage impacts
>
> Quality: Assessing whether services are reliable and responsive to customers
>
> Affordability: Assessing whether services are affordable and provided at the lowest cost for both current and future customers

Community Levels of Service – build on the service attributes and expectations mentioned above.

Technical Levels of Service – Performance Measures – once the community levels of service have been established, they are then translated into Technical LOS, where Capacity & Use LOS drive assessment of the Expansion needs; Function LOS drive assessment of Upgrade needs; Quality LOS drive assessment of renewal, operations and maintenance needs; and Affordability LOS drive assessment of Financial Sustainability needs. The risks of failing to achieve the defined Community and Technical LOS are assessed, and life cycle activities are prioritized to address those risks

Historical Measures (2019-2021) – these columns identify the Township's past performance against the defined technical levels of service performance measures and provides levels of service trends over a 3-year horizon.

Target – this column graphically depicts the desired trend for the technical levels of service – performance measures and contextualizes how the Township is performing against these metrics. Each of the target option icons can be interpreted as follows:

- This icon indicates that the technical trend should be consistently maintained

- This icon indicates target trend for the historical measures should be increasing over time

- This icon indicates target trend for the historical measures should be decreasing over time

Roads Related Services

Table 3-5
Roads Levels of Service Line of Sight

Line of Sight

Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Roads Related Assets
Service Objective	Roads that take people and goods where they need to go in a safe and efficient manner
Service Expectations	SCOPE & FUNCTION: Roads that are open and provide efficient transportation.
	QUALITY: Roads that provide a comfortable ride
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-6
Roads Level of Service Metrics

Roads

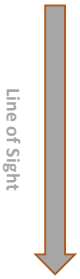
Service Objective	Service Attributes & Expectations	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Roads that take people and goods where they need to go in a safe and efficient manner.	**SCOPE & FUNCTION: Roads that are open and provide efficient transportation.**	Description, which may include maps, of the road network in the municipality and its level of connectivity. **Ont. Reg 588/17- See Figure B-1 and B-2**	Arterial Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**0.01**	**0.01**	**0.01**	↔
			Collector Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**0.19**	**0.19**	**0.19**	↔
			Local Roads: Number of lane-kilometres as a proportion of square kilometres of land area. **Ont. Reg 588/17**	**2.02**	**2.02**	**2.02**	↔
	QUALITY: Roads that provide a comfortable ride	Description or images that illustrate the different levels of road class pavement condition. **Ont. Reg 588/17- See Figures B-3, B-4, B-5, and B-6**	For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Arterial Roads**	**N/A**	**6.72**	**6.72**	↓
			For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Collector Roads**	**N/A**	**7.17**	**7.17**	↓
			For paved roads: the average pavement condition index value. **Ont. Reg 588/17 Local Roads**	**N/A**	**6.86**	**6.86**	↓
			For unpaved roads: the average surface condition (e.g. excellent, good, fair or poor). **Ont. Reg 588/17**	**Poor**	**Poor**	**Poor**	↓

The Township's Road network is maintained to provide a safe and well-maintained means of transportation, as outlined in the Township's Strategic Plan. The road network is inspected in accordance

with Minimum Maintenance Standards (MMS) for Municipal Highways, wherein the Provincial government mandates the frequency of the inspection of roads based on traffic volume and posted speed limits. Roads with higher volumes and higher speed limits are required to be inspected more frequently. The inspection evaluates the existence of shoulder drop offs, cracks, and pavement surface discontinuities that would compromise the ability to drive on the road section at the posted speed limit. Once a defect has been identified, the MMS prescribes the maximum allowable time between identification and time for repair based on the traffic volume and posted speed limit.

Bridges & Culvert Related Services

Table 3-7
Bridges & Culverts Level of Service Line of Sight



Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Bridge & Culvert Related Assets
Service Objective	Bridges & culverts that take people and goods where they need to go in a safe and efficient manner
Service Expectations	SCOPE & FUNCTION: Bridges and culverts that are open and provide efficient transportation
	QUALITY: Bridges and culverts that provide a comfortable ride
	CAPACITY & UTILIZATION: Bridges and culverts with minimized traffic congestion
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-8
Bridges & Culverts Level of Service Metrics

Bridges and Culverts

Service Objective	Service Attributes & Expectations	Community Levels of Service Indicaor	Community Level of Service Performance	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Bridges and culverts that take people and goods where they need to go in a safe and efficient manner.	**SCOPE & FUNCTION: Bridges and culverts that are open and provide efficient transportation.**	Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists). **Ont. Reg 588/17**	The Township's 111 bridges and culverts support vehicular traffic, including heavy and emergency vehicles, with exception of those noted in Figure B-11 as being closed. In terms of pedestrian bridges, all structures are passable by pedestrians and cyclists.	Percentage of open bridges with loading or dimensional restrictions. (excludes closed structures) **Ont. Reg 588/17**	14%	14%	9%	↓
				Percentage of structures in compliance with biennial inspections	100%	100%	100%	100%
	QUALITY: Bridges and culverts that provide a comfortable ride	Description or images of the condition of bridges and how this would affect use of the bridges. **Ont. Reg 588/17**	Please refer to Chapter 2 for and Figure B-11 for additional information relative to condition approximations.	Bridges: Average bridge condition index value. **Ont. Reg 588/17**	67.08	65.74	65.74	↑
		Description or images of the condition of culverts and how this would affect use of the culverts. **Ont. Reg 588/17**	Please refer to Chapter 2 for and Figure B-11 for additional information relative to condition approximations.	Culverts: Average bridge condition index value. **Ont. Reg 588/17**	72.16	70.87	70.87	↑
	CAPACITY & UTILIZATION: Bridges and culverts with minimized traffic congestion.	Map of the bridge network outlining bridges with increased traffic.	**See Figure B-11**	Number of closed bridges/culverts.	11	10	13	↓

The Township's bridge and major culverts are inspected, at a minimum, every 2 years based on Ontario Structure Inspection Manual (OSIM) legislated requirements. Bridges and culverts that are considered a higher risk are inspected more frequently.

Stormwater Services

Table 3-9
Stormwater Level of Service Line of Sight

Line of Sight

Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Storm Related Assets
Service Objective	Protect the community and the environment from storm water runoff, created by rain and snow melt events, by controlling storm water functionality, quality, and capacity
Service Expectations	SCOPE & FUNCTION: Storm Systems that minimizes incidents of flooding
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-10
Stormwater Level of Service Metrics

Storm

Service Objective	Service Attributes & Expectations	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Protect the community and the environment from storm water runoff, created by rain and snow melt events, by controlling storm water functionality, quality, and capacity.	SCOPE & FUNCTION: Storm Systems that minimizes incidents of flooding.	Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system. **Ont. Reg 588/17- See Figure B-22 and B-23**	Percentage of properties in municipality resilient to a 100-year storm. **Ont. Reg 588/17**	82.3%	82.3%	82.3%	↑
			Percentage of the municipal stormwater management system resilient to a 5-year storm. **Ont. Reg 588/17**	80.0%	80.0%	80.0%	↑

The Township stormwater network assets are currently combined with road related assets for asset management purposes.

O.Reg. 588/17 requires municipalities to report the percentage of properties in municipality resilient to a 100-year storm – these are detailed above. Maps showing estimated flood boundaries for 100-year, overlaid on property line maps are detailed in in Appendix B, Figure B-22 and B-23. O.Reg. 588/17 also requires municipalities to report the percentage of the network resilient to a 5-year storm, which are once again detailed above.

Water Network Related Services

Table 3-11
Water Network Level of Service Line of Sight

Line of Sight

Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Water Network Related Assets
Service Objective	Providing safe and reliable drinking water that meets or exceeds the needs of the community and conforms to all applicable regulatory requirements
Service Expectations	SCOPE & FUNCTION: Water systems that support community fire protection, provide adequate water services to the community with minimal interruptions
	QUALITY: Water systems that are safe and reliable
	CAPACITY & UTILIZATION: Providing water services in an efficient manner
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-12
Water Network Level of Service Metrics

Water

Service Objective	Service Attributes & Expectations	Community Levels of Service	Community Level of Service Performance	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Providing safe and reliable drinking water that meets or exceeds the needs of the community and conforms to all applicable regulatory requirements	SCOPE & FUNCTION: Water systems that support community fire protection, provide adequate water services to the community with minimal interruptions	Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system **O. Reg 588/17**	**See Figure B-15**	% of properties connected to the municipal water system **O. Reg 588/17**	N/A	79%	79%	↑
				% of water supply wells with back-up generator capabilities	100%	100%	100%	↔
				% of line valves inspected annually (100% over 5 years)	20%	20%	20%	↔
				Inoperable watermain valves repaired within a year	100%	100%	100%	↔
				% of critical valves inspected annually	100%	100%	100%	↔
		Description, which may include maps, of the user groups or areas of the municipality that have fire flow	**See Figure B-18**	% of properties where fire flow is available **O. Reg 588/17**	N/A	79%	79%	↑
				Sufficient back up power in system - ability to supply average day usage during emergency or power outage	75%	75%	75%	↑
				% of hydrants inspected annually	100%	100%	100%	↔
	QUALITY: Water systems that are safe and reliable	Description of boil water advisories and service interruptions **O. Reg 588/17**	Boil water advisories are issued when there is a potential for contamination of drinking water. Boil water advisories are typically managed via direct contact with residents & businesses, media releases, and coordination with Wellington Dufferin-Guelph Public Heath. Service interruptions are described as any break in continuous service for a period extending beyond 12 hours in duration.	Number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system **O. Reg 588/17**	0%	0%	0%	↔
				Number of connection days per year due to water main breaks compared to the total number of properties connected to the municipal water system **O. Reg 588/17**	12 connection days / 8,300 properties = 0.14%	9 connection days / 8,500 properties = 0.11%	11 connection days / 8,700 properties = 0.13%	↓
				# of watermain breaks	12	9	11	↓
				# of watermain breaks/100 km	0.11	0.08	0.10	↓
				% of ICI properties with backflow prevention devices	100%	100%	100%	↔
	CAPACITY & UTILIZATION: Providing water services in an efficient manner	Discussion of water rates relative to comparable municipalities	**See Table 5-17**	% of unaccounted for water	23%	21%	21%	↓

The Township's water network is operated to ensure safe drinking water, the Township's drinking water system operates under the Safe Drinking Water Act, 2002 and its' associated Regulations.

The Township's drinking water is continually tested, monitored and analyzed to ensure water quality, which is summarized in the Township's Annual Drinking Water Reports, and are readily available on the Township's Website.

The Township has developed and implemented a Quality Management System for the drinking water system in accordance with the Ministry of the Environment mandated Drinking Water Quality Management Standard.

The Quality Management System Policy for Centre Wellington's Drinking Water System states the Township is committed to:

- Comply with all applicable legislation and regulations for the supply of drinking water in the Province of Ontario
- Maintain and continually improve the Quality Management System and Drinking Water System
- Provide safe drinking water to the consumer

A copy of the QMS Operational Plan is available for review at the Infrastructure Services Office.

Wastewater Network Related Services

Table 3-13
Wastewater Network Level of Service Line of Sight

Line of Sight

Strategic Goal	Safe & Well-Maintained Roads & Infrastructure
Assets	Wastewater Network Related Assets
Service Objective	Providing wastewater collection and treatment services that meets or exceeds the needs of the community and conforms to all applicable regulatory requirements
Service Expectations	SCOPE & FUNCTION: Wastewater collection and treatment systems provide adequate water services to the community with minimal interruptions
	QUALITY: Wastewater collection and treatment systems that are safe and reliable
	CAPACITY & UTILIZATION: Providing wastewater collection and treatment services in an efficient manner
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-14
Wastewater Network Level of Service Metrics

Wastewater

Service Objective	Service Attributes & Expectations	Community Levels of Service	Community Level of Service Performance	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Providing wastewater collection and treatment services that meets or exceeds the needs of the community and conforms to all applicable regulatory requirements	**SCOPE & FUNCTION: Wastewater collection and treatment systems provide adequate water services to the community with minimal interruptions**	Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes **O. Reg 588/17**	**Not Applicable**	# of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system **O. Reg 588/17**	**2 events per year/ 8,300 properties = 0.024%**	**2 events per year/ 8,500 properties = 0.023%**	**2 events per year/ 8,700 properties = 0.022%**	↓
		Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches **O. Reg 588/17**	**Not Applicable**	# of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system **O. Reg 588/17**	**0 events per year/ 8,300 properties = 0%**	**1 event per year/ 8,500 properties = 0.012%**	**0 events per year/ 8,700 properties = 0%**	↓
		Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes **O. Reg 588/17**	Inflow (e.g. Maintenance Hole covers), and infiltration (e.g. sanitary pipe joints and cracks permitting groundwater in)	No combined sewer	N/A	N/A	N/A	N/A
		Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events described above **O. Reg 588/17**	New sanitary sewer services are designed/engineered according to the Municipal Servicing Standard.	No combined sewer	N/A	N/A	N/A	N/A
		Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system **O. Reg 588/17**	**See Figure B-19**	% of properties connected to the municipal wastewater system **O. Reg 588/17**	**No information**	**89%**	**90%**	↑
	QUALITY: Wastewater collection and treatment systems that are safe and reliable	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system **O. Reg 588/17**	Fergus WWTP and Elora WWTP both use extended aeration, sand filtration, chemical phosphorous removal and UV treatment. Both WWTPs discharge into the Grand River. Effluent meets ECA requirements.	% of sewer stations with back-up generator capabilities	**100%**	**100%**	**100%**	↔
				# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system **O. Reg 588/17**	**4 violations / 8,300 properties = 0.048%**	**1 violation / 8,500 properties = 0.012%**	**0 violations / 8,700 properties = 0%**	↓
				% removal of targeted parameters as defined in the ECA **Fergus**	**90.7% to 98.4%**	**97.1% to 99.3%**	**95.6% to 98.7%**	↑
				% removal of targeted parameters as defined in the ECA **Elora**	**97.6% to 99.3%**	**97.7% to 99.2%**	**98.3% to 99.5%**	↑
	CAPACITY & UTILIZATION: Providing wastewater collection and treatment services in an efficient manner	Discussion of wastewater rates relative to comparable municipalities	**See Table 5-17**	% of Wastewater Treatment Plant flows which are attributed to inflow & infiltration in the wastewater network	**Elora: 8%, Fergus: 11%**	**Elora: 10%, Fergus: 19%**	**Elora: 14%, Fergus: 10%**	↓

The Township's wastewater network is operated to ensure the safe and effective treatment of wastewater in the Township to help protect public health and the environment. The Township's wastewater treatment process operates under strict regulations and meets or exceeds the standards set by the provincial and federal governments.

Wastewater is collected and treated 24 hours a day, 7 days a week. The Township collects the municipal sanitary sewage (wastewater) in Fergus and Elora as well as from the Low-Pressure Sewage System located in Salem. Wastewater is the mixture of liquid and solid materials flushed down toilets, sinks and drains. It flows through the Township's sanitary sewer system to the wastewater treatment plants.

Wastewater is then treated at one of the two treatment plants located in Centre Wellington. Treatment of wastewater is an essential process that protects both the environment and natural water resources.

The effluent is then discharged into the Grand River.

Parks Related Services

Table 3-15
Parks Level of Service Line of Sight

Line of Sight

Strategic Goal	Active & Caring Community
Assets	Parks Related Assets
Service Objective	Residents and visitors are inspired by the beauty of our natural surroundings and cultural vibrancy, motivating them to lead active, healthy and engaged lifestyles
Service Expectations	SCOPE & FUNCTION: Parks offer an oasis within built-up environments, offering environmental, economic and health benefits while beautifying the urban landscape
	QUALITY: Centre Wellington's hierarchy of parkland guides park development by directing usage, size, form, function and/or level of amenity found within different types of parks
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-16
Parks Level of Service Metrics

Parks

Service Objective	Service Attributes & Expectations	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target 2028
Residents and visitors are inspired by the beauty of our natural surroundings and cultural vibrancy, motivating them to lead active, healthy and engaged lifestyles	**SCOPE & FUNCTION: Parks offer an oasis within built-up environments, offering environmental, economic and health benefits while beautifying the urban landscape**	Parkland service level of 3.0 hectares per 1,000 residents	Parkland per 1,000 residents. Official Plan target is 3.0 Ha per 1000 residents.	3.23	3.23	3.18	3.45
			Total hectares of parkland.	96.9	96.9	99.5	120.0
	QUALITY: Centre Wellington's hierarchy of parkland guides park development by directing usage, size, form, function and/or level of amenity found within different types of parks	Parks Classification and Function: Neighbourhood Park, Community Park, Township-Wide Park, OpenSpace Linkages. (Classification system in Township's Development Standard's Manual currently in draft form) - **see Figure B-14 in Appendix B for Park Land Locations**	**Neighbourhood Parks** within an 800m radius of majority of residents within a local neighbourhood.	Yes	Yes	Yes	Yes
			Neighbourhood Parks to be provided at the rate of 1.0 hectares per 1,000 population.	0.88	0.88	0.87	1.00
			# of Neighbourhood Parks	32.00	32.00	33.00	36.00
			Community Parks provided at a rate of 1.2 hectares per 1,000 population.	0.59	0.59	0.62	0.67
			# of Community Parks	18.00	18.00	19.00	19.00
			Township-Wide Park meet special community-wide needs and serving Township-wide functions. Serve as a unique destination.	Yes	Yes	Yes	Yes
			# of Township-Wide Parks	5.00	5.00	5.00	5.00
			# Open Space Linkages	4.00	4.00	4.00	4.00
			Open Space Hectares per 1,000 population	0.38	0.38	0.36	0.39
			Number of Trail Connections: Parkland shall be linked directly with open space (including storm water management facilities) and preserved environmental areas wherever appropriate.	12.00	12.00	14.00	16.00

The Township's Park assets are diverse, and include soccer and other sports fields, tennis & basketball courts, skate parks, playgrounds, splashpads, and a network of trails.

Indoor Recreation Related Services

Table 3-17
Indoor Recreation Level of Service Line of Sight

Line of Sight

Strategic Goal	Active & Caring Community
Assets	Indoor Recreation Related Assets
Service Objective	Residents and visitors are inspired by the beauty of our natural surroundings and cultural vibrancy, motivating them to lead active, healthy and engaged lifestyles
Service Expectations	SCOPE & FUNCTION: Community Centres that reflect the needs of all citizens with safe access to recreation and leisure activities
	CAPACITY & UTILIZATION: Facilities that meet population needs, and plan for growth
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-18
Indoor Recreation Level of Service Metrics

Indoor Recreation

Service Objective	Service Attributes & Expectations	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target 2028
Residents and visitors are inspired by the beauty of our natural surroundings and cultural vibrancy, motivating them to lead active, healthy and engaged lifestyles	**SCOPE & FUNCTION: Community Centres that reflect the needs of all citizens with safe access to recreation and leisure activities.**	Accessibility for Ontarians with Disabilities Act (AODA).	Number of Facilities that comply with AODA.	1.0 : 4.0	1.0 : 4.0	1.0 : 4.0	5.0 : 5.0
	CAPACITY & UTILIZATION: Facilities that meet population needs, and plan for growth.	Summary of Indoor Recreation Facilities needs based on population.	**Ice Pads/Dry Pads**: 1 pad per 700 registered participants (ratio shown as Actual: Required)	3.0 : 2.5	3.0 : 2.5	3.0 : 2.5	3.0 : 3.2
			Indoor Aquatic Centres: 1 centre per 35,000 residents (ratio shown as Actual: Required)	1.0 : 0.86	1.0 : 0.86	1.0 : 0.89	1.0 : 0.99
			Community Centres: Centre Wellington Community Sportsplex, Elora Community Centre and Belwood Hall service the entire community	3.0	3.0	3.0	4.0
			Gymnasiums: 1 centre per 40,000 residents (ratio shown as Actual: Required)	0 : 0.75	0 : 0.75	0 : 0.78	1.0 : 0.87
			Seniors Centre	1.0	1.0	1.0	1.0
			Seniors Centre: Square Footage	13,588.0	13,588.0	13,588.0	17,588.0
			Youth Space	0.0	0.0	0.0	1.0
			Fitness Centre	1.0	1.0	1.0	1.0
			Indoor Turf Facility: 1 centre per 50,000 residents (ratio shown as Actual: Required)	0 : 0.60	0 : 0.60	0 : 0.63	1.0 : 0.70
			Multi-Purpose Space	11.0	11.0	11.0	11.0

The Township's indoor recreation assets are comprised of the CW Community Sportsplex, the Elora Community Centre, Belwood Hall, and Victoria Park Seniors Centre, each providing a diverse range of programming and other opportunities for the public to engage and enjoy.

Fire Related Services

Table 3-19
Fire Level of Service Line of Sight

Strategic Goal	Active & Caring Community / Good Government
Assets	Fire Related Assets
Service Objective	Educate, prevent and protect the inhabitants and visitors to the Township from the adverse effects of fires, sudden medical emergencies or exposure to dangerous conditions created by man or nature in an efficient and cost effective manner
Service Expectations	Fire Suppression
	Fire Prevention & Public Education
	Training
Community Levels of Service	What is the Community receiving?
Technical Levels of Service	What is the Township providing?

Table 3-20
Fire Level of Service Metrics

Fire Services

Service Objective	Service Attributes	Community Levels of Service	Technical Levels of Service - Performance Measures	2019	2020	2021	Target
Educate, prevent and protect the inhabitants and visitors to the Township from the adverse effects of fires, sudden medical emergencies or exposure to dangerous conditions created by man or nature in an efficient and cost effective manner.	Fire Suppression	Well trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents.	NFPA 1720 - Emergency Response (Rural): 6 Firefighters in 14 Minutes, 80% of time	In Compliance	In Compliance	In Compliance	⟷
			NFPA 1720 - Emergency Response (Suburban - Elora, Salem, Fergus): 10 Firefighters in 10 Minutes, 80% of time	In Compliance	In Compliance	In Compliance	⟷
			Dispatch Response - 95% of Calls Answered in 15 Seconds	In Compliance	In Compliance	In Compliance	⟷
			Dispatch Response - 99% of Calls Answered in 40 Seconds	In Compliance	In Compliance	In Compliance	⟷
	Fire Prevention & Public Education	Educating residents of the community to fulfill their responsibilities for their own fire safety. Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized.	Fire Inspection Cycles (based on type of building) followed.	In Compliance	In Compliance	In Compliance	⟷
	Training	Fire Services personnel receive the training necessary to meet legislative requirements. Fire Services is also responsible for ensuring that training programs meet appropriate training standards.	Training Programs (levels 1 to 4) Implemented	In Compliance	In Compliance	In Compliance	⟷
			Volunteer Firefighter Complement	60	65	66	72

The Township's Fire Services division provides fire and rescue services for all of Centre Wellington. Police services are provided by the OPP and Guelph Wellington EMS provides ambulance services for Centre Wellington

LEVELS OF SERVICE FINANCIAL IMPLICATIONS

Refer to Appendix C – detailed technical spreadsheets for each service area.

Table 3-21
Increase in Cost to Maintain Existing Levels of Service

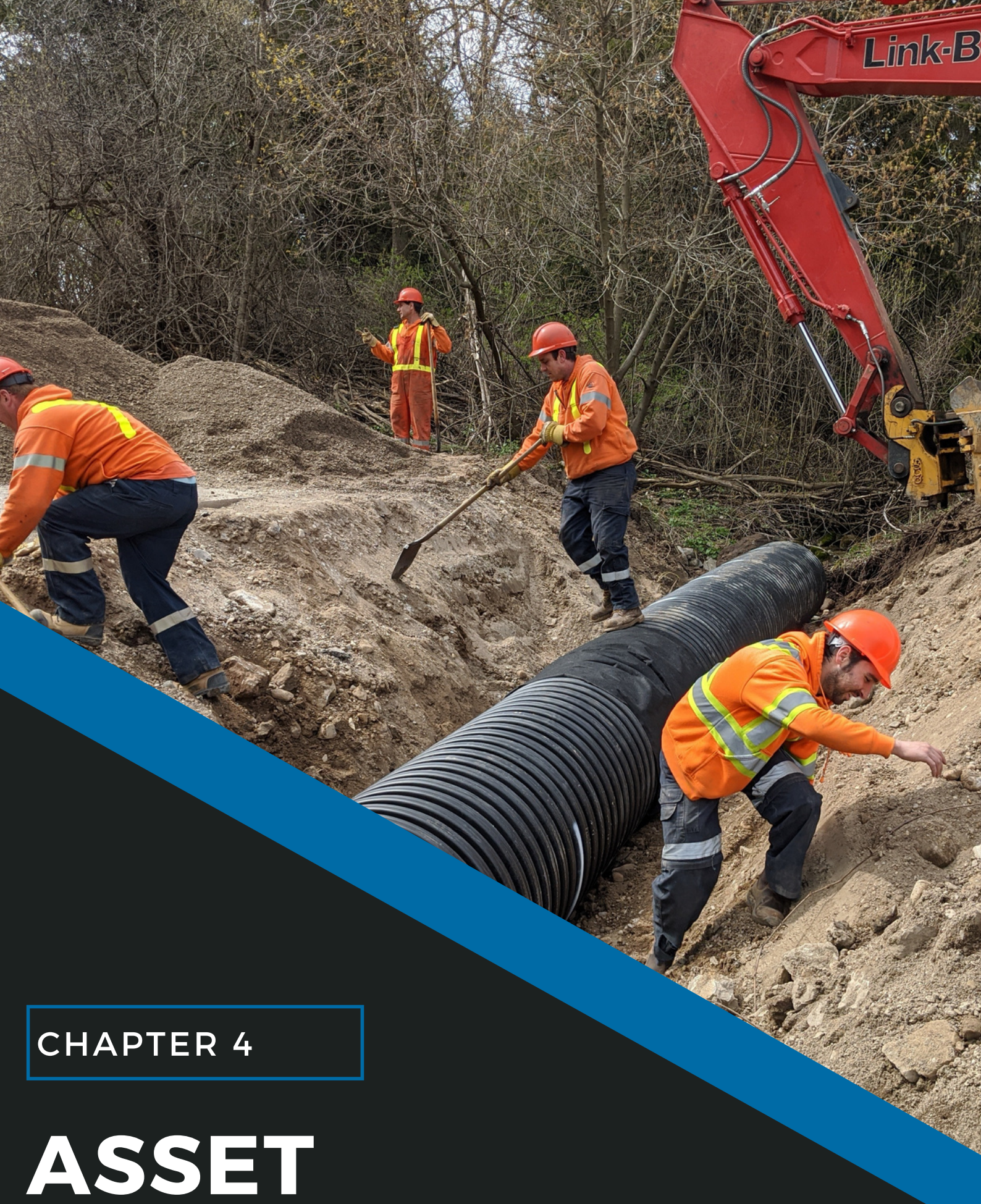
Total Cost to Maintain Existing LOS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Tax Supported:										
Roads, Storm, Bridges, Culverts	18,339,932	18,890,130	19,456,834	20,040,539	20,641,755	21,261,007	21,898,838	22,555,803	23,232,477	23,929,451
Parks, Recreation	7,675,254	7,905,511	8,142,676	8,386,957	8,638,565	8,897,722	9,164,654	9,439,594	9,722,782	10,014,465
Fire Services	2,296,856	2,365,761	2,436,734	2,509,836	2,585,131	2,662,685	2,742,566	2,824,843	2,909,588	2,996,876
Total	**28,312,041**	**29,161,402**	**30,036,244**	**30,937,332**	**31,865,452**	**32,821,415**	**33,806,058**	**34,820,239**	**35,864,847**	**36,940,792**

Total Cost to Maintain Existing LOS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Network	5,848,427	6,023,879	6,204,596	6,390,734	6,582,456	6,779,929	6,983,327	7,192,827	7,408,612	7,630,870
Wastewater Network	4,974,023	5,123,244	5,276,941	5,435,250	5,598,307	5,766,256	5,939,244	6,117,421	6,300,944	6,489,972
Total	**10,822,450**	**11,147,123**	**11,481,537**	**11,825,983**	**12,180,763**	**12,546,186**	**12,922,571**	**13,310,248**	**13,709,556**	**14,120,843**

Table 3-22
Increase in Cost to Transition to Proposed Levels of Service

Total Cost to Transition to Proposed LOS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Tax Supported:										
Roads, Storm, Bridges, Culverts	19,851,849	22,004,679	24,268,812	26,648,989	29,150,134	30,024,638	30,925,378	31,853,139	32,808,733	33,792,995
Parks, Recreation	7,954,320	8,480,388	9,030,860	9,606,729	10,209,023	10,515,293	10,830,752	11,155,675	11,490,345	11,835,055
Fire Services	2,347,652	2,470,402	2,598,404	2,731,863	2,870,991	2,957,121	3,045,834	3,137,209	3,231,326	3,328,265
Total	**30,153,821**	**32,955,468**	**35,898,077**	**38,987,581**	**42,230,148**	**43,497,053**	**44,801,964**	**46,146,023**	**47,530,404**	**48,956,316**

Total Cost to Transition to Proposed LOS	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Network	6,059,891	6,459,496	6,877,623	7,315,025	7,772,481	8,005,655	8,245,825	8,493,199	8,747,995	9,010,435
Wastewater Network	5,293,680	5,781,737	6,294,313	6,832,441	7,397,190	7,619,106	7,847,679	8,083,110	8,325,603	8,575,371
Total	**11,353,571**	**12,241,233**	**13,171,937**	**14,147,465**	**15,169,671**	**15,624,761**	**16,093,504**	**16,576,309**	**17,073,598**	**17,585,806**



CHAPTER 4

ASSET MANAGEMENT STRATEGY

CHAPTER 4: ASSET MANAGEMENT STRATEGY

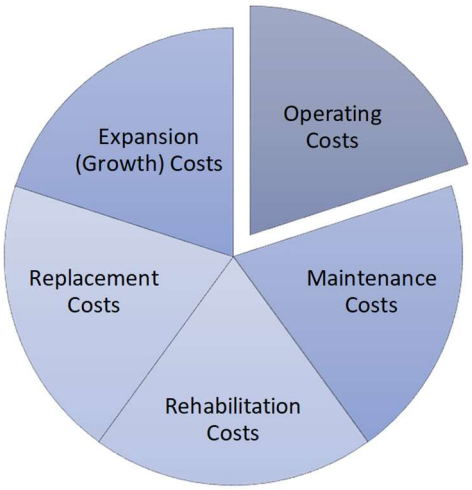
OVERVIEW

The asset management strategy reviews and quantifies the many costs involved in the management of assets through the asset management planning process. This includes asset specific lifecycle costs as well as more indirect "non-infrastructure solutions", such as studies and master plans that assist in the management of assets. This chapter includes the following sections:

- What is an Asset Management Strategy?
- Demand Management
- Risk Management
- Critical Assets
- Priority Assets
- Historical Lifecycle Costs
- Asset Management Strategy
    - Non-Infrastructure Solutions
    - Operations & Maintenance Costs
    - Rehabilitation Costs
    - Replacement Costs
    - Expansion & Growth Costs

WHAT IS AN ASSET MANAGEMENT STRATEGY?

An asset management strategy brings together key information from Chapter 2 (State of Township Assets) and Chapter 3 (Levels of Service) in order to assess the costs to be incurred from an asset perspective in order to provide services. Other factors are also considered, such as the demand for services, corporate risk, and asset specific risk. The result is a long-term view of these asset specific costs.

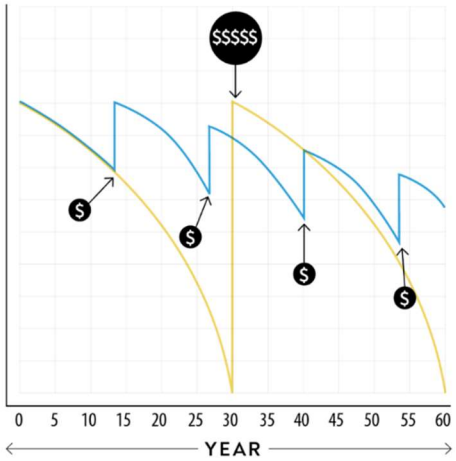


The direct costs associated with asset ownership can be broken down into various lifecycle costing categories, such as operating costs, maintenance costs, rehabilitation costs, replacement costs, and expansion (or growth) related costs. Once in operation, assets are maintained and rehabilitated at regular intervals to extend their useful life as much as possible. Once an asset has reached the end of its useful life, it is disposed of appropriately. Assets are generally replaced once the costs of maintenance exceeds the benefits received.

A decision-making process, such as a needs identification or planning/budgeting process, initiates the need to incur or initiate lifecycle costs, either through an initial (new) asset investment, the replacement of an existing assets, or the expansion (or upgrade) of existing assets. Expansion (or growth) occurs when either a new

service is to be provided, or if an existing service requires additional functionality or capacity. For example, a roads network may require additional roads or bridges to address capacity needs, or a municipality may decide to start providing transit services that have not been provided in the past.

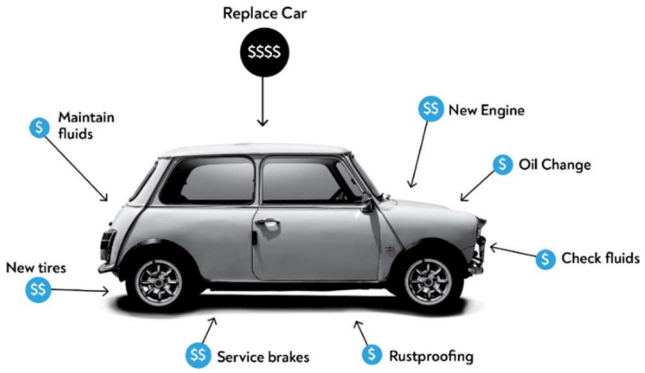
While initial investment costs may be significant, the ongoing maintenance costs over the life of the asset make up the bulk of the cost of asset ownership. As an asset ages, typically the costs of ownership from an operational and maintenance perspective increases. At a point in time, rehabilitation options can be considered to gain additional life from the asset as well as provide for a reduction on operations and maintenance costs. However, eventually rehabilitation is no longer an option and replacement is required.



Lifecycle costing strategies are built into asset management planning practices to reduce the costs associated with the ownership and maintenance of assets.

Example: Vehicle Ownership

When purchasing a vehicle, the initial up-front cost represents only a fraction of the cost of ownership. Vehicles require regular maintenance, as well as occasional retrofitting and replacement of components. Investing in regular maintenance, such as oil changes, extends the life of the vehicle and delays the costs of replacing components that can break down.



Vehicle owners add regular maintenance activities into their annual budgets and may even make regular contributions to savings accounts when planning for these costs. For vehicle owners and municipalities, lifecycle costing strategies are built into asset management planning practices to reduce the costs associated with asset ownership.

Budgets based on annual operating and maintenance costs account for the short-term needs of Township assets, but do not consider the rehabilitation and replacement costs of assets approaching the end of their useful lives, or costs associated with the construction and acquisition of assets to accommodate demand (expansion or growth), climate change, and changes in the types of services or levels of service that are provided.

Forecasting future asset lifecycle costs is critical to asset management planning. To accomplish this, the Township has acquired asset management software with the capacity of mapping future asset lifecycle costs over a long-term forecast period. With this approach:

- Lifecycle models can be developed, with scenarios of increased maintenance and rehabilitation in comparison to asset replacement to find a strategy that results in the lowest cost with manageable risk.
- Periods of high asset investment needs can be identified, and financing strategies can be created to plan for these needs.
- Investment decisions made with annual budget approvals can be evaluated in relation to the impact on service levels and risk.

Township specific lifecycle costs will be discussed later in this chapter.

DEMAND MANAGEMENT

One of the factors influencing the longevity of Township assets is the demand for the services provided by those assets. Demand will change over time, both in terms of service quantity and the types of services required.

Demand can be driven by several factors, including population growth, demographic shifts, changes in the types of services provided, the ways in which the Township is expected to provide those services, land-use changes, economic development trends, and environmental changes. Anticipated changes in demand should be considered and accounted for within an asset management plan.

Table 4-1 below provides a high-level assessment of significant drivers of demand for Centre Wellington, as well as the associated impact on services.

Table 4-1
Significant Demand Drivers in Centre Wellington

Demand Drivers	Present Position	Projection	Impact on Services
Population Growth	Population of approximately **31,100 residents**	Anticipated population of **52,300 by 2041**	Increase in asset usage and demand requires increases in capacity for various asset classes and services.
Non-Residential Growth	Employment of approximately **12,200 jobs**	Anticipated employment of **22,800 by 2041**	
Tourism	Centre Wellington is a tourism attraction within the province.	Tourism will continue to thrive in Centre Wellington.	
Housing Affordability	Demand is driving the price of housing upward.	Housing affordability is a concern of all levels of government and mitigation factors are underway.	Specific services need to be tailored to encourage attainable housing options.
Resident Preferences	Automobile use with focus on alternate forms of transportation. Demand for particular sports activities.	Increased use of bicycles and demand for transit and parking facilities. Demand for sports activities tends to shift	Relieves some stress on some assets, however introduces an increased demand for alternate assets/services, and potentially results in

		(i.e., increase demand for pickleball, soccer vs. baseball).	requirement to provide new services or increasing capacity of existing services.
Farm & Gravel Pit Usage	Farm and gravel pit industries rely on Township road networks.	It is expected that this usage will continue in the future.	Overall reduction in road useful life and increased deterioration of road condition, requiring accelerated rehabilitation or replacement.
Seasonal Factors & Climate Change	Extreme weather is affecting the type and frequency of asset rehabilitation and replacement.	Extreme weather is expected to increase in frequency and intensity in the future.	Asset lifecycle costs, including evolving asset technologies will require the Township to adapt to account for climate change.

These demand drivers impact decisions made with respect to asset lifecycle costs and therefore, also impact the ability to provide sustainable services over time. To assist with managing the impacts of these drivers, demand management strategies including education, legislation, demand substitution, asset expansion, asset (service) efficiency, and asset sustainability can assist in addressing this demand (see Table 4-2 below).

Table 4-2
Demand Management

Demand Drivers	Impact on Services	Demand Management Strategies
Population Growth	Increase in asset usage and demand requires increases in capacity for various asset classes and services.	Plan for the projected change in lifecycle costs associated with Township assets. a. **Education** – educate residents, businesses, and tourists on the effective use of assets (i.e., road bypass, parking, transit options). b. **Legislation** – restrict asset use using legislation (i.e., enforcement related by-laws). c. **Demand Substitution** – provide alternate services in substitution for demanded services (i.e., bicycle lanes, transit).
Non-Residential Growth		
Tourism		
Housing Affordability	Specific Services need to be tailored to encourage attainable housing options.	
Resident Preferences	Relieves some stress on some assets, however introduces an increased demand for alternate assets/services, and potentially results in requirement to provide new	

	services or increasing capacity of existing services.	d. **Asset Expansion** – expand assets, asset capacities, and services offered in alignment with Township master plans. e. **Asset (Service) Efficiency** – promote the efficient use of assets/services (i.e., traffic flow, higher density housing). f. **Asset Sustainability** – ensure funding is available to provide sustainable services, given the projected increase in demands.
Farm & Gravel Pit Usage	Overall reduction in road useful life and increased deterioration of road condition, requiring accelerated rehabilitation or replacement.	
Seasonal Factors & Climate Change	Asset lifecycle costs, including evolving asset technologies will require the Township to adapt to account for climate change.	

Increases or decreases in demand can significantly affect types and quantities of assets that will be required to meet the needs of our community. The Township analyzes asset demand trends to predict impacts on asset management planning, financial strategies, and future budgets.

Population and Employment Forecasts

The population of the Township of Centre Wellington is projected to grow to approximately 52,300 residents by 2041 (See Table 4-3 and Figure 4-1 below).

Employment (jobs) are expected to grow from approximately 12,200 in 2021 to approximately 22,780 by 2041. See Table 4-3 and Figure 4-2 below.

Anticipated growth is not evenly distributed across the County, with a significant amount of the growth concentrated in Centre Wellington. This reflects proximity to the Golden Horseshoe, which is experiencing rapid growth, as well as the ability to expand geographically as a result of relatively low population density and the greenbelt.

Table 4-3
Growth Projections

	2021	County Official Plan	
		2036	2041
Population	31,093	48,520	52,310
Households	11,970	17,245	18,690
Employment	12,200	20,130	22,780

Sources: 2021 Census Data / Wellington County Official Plan May 6, 1999 (Last Revision August 15, 2019)

Figure 4-1
Population Growth

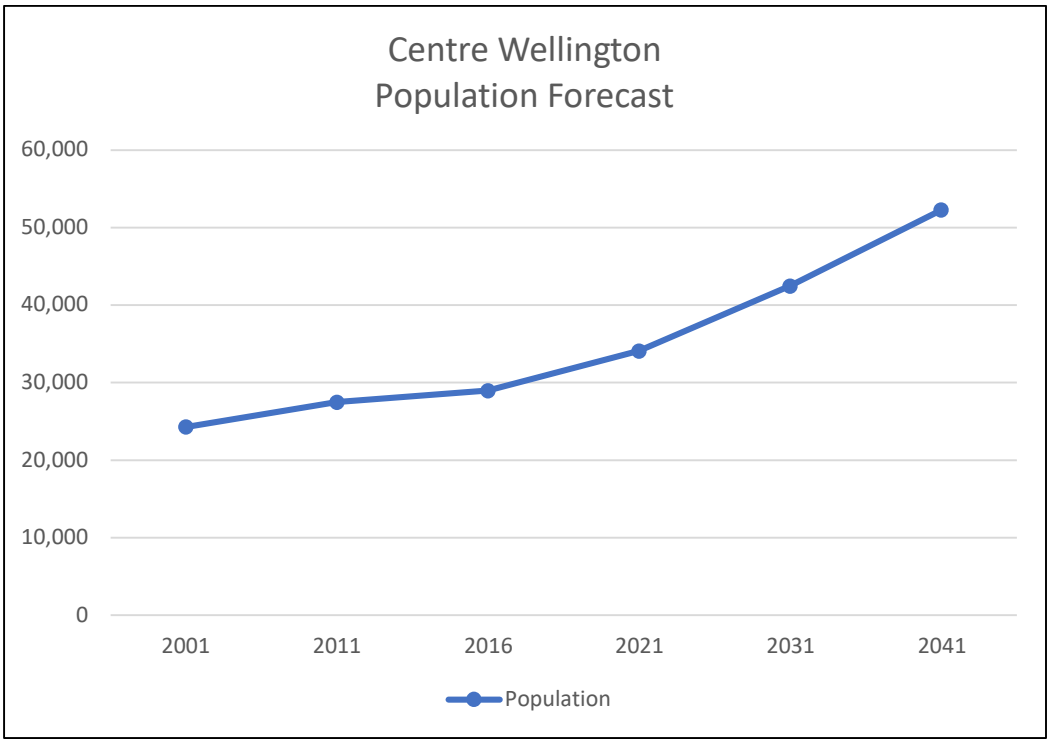
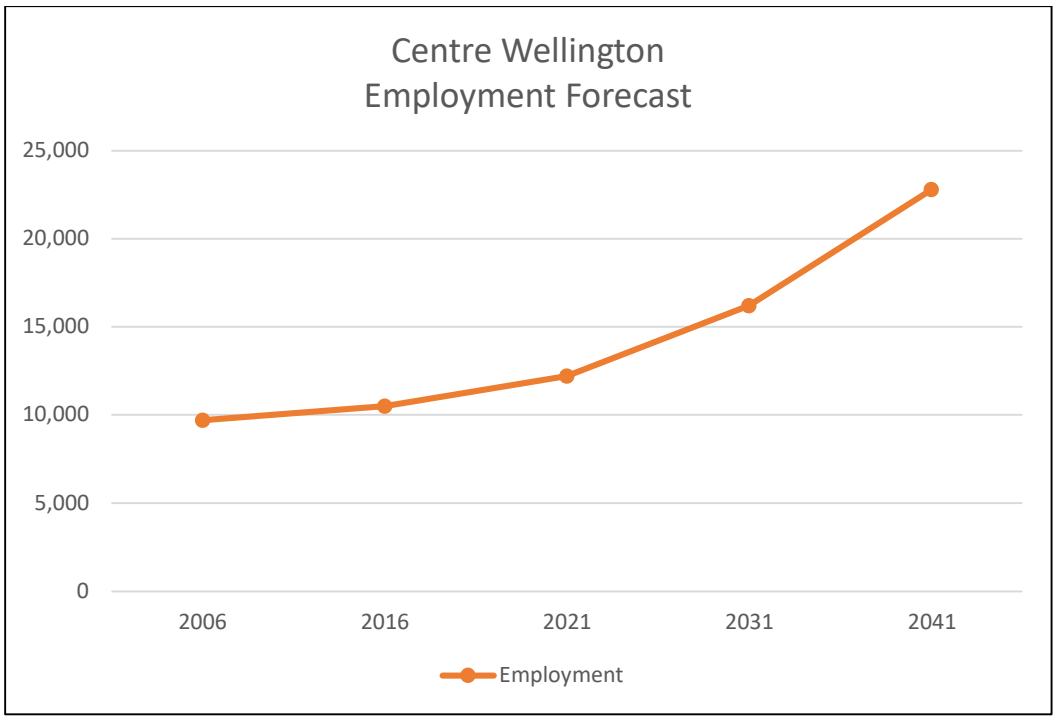


Figure 4-2
Employment Growth



Climate Change

Climate change significantly impacts the management and maintenance of Township assets. Climate change can reduce the lifespan and performance of assets, resulting in rising costs of maintenance and replacement. More frequent and severe weather events can cause increased damage to assets, and changes in the intensity of precipitation will impact levels of service across the Township.

For example, water, wastewater, and stormwater infrastructure in Ontario faces three major pressure points[1]: population growth, climate change, and deterioration due to aging.

- Centre Wellington's growing population will put greater stress on assets;
- Aging infrastructure may become inadequate to perform its defined function;
- Climate change will cause more severe weather events and push assets beyond capacity.

When infrastructure is unable to cope, disruptions can be significant. A July 2013 storm that resulted in flash flooding across the GTA became the most expensive natural disaster in Ontario history. Four years later, Windsor saw over 1,000 basements flooded, resulting in over $124 million of damage. In February of 2018, a state of emergency was declared across southwestern Ontario due to heavy rain and melting snow.

These previously rare "100-year" storm events are becoming much more common, and existing stormwater infrastructure is unable to cope. Stormwater infrastructure is not unique in this regard. Most infrastructure is not constructed to cope with conditions that are becoming increasingly more common.

[1] Ontario Sewer & Watermain Construction Association (OSWCA). (2018). The State of Ontario's Water and Wastewater Infrastructure.

Climate change adaptation is an inevitable, major investment that is made up of an array of asset investment decisions that help the community withstand the consequences of a changing climate. For example, Township roads maintenance practices have already adjusted to changing weather patterns that necessitate more frequent and intensive intervention to ensure roads are safe. Future adaptation strategies may include re-considering the way assets are constructed to take into account flood risks, severe storms, and other consequences of the changing climate.

As part of the Township's Strategic Asset Management Policy endorsed by Council in 2019, Centre Wellington has established guiding principles that ensure environmentally conscious decision making to ensure that it minimizes the impact of infrastructure on the environment by:

a) Respecting and helping maintain ecological and biological diversity;

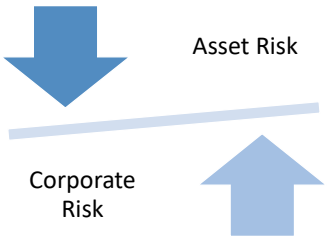
b) Augmenting resilience to the effects of climate change; and

c) Endeavoring to make use of acceptable recycled materials, energy efficient technologies, and environmentally sustainable practices.

Additionally, the Township will consider climate change as part of our risk management approach embedded in local asset management planning methods. This approach will balance the potential cost of vulnerabilities to climate change impacts and other risks with the cost of reducing these vulnerabilities. Balance will be struck in the levels of service delivered through operations, maintenance schedules, emergency response plans, contingency funding, and capital investments. The Township will attempt to reduce their contribution to climate change through greenhouse gas emissions.

RISK MANAGEMENT

Risk assessments are incorporated into the asset management planning process in order to identify critical (or higher risk) areas to prioritize asset investments. In many cases, the demand for asset investment exceeds the actual asset investment available, requiring the need to allocate funds based on a risk management approach. The Township's asset management planning process looks at risk both from a corporate and asset perspective. This approach ensures asset investments are made in a manner that mitigates risk, rather than using a "fix the worst conditioned asset first" approach that does not consider risk.



By definition, risk management is the process of finding, assessing, and controlling threats to the Township. Corporate risk management approaches this process from a high level, while asset risk management assesses risk on an asset-by-asset basis.

Corporate Risk Management

Corporate risk management reviews Township risks at the asset category level, taking into account:

- Strategic/corporate risk;
- Environmental risk;
- Health & safety;
- Operational risk; and
- Financial risk.

Table 4-4 below provides this high-level review of corporate risk across the major asset categories of the Township providing various corporate risk ratings from 1 (Low) to 5 (High). In this assessment, roads related, bridges and culverts, water and wastewater network assets represent the asset areas with "high" corporate risk, with facility assets and stormwater network assets representing asset areas with "medium" risk.

Table 4-4
Township Corporate Risk Assessment

Asset Type	Strategic/Corporate	Environmental	Health & Safety	Operational	Financial	Total (25)	Corporate Risk Rating
Roads Related	5	4	5	4	5	23	HIGH
Bridges & Culverts	5	3	5	4	5	22	HIGH
Facility Assets	3	3	5	3	4	18	MEDIUM
Vehicles	2	2	4	2	2	12	LOW
Equipment	2	2	4	2	2	12	LOW
Land Improvements	2	2	3	2	2	11	LOW
Water Network Assets	5	5	5	5	5	25	HIGH
Wastewater Network Assets	5	5	4	5	5	24	HIGH
Stormwater Network Assets	4	4	4	4	4	20	MED-HIGH

This corporate risk assessment is helpful when prioritizing asset investments as part of the annual budget process. When competing assets have similar asset specific risks (see discussion below), corporate risk can be used to determine the investment priority.

Asset Risk Management

With the asset specific risk management approach, a risk assessment is conducted for every Township asset, to evaluate how likely that asset is to fail, and what the impact of that failure would be on our community.

Chapter 2 (State of Township Assets) introduced the risk assessments that have been performed on the various Township assets, using the "probability of failure" (PoF) multiplied by "consequence of failure" (CoF) formula (in most instances).

PoF represents the likelihood (or probability) that an asset will not achieve the desired level of service or will not be able to fulfill a particular need. If the condition of an asset deteriorates, the risk of this happening will increase. However, even assets with a high condition score can be at risk of failing to meet community needs, if they no longer meet regulatory requirements or are inadequate to meet changing demand from a functionality or capacity point of view. The factors used to estimate the probability of failure vary by asset class:

Table 4-5
Probability of Failure (PoF) Variables

Asset Class	Probability of Failure
Road Base	Age and Average Daily Traffic (ADT)
Road Surface	Overall Condition Index (OCI)
Bridges and Culverts	Average Daily Traffic (ADT), Bridge Condition Index (BCI) and Load Limits
Pedestrian Bridges	Bridge Condition Index (BCI) and Load Limits
Facility Assets	Building Condition Audit Results
Vehicles	Age Based
Equipment	
Land Improvements	
Water Network Assets	Main Breaks per 100m and Age Based
Wastewater Network Assets	Forcemain Status and Age Based

CoF represents the consequences if an asset does not achieve the desired level of service or is not able to fulfill a particular need. The factors used to estimate the consequence of failure vary by asset class:

Table 4-6
Consequence of Failure (CoF) Variables

Asset Class	Consequence of Failure
Road Base	Average Daily Traffic (ADT) and Speed Limit
Road Surface	
Bridges and Culverts	Emergency Response Time, Detour Length, Average Daily Traffic (ADT), Local Access, and Heritage Status
Pedestrian Bridges	Bridge Condition Index (BCI) and Load Limits
Facility Assets	Determined by Township Staff
Vehicles	
Equipment	
Land Improvements	
Water Network Assets	Static Pressure (kPa), Redundancy, Pipe Diameter (mm), Average Daily Traffic (ADT), and Accessibility of Pipes
Wastewater Network Assets	Forcemain Status, Pipe Diameter (mm), Proximity to Water, Average Daily Traffic (ADT), and Accessibility of Pipes

The probability of failure is multiplied by the overall consequence of failure to arrive at a risk score, which is plotted on a risk matrix (sample provided in Figure 4-3) and provides a summary of priority assets. As outlined in Chapter 2, this risk matrix can change from asset category to asset category.

Figure 4-3
Risk Matrix Example

		CoF				
		Very Low	Low	Moderate	High	Critical
PoF	Very Low	Very Low	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	Moderate
	Moderate	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Critical
	Critical	Moderate	Moderate	High	Critical	Critical

Chapter 2 provides asset risk summary information by asset category, which is based on using a risk matrix approach on all Township assets. Information on specific critical (priority) assets is discussed below.

CRITICAL ASSETS

Critical assets are defined as those that would have significant impacts on our communities if they were unable to provide services as intended. These assets need to be monitored to ensure that the Township is proactively managing any risks of failure. From an asset risk perspective, these assets have been given a very high CoF rating.

PRIORITY ASSETS

The prioritization exercise is based on a combination of asset specific risk and corporate risk ratings. By layering asset specific information on PoF, CoF, and Corporate Risk, short term priorities can be identified. This is critical, as the Township does not have sufficient funds to address the rehabilitation and replacement needs of all assets. Available funding must be allocated in the most cost-effective way possible.

Please refer to Appendix D for a listing of Priority Assets and Projects identified by the Township.

HISTORICAL LIFECYCLE COSTS

In the past three years, the Township has made significant investments in asset lifecycle costs (see table 4-7 below):

Table 4-7
Historical Lifecycle Costs

Asset Category	2020 Budget				2021 Budget				2022 Budget			
	Operations & Maintenance	Rehabilitation & Replacement	Expansion	Total	Operations & Maintenance	Rehabilitation & Replacement	Expansion	Total	Operations & Maintenance	Rehabilitation & Replacement	Expansion	Total
Tax Supported:												
Roads, Storm, Bridges, Culverts	6,052,989	8,937,800	420,000	15,410,789	6,133,753	5,239,900	1,058,000	12,431,653	6,195,459	11,610,300	1,021,600	18,827,359
Parks, Recreation	6,097,034	1,282,800	636,300	8,016,134	5,628,513	2,507,800	271,500	8,407,813	6,163,453	997,300	177,000	7,337,753
Fire Services	1,903,934	206,700	15,000	2,125,634	1,908,558	346,300	28,000	2,282,858	1,925,857	304,100	-	2,229,957
Water Network	2,757,171	1,797,200	2,973,500	7,527,871	2,845,218	1,513,000	815,500	5,173,718	3,061,884	2,616,200	441,000	6,119,084
Wastewater Network	3,339,919	883,000	40,000	4,262,919	3,462,147	2,154,800	275,000	5,891,947	3,720,649	1,108,500	35,600	4,864,749
Total	**20,151,047**	**13,107,500**	**4,084,800**	**37,343,347**	**19,978,189**	**11,761,800**	**2,448,000**	**34,187,989**	**21,067,302**	**16,636,400**	**1,675,200**	**39,378,902**

This historical investment becomes the “starting point” for recommendations with respect to future funding needs. The Financing Strategy chapter will outline approaches to increasing historical asset investments in order to effectively and efficiently manage Township assets in order to provide needed services to residents, businesses, and visitors at target levels of service.

ASSET MANAGEMENT STRATEGY

NON-INFRASTRUCTURE SOLUTIONS

Non-Infrastructure solutions represent costs incurred that are not directly related to asset lifecycle costs, however they are indirectly related and critical to the success of asset management and/or the provision of services. These costs are incurred to:

- Plan for future demand and growth on assets/services (such as master plans);
- Gain much needed information on assets (such as condition assessments); and
- Assist in the provision of services.

With the goal of providing asset management planning in an efficient and effective manner, these non-infrastructure solutions become critical.

The following table provides a summary of non-infrastructure solutions anticipated.

Table 4-8
Non-Infrastructure Solutions

	Description	Service Area	Cost (2022 $)	Next Study Timing	Frequency (Years)	Duration (Years)	Funding Allocation				
							% DC Funded	% Tax Funded	% Water Funded	% Wastewater Funded	% Other Funded
Master Plans:											
1	Transportation Master Plan	Infrastructure Services	230,000	2026	10	Ongoing	100%	0%	0%	0%	0%
2	Stormwater Master Plan	Infrastructure Services	150,000	2031	10	Ongoing	80%	20%	0%	0%	0%
3	Water Supply Mater Plan	Infrastructure Services	150,000	2029	10	Ongoing	100%	0%	0%	0%	0%
4	Water & Wastewater Servicing Master Plan	Infrastructure Services	150,000	2032	10	Ongoing	100%	0%	0%	0%	0%
5	Parks, Recreation & Culture Master Plan	Community Services	85,000	2028	10	Ongoing	80%	20%	0%	0%	0%
6	Sports Fields Master Plan	Community Services	80,000	2024	10	Ongoing	100%	0%	0%	0%	0%
7	Fire Master Plan	Community Services	60,000	2027	10	Ongoing	100%	0%	0%	0%	0%
8	Trails Master Plan	Community Services	72,000	2026	10	Ongoing	75%	25%	0%	0%	0%
9	Cultural Action Plan	Community Services	40,000	2028	10	Ongoing	0%	100%	0%	0%	0%
	Subtotal		$1,017,000								
Condition Assessments											
10	Bridge & Culvert Inspections	Infrastructure Services	90,000	2024	2	Ongoing	0%	100%	0%	0%	0%
11	Roads Condition Assessment	Infrastructure Services	70,000	2025	4	Ongoing	0%	100%	0%	0%	0%
12	Wastewater / Storm Inspections (CCTV)	Infrastructure Services	150,000	2023	1	Ongoing	0%	50%	0%	50%	0%
13	Building Condition Studies	All Areas	100,000	2025	5	Ongoing	0%	60%	20%	20%	0%
	Subtotal		$ 410,000								
Other Studies:											
14	Corporate Strategic Plan	All Areas	40,000	2026	4	Ongoing	0%	100%	0%	0%	0%
15	Development Charge Study	All Areas	75,000	2025	5	Ongoing	100%	0%	0%	0%	0%
16	Job Evaluation Study	All Areas	50,000	2023	4	Ongoing	0%	100%	0%	0%	0%
17	Records Management	All Areas	50,000	2024	1	3	0%	60%	20%	20%	0%
18	Water & Wastewater Rate Study	Infrastructure Services	50,000	2025	5	Ongoing	0%	0%	50%	50%	0%
19	Parks & Recreation Fee Study	Community Services	30,000	2023	10	Ongoing	0%	100%	0%	0%	0%
20	Termite Management	Planning & Development	100,000	2023	1	5	0%	100%	0%	0%	0%
21	Building, Planning, Engineering Fee Study	Planning & Development	50,000	2027	5	Ongoing	0%	40%	0%	0%	60%
22	Cultural Heritage Landscape (CHL) Study	Planning & Development	100,000	2030	10	Ongoing	0%	100%	0%	0%	0%
23	Heritage Conservation Districts Studies	Planning & Development	100,000	2023	1	5	0%	100%	0%	0%	0%
24	Community Improvement Plan Update	Planning & Development	50,000	2032	10	Ongoing	0%	100%	0%	0%	0%
	Subtotal		$ 695,000								
Grand Total			**$2,122,000**								

OPERATIONS & MAINTENANCE COSTS

Operations and maintenance costs, planned for through the Township's Operating Budget, ensure assets are in good working order, and can extend asset useful life. The amount of operations and maintenance costs incurred is impacted by the volume of assets owned, as well as the level of service provided. The higher the level of service, typically the higher the costs incurred to maintain that level of service.

Chapter 3 (Level of Service) provided an analysis of operations and maintenance costs incurred in major service areas. The following is a high-level summary.

Table 4-9
Operations & Maintenance Costs

	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Services	Cost to Provide Expected Levels of Service	Implementation Years
Roads Related*	6,052,989	6,133,753	6,195,459	6,195,459	7,367,949	5
Water Network	2,757,171	2,845,218	3,061,884	3,061,884	3,067,862	5
Wastewater Network	3,339,919	3,462,147	3,720,649	3,720,649	3,980,423	5
Parks & Recreation	6,097,034	5,628,513	6,163,453	6,454,402	6,957,001	5
Fire Services	1,903,934	1,908,558	1,925,857	1,925,857	1,934,057	5

* Roads Related costs include bridges, culverts, and stormwater operating costs.

REHABILITATION COSTS

Over the life of many assets, different rehabilitation treatments can be applied in order to extend useful life. While minor rehabilitation costs are included in the operations and maintenance costs described above, the Township has other major rehabilitation programs in place that are funded annually through the budget process.

Table 4-10
Rehabilitation Costs

Description	Service Area	Asset Category	Description of Work	Annual Cost (2022 Budget)	Optimal Annual Investment	Phase-in (Years)
Pre-Engineering - Roads	Infrastructure Services	Roads Related	Road EA and Detailed Design	75,000	112,500	5
Rural Road Rebuild	Infrastructure Services	Roads Related	Rebuild of Roads in Rural Areas	Included in Replacement Needs		
Gravel Road Maintenance	Infrastructure Services	Roads Related	Resurfacing of Gravel Roads	Included in Replacement Needs		
Sidewalk Repairs	Infrastructure Services	Roads Related	Repair and Replacement of Sidewalks	90,000	150,000	5
Pavement Management	Infrastructure Services	Roads Related	Pavement Replacement Program	145,000	250,000	2
Total Roads Related				**310,000**	**512,500**	
Pre-Engineering - Bridges	Infrastructure Services	Bridges & Culverts	Bridge and Culvert EA and Detailed Design	100,000	150,000	5
Bridge Repairs & Remediation	Infrastructure Services	Bridges & Culverts	Minor Rehabilitation of Bridges and Culverts	220,000	220,000	1
Total Bridges & Culverts				**320,000**	**370,000**	
Pre-Engineering - Water	Infrastructure Services	Water	Water EA and Detailed Design	12,500	18,750	5
Total Water				**12,500**	**18,750**	
Pre-Engineering - Wastewater	Infrastructure Services	Wastewater	Wastewater EA and Detailed Design	12,500	18,750	5
LPS Grinder Pumps	Infrastructure Services	Wastewater	Grinder Pump Replacements	35,000	35,000	1
Wastewater Re-lining	Infrastructure Services	Wastewater	Re-lining Program for Wastewater Mains	-	100,000	2
Total Wastewater				**47,500**	**153,750**	
Neighbourhood Interconnections	Community Services	Trails	Development of Trail Network	150,000	200,000	2
Park Identification	Community Services	Parks	Purchase and Installation of Park Signage	5,000	5,000	1
Forestry (Urban & Rural)	Community Services	Forestry	Ongoing Forestry Program	200,000	300,000	5
Total Community Services				**355,000**	**505,000**	
Grand Total				**$ 1,045,000**	**$ 1,560,000**	

REPLACEMENT COSTS

The baseline method of estimating asset replacement needs is to use replacement cost and useful life estimates to plan for replacement timing. Estimating replacement costs can vary in complexity, from simply inflating prior known costs to reflect the value of assets in the future, to developing more complex equations that consider variability in material and labour costs.

This baseline model does not take into consideration:

- The impact of maintenance and rehabilitation costs incurred on the estimated useful life of each asset.
- The condition of each asset. Linking asset replacement needs to asset condition is a more accurate approach to replacement planning.
- The risk associated with each asset. A higher asset risk can result in replacement timing being accelerated while a lower asset risk can result in a delayed replacement timing.

Figure 4-4
Replacement Planning – Baseline (Tax Supported)

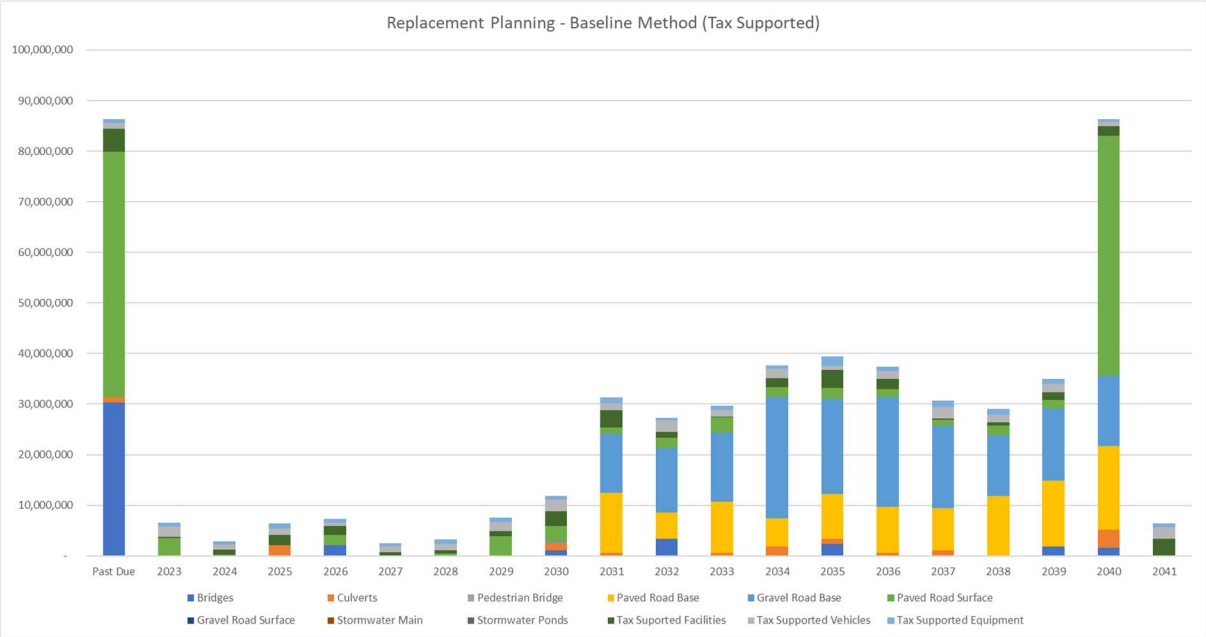


Figure 4-5
Replacement Planning – Baseline (Water Supported)

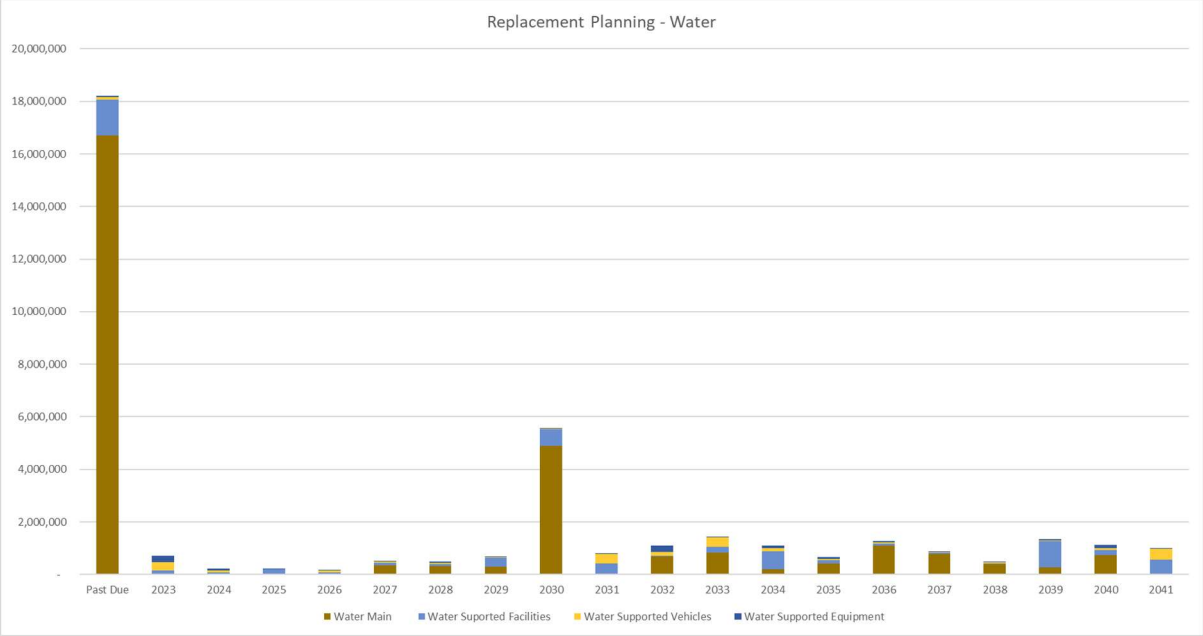
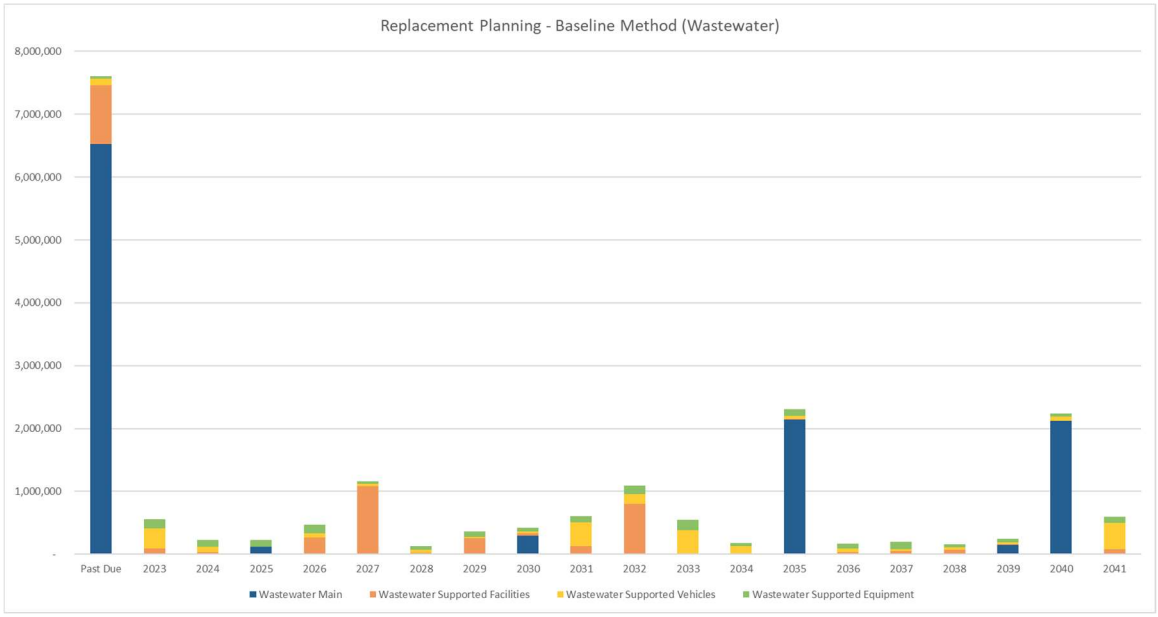


Figure 4-6
Replacement Planning – Baseline (Wastewater Supported)



A strategy of simply using assets until the end of their planned useful life, without any intervention to slow or reverse deterioration, ultimately results in higher asset investment to accommodate the more frequent replacement of assets. This approach is applied to some assets, such as vehicles, equipment, and land improvements, which are replaced on a more regular basis, however even with these assets, condition and usage plays a role in their replacement timing.

The baseline forecast provided in Figure 4-4 above is used annually in the budget process, along with asset condition, risk and other lifecycle costs incurred in order to determine immediate needs.

EXPANSION & GROWTH COSTS

The primary planning tool for expansion related lifecycle costs is the Township's Development Charges Background Study (DC Study). The DC Study incorporates the Township's various master plans into one planning tool. With the Council strategic direction of "growth paying for growth", it is important to have the DC Study kept up-to-date and effectively recommending DC charges that will ensure growth pays for growth.

The DC Study provides approximately $268 million in projects that are either fully or partially growth related, required between 2022 and 2041. $198 million of this (or 74%) is to be funded by DCs, either directly or through growth related debt. $28 million (or 10%) is to be funded by various developers as a local service. That leaves $42 million (or 16%) that must be funded by Township sources, such as taxation, grants, water rates, or wastewater rates.

Table 4-11
Expansion Costs

Source	Cost (2020 $)	%
DCs	198,049,975	74%
Developer	27,984,000	10%
Tax	26,129,641	10%
DCL / OCIF	5,538,693	2%
Water	2,034,357	1%
Wastewater	8,298,934	3%
Total	268,035,600	100%

Source: Township 2020 DC Study

Figure 4-7
Expansion Planning - Baseline

Figure 4-5 above provides a high-level projection on project timing as outlined in the DC Study. Timing of these projects is constantly changing due to evolving demand, priorities, DC cash flow, and affordability. Significant growth-related projects in the 2024 to 2030 forecast years include:

- Fergus Wastewater Treatment Plan expansion;
- New Fire Station (with vehicles/equipment);
- Significant road expansions as per the Transportation Master Plan;
- Acquisition of future parkland;
- New indoor turf facility; and
- New water capacity (wells), including connection to the water system.

CHAPTER 5

FINANCING STRATEGY

CHAPTER 5: FINANCING STRATEGY

OVERVIEW

The financing strategy for an asset management plan outlines the key funding sources used to finance asset management related costs, including methodologies and strategies proposed for each funding source. The main objective is to fund the recommended asset management strategy costs outlined in Chapter 4 while providing services at appropriate levels. However, funding availability is a legitimate barrier to meeting levels of service expectations.

A financing strategy has been developed for tax supported, water supported, and wastewater supported assets, representing the three more significant asset funding sources present at the Township. As such, this chapter is broken down as follows:

- Tax Supported Financing Strategy:
    - Sources of Funding
    - Historical Funding
    - Grant Funding Assumptions
    - Ontario Lottery and Gaming (OLG) Funding Assumptions
    - Development Charges Funding Assumptions
    - Partner Contributions Assumptions
    - Debt Funding Assumptions
    - Use of Assessment Growth
    - Impact on Taxation
- Water and Wastewater Supported Funding Strategy:
    - Water and Wastewater Rate Study
    - Sources of Funding
    - Historical Funding
    - Grant Funding Assumptions
    - Development Charges Funding Assumptions
    - Partner Contributions Assumptions
    - Debt Funding Assumptions
    - Impact on Rates

TAX SUPPORTED FINANCING STRATEGY

Sources of Funding

To fund the tax supported needs identified through the asset management planning process, the Township has a number of funding sources, representing both internal and external:

Table 5-1
Sources of Funding – Tax Supported

Internal Resources	External Sources
• Operating Budgets (operating & maintenance costs) • Contributions to Capital • Dedicated Capital Levy • Vehicle Replacement • Equipment Replacement • Facility Replacement	• Canada Community-Building Fund (Federal Gas Tax) • Ontario Community Infrastructure Fund (OCIF) • OLG Funding • One-time Capital Grants • Development Charges (growth) • Partner Contributions • Debt

There is a level of risk associated with relying on external sources of funding over a long-term forecast. While internal sources are more controllable, external sources are uncontrollable and subject to change. This makes long-term planning more difficult.

Table 5-2
Known Risks Associated with External Funding Sources

External Funding Source	Risk
OLG Funding	Potential reduction due to iGaming.
Canada Community-Building Fund (Gas Tax)	Reduction due to transition to reduce CO^2 emissions.
Ontario Community Infrastructure Fund (OCIF)	Funding formula is being re-developed.
One-time Capital Grants	Application based grants, not guaranteed.
Development Charges (growth)	Restricted cash flow (capital precedes growth).

Though annual budget processes and required updates to this Asset Management Plan, updates to available funding from all funding sources can be incorporated into this financing strategy.

Historical Funding

An analysis of historical funding sources from 2010 to 2022 is provided below. This analysis has been broken down between internal funding sources versus external funding sources.

Figure 5-1 provides the historical internal sources of funding for tax supported assets. This funding increased from approximately $975,000 in 2010 to $4.3 million in 2022.

- A significant contributing factor to this increase is the dedicated capital levy, used to fund bridge and culvert capital needs.
- The Township has vehicle and equipment replacement schedules that have funding increases from $625,000 in 2010 to $1.8 million in 2022.
- The contribution to capital, which funds non-growth related capital in the areas for roads, fire, parks, recreation, planning, and corporate/studies has only increased from $350,000 in 2010 to

$900,000 in 2022.

Future increases in internal sources of funding become critical as they are controllable and certain.

Figure 5-1
Internal Sources of Tax Supported Capital Funding

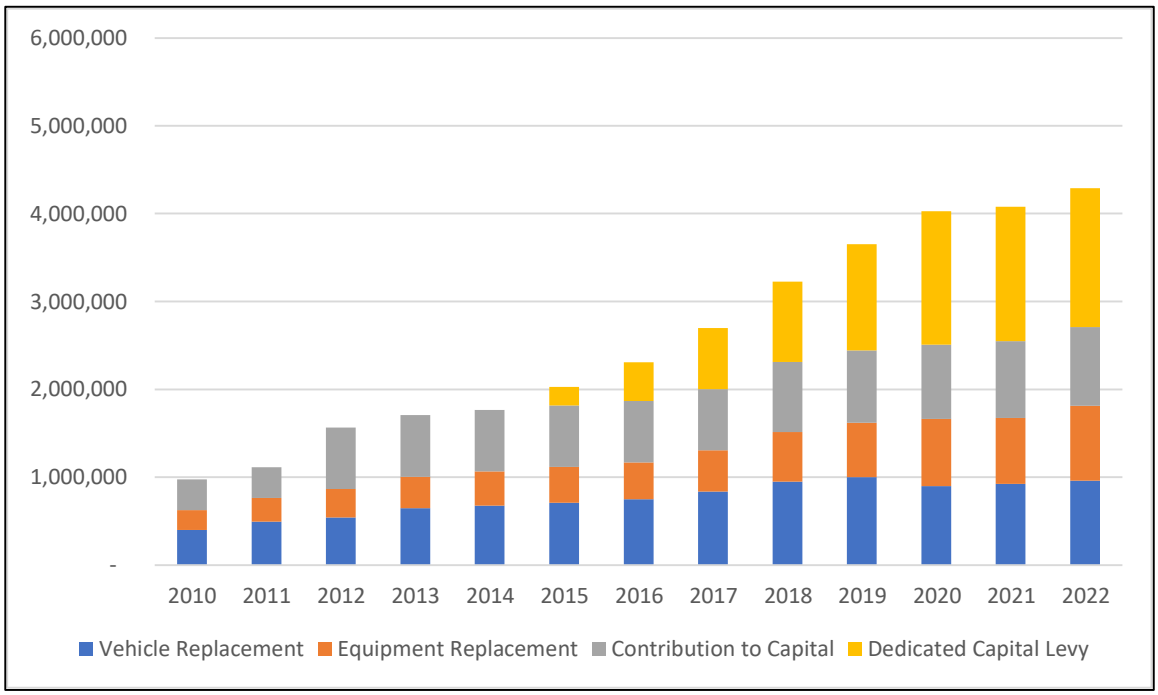


Figure 5-2 provides the historical external funding for tax supported assets. As shown, these sources of funding are more variable and uncertain, especially in years where COVID-19 impacted the Township.

- The Canada Community-Building Fund (CCBF), formerly known as Federal Gas Tax Funding, has increased from approximately $800,000 in 2010 to $894,000 in 2022. There were a few years (2019 and 2021) where "top-ups" to this funding was also provided. Typically, a minor inflationary increase is provided every two years on this funding.
- Ontario Community Infrastructure Funding (OCIF) has increased from $0 in 2010 (it was established in 2015) to $2,600,000 in 2022. Please note that 2021 OCIF funding totaled approximately $1,300,000 and a top-up was provided in 2022 that doubled OCIF funding for the year. The province has announced that $1billion in additional OCIF funding will be provided over the next five years, and funding formulas will be tied to asset replacement values in each municipality's asset management plan.
- Ontario Lottery and Gaming (OLG) funding has decreased from $2.2 million in 2010 to $1.1 million in 2022. The Township's policy is to include OLG funding in the year following receipt, which assists in mitigating annual fluctuations. Also, in 2020 Council approved an allocation policy that limits OLG funding for Township capital to a maximum of $2.2 million, with the remainder of OLG funding being allocated to Economic Development, Arts, Culture, and Heritage.

Figure 5-2
External Sources of Tax Supported Capital Funding

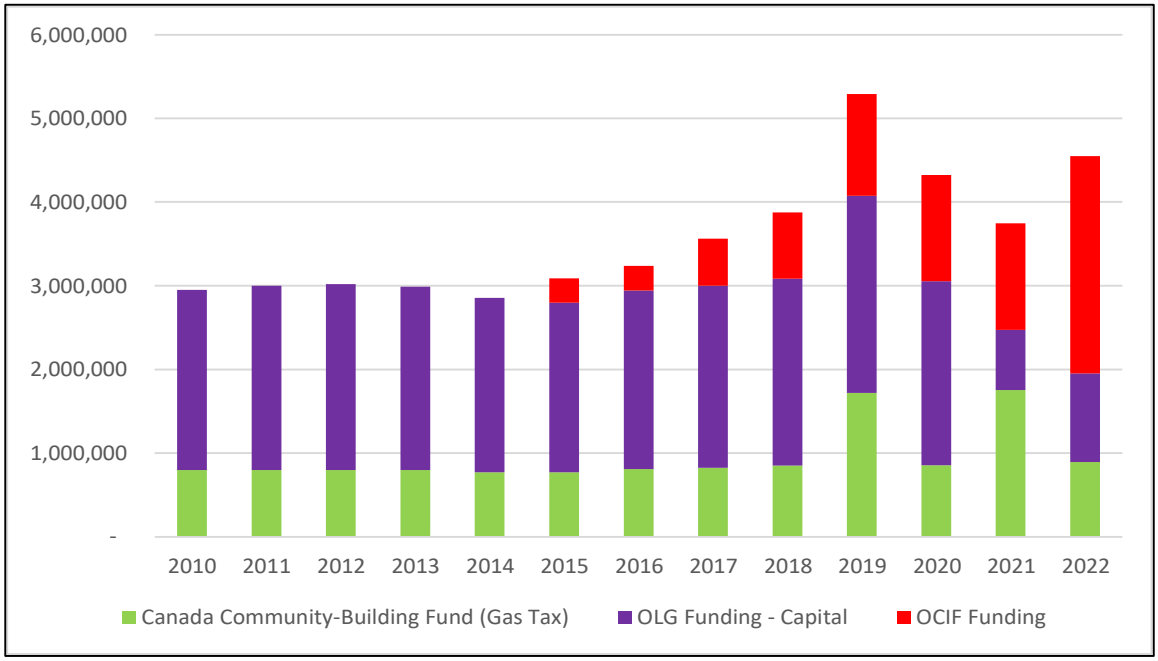
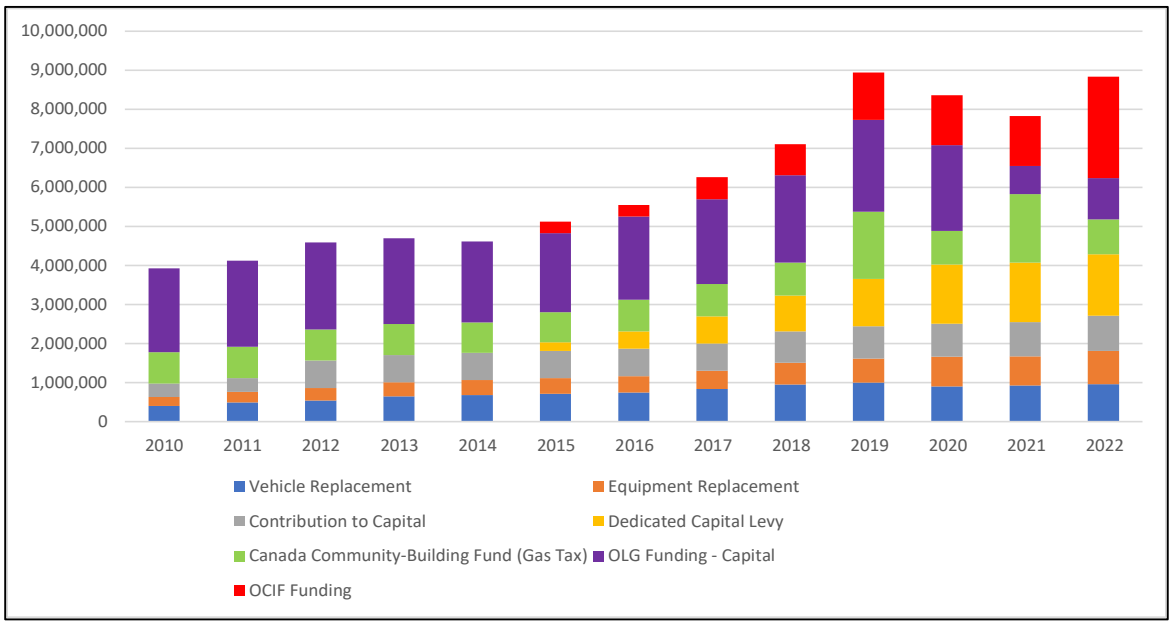


Figure 5-3 below combines internal and external funding sources into a combined tax supported capital funding graph. Total funding approached $9 million in 2019 however the Township has yet to reach this amount since, due to the impacts of COVID-19 on external funding sources.

Figure 5-3
Combined Internal and External Sources of Tax Supported Capital Funding



The 2022 available funding becomes the starting point in planning for funding needs and impacts over the

forecast period. The following sections will outline the assumptions used for each funding source.

Grant Funding Assumptions

CCBF/Gas Tax — It has been assumed that minor inflationary increases every 2 years will continue over the forecast period. This is in alignment with historical increases in the CCBF.

OCIF — 2021 OCIF funding received totaled $1,271,559. With the announcement of additional OCIF funding for 2022, the Township is expected to receive $2,596,074. This represents a one-time increase of $1,324,515. It has been assumed that this additional OCIF funding received in 2022 will become the new annual OCIF funding received over the forecast period, and that no further increases will be provided. This is supported by the $1 billion increase in OCIF funding over the next 5 years by the provincial government. It has also been assumed that the additional OCIF funding received (i.e. $1,324,515) will be allocated to roads projects (while the original $1,271,559 will continue to fund bridges and culverts).

Ontario Lottery and Gaming (OLG) Funding Assumptions

Future projected OLG funding is uncertain, given the impacts of COVID-19, the constantly changing economic climate, and the potential impacts due to iGaming. The Township's current OLG Allocation Policy limits the amount of OLG funds that can be allocated to Township capital to 88% of OLG funds received to a maximum of $2.2 million annually. It is recommended that this policy be reviewed in order to maximize the funding available for asset management purposes.

It has been assumed that $2.2 million in OLG funds will be available to fund Township capital annually over the forecast period. The following sensitivity analysis is provided:

- Just before the COVID-19 pandemic, approximately $2.7 million in annual OLG funds was received, of which $2.2 million was dedicated to Township capital. If this allocation was not limited to $2.2 million the allocation would have been almost $2.4 million (or 88%).
- With the current allocation formula, $2.5 million in OLG funding would be required annually in order to allocate $2.2 million to Township capital.
- If OLG funds are reduced by up to 30% due to internet gaming, Township OLG proceeds could be reduced by up to approximately $800,000 to $1.9 million.

Once OLG funding has somewhat stabilized, revisions to these assumptions can be made in future asset management plans.

Development Charges Funding Assumptions

Development charges represent fees paid by builders and developers that are paid when development is occurring in order to assist in funding the impacts on the Township due to growth. In many cases, growth related infrastructure (such as roads, water, and wastewater mains) is required to be constructed before growth can occur, which creates a cash flow issue when funding these projects. In an attempt to offset this, the Township can:

- Issue growth related debt, with future principal and interest payments funded from future development charges.

- Enter into agreements with builders and developers, requiring the payment of development charges at an earlier date.
- Defer growth related capital.

The Township's Development Charges Background Study was created in 2020 and includes over $208 million in growth related costs required to accommodate growth from 2020 to 2041. Over 22 years, that represents an average annual investment in growth related needs of $9.5 million. There are also growth related needs mentioned that are scheduled to occur beyond 2041 that will be included in future study calculations.

Looking at growth related needs forecasted between 2022 and 2041, the Table below outlines the suggested sources of funding. As there are benefits of some projects to the existing population, not all costs identified can be funded from development charges. Also, "developer funded" costs are considered local service costs, which are required to be funded by specific developers as the projects are specifically required for their development.

Table 5-3
Breakdown of Growth Related Needs by Funding Type

Source	Cost (2020 $)	%
Development Charges	198,049,975	74%
Developer Funded	27,984,000	10%
Taxation	26,129,641	10%
Dedicated Capital (Bridges)	5,538,693	2%
Water Rates	2,034,357	1%
Wastewater Rates	8,298,934	3%
Total	268,035,600	100%

Source: Township 2020 DC Study

The Development Charges Act requires linkages to asset management planning to ensure that proposed assets are financially sustainable over their useful life. This includes assessing the Township's ability to operate and maintain these assets, in addition to funding their eventual replacement. The Table below outlines the additional annual asset investments that will be required once all growth related projects identified within the Development Charges Background Study are completed.

Table 5-4
Future Annual Investment Needs for Growth Related Assets

Source	Annual Investment (2020 $)	%
Taxation	4,488,000	76%
Dedicated Capital (Bridges)	186,000	3%
Water Rates	709,000	12%
Wastewater Rates	501,000	9%
Total	5,884,000	100%

These annual investment needs will be added into future asset management plans as projects are completed.

Through the annual budget process, Township staff assess the availability of development charges from a cash flow perspective to fund growth related needs. In addition, development charges are allocated annually to fund growth related debt payments. Debt will be discussed in a later section.

Partner Contributions Assumptions

Partner contributions typically relate to:

- Projects that have a component of work that relates to partner/developer owned infrastructure.
- Growth related infrastructure that is considered a "local service", of which the costs are a partner/developer's responsibility, and the infrastructure is usually assumed by the Township at a later date.

During the annual budget process, portions of projects that are to be funded by partner contributions are identified and third-party funding is applied to these projects. Once infrastructure is assumed by the Township, the Township is responsible for ongoing lifecycle costs, unless ownership is not transferred, or an agreement is put in place that gives another party this responsibility.

Debt Funding Assumptions

Debt funding is a tool that can be used to finance capital needs where other funding is not available. It also spreads out the impact of a project over a longer period, as debt payments are made.

The province establishes limits on the amount of debt a municipality can incur. This limit (or debt capacity) is recalculated annually and is based on twenty-five percent of a municipalities' (own source) revenue. Therefore, annual debt payments for the Township, regardless of how they are funded, cannot exceed 25% of all revenue generated in a year.

The Township primarily incurs debt for projects that are considered growth related. With this approach, future development can fund the debt payments. Also, the Township plans for debt levels that are well below the province's debt limits. Planned Township debt does not exceed fifteen percent of annual revenues, which allows sufficient room for any unexpected debt needs that could occur.

Through the annual budget process, the Township maintains a ten-year forecast of anticipated future debt needs. Table 5-5 below provides a forecast of anticipated future debt from 2022 to 2031. Table 5-6 provides a summary of combined current and future debt over this period, and Figure 5-7 provides a comparison of debt levels in relation to the limited imposed by the province. Of the $69.6 million in planned future debt, 96% is growth related with annual payments being funded from future development charges.

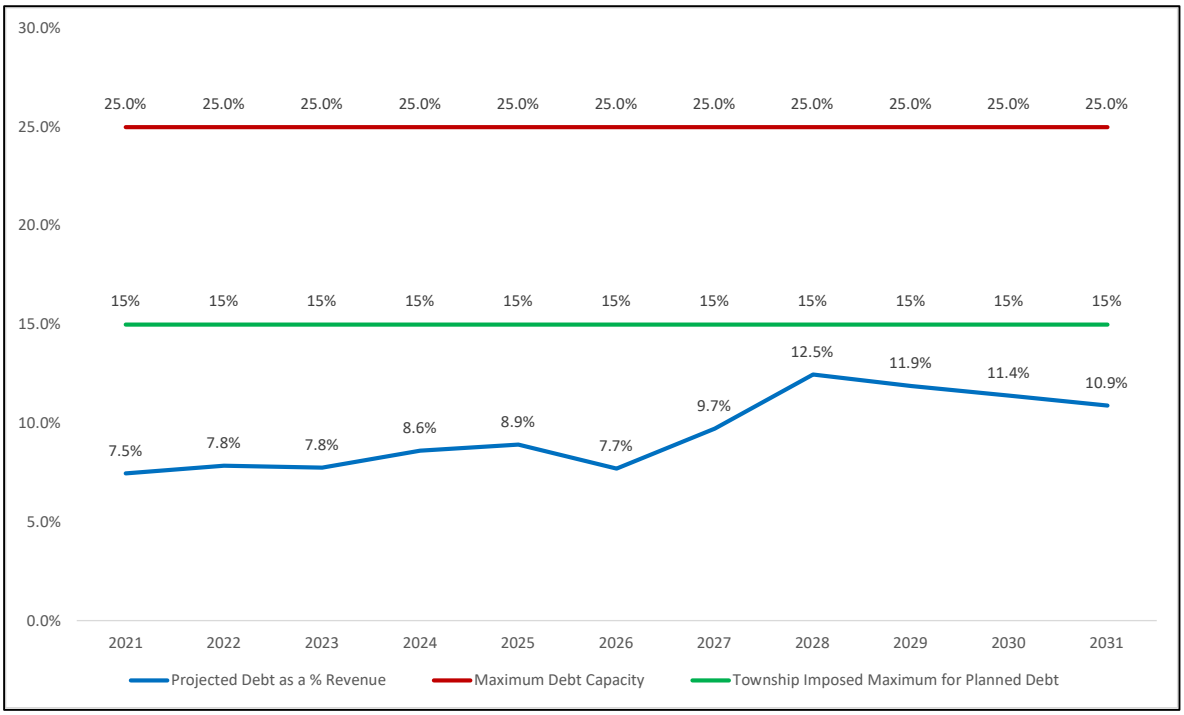
Table 5-5
Forecast of Anticipated Debt

Project Description	Annual Debt Requirements											
	2021 Unissued	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	TOTAL
2020-007 - Water Supply Strategy - Phase 2 Groundwater Investigation Study	2,420,000	-	-	-	-	-	-	-	-	-	-	2,420,000
2020-008 - New Well - Area #3	-	-	87,000	640,000	313,000	3,422,000	-	-	-	-	-	4,462,000
2020-009 - New Well - Area # 5	-	-	-	-	-	-	-	87,000	640,000	282,000	2,964,000	3,973,000
2022-042 - Woolwich Watermain Extension - WR 7 to Urban Boundary	-	-	-	1,244,600	-	-	-	-	-	-	-	1,244,600
2022-044 - WR 18 Watermain Extension - Urban Boundary to 3rd Line	-	-	-	2,258,900	-	-	-	-	-	-	-	2,258,900
2022-045 - 3rd Line Watermain Extension - WR 18 to Well Area 3	-	-	-	1,131,900	-	-	-	-	-	-	-	1,131,900
301/330/360-0841 - Dickson Drive Employment Land Servicing	-	-	-	-	-	-	-	-	-	-	-	-
303-0299 - Corporate Operations Facilities	500,000	805,720	6,996,640	6,996,640	-	-	-	-	-	-	-	15,299,000
F0171 - Future Expansion of Fergus WWTP	-	-	-	-	1,350,000	12,150,000	16,200,000	-	-	-	-	29,700,000
2010-080 - New Fire Hall	-	-	-	-	100,000	200,000	3,945,000	-	-	-	-	4,245,000
2010-078 - Tanker	-	-	-	-	-	-	610,000	-	-	-	-	610,000
2010-079 - Pumper	-	-	-	-	-	-	880,000	-	-	-	-	880,000
2018-017 - Additional Equipment for New Fire Hall	-	-	-	-	-	-	420,000	-	-	-	-	420,000
2010-177 - Future Parkland Development (16 hectares)	-	-	-	-	-	-	-	-	-	-	2,912,000	2,912,000
Total Projected New Debt	**2,920,000**	**805,720**	**7,083,640**	**12,272,040**	**1,763,000**	**15,772,000**	**22,055,000**	**87,000**	**640,000**	**282,000**	**5,876,000**	**69,556,400**

Table 5-6
Summary of Current and Future Debt Payments

	2021 Actual Payments	Projected Annual Debt Payments (Principal & Interest)									
		2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Tax Supported	**728,926**	**972,887**	**946,898**	**1,300,642**	**1,256,932**	**1,048,170**	**1,062,886**	**1,493,695**	**1,493,695**	**1,493,695**	**1,493,695**
OLG Supported	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**	**149,573**
Waterworks Supported	**602,310**	**601,434**	**660,305**	**743,926**	**1,029,470**	**764,562**	**1,016,352**	**1,016,352**	**1,022,752**	**1,069,852**	**1,090,652**
Wastewater Supported	**1,156,521**	**1,246,348**	**1,325,483**	**1,401,872**	**1,478,046**	**1,577,061**	**2,470,696**	**3,662,357**	**3,661,012**	**3,660,756**	**3,660,678**
Total Projected Debt Payments (Existing & New)	**2,637,330**	**2,970,242**	**3,082,259**	**3,596,013**	**3,914,021**	**3,539,366**	**4,699,507**	**6,321,978**	**6,327,032**	**6,373,876**	**6,394,598**

Figure 5-4
Projected Debt Payments as a Percentage of Revenue



The Township's planned debt reached a maximum of 12.5% of revenues in 2028, leaving sufficient debt capacity for any unforeseen debt needs.

Use of Assessment Growth

A potential approach to mitigating the impact of asset investment on taxation rate is through the use of assessment growth funding each year. Assessment growth is intended to fund the growth related pressures imposed on the Township each year, ensuring where possible, growth pays for growth. The two primary areas that are impacted by growth within the Township include:

1. Operational Impacts of providing services to more residents and businesses (including additional Township staffing).
2. Asset impacts, including the need for more assets and in some cases, increased capacity and/or functionality of assets to accommodate growth.

The Table below outlines a strategy for allocating assessment growth between operational impacts and asset related impacts. With assessment growth under 1%, it would be allocated equally (i.e. 50% each) between operations and asset investment. Growth above 1% would be split 75% to operations and 25% to asset investment. Given expected growth as well as historical growth over the last 10 years, annual assessment growth is expected to be in the 2% to 3% range, which would result in a 0.50% to 0.75% relative impact on taxation dedicated to asset investment each year that could be funded from assessment growth using this strategy.

Table 5-7
Use of Assessment Growth to Fund Asset Investment

Assessment Growth		Allocation of Growth to:		Equivalent Reduction in Taxation Impact			
				Operations		Asset Investment	
Min	Max	Operations (including New Staff Positions)	Asset Investment	Min	Max	Min	Max
0.00%	1.00%	50%	50%	0.00%	0.50%	0.00%	0.50%
1.01%	2.00%	75%	25%	0.76%	1.50%	0.25%	0.50%
2.01%	3.00%	75%	25%	1.51%	2.25%	0.50%	0.75%
3.01%	4.00%	75%	25%	2.26%	3.00%	0.75%	1.00%
4.01%	5.00%	75%	25%	3.01%	3.75%	1.00%	1.25%
Over 5%		75%	25%	3.76%	n/a	1.25%	n/a

Impact on Taxation

Making progress on asset management planning related investment strategies requires a long-term approach to reach optimal funding levels. All other funding sources discussed in the chapter contribute to this funding strategy, however clear and defined increases in contributions to capital are also required.

As initially outlined in Chapter 2 and Chapter 4, optimal tax supported asset investment levels are as shown below in Table 5-8 and Table 5-9.

Table 5-8
Optimal vs. Actual Funding – Tax Supported (excl. Bridges/Culverts)

Tax Supported (excl. Bridges/Culverts)			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding (note 1)**	**% of Optimal**
Road Base - Paved	2,551,000	4,179,318	43%
Road Surface - Paved	5,519,459		
Road - Gravel	2,000,000		
Buildings	1,626,761		
Vehicles	1,235,550	961,000	
Equipment	731,372	849,400	
Land Improvements	319,700		
Total	**$ 13,983,842**	**$ 5,989,718**	

Note 1: Assumes that the extra OCIF funding received in 2022 (and every year thereafter) is dedicated to roads.

Table 5-9
Optimal vs. Actual Funding – Bridges and Culverts

Bridges and Culverts			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding**	**% of Optimal**
Bridges	2,109,986	2,849,139	74%
Culverts	1,677,000		
Pedestrian Bridges	75,000		
Total	**$ 3,861,986**	**$ 2,849,139**	

While the Township has made significant progress in funding bridges and culverts (reaching 74% of optimal annual investments), only 43% of the optimal annual investment has been achieved for other tax supported assets. Given that the Township has extensive vehicle and equipment replacement schedules, a significant portion of the shortage lies in roads, buildings, and land improvements.

Table 5-10 provides a scenario analysis that outlines various strategies that could be achieved over the long-term to progress towards optimal annual investments for all tax supported assets. This includes:

- Scenario 1: Reaching and maintaining optimal funding in 20 years.
- Scenario 2: Reaching and maintaining optimal funding in 30 years.
- Scenario 3: Reaching and maintaining optimal funding in 40 years.
- Scenario 4: Providing an equivalent to a 2.0% taxation increase to asset investments annually.
- Scenario 5: Providing an equivalent to a 1.5% taxation increase to asset investments annually.
- Scenario 6: Providing an equivalent to a 1.0% taxation increase to asset investments annually.

Table 5-10
Financing Strategy Scenario – Sensitivity Analysis

Sensitivity Analysis - Financing Strategy	Funding Investment by Year 10	Funding Investment by Year 20	Funding Investment by Year 30	Funding Investment by Year 40	Equivalent Annual Increase in Taxation
Scenario 1: Optimal Funding in 20 Years	77%	100%	100%	100%	**3.85%**
Scenario 2: Optimal Funding in 30 Years	69%	83%	100%	100%	**2.86%**
Scenario 3: Optimal Funding in 40 Years	63%	73%	85%	100%	**2.27%**
Scenario 4: 2% Capital Investment	61%	68%	78%	91%	**2.00%**
Scenario 5: 1.5% Capital Investment	57%	60%	65%	73%	**1.50%**
Scenario 6: 1% Capital Investment	52%	51%	53%	56%	**1.00%**
Optimal Capital Investment	**$ 23,983,000**	**$ 32,231,000**	**$ 43,317,000**	**$ 58,214,000**	

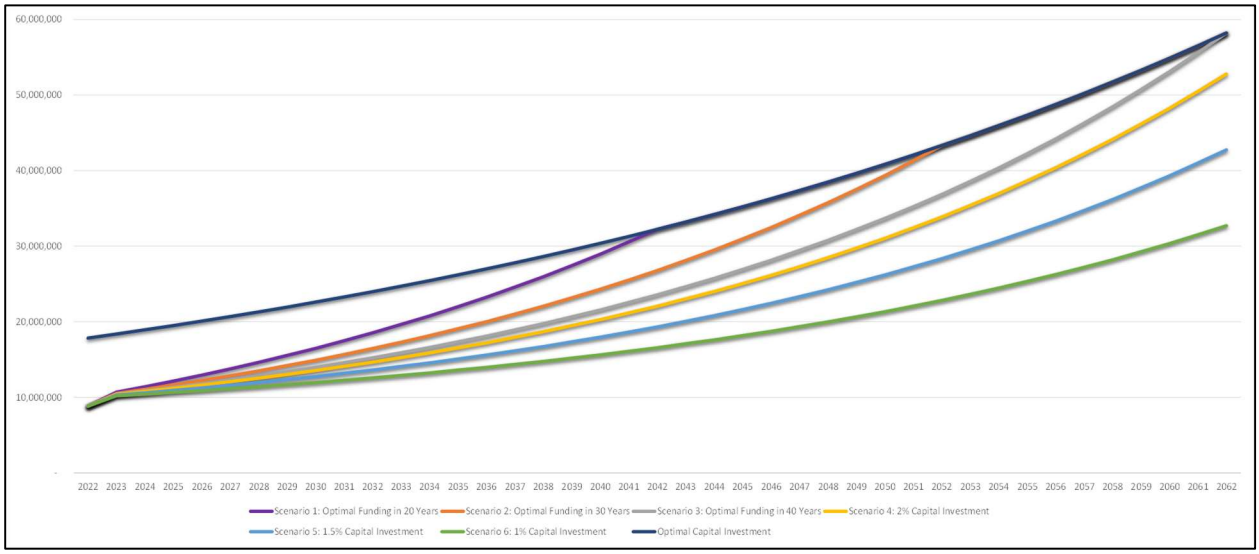
The following observations can be made from this scenario analysis:

1. Only scenarios 1, 2, and 3 reach optimal investment levels in the next 40 years.
2. Scenario 4 provides a gradual increase in investment, reaching 91% in 40 years.
3. Scenario 5 provides a more gradual increase in investment, reaching 73% in 40 years.
4. Scenario 6 actually shows a reduction in percentage of optimal investment over time, with a gradual increase thereafter, reaching 56% in 40 years.

Also, please note that the proposed funding in the scenarios above is labelled as "equivalent annual increase in taxation", meaning that alternate sources of funding can reduce the overall impact on taxation annually, such as increases in external sources of funding, or funding provided by assessment growth. Also, as the Township's Asset Management Plan is refined and improved over time, lifecycle optimization strategies can result in a reduction in the optimal asset investment amount.

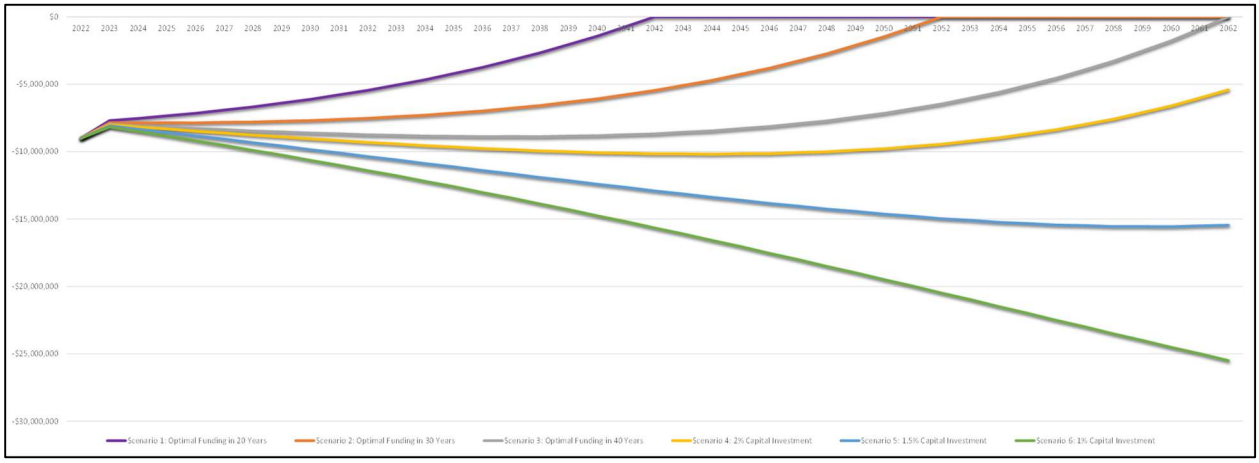
The Figure below provides an illustration of each financing scenario in comparison to the annual optimal investment.

Figure 5-5
Financing Scenario Comparison to Optimal Investment



The following Figure provides analysis of how each scenario impacts the tax supported funding gap. The current tax supported funding gap is estimated at $9.3 million, meaning that in optimal conditions, the Township would be investing an additional $9.3 million each year in tax supported assets. Scenarios 1 to 3 result in the elimination of the gap over the next 40 years. Scenario 4 (2% annual capital investment) results in an overall reduction in the gap to $5.4 million in 40 years. Scenarios 5 and 6 result in an increasing funding gap (to $15.5 million and $25.5 million respectively).

Figure 5-6
Financing Scenario Comparison of Funding Gap



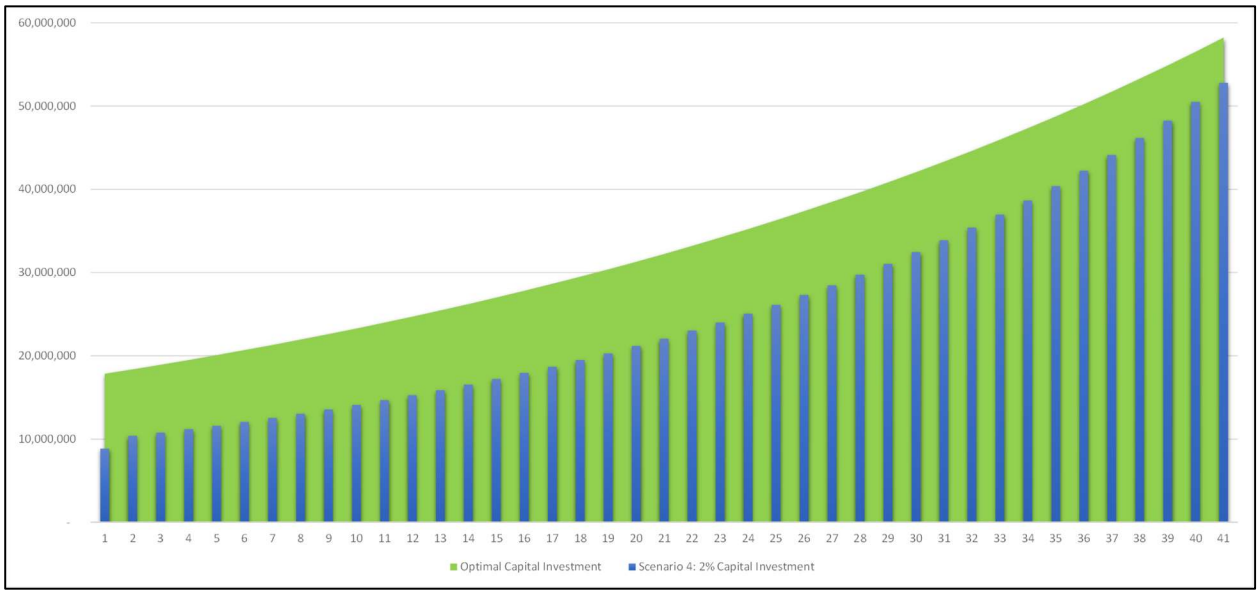
An equivalent increase in taxation of at least 2.0% (representing Scenario 4) is needed annually to invest in tax supported assets in order to make meaningful progress towards optimal annual asset investment levels. If assessment growth each year falls between 2% and 3%, then the net impact on taxation would be between 1.25% and 1.50% annually (see Table below). As assessment growth changes annually, so does the net impact on taxation. This can be reduced further if other external funding sources (such as grants) become available and is subject to annual approval through the budget process.

Table 5-11
Impact of a 2.0% Taxation Equivalent Asset Investment (with Assessment Growth)

Assessment Growth		Taxation Impact before Assessment Growth	Impact of Assessment Growth	Net Impact on Taxation
Min	Max			
0%	1%	2.00%	0.00% to -0.50%	2.00% to 1.50%
1.01%	2%	2.00%	-0.25% to -0.50%	1.75% to 1.50%
2.01%	3%	2.00%	-0.50% to -0.75%	1.50% to 1.25%
3.01%	4%	2.00%	-0.75% to -1.00%	1.25% to 1.00%
4.01%	5%	2.00%	-1.00% to -1.25%	1.00% to 0.75%
Over 5%		2.00%	-1.25% to n/a	0.75% to n/a

The Figure below provides another perspective of how Scenario 4 provides an increasing asset investment over 40 years, approaching optimal levels.

Figure 5-7
Impact of Scenario 4 on the Funding Gap



WATER AND WASTEWATER SUPPORTED FINANCING STRATEGY

Water and Wastewater Rate Study

The Township has been completing Water and Wastewater Rate Studies for many years. More importantly, Councils both past and present have been very proactive in following the recommendations within these studies when passing annual budgets. The result of this is evident in the Historical Funding section below. Planned increases to capital contributions over time has resulted in much needed annual capital investments that fund water and wastewater related asset management costs each year.

Sources of Funding

To fund the water and wastewater supported needs identified through the asset management planning process, the Township has a number of funding sources:

Table 5-12
Sources of Funding – Water & Wastewater Supported

Internal Resources	External Sources
• Operating Budgets (operating & maintenance costs) • Contributions to Capital • Vehicle Replacement • Equipment Replacement • Facility Replacement	• One-time Capital Grants • Development Charges (growth) • Partner Contributions • Debt

There is a level of risk associated with relying on external sources of funding over a long-term forecast. While internal sources are more controllable, external sources are uncontrollable and subject to change. This makes long-term planning more difficult.

Table 5-13
Known Risks Associated with External Funding Sources

External Funding Source	Risk
One-time Capital Grants	Application based grants, not guaranteed.
Development Charges (growth)	Restricted cash flow (capital typically precedes growth).

Though annual budget processes and required updates to this Asset Management Plan, updates to available funding from external funding sources can be incorporated into this financing strategy.

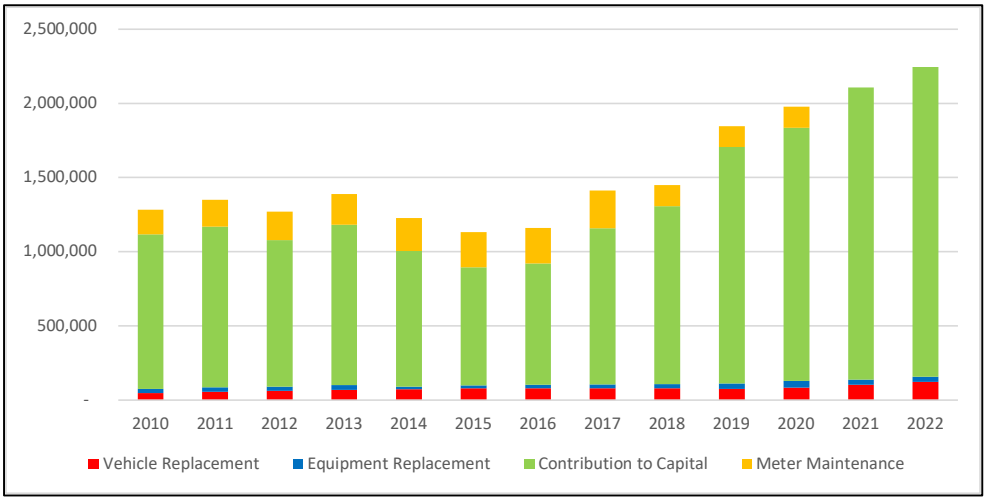
Historical Funding

An analysis of funding sources from 2010 to 2022 is provided below. Figure 5-8 provides the historical sources of funding for water supported assets while Figure 5-9 provides the historical sources of funding for wastewater supported assets.

Water Historical Funding:

- Each year, the contribution to capital is impacted by the water rate increase for the year, plus the allocation of any year-end surplus. This is the primary capital funding source, which has successfully increased over time by following recommendations in prior and current Water and Wastewater Rate Studies.
- The Township has vehicle and equipment replacement schedules that have funding increases as required annually.
- In 2021, the meter maintenance (replacement) program was combined with general capital.

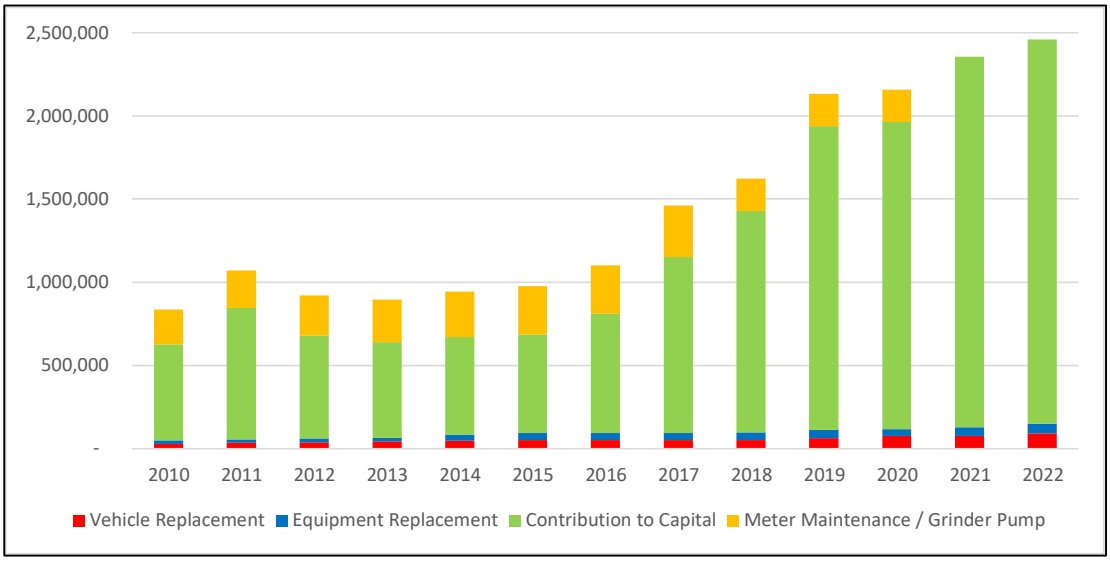
Figure 5-8
Water Supported Capital Funding



Wastewater Historical Funding:

- Each year, the contribution to capital is impacted by the wastewater rate increase for the year, plus the allocation of any year-end surplus. This is the primary capital funding source, which has successfully increased over time by following recommendations in prior and current Water and Wastewater Rate Studies.
- The Township has vehicle and equipment replacement schedules that have funding increases as required annually.
- In 2021, the meter maintenance (replacement) and grinder pump programs were combined with general capital.

Figure 5-9
Wastewater Supported Capital Funding



Grant Funding Assumptions

Given the discussion above regarding the proactive historical funding increases provided in this area, any available infrastructure grants are typically applied for in tax supported asset categories, such as roads and stormwater. In situations where specific grants are tied only to water and/or wastewater infrastructure, submissions for funding are made by the Township in this area. Canada Community-Building Funding (Gas Tax) and OCIF funding could be used for water and wastewater projects, however the Township's practice is to allocate this funding to roads related and bridge/culvert projects.

For the forecasted financing strategy, there are no known water and wastewater specific grants therefore it has been assumed that grant funding will not assist in this area. In the event that grant funding becomes available, adjustments can be made through the budget process and future asset management plan updates.

Development Charges Funding Assumptions

Please refer to the comprehensive development charges discussion in the tax supported financing strategy above.

Partner Contributions Assumptions

Please refer to the comprehensive partner contribution discussion in the tax supported financing strategy above.

Debt Funding Assumptions

Please refer to the comprehensive debt funding discussion in the tax supported financing strategy above.

Impact on Rates

Making progress on asset management planning related investment strategies requires a long-term approach to reach optimal funding levels. All other funding sources discussed in the chapter contribute to this funding strategy, however clear and defined increases in contributions to capital are also required.

As initially outlined in Chapter 2 and Chapter 4, optimal asset investment levels are as shown below in Table 5-14 and Table 5-15.

Table 5-14
Optimal vs. Actual Funding – Water Supported

Water Assets			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding**	**% of Optimal**
Water Mains	2,667,455	2,090,398	76%
Buildings	147,760		
Vehicles	112,186	122,550	
Equipment	22,560	33,300	
Land Improvements	5,921		
Total	$ 2,955,882	$ 2,246,248	

Table 5-15
Optimal vs. Actual Funding – Wastewater Supported

Wastewater Assets			
Asset Type	**Optimal Annual Investment (2022 $)**	**Existing (2022) Funding**	**% of Optimal**
Wastewater Mains	2,242,000	2,308,907	76%
Buildings	839,152		
Vehicles	90,750	92,450	
Equipment	56,000	56,700	
Land Improvements	5,921		
Total	$ 3,233,823	$ 2,458,057	

The Township has made significant progress in funding water and wastewater supported assets, reaching 76% of optimal annual investments for each.

Table 5-16 below shows the planned water and wastewater rate increases based on the current Council approved Water and Wastewater Rate Study. Table 5-17 provides a comparison analysis to other

municipalities.

Table 5-16
Proposed Water and Wastewater Rate Increases

Proposed Rate Increases	2023	2024	2025	2026	2027	2028	2029	2030
Water	1.10%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%	1.20%
Wastewater	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.40%	3.40%
Combined Increase	**2.30%**	**2.30%**	**2.30%**	**2.40%**	**2.40%**	**2.40%**	**2.40%**	**2.50%**

These rate increases support the ongoing operations of the water and wastewater systems as well as planned increases to asset investment over the forecast period, with the goal of reaching system financial sustainability, including realizing optimal annual asset investments. Water and Wastewater Rate Studies are updated every five years and will be completed in conjunction with the Township's Asset Management Plan updates.

Table 5-17
Customer Cost of Service Comparison 2020

Volume Meter Size	Population	Land Area sq. km	Population Density per sq. km	Location	Residential 200 m^3 5/8"
New Tecumseth	42,167	274	154	Simcoe	$ 852
Halton Hills	65,466	276	237	Halton	$ 902
Orillia	33,113	29	1,159	Simcoe	$ 941
Bradford West Gwillimbury	36,759	201	183	Simcoe	$ 996
Orangeville	30,859	16	1,977	Dufferin	$ 1,035
Georgina	48,772	288	169	York	$ 1,145
Innisfil	41,548	263	158	Simcoe	$ 1,208
Woolwich	27,589	326	85	Waterloo	$ 1,246
Wellington North	12,585	526	24	Wellington	$ 1,246
Mapleton	11,432	535	21	Wellington	$ 1,430
King	27,496	333	83	York	$ 1,433
Guelph-Eramosa	14,432	292	49	Wellington	$ 1,444
East Gwillimbury	32,850	245	134	York	$ 1,454
Minto	9,359	301	31	Wellington	$ 1,608
Average					**$ 1,210**
Median					**$ 1,227**
Centre Wellington	31,148	408	76	Wellington	$ 1,298
$ Difference to Median					$ 72
% Difference to Median					5.8%

*Source is the November 2020 BMA Water and Wastewater Rate Study & Financial Plans - 2020 cost of service for a residential customer in relation to neighbouring municipalities as well as municipalities with similar, population, land area and density. The table above compares the cost of service assuming a 5/8" meter which is typical for a residential customer and an annual consumption of 200 m^3 annually.

CHAPTER 6

MONITORING & CONTINUOUS IMPROVEMENT

CHAPTER 6: MONITORING AND CONTINUOUS IMPROVEMENT

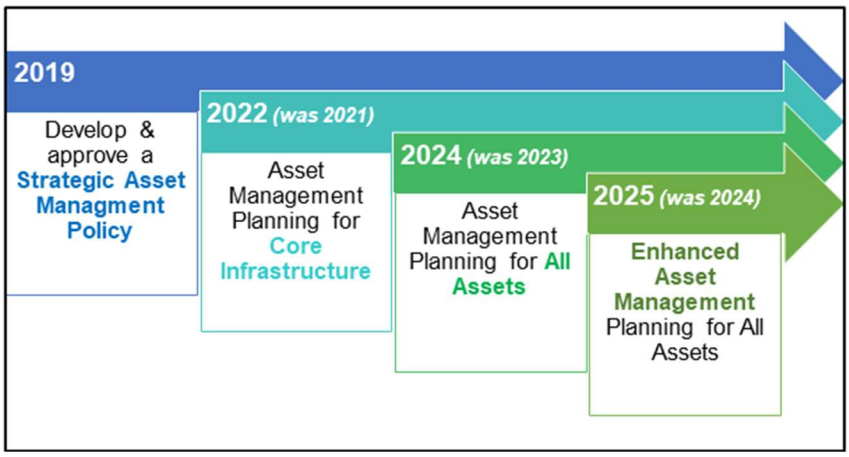
OVERVIEW

The ongoing monitoring and continuous improvement of Township asset management practices ensures that:

- Compliance with asset management legislation is achieved and maintained; and
- Asset management practices are implements in the best interest of the Township, ensuring efficiencies and integration into day-to-day operations.

As outlined in Chapter 1, Ontario Regulation 588/17 was passed in 2017, requiring municipalities to implement specific asset management practices within four set timelines. These timelines were expended by one year as a result of COVID-19 as follows:

Figure 6-1
Asset Management Planning – Legislated Timelines



To date, the Township has been compliant with all Provincial requirements and best practices. However, with the introduction of Ontario Regulation 588/17, significant time and resourcing will be required to meet the identified compliance deadlines. In 2019, Township Council approved a Strategic Asset Management Policy, the first requirement of Ontario Regulation 588/17.

The more significant challenges around regulation compliance will include the integration of asset management planning into existing Township processes, the ability to continually update and improve the Township's asset management plan, and the requirement of all Township departments to include asset management planning within existing workloads and staff compliments. An internal Township Asset Management Committee has been established and approved through the Strategic Asset Management Policy, with staff representatives from all Township departments.

COLLABORATION WITHIN WELLINGTON COUNTY

Asset management activities at the Township are not conducted in a vacuum. They are integrated with the policies and practices of Wellington County and the other lower-tier municipalities, whose assets overlap with those of the Township. Township roads, storm, and bridge/culvert assets are integrated with County road, storm, and bridge/culvert assets. In addition, road and bridge/culvert assets on boundary roads are shored with other lower-tier municipalities, within Wellington County and Waterloo Region. Asset management planning for Township assets impacts the County and these lower-tier municipalities, and vice versa. As a result, coordinated asset management practices are necessary to optimize asset management practices.

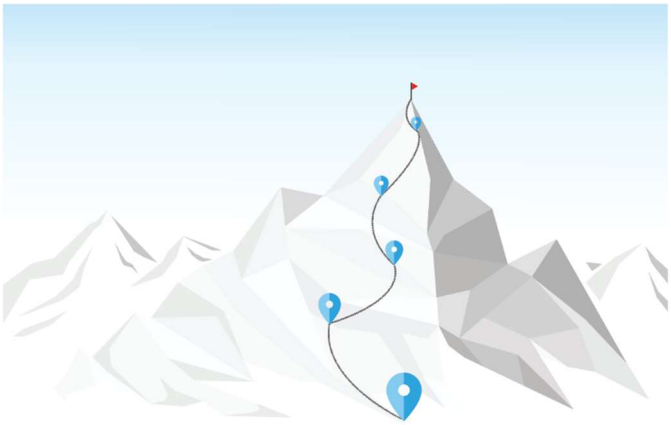
Throughout the process of establishing asset management planning practices, the Township has engaged Wellington County and the Wellington lower-tier municipalities, to share best practices, templates, and resources. All have implemented a common asset management software to aid in tracking asset management activities and enabling predictive analyses relating to infrastructure investment.

Components of lifecycle cost management, including condition assessment scales, risk models, and performance measurement are being reviewed to determine the potential for commonalities in measurement and reporting. Opportunities for further collaboration and efficiency across the County are being evaluated.

MONITORING AND CONTINUOUS IMPROVEMENT

As an organization, the Township's asset management capacity is at an intermediate level, with informal AM practices in each department. While these practices varied in completeness and complexity, the common theme across the organization is the need to improve the degree of consistency in data collection and management practices, formalize risk assessment procedures, and work toward improving data quality.

This asset management plan is a living document, and an output from the overall Township asset management processes. As asset management processes evolve and improve, the completeness and quality of future asset management plans will improve, as will the Townsip's capacity to plan for future asset investment needs. A comprehensive update of the Asset Management Plan will take place, at a minimum, every five years. In addition, an annual update report will be submitted to Township Council in conjunction with the annual budget process. This report will outline asset management progress, including how "aligned" approved budgets are to the recommendations within the Asset Management Plan.

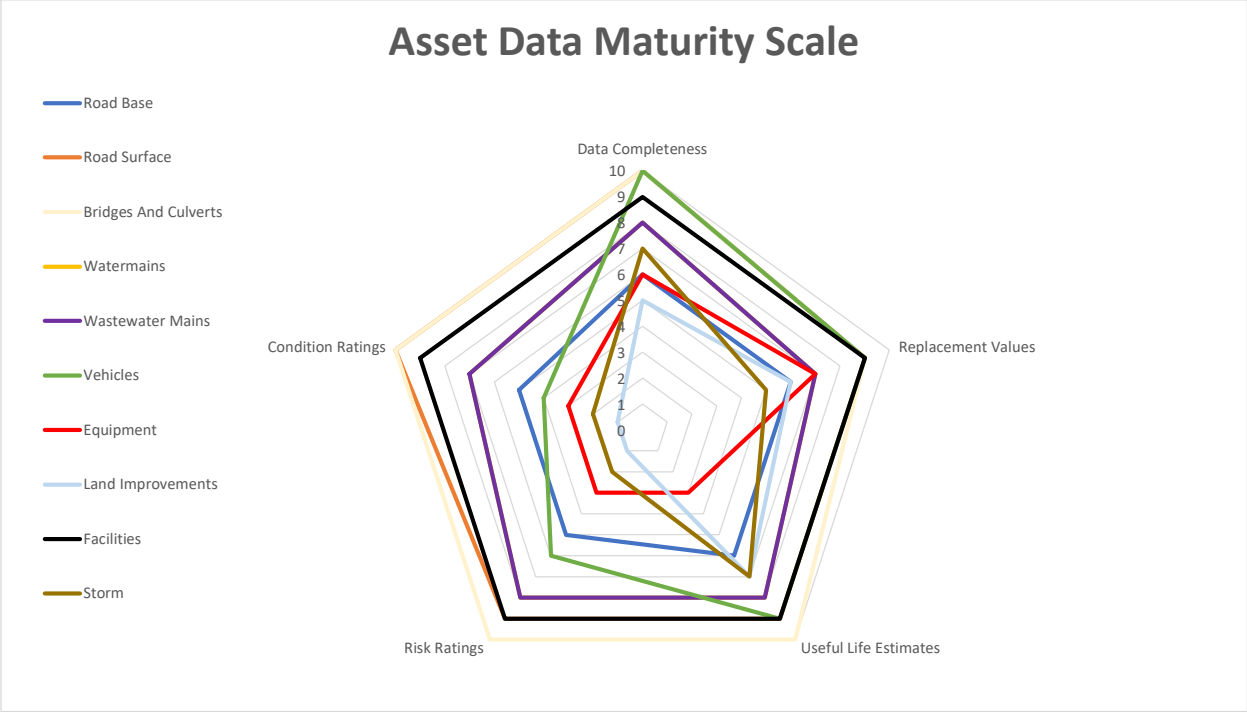


Data quality is critical to asset management. Having an up to date, comprehensive asset data inventory is critical for making informed, timely decisions regarding optimal investments in our infrastructure. In addition to detailed technical data, the data that is collected for each asset includes:

- Valuation data that allows for the valuation of asset, the calculation of replacement costs, and the determination of financial useful lives of all assets;
- Lifecycle costing data that identifies work that needs to be completed on each asset, and the cost and frequency of that work. It gives the ability to predict future operations, maintenance, rehabilitation, replacement and expansion costs;
- Condition data, which is used to determine the current condition of assets and better understand the rate of deterioration of each asset;
- Performance data, which tracks demand and capacity performance, to provide an idea of service levels provided by Township assets;
- Risk data is used to define the probability of an asset failing, as well as the consequences of the failure of that asset, so that asset investments can be prioritized and critical infrastructure can be identified;

The diagram below provides an "Asset Data Maturity Scale", which gives an idea of the confidence staff currently have in each asset area, based on the quality and completeness of the asset data available. It also provides an overview of key data gaps, and the priorities for ongoing asset data improvement. Some assets, like the road surface assets and bridge/culvert assets have had regular condition assessment data for a number of years, and the investment needs of the network are based on reliable data. Other assets do not have complete data. As a result, staff rely on best available information and estimates of the condition and risk assessments of those assets, including inferring condition from the age of the asset, to build out lifecycle and financial models.

Figure 6-2
Asset Data Maturity Analysis



Each of the asset areas are further elaborated below to provide readers with a more granular or detailed view of current (self-assessed) data maturity, and areas for improvement:

Roads and Transportation Network

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	Reliable inventory data exists for critical assets	**Inventory data is complete for all assets in this asset class.**	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	**Condition data is incomplete.**	Condition data is complete for critical assets.	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	Services provided by this asset class are understood by departmental staff.	**Current levels of service have been defined and performance metrics are used to measure progress.**	Current levels of services are defined, tracked, and reported on a regular basis.	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	Lifecycle activities required to maintain current levels of service are understood.	**Lifecycle activities required to maintain current levels of service are understood and documented.**	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would greatly benefit from better understanding of the actual condition of both paved and gravel road bases. In its current state, it is evident that the condition, and risk (probability of failure) of the road bases are skewed toward the bottom end of the spectrum which may not be entirely accurate when considering the composition of road bases and expect useful lives. Additionally, enhancement of the risk profile in this asset class to include consequence of failure, and climate change implications will enhance the risk makeup of these assets and provide better decision-making support if risk is to be used as a metric by which council and staff will ultimately formulate decisions to ensure Township lifecycle interventions are taking place on the right assets, at the right times.

The roads and transportation network for the Township of Centre Wellington represent the largest singular asset class – with this segment representing approximately 70% of the tax supported assets owned and operated by the Township. Given this weighting, and the current condition assessment of the road bases, this particular asset segment is expected to receive a large portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of road base condition assessment and develop risk strategies that are elaborated to include not only probability of failure, but also consequence of failure to better understand risk associated with this asset segment, but also to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing infrastructure replacement backlogs.

Bridges and Culverts

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	Reliable inventory data exists for critical assets	**Inventory data is complete for all assets in this asset class.**	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	Condition data is complete for critical assets.	Condition data is complete and accurate for all assets.	**Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.**
Levels of Service	Services provided by this asset class are	**Current levels of service have been defined and**	Current levels of services are defined, tracked,	Proposed levels of service have been defined, and

	understood by departmental staff.	**performance metrics are used to measure progress.**	and reported on a regular basis.	funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	Risk is estimated according to remaining service life.	**Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.**	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	Lifecycle activities required to maintain current levels of service are understood.	**Lifecycle activities required to maintain current levels of service are understood and documented.**	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from better inventory of its bridge and culvert inventory in its asset database. In its current state, it is evident that the risk associated with operation of its bridge network is skewed toward the top end of the spectrum, which is widely acknowledged, and is being mitigated by the implementation of a dedicated capital levy.

The bridge and culvert network for the Township of Centre Wellington represent the second-largest asset class – with this segment representing approximately 16% of the tax supported assets owned and operated by the Township. Given this weighting, and the current risk assessment of the bridges and culverts, this particular asset segment is expected to receive a disproportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change implications, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of inventory, full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing infrastructure replacement backlogs.

Facilities

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	**Reliable inventory data exists for critical assets**	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Lifecycle Maintenance Strategy	Lifecycle activities required to maintain current levels of service are understood.	**Lifecycle activities required to maintain current levels of service are understood and documented**.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from completion of the building condition assessment for the remainder of the inventory in its facilities inventory. In its current state, it is evident that the risk associated with operation of township facilities is skewed toward the top end of the spectrum, which is widely acknowledged.

The facilities operated by the Township of Centre Wellington represent the third-largest asset class – with this segment representing approximately $143 Million in replacement values across all funding sources. Given this weighting, and the current risk assessment of the facilities owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change implications, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of condition assessment, full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing capacity needs.

DATA QUALITY

Vehicles

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	Reliable inventory data exists for critical assets	Inventory data is complete for all assets in this asset class.	**Inventory data is complete, accurate, and in a centralized, accessible format.**
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	**Services provided by this asset class are understood by departmental staff.**	Current levels of service have been defined and performance metrics are used to measure progress.	Current levels of services are defined, tracked, and reported on a regular basis.	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	Risk is estimated according to remaining service life.	**Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist**.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	**Lifecycle activities required to maintain current levels of service are understood.**	Lifecycle activities required to maintain current levels of service are understood and documented.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate

				funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from developing condition assessment, levels of service, and lifecycle management strategy data for the vehicle inventory. In its current state, it is evident that the risk associated with operation of township vehicles is skewed toward the top end of the spectrum, which is widely acknowledged and indicative of the criticality of these assets in support of delivering township services. Future risk modelling for Township vehicles should be developed to address risk mitigation, levels of service, climate change implications, and replacement requirements.

The vehicles owned and operated by the Township of Centre Wellington represent a smaller asset segment in terms of total replacement value; however, with this segment representing approximately $17 Million in replacement values across all funding sources, it is still very much an asset class worthy of application of asset management practices.

Given the current risk assessment of the vehicles owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing capacity needs.

DATA QUALITY

Equipment

	Level 1	Level 2	Level 3	Level 4
Inventory	**Inventory data is incomplete.**	Reliable inventory data exists for critical assets	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.

Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	**Services provided by this asset class are understood by departmental staff.**	Current levels of service have been defined and performance metrics are used to measure progress.	Current levels of services are defined, tracked, and reported on a regular basis.	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	**Lifecycle activities required to maintain current levels of service are understood.**	Lifecycle activities required to maintain current levels of service are understood and documented.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from developing condition assessment, levels of service, and lifecycle management strategy data for the vehicle inventory. In its current state, it is evident that the risk associated with operation of township equipment is skewed toward the top end of the spectrum (especially as it pertains to environmental services), which is widely acknowledged and indicative of the criticality of these assets in support of delivering township services.

The equipment owned and operated by the Township of Centre Wellington represents a smaller asset segment in terms of total replacement value; however, it is still very much an asset class worthy of application of asset management practices. Given the current risk assessment of the equipment owned and operated by the Township, this particular asset segment is expected to receive a proportionate

portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change implications, and replacement requirements.

This asset segment presents a lesser opportunity for the Township to address data maturation in terms of full lifecycle costs, and development of levels of service, as many of the assets in this category are run-to-failure type assets with only minimal lifecycle intervention required.

DATA QUALITY

Land Improvements

	Level 1	Level 2	Level 3	Level 4
Inventory	**Inventory data is incomplete.**	Reliable inventory data exists for critical assets	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	**Services provided by this asset class are understood by departmental staff.**	Current levels of service have been defined and performance metrics are used to measure progress.	Current levels of services are defined, tracked, and reported on a regular basis.	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	**Lifecycle activities required to maintain current levels of service are understood.**	Lifecycle activities required to maintain current levels of service are understood and documented.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate

				funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from developing comprehensive asset inventories, condition assessment, levels of service, and lifecycle management strategy data for the vehicle inventory. In its current state, it is evident that the risk associated with operation of township equipment near the middle of the spectrum.

The Land Improvements owned and operated by the Township of Centre Wellington represents a smaller asset segment in terms of total replacement value; however, it is still very much an asset class worthy of application of asset management practices. Given the current risk assessment of the Land Improvements owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change, and replacement requirements.

This asset segment presents a lesser opportunity for the Township to address data maturation in terms of full lifecycle costs, and development of levels of service, as many of the assets in this category are run-to-failure type assets with only minimal lifecycle intervention required.

DATA QUALITY

Water Network

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	**Reliable inventory data exists for critical assets**	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	Services provided by this asset class are	**Current levels of service have been**	Current levels of services are	Proposed levels of service have been

	understood by departmental staff.	**defined and performance metrics are used to measure progress**.	defined, tracked, and reported on a regular basis.	defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	Lifecycle activities required to maintain current levels of service are understood.	**Lifecycle activities required to maintain current levels of service are understood and documented.**	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from additional condition assessment data for the remainder of the inventory in its water network inventory. In its current state, it is evident that the risk associated with operation of township water network is skewed toward the top end of the spectrum, which is widely acknowledged.

The water network operated by the Township of Centre Wellington represents a significant rate-supported class – with this segment representing approximately $112 Million in replacement values. Given this weighting, and the current risk assessment of the water network owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of condition assessment, full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing capacity needs.

DATA QUALITY

Wastewater Network

	Level 1	Level 2	Level 3	Level 4
Inventory	Inventory data is incomplete.	**Reliable inventory data exists for critical assets**	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	Services provided by this asset class are understood by departmental staff.	Current levels of service have been defined and performance metrics are used to measure progress.	**Current levels of services are defined, tracked, and reported on a regular basis.**	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.
Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	Lifecycle activities required to maintain current levels of service are understood.	**Lifecycle activities required to maintain current levels of service are understood and documented**.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast.**	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from additional condition assessment data for the remainder of the inventory in its wastewater network inventory. In its current state, it is evident that the risk associated with operation of township water network is fairly evenly distributed which is widely acknowledged.

The wastewater network operated by the Township of Centre Wellington represents a significant rate-supported class – with this segment representing approximately $85 Million in replacement values. Given this weighting, and the current risk assessment of the wastewater network owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change implications, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of condition assessment, full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.

Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing capacity needs.

DATA QUALITY

Stormwater Network

	Level 1	Level 2	Level 3	Level 4
Inventory	**Inventory data is incomplete.**	Reliable inventory data exists for critical assets	Inventory data is complete for all assets in this asset class.	Inventory data is complete, accurate, and in a centralized, accessible format.
Condition	Condition data is incomplete.	**Condition data is complete for critical assets.**	Condition data is complete and accurate for all assets.	Condition data is complete, accurate, and regularly updated. Data is centralized and accessible.
Levels of Service	Services provided by this asset class are understood by departmental staff.	**Current levels of service have been defined and performance metrics are used to measure progress.**	Current levels of services are defined, tracked, and reported on a regular basis.	Proposed levels of service have been defined, and funding impacts are assessed. Trends in performance are tracked.

Risk	Critical assets and services are understood by department staff.	**Risk is estimated according to remaining service life.**	Risk models exist for assets in this asset class. Critical assets have been identified, and risk management strategies exist.	Risk management strategies are documented for all assets, including level of resilience and risk tolerance.
Lifecycle Maintenance Strategy	**Lifecycle activities required to maintain current levels of service are understood.**	Lifecycle activities required to maintain current levels of service are understood and documented.	Costs of lifecycle activities and risks associated with deferred maintenance are documented.	Projected lifecycle maintenance needs are defined, funding shortfalls are identified, and risks associated with inadequate funding are documented.
Financial Sustainability Strategy	Budgets are based on prior year spending.	Prior year spending is adjusted to account for inflation and other variables.	**Asset replacement schedules have been built into the long-term capital forecast**.	Full lifecycle costs have been built into long-term forecasts. Demand forecasts inform the budget.

CONTINUOUS IMPROVEMENT

As can be gleaned in this section, the Township would benefit from a complete Stormwater asset inventory, and lifecycle management data for the stormwater asset category. In its current state, it is evident that the risk associated with operation of township water network is low which is widely acknowledged.

The stormwater network operated by the Township of Centre Wellington represents a significant asset class with assets intermingled with roads infrastructure, and others being clearly defined. Given the distribution of these assets, and the current risk assessment of the stormwater network owned and operated by the Township, this particular asset segment is expected to receive a proportionate portion of both capital and operating allocations for the foreseeable future to address risk mitigation, levels of service, climate change, and replacement requirements.

This asset segment also presents a significant opportunity for the Township to address data maturation in terms of specific asset inventory identification, condition assessment, full lifecycle costs, and development of levels of service, to be better equipped to perform data-driven lifecycle interventions in support of delivering services for Township residents.
Key goals for this segment would include continuation of implementation of work order management systems, reducing data shortfalls, and addressing capacity needs.

ASSET MANAGEMENT PLANNING MATURITY

The following diagram provides a maturity scale for the entire Township asset management planning process. This looks at not only asst data maturity, but the maturity of the entire process. The fifteen areas defined provide indications of where monitoring and continuous improvement is needed over time.

Figure 6-3
Asset Management Planning Maturity Analysis

Township staff have committed to a set of short/medium-term and longer-term targets in the ongoing improvement of the Township asset management planning process, to ensure that future asset management plans increase in accuracy and quality.

Table 6-1
Asset Management Planning Short/Medium-Term Targets

Short/Medium-Term Targets
a) Compliance with Ontario Regulation 588/17: Incorporating the ongoing regulatory requirements into future iterations of the Asset Management Plan. - Legislated requirements to be implemented by 2025 - Update the Township's Strategic Asset Management Policy at least every 5 years - Review and update the Township's Asset Management Plan at least every 5 years - Annual review of asset management process with Council before July 1st
b) Full implementation of asset management software, including predictive modelling of future lifecycle cost needs.
c) Development and refinement of asset management procedures and processes to ensure asset data completeness and accuracy.
d) Integrate data from various studies, reports, and systems in a centralized asset registry database.
e) Full integration of risk assessments and the levels of service framework into the asset management software, generating outputs for future asset management plans.

Table 6-2
Asset Management Planning Long-Term Targets

Long-Term Targets
a) Data Governance Strategy: Developing a standardized approach to data maintenance and ownership across the organization.
b) Integration of asset data used for asset management purposes to the Township's Capital Budget and 10-year Capital Forecast.
c) Further breakdown of asset data, including separating storm assets, streetlights, and sidewalk assets from road assets. Detailed inventory of water and wastewater process equipment in each facility.
d) Integration of Township Strategic Planning and Master Planning documents into future asset management planning processes.
e) Refine funding assumptions to reflect improved data availability and incorporation of updated lifecycle cost models.
f) Development and implementation of a Public Engagement Strategy specific to asset management planning.

CHAPTER 7

CONCLUSIONS & RECOMMENDATIONS

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The backbone of the Township's asset management planning practices is an understanding of the services and service levels expected and how Township assets assist in providing these services. A balance is required between providing high levels of service and the costs associated with those services. From an asset funding perspective, a balance is needed between financing the cost of implementing asset management recommendations and the risk associated with deferring lifecycle costs.

Asset management planning is a journey that with evolve over time as new data, assumptions and strategies are brought forward. Recommendations are provided that will assist in this evolution and will ensure the Township is constantly moving forward with this initiative.

RECOMMENDATIONS

The table below provides a summary of recommendations that were outlined in each chapter. It is important to note that these recommendations will need to be brought forward into other processes for ultimate approval, such as the annual budget process.

Table 7-1
Summary of Recommendations

Chapter Reference	Description
Overall	Recognize that asset management planning is a journey that requires continuous improvement and updates.
Chapter 3	Consider the costs associated with providing services at expected levels when developing the annual budget.
Chapter 4	Consider the following when developing the annual budget: a) All asset management related costs (non-infrastructure solutions and lifecycle costs) required to provide Township services. b) The risks (both corporate and asset related) of deferring various asset lifecycle costs. c) The impacts of demand on Township assets, including anticipated growth. d) Recognition that "critical assets" play a significant role in providing services and have a high consequence of failure. e) Priority assets represent assets in each category with the highest asset risk, and future short/medium-term lifecycle costs should focus on these assets.
Chapter 5	Consider the following when developing the annual budget: a) Staff to closely monitor external sources of funding trends, given the associated risks of relying on this funding from an asset management perspective. b) Increases in OCIF funding received in 2022 as well as ongoing increases in OCIF funding received going forward will be dedicated to roads related

	rehabilitation and replacement needs. c) The OLG Allocation Policy is to be reviewed considering the goal to maximize funding available for asset management purposes. d) Planned debt payments over the ten-year capital forecast is not to exceed 15% of Township revenues. e) A proportion of annual taxation assessment growth is to be allocated to asset investment as outlined in chapter 5. f) To provide meaningful increases in tax supported asset investment over time, an annual increase equivalent to a 2.0% increase in taxation is needed. Other available funding increases, such as a proportion of assessment growth would reduce the net impact on taxation. g) To continue to follow Water and Wastewater Rate Study recommended rate increases.
Chapter 6	Continue to monitor and continuously improve Township asset management planning practices. a) Continue to work with the County and associated lower-tier municipalities in the advancement of asset management planning. b) Continuous improvement of asset data quality (i.e. completeness and accuracy) for all asset categories over time. c) Progression of short/medium-term and long-term continuous improvement targets.

2022 ASSET MANAGEMENT PLAN

APPENDICIES

Appendix A

Glossary and Key Concepts

Asset – An asset is an item, thing, or entity that has potential or actual value to the Township. Examples include roads, bridges, buildings, vehicles, and equipment.

Asset Management Committee – The committee of Township staff appointed by an organization to review and monitor Asset Management Planning practices and ensure the development of integrated Asset Management systems, processes, and plans consistent with organizational goals and objectives. The Team consists of representatives from every Township department and reports to the Senior Management Team.

Asset Management Planning – The coordinated activities of an organization to realize value from its assets in providing services to residents and businesses. It is an integrated set of processes and practices that minimize lifecycle costs of owning, operating, and maintaining assets, at an acceptable level of risk, while continuously delivering established levels of service. This includes the Strategic Asset Management Policy, Asset Management procedures/processes, and the Asset Management Plan

Asset Management Plan – A document that outlines the long-term approach to asset management planning at a specific point in time. The Asset Management Plan is reviewed every five years. Some information within the plan, such as the condition assessment of some assets, characteristics, and asset values, may be updated more frequently.

Asset Management System – An Asset Management System combines processes, data, software, and hardware in order to provide the necessary outputs for effective Asset Management Planning.

Asset Register – Provides a complete list of assets owned by the Township. Components of the register may reside in a number of locations, depending on whether the assets are tracked at the corporate or departmental level.

Asset Risk – The risk of an asset failing to perform in the provision of Township services. The formula of Probability of Failure (Pof) multiplied by Consequences of Failure (CoF) is used to quantify this.

Climate Change – Climate change is a long-term shift in weather conditions identified by changes in temperature, precipitation, winds, and other indicators. Climate change involves both changes in average conditions, as well as changes in variability, including the frequency of extreme events.

Components – Specific parts of an asset having independent physical or functional identity, and having specific attributes such as different useful life, maintenance plan, and asset risk calculation. Complex assets, such as buildings, are often broken down into components for asset management purposes, to reflect the differing needs of various components.

Condition – The physical state of an asset.

Condition Assessment – The inspection, assessment, measurement, and interpretation of the resultant data, to indicate the condition of a specific asset or component, so as to determine the need for preventative or remedial action.

Consequence of Failure (CoF) – The impact of an asset failing to an organization. This is typically tied to impacts related to the environment, social, or financial.

Critical Assets – Those assets that are likely to result in a more significant financial, environmental, and social impact should they fail. The maintenance of these assets is a priority.

Demand Management – Actions taken to influence demand for services and assets, often undertaken as part of sustainability initiatives and/or to avoid or defer required asset investment. It includes forecasting future demand, and proactively taking action to mitigate the risk of service disruptions by enhancing capacity to meet demand.

Deterioration Curve – The rate at which an asset approaches the end of its useful life, represented by a curve. With no intervention (e.g. repair or rehabilitation), the rate of deterioration increases as assets near the end of their useful life. The deterioration curve differs for each asset class and can differ for assets within the same class, based on usage, construction materials, weather, etc.

Financial Sustainability – The ability to provide and maintain service and infrastructure levels without resorting to unplanned increases in rates or cuts to service. It is the ability to meet present needs without compromising the ability to meet future needs.

Gap Analysis – A method for assessing the gap between an organization's current Asset Management practices and the future desirable Asset Management practices, or best (optimal) practices.

Geographic Information System (GIS) – A computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface. It can show many different kinds of data on one map. This enables people to see, analyze, and understand patterns and relationships.

Historical Cost – The purchase price or construction cost of an asset, in the year it was purchased or constructed.

Infrastructure Deficit (or Gap) – The cumulative shortfall of required asset renewal.

Key Performance Indicator (KPI) – A metric that is used in alignment with a business objective. It is often used as a comparator with a range of thresholds that identify a desirable or undesirable state.

Levels of Service – Describe the outputs or objectives that an organization or activity intends to deliver to customers. This includes commonly measured attributes such as quality, reliability, responsiveness, sustainability, timeliness, accessibility, and cost. Levels of Service can be a measure, metric, or a KPI, depending on the context in which it is used. It is a vale that represents a desired or undesired state of services being provided.

Lifecycle Cost – The total cost of an asset throughout its useful life. This includes costs related to planning, design, construction, acquisition, operation, maintenance, rehabilitation, replacement, and disposal.

Maintenance – Routine operational activities to keep the asset operating effectively. The costs associated with maintenance activities are built into departmental operating budgets. This includes both corrective and preventative maintenance.

Mitigation – Measures taken in advance of negative events, risk, or disasters, to reduce their impacts.

Preventative Maintenance – Activities undertaken on a regular basis to ensure and asset is able to provide the expected service. These activities are typically planned and are intended to reduce the probability of failure or breakdown. Maintenance does not increase the service potential of the asset or keep it in its original condition, however it slows down deterioration and delays when rehabilitation or replacement is necessary.

Probability of Failure (PoF) – The likelihood of an asset failing. This is typically tied to asset attributes such as condition or usage.

Performance Measure – A qualitative or quantitative measure used to measure actual performance against a standard or other target. Performance measures are used to indicate how the organization is doing in relation to delivering levels of service.

Public Engagement – The process by which residents, businesses, and other stakeholders are invited to provide input into asset management planning objectives of the municipality.

Rehabilitation – Work to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its remaining life. Generally, involves repairing the asset to deliver its original levels of service without resorting to significant upgrading or replacement.

Reserve – A reserve is an allocation of accumulated net revenue set aside for a designated purpose. Funds held in a reserve can be utilized at the discretion of Council. Reserves do not earn interest.

Reserve Fund – A reserve fund is established based on a statutory requirement (i.e. obligatory) or a defined future use established by Council (i.e. discretionary). It is prescriptive as to the basis for collection and use of funds in the reserve fund. All earnings derived from reserve fund investments form part of the reserve fund.

Replacement – The complete replacement of an asset that has reached the end of its useful life.

Replacement Cost - The cost that would be incurred to replace the asset with a new modern equivalent asset (not a second hand one) with the same economic benefits (gross service potential). The replacement value can be calculated by a number of methods:

Method	Description
Insurance Values	Replacement costs as identified in the most recent insurance contract
Engineer Condition Assessment	Replacement costs identified by external consultants from condition assessments or from engineering inspections of assets
Historical Cost Inflation	The historical cost of an asset inflated to the current dollar value
Current market cost	Use of recent acquisition or construction costs

Risk Management – The iterative process of identifying and assessing risks, identifying and evaluating actions that can be taken to reduce risk, and implementing the appropriate actions to mitigate risk.

Stakeholder – A person or entity that can affect, be affected by, or perceive themselves to be affected by a decision or activity.

Strategic Plan – A document outlining the overall strategic direction and goals of the Township. Typically updated every 4 years with a new term of Council.

Strategic Asset Management Policy – A strategic policy developed and approved at the Township that outlines the objectives of Asset Management Planning and the processes and procedures that enable the realization of those objectives. This document is required to be reviewed and updated every 5 years.

Useful Life – The period of time over which an asset is expected to provide service.

User Fee – Fee or charge to individuals or groups and/or businesses for the provision of a service, activity or product, or for conferring certain rights and privileges, which grant authorization or special permission to a person, or group of persons to access Township owned resources or areas of activity.

Appendix B

Maps

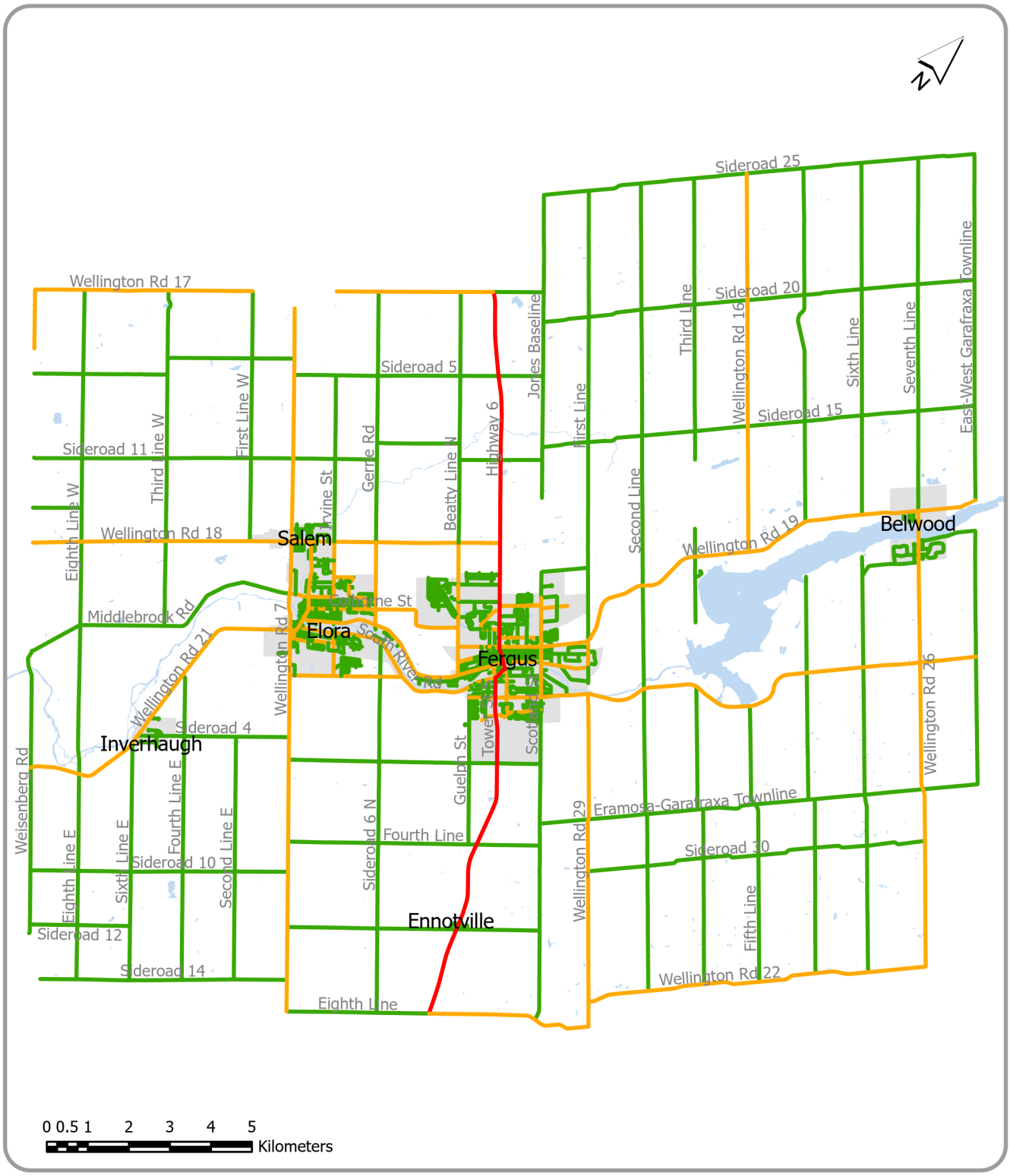


Figure B-1
Road Connectivity

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

Road Connectivity

- Local
- Collector
- Arterial
- No Data
- Urban Areas & Hamlets
- Waterbody

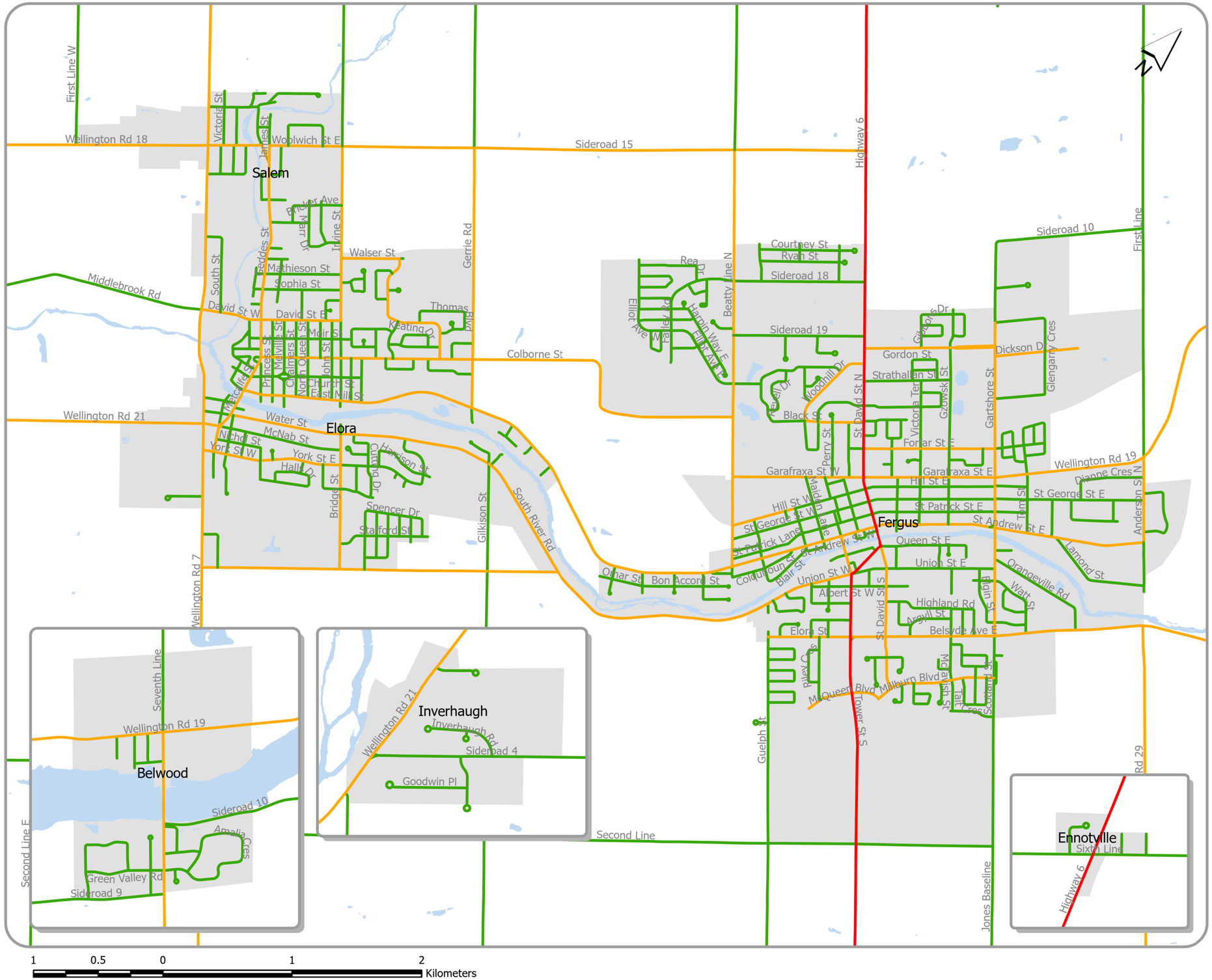


Figure B-2

Road Connectivity

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

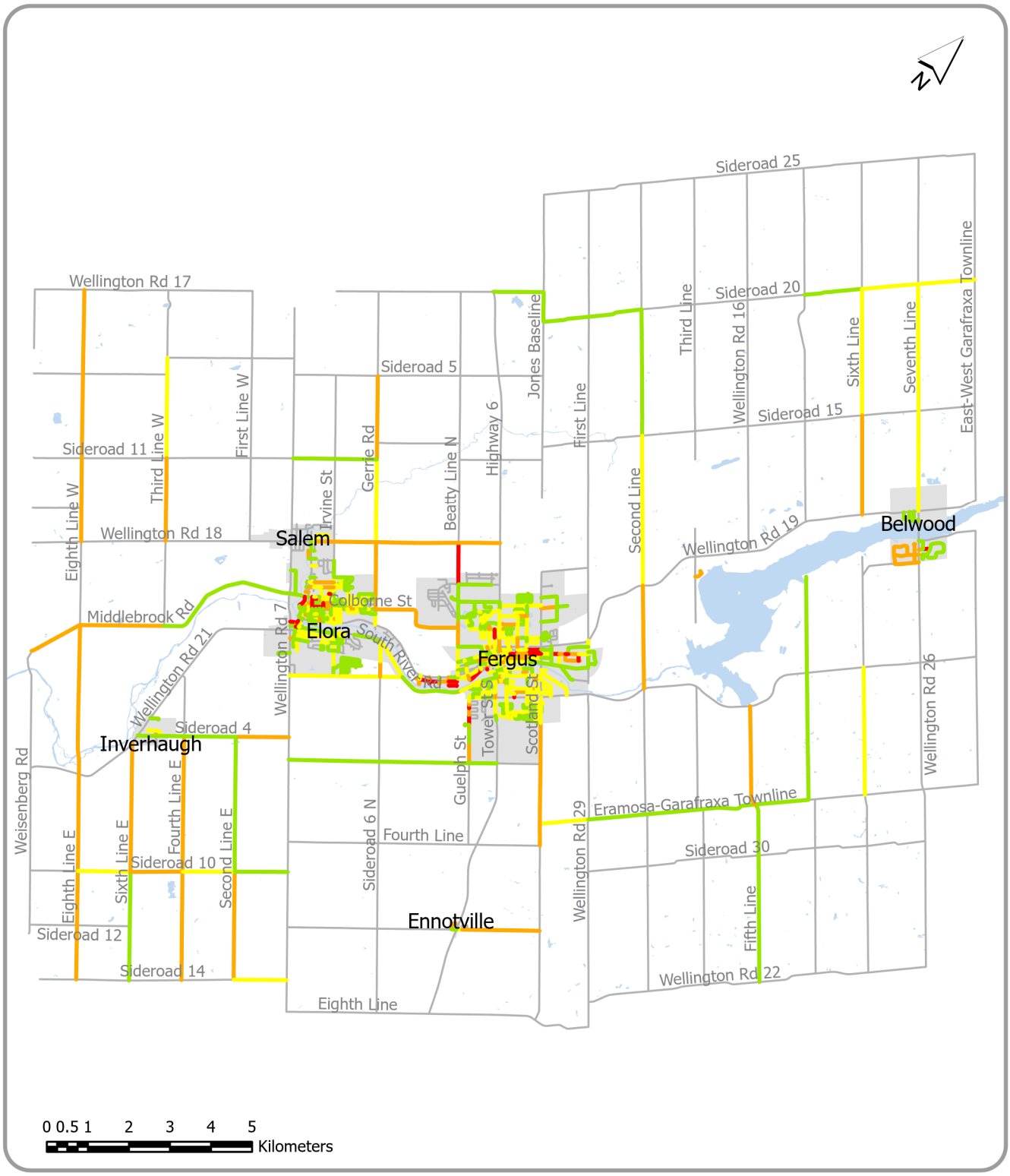


Figure B-3
Paved Road Surface
Asset Management Plan
2022
Township of Centre Wellington

Centre Wellington

Paved Road Surface - Condition

- Very Good
- Good
- Fair
- Poor
- Very Poor
- No Data/Gravel Road/County Road
- Urban Areas & Hamlets
- Waterbody

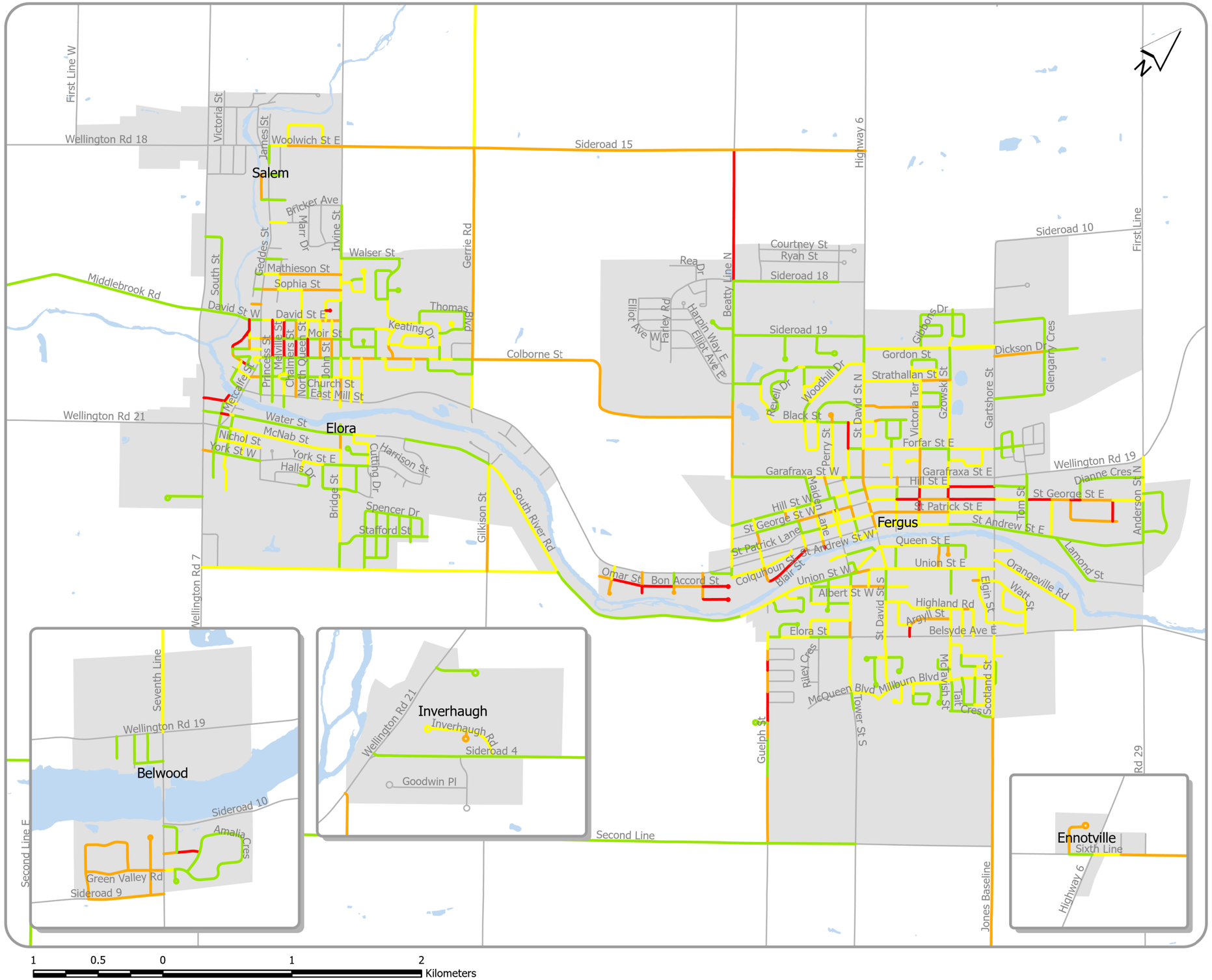


Figure B-4

Paved Road Surface Condition

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

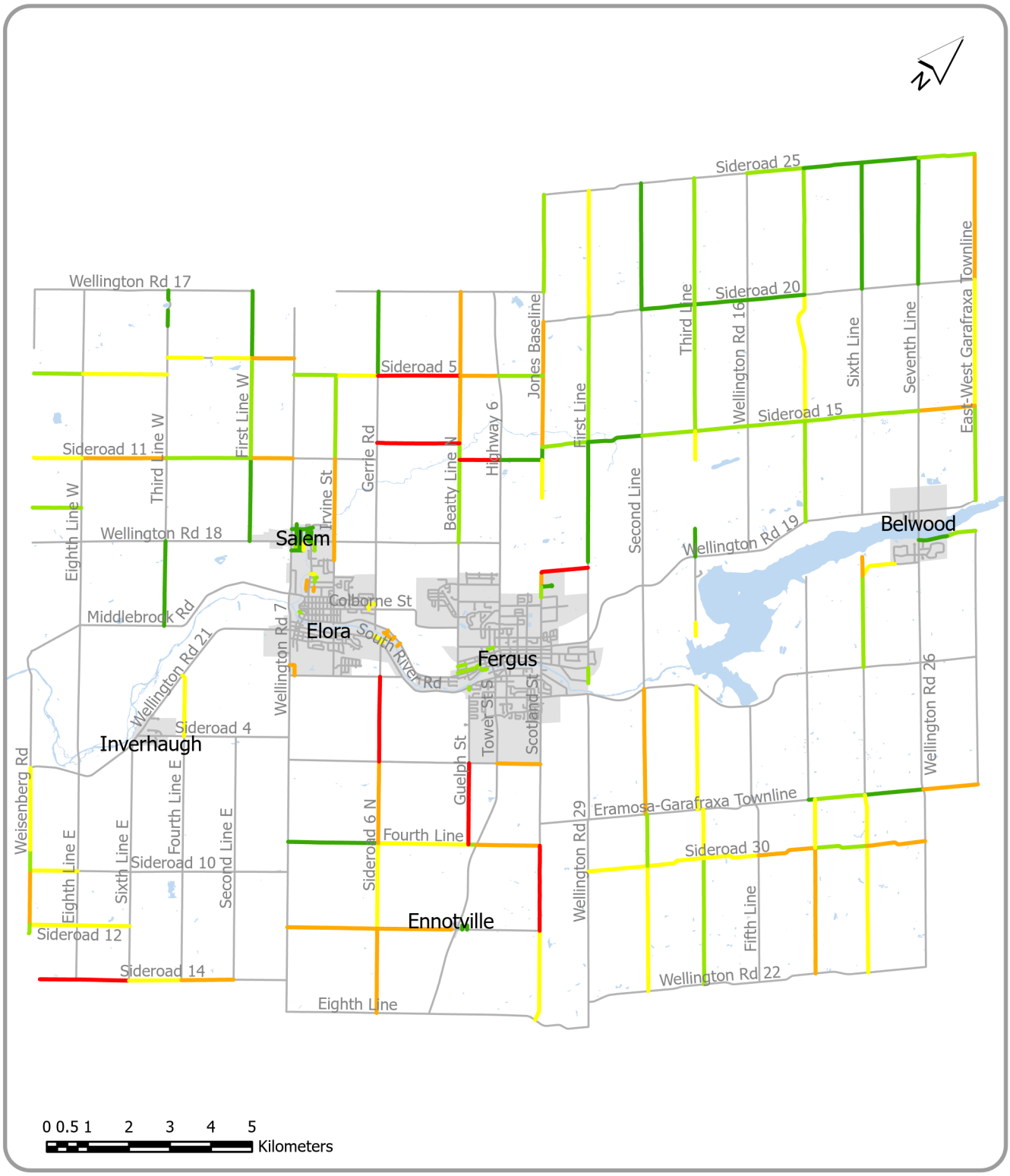


Figure B-5
Gravel Road Surface
Asset Management Plan
2022
Township of Centre Wellington

Centre Wellington

Gravel Road Surface - Condition

- Very Good
- Good
- Fair
- Poor
- Very Poor
- No Data/Paved Road/County Road
- Urban Areas & Hamlets
- Waterbody

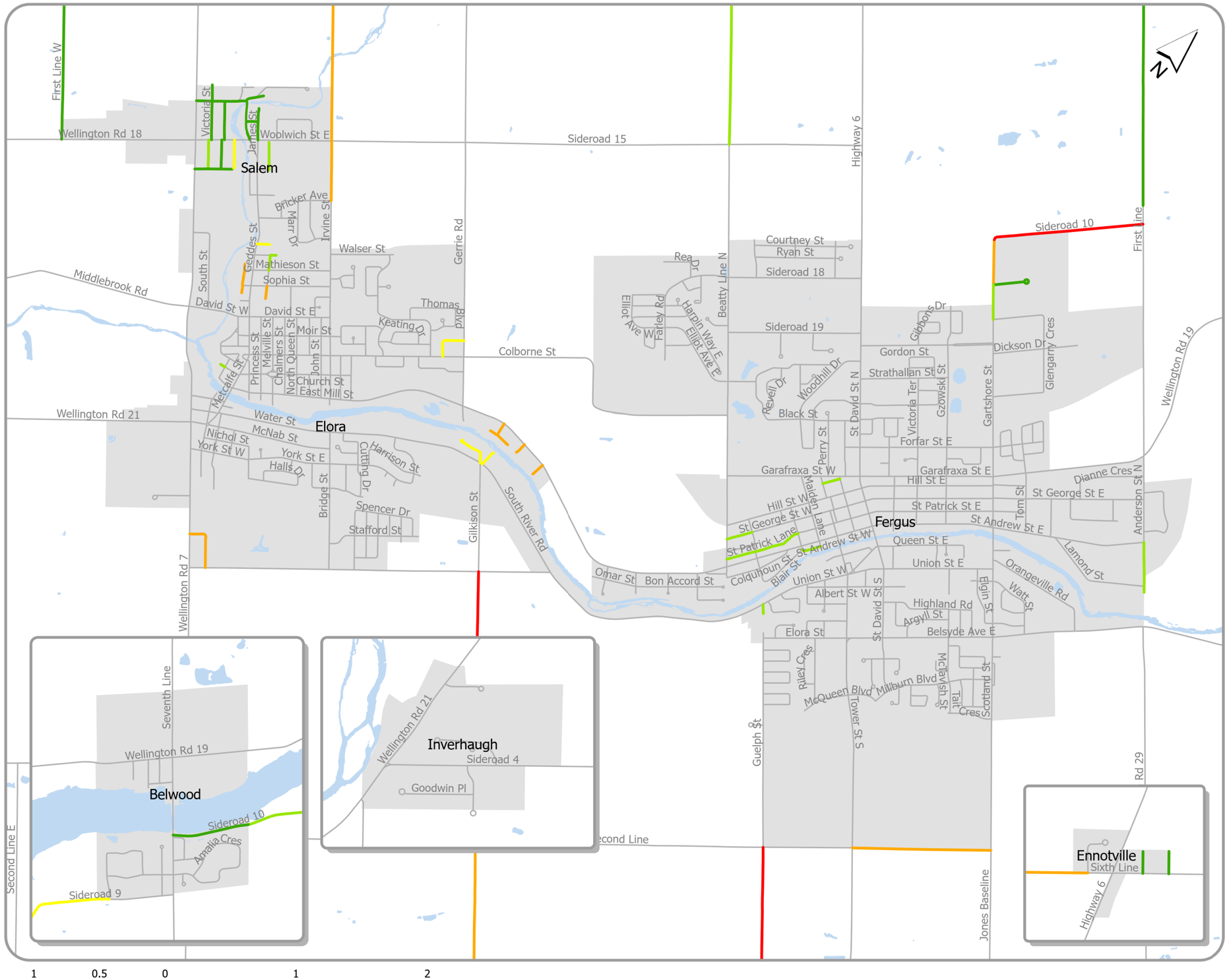


Figure B-6

Gravel Road Surface Condition

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

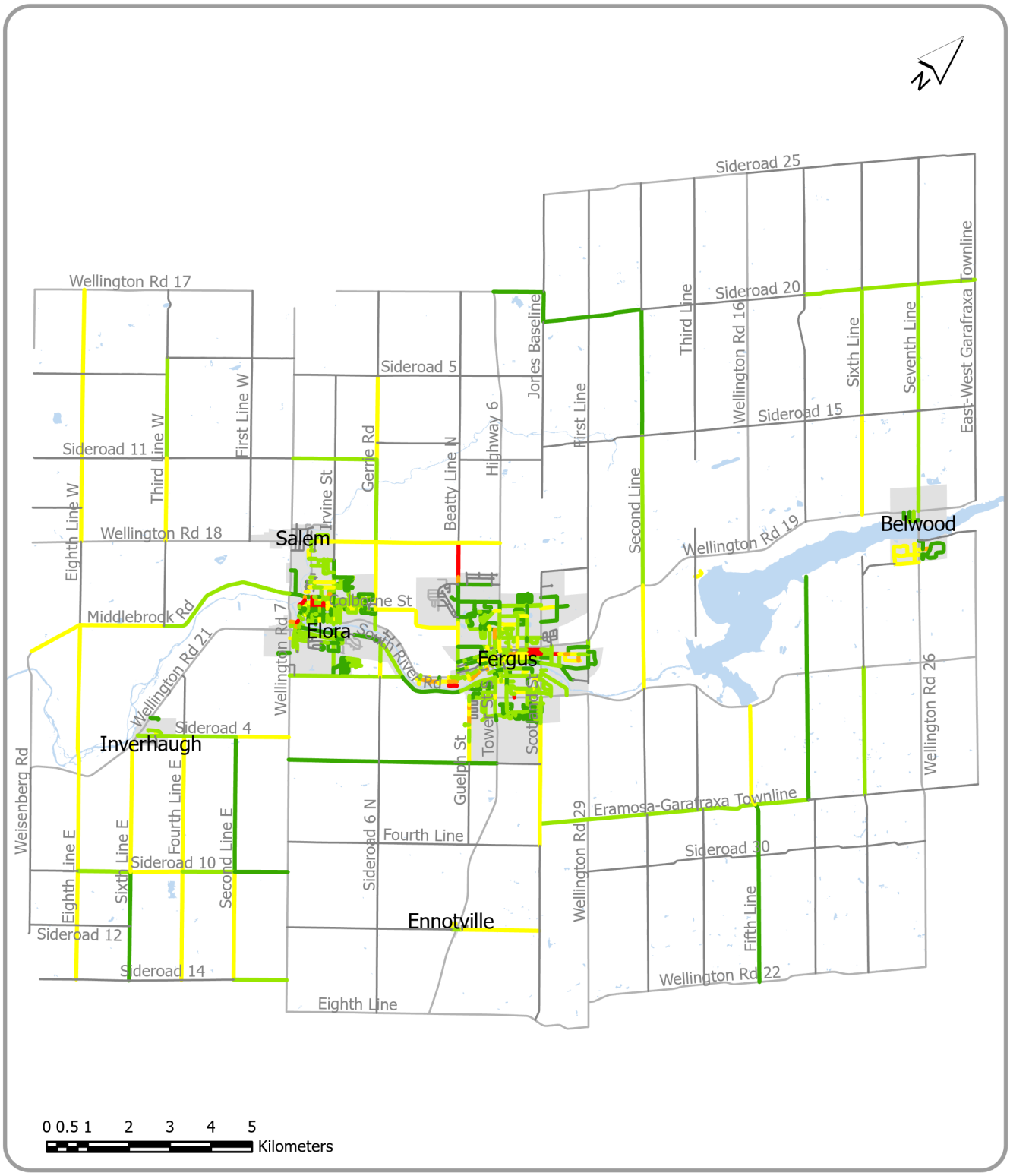


Figure B-7
Paved Road Surface
Asset Management Plan
2022
Township of Centre Wellington

Centre Wellington

Paved Road Surface - Risk

- Very Low
- High
- Moderate
- High
- Critical
- No Data/Gravel Road/County Road
- Urban Areas & Hamlets
- Waterbody

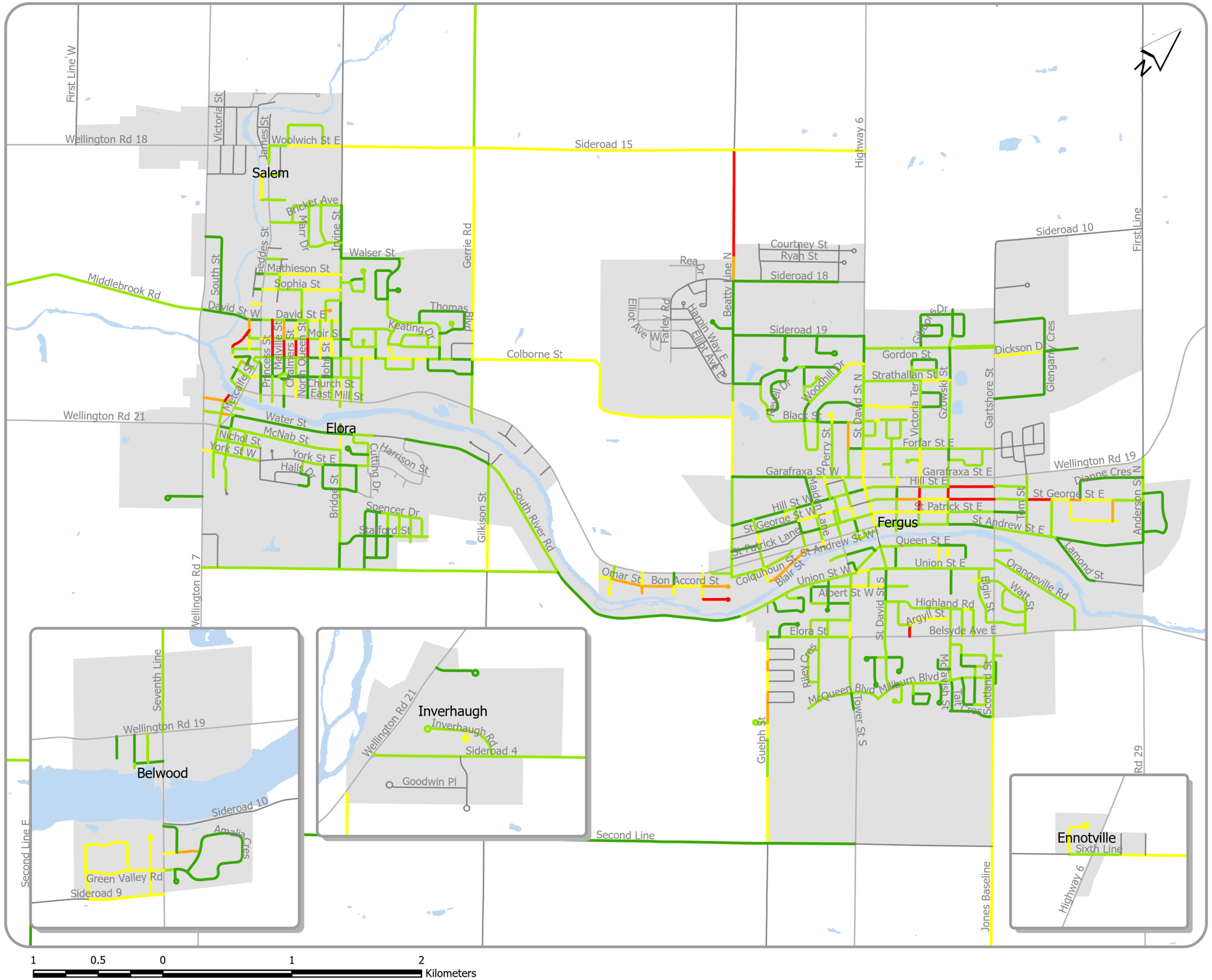


Figure B-8

Paved Road Surface
Risk

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

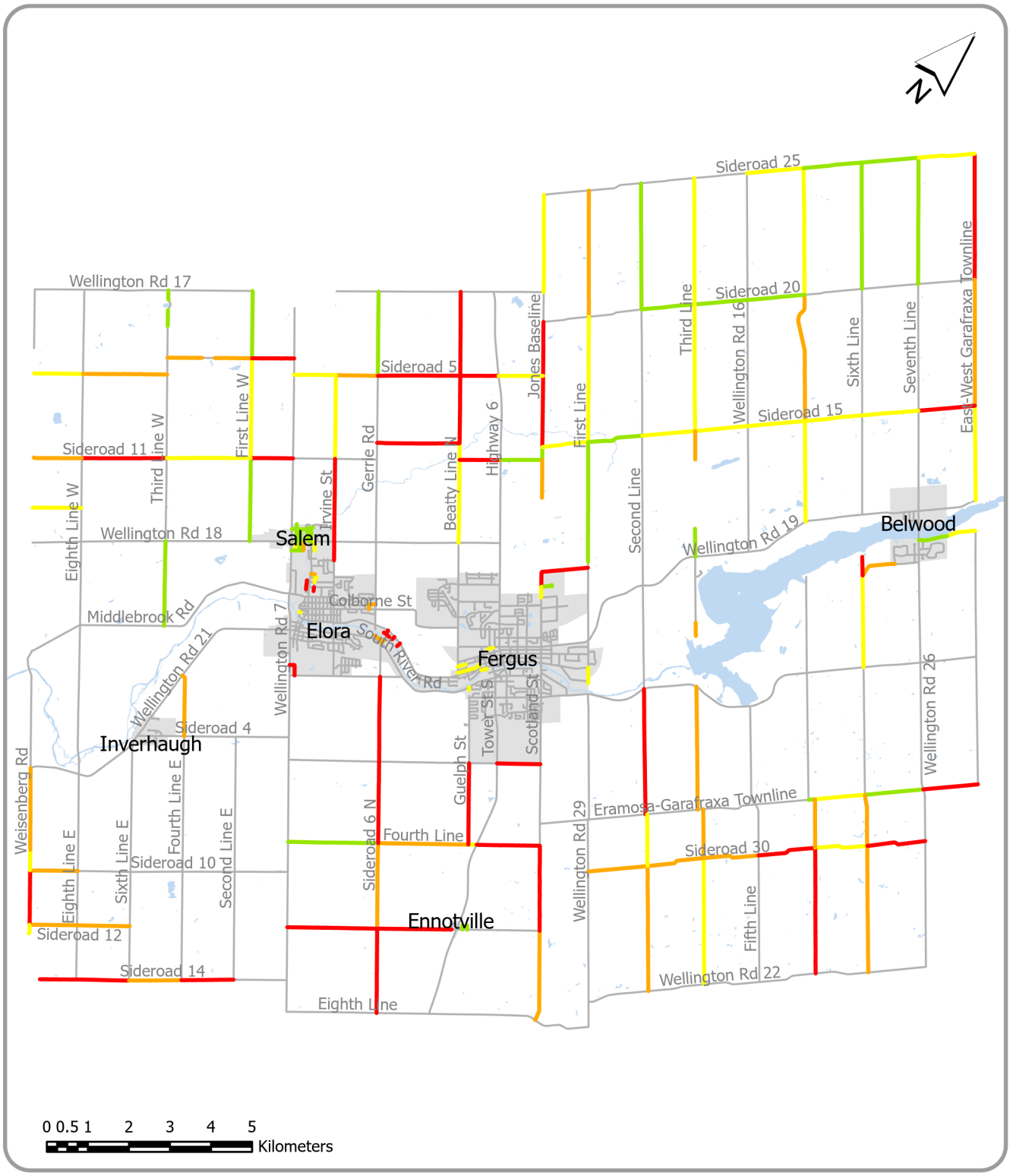
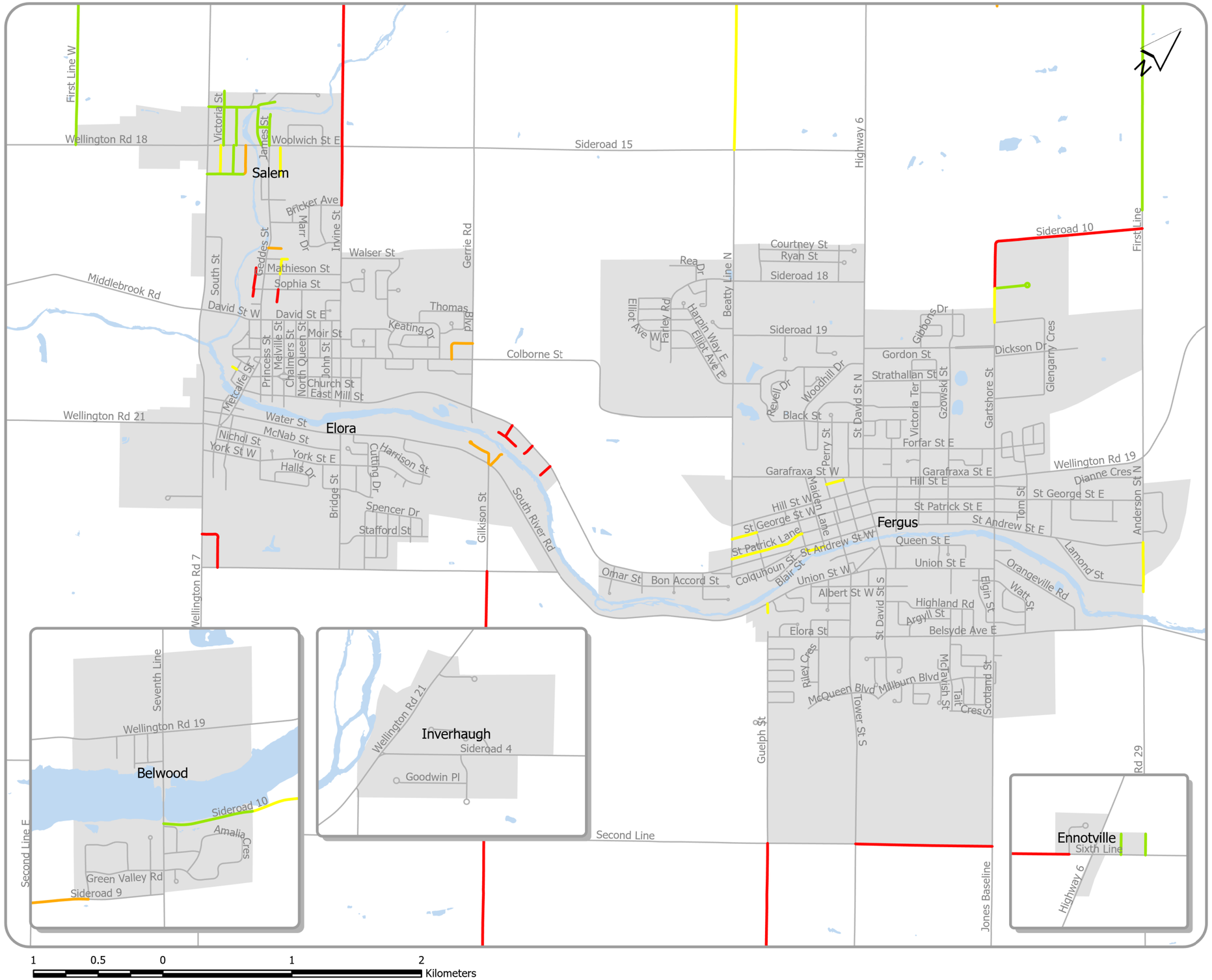


Figure B-9
Gravel Road Surface
Asset Management Plan
2022
Township of Centre Wellington

Centre Wellington

Gravel Road Surface - Risk

- Very Low
- Low
- Moderate
- High
- Critical
- No Data/Paved Road/County Road
- Urban Areas & Hamlets
- Waterbody



Gravel Road Surface Risk

- Very Low
- Low
- Moderate
- High
- Critical
- No Data/Paved Road/County Road

- Waterbody
- Urban Areas & Hamlets

Figure B-10

Gravel Road Surface Risk

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

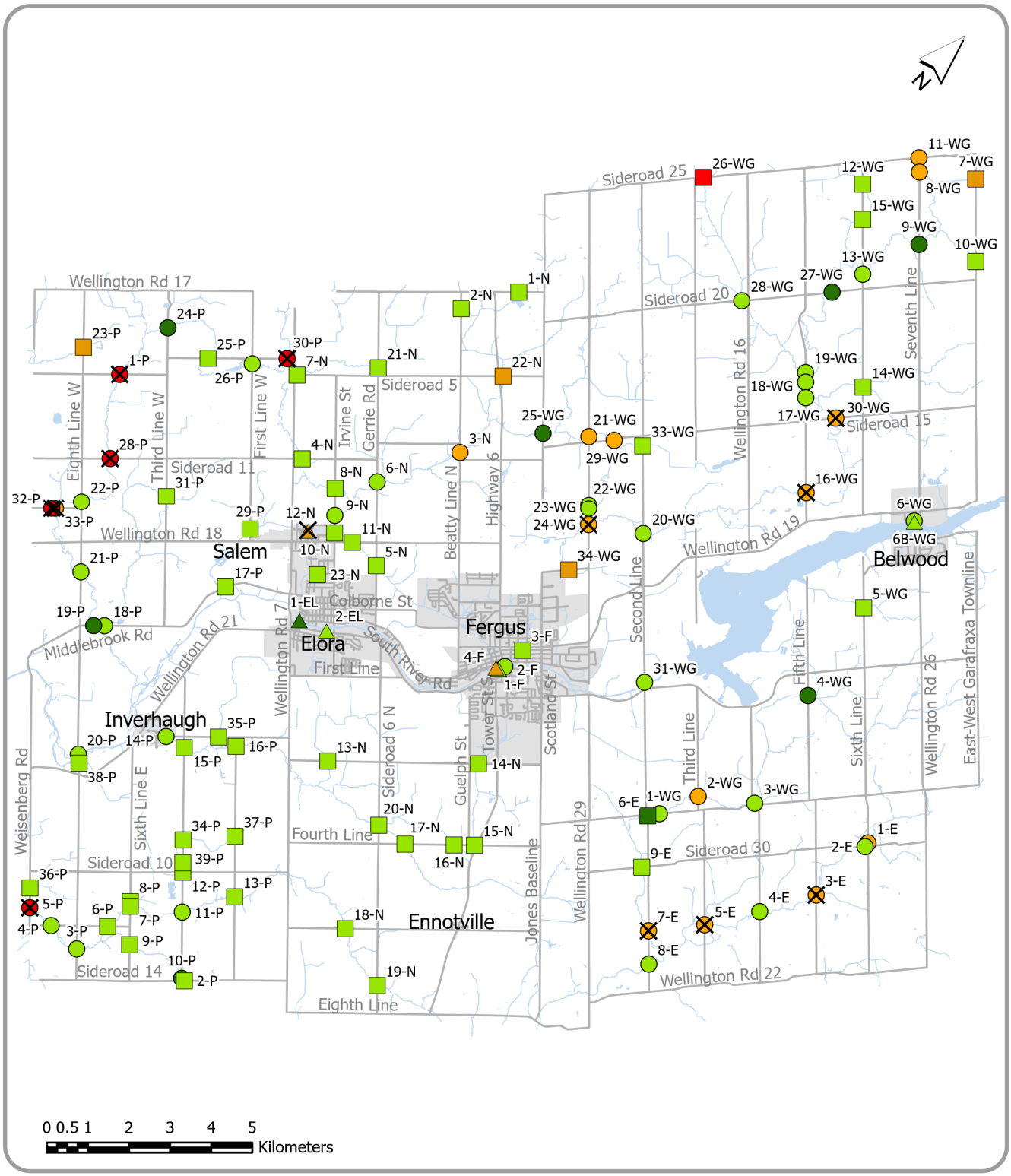


Figure B-11
Bridges & Culverts

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

Bridges & Culverts

Condition

- Very Good
- Good
- Poor
- Very Poor

- Closed Bridge/Culvert
- Bridge
- Culvert
- Pedestrian Bridge
- Urban Areas & Hamlets
- Waterbody
- Watercourse

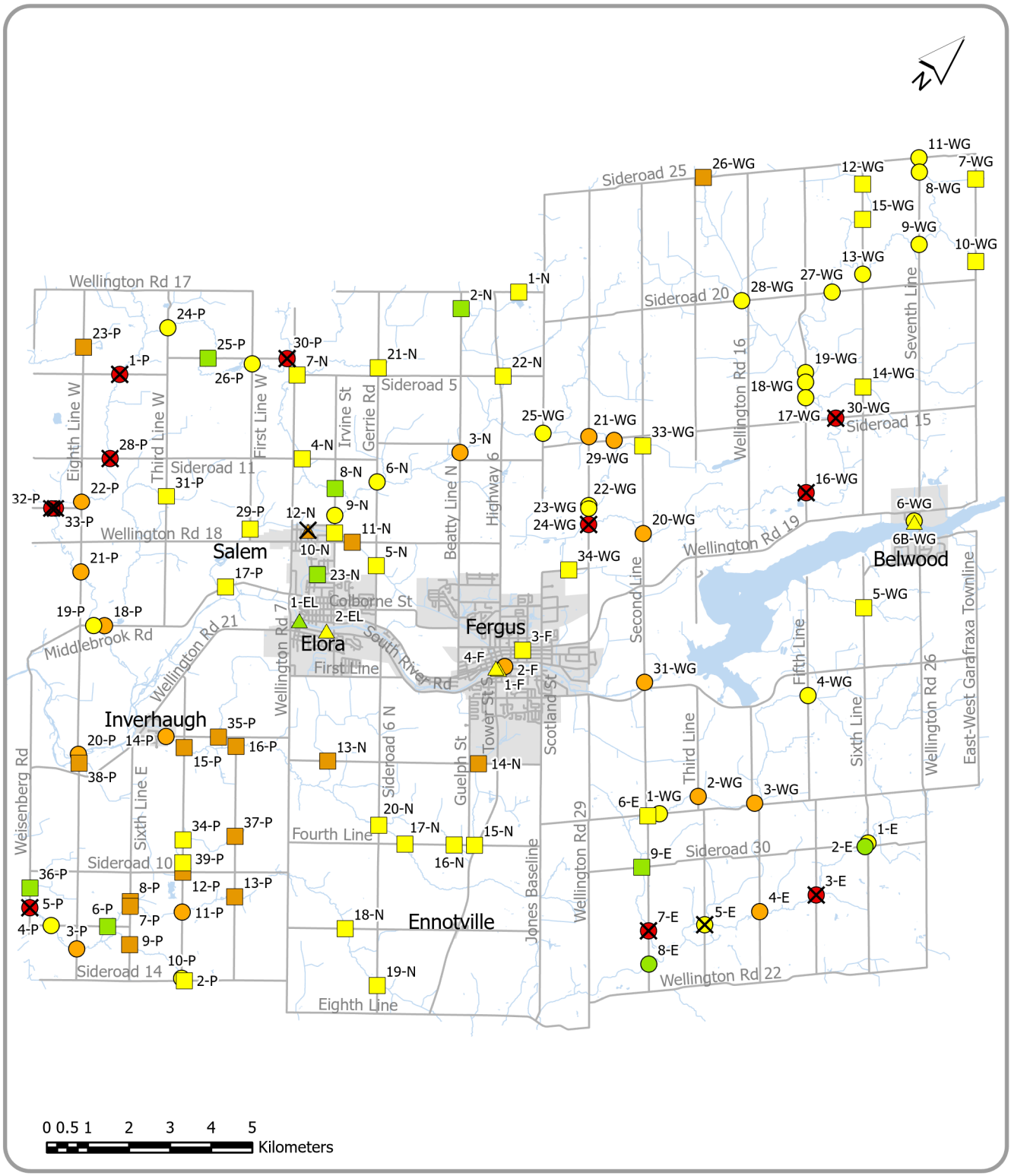


Figure B-12
Bridges & Culverts

Asset Management Plan

2022

Township of Centre Wellington

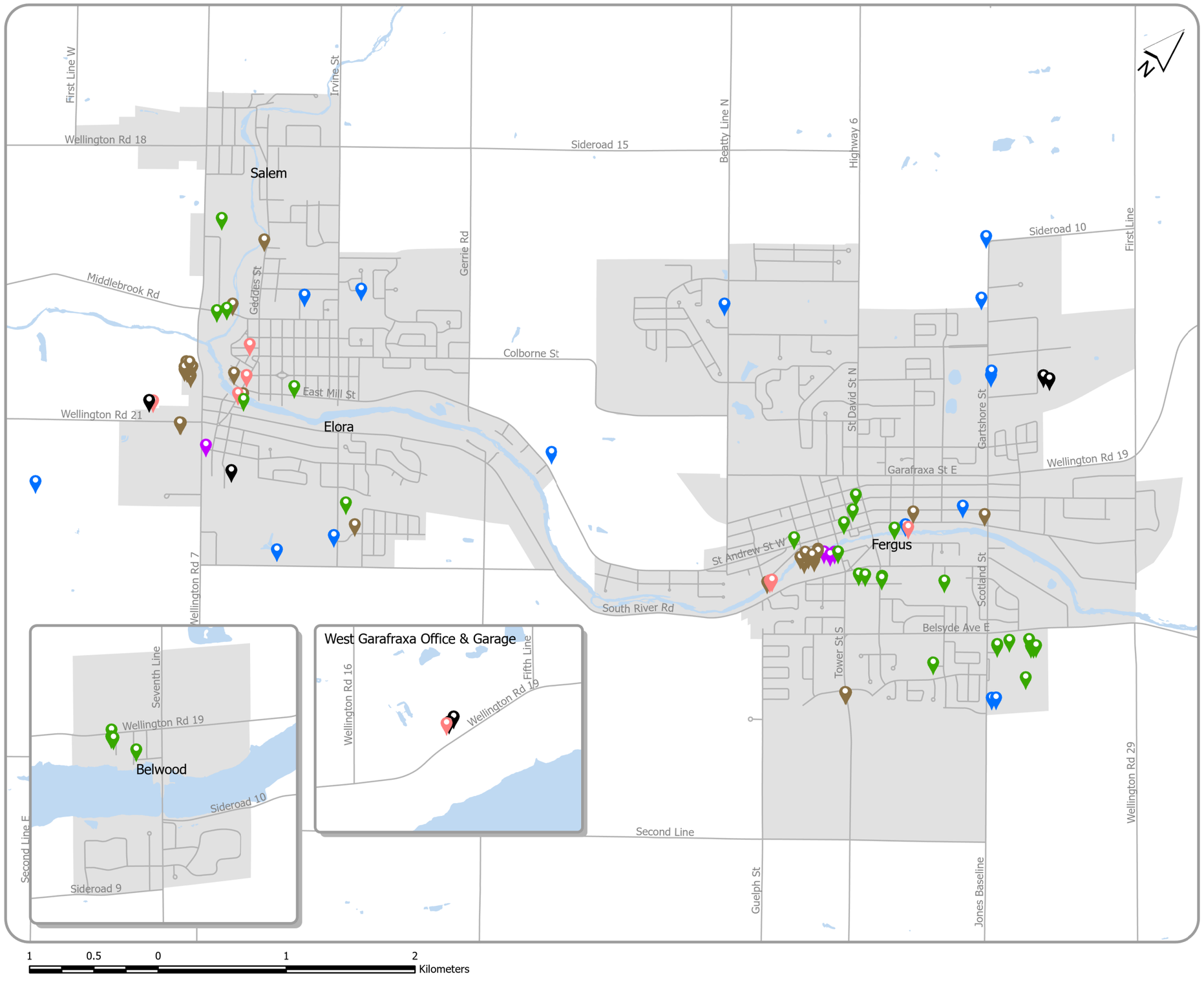
Centre Wellington

Bridges & Culverts

Risk

- Very Low
- Low
- Moderate
- High
- Critical

- Closed Bridge/Culvert
- Bridge
- Culvert
- Pedestrian Bridge
- Urban Areas & Hamlets
- Waterbody
- Watercourse



Structure Type

- General Government
- Public Works Garage
- Sanitary Sewer Structure
- Water System Structure
- Community Services Structure
- Emergency Services Structure

- Waterbody
- Urban Areas & Hamlets

Figure B-13

Facility Locations

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

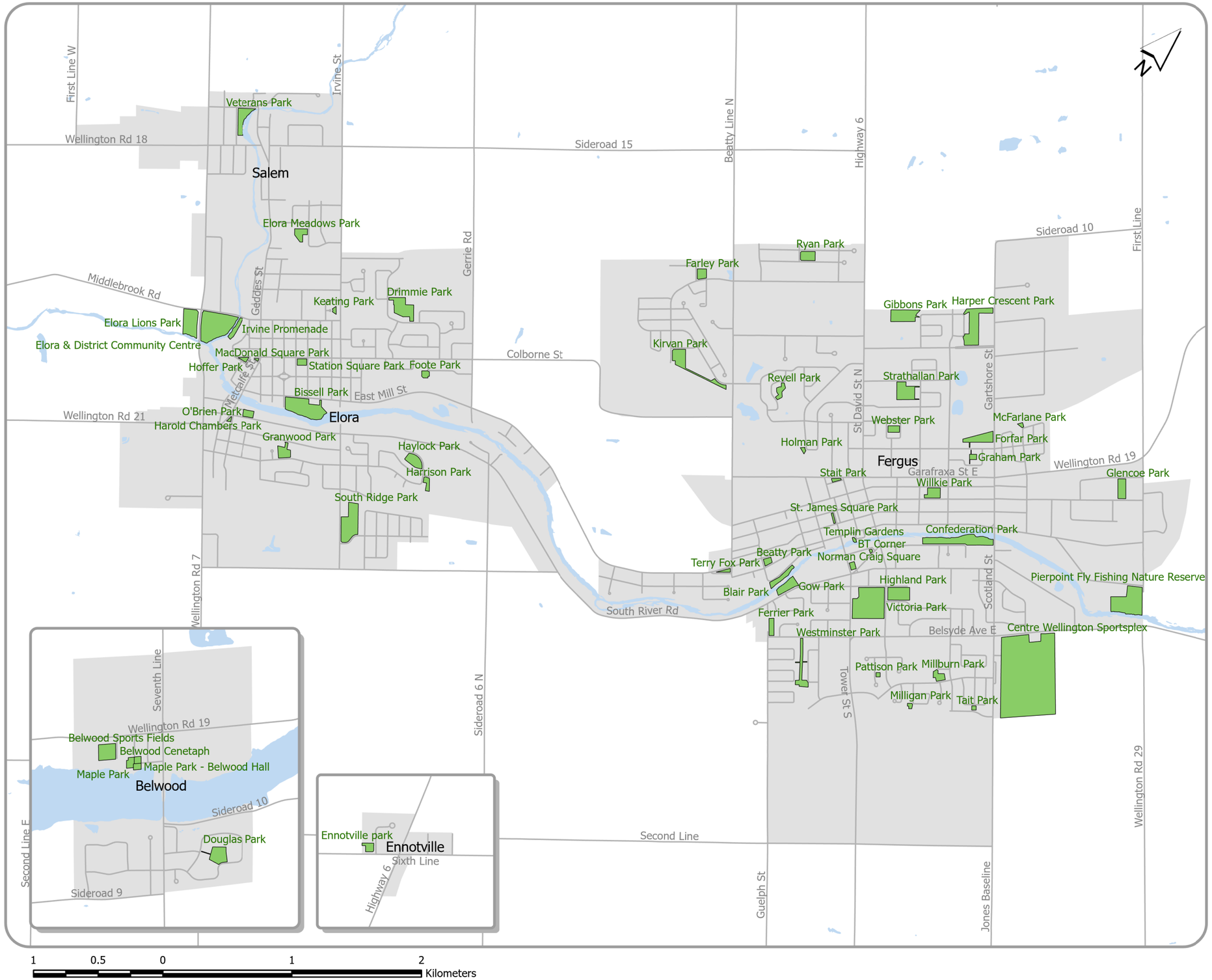


Figure B-14

Park Land

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

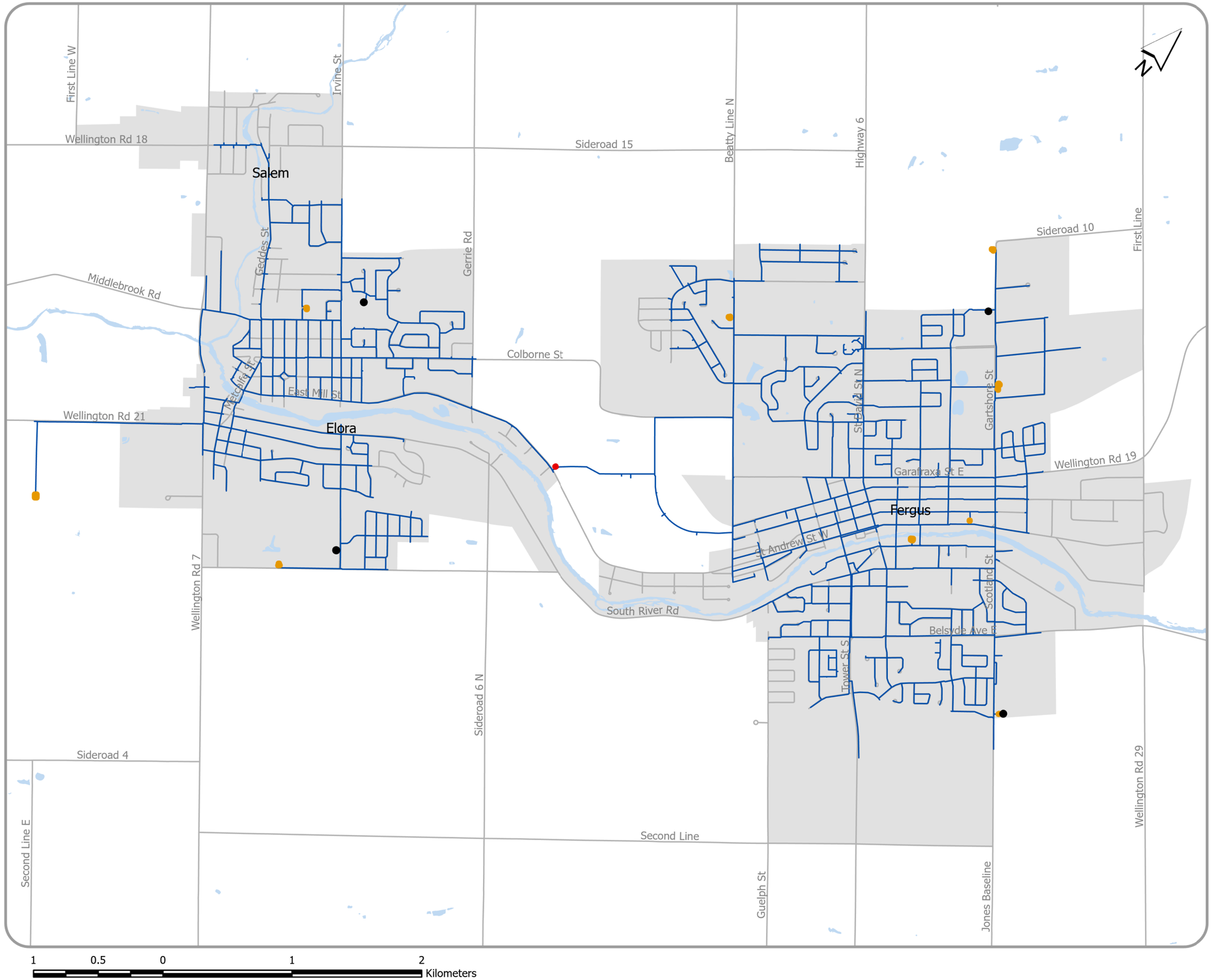


Figure B-15

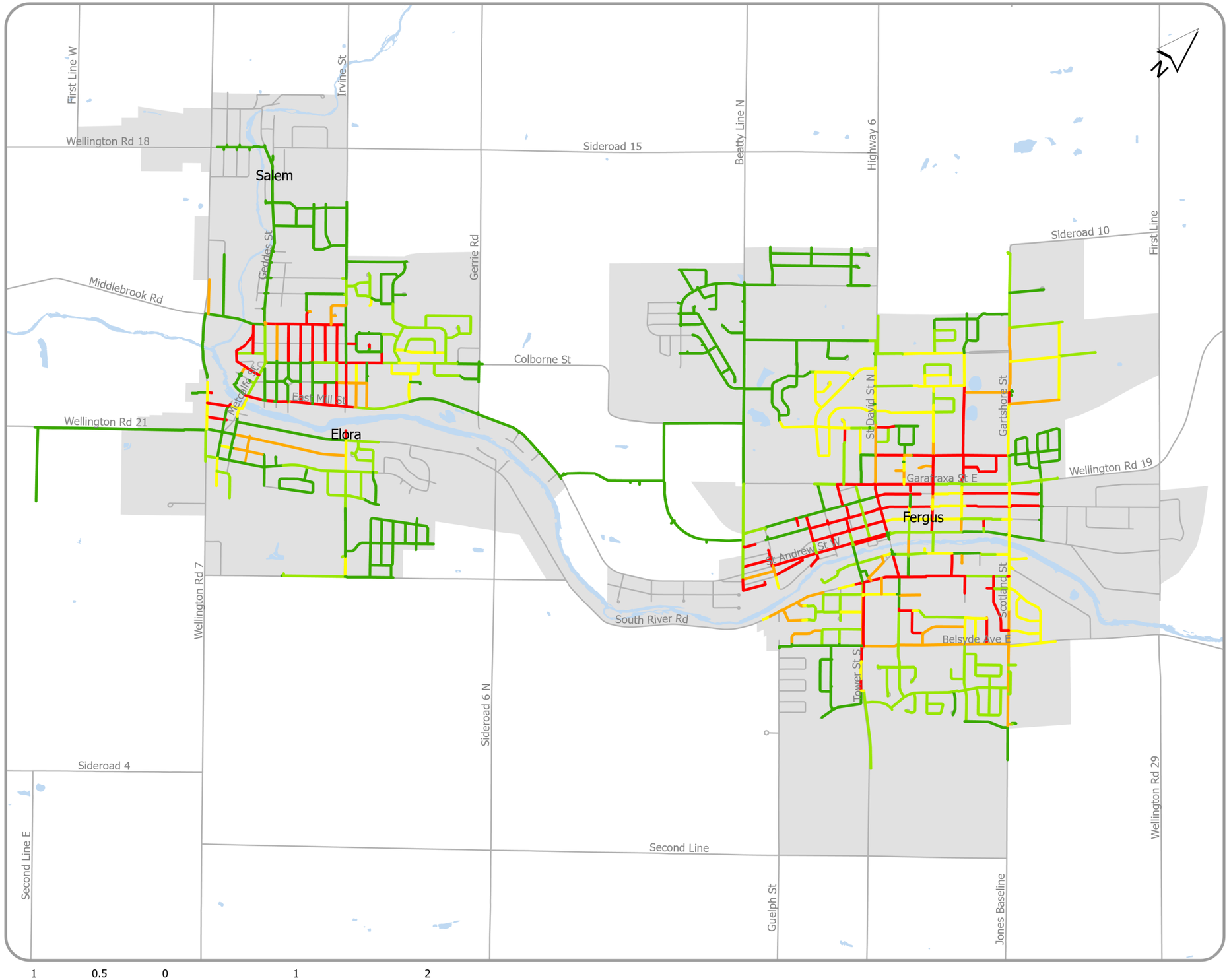
Water System Overview

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington



Watermains

Condition

- Very Good
- Good
- Fair
- Poor
- Very Poor

- Roads
- Waterbody
- Urban Areas & Hamlets

Figure B-16

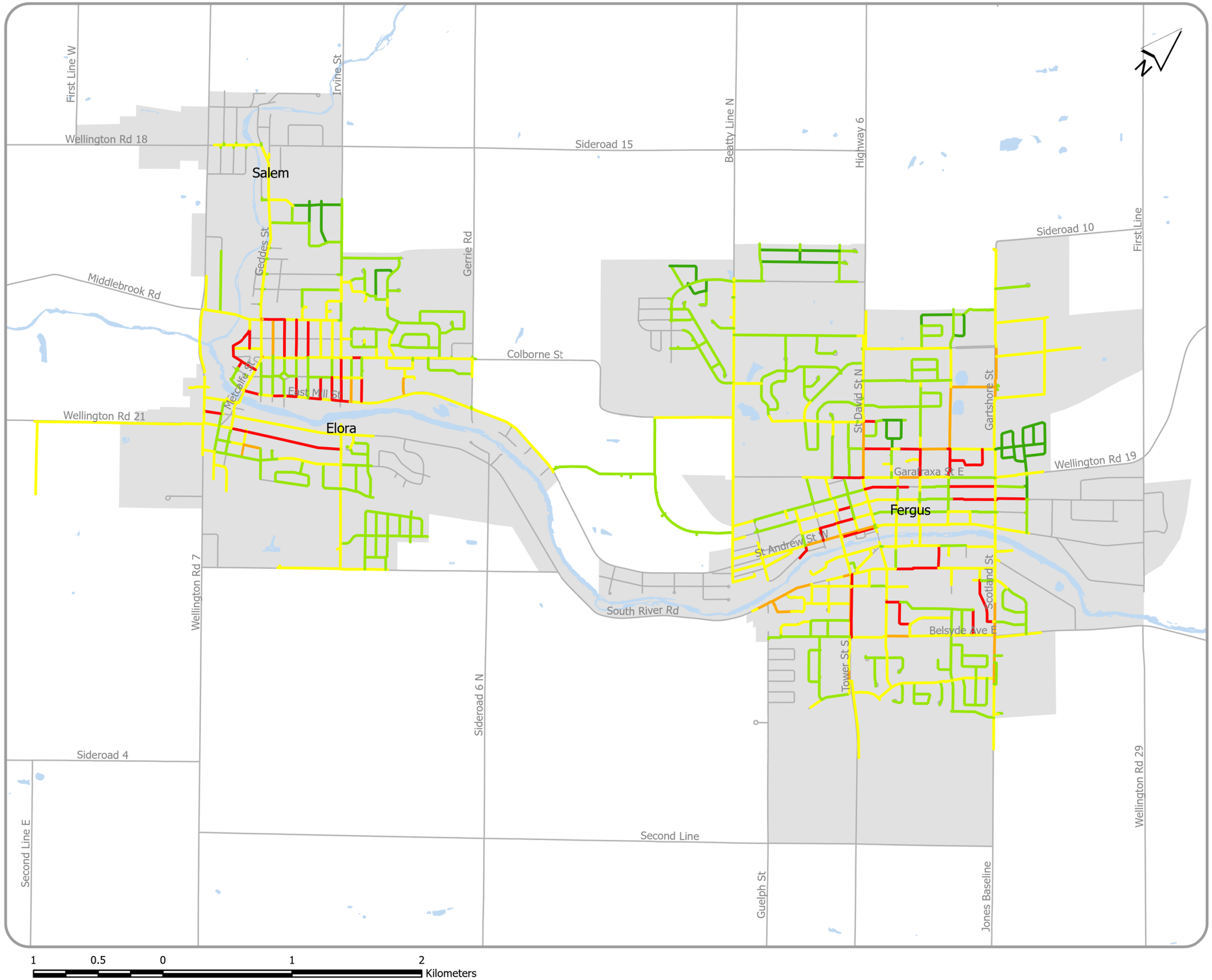
Watermains - Condition

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington



Watermains

Risk

- Very Low
- Low
- Moderate
- High
- Very High

- Roads
- Waterbody
- Urban Areas & Hamlets

Figure B-17

Watermains - Risk

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

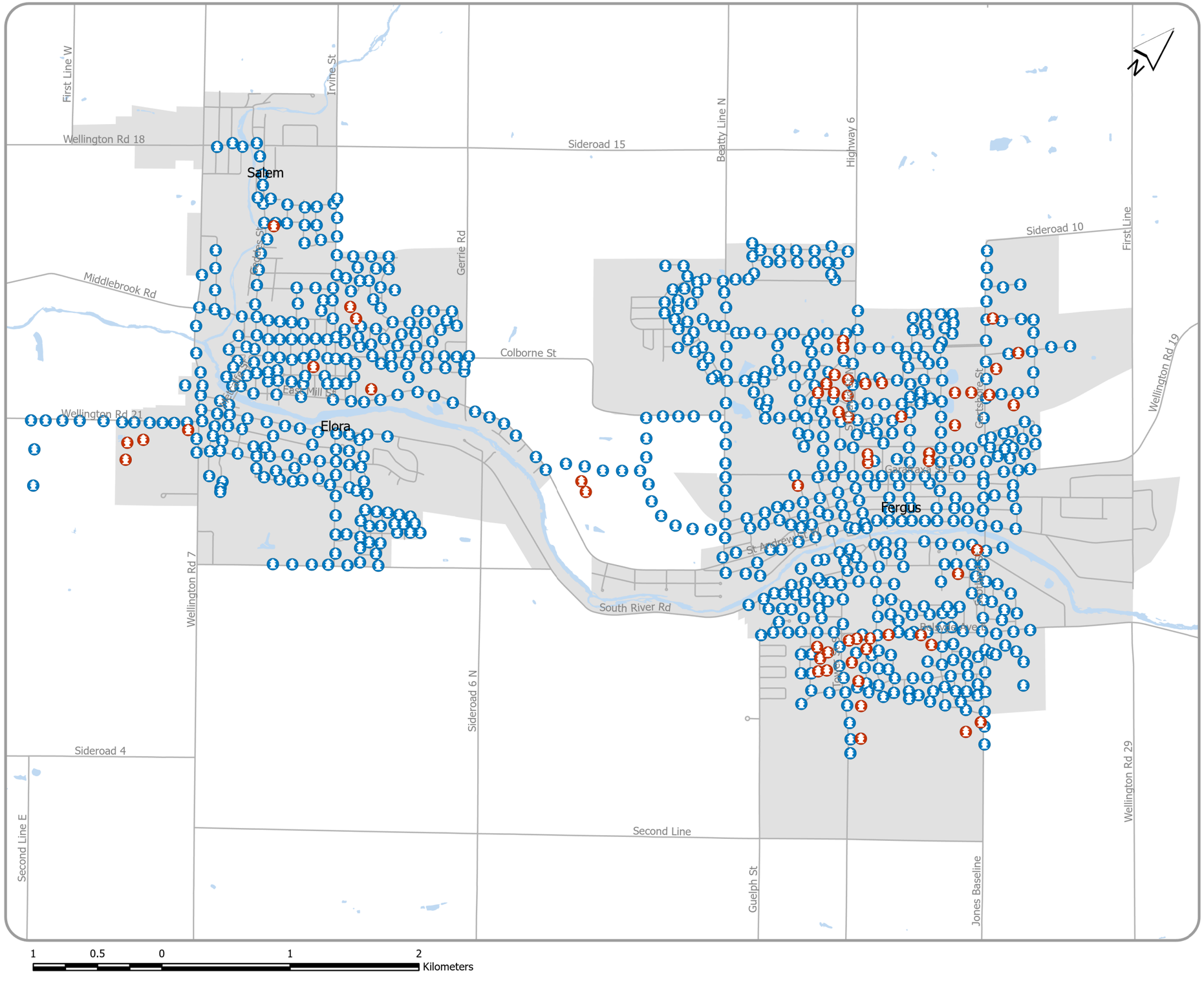


Figure B-18

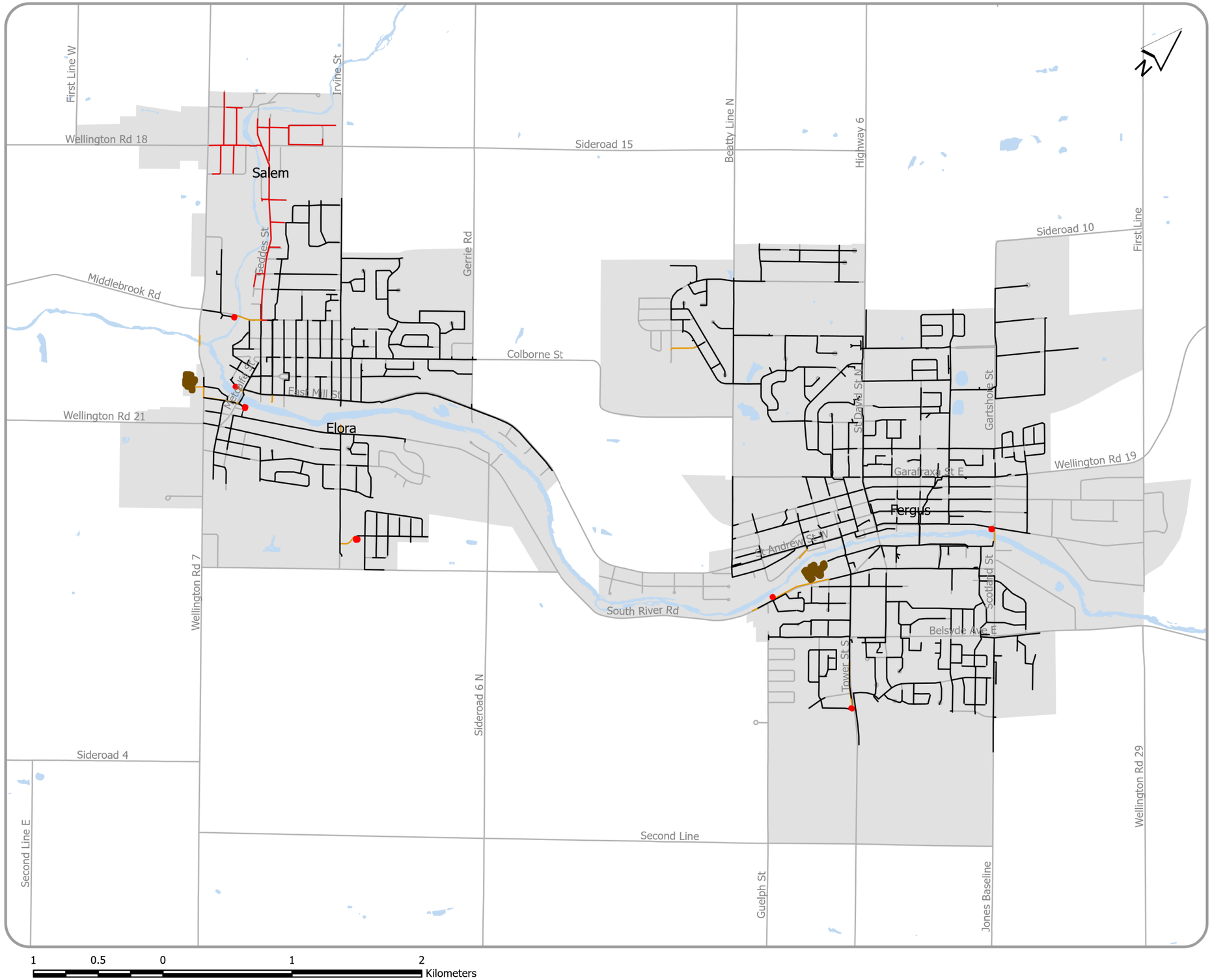
Water System
Hydrant Location

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington



- Treatment Plant
- Lift Station
- Gravity Wastewater Main
- Low Pressure Wastewater System
- Forced Wastewater Main
- Roads
- Waterbody
- Urban Areas & Hamlets

Figure B-19

Wastewater Mains - Overview

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

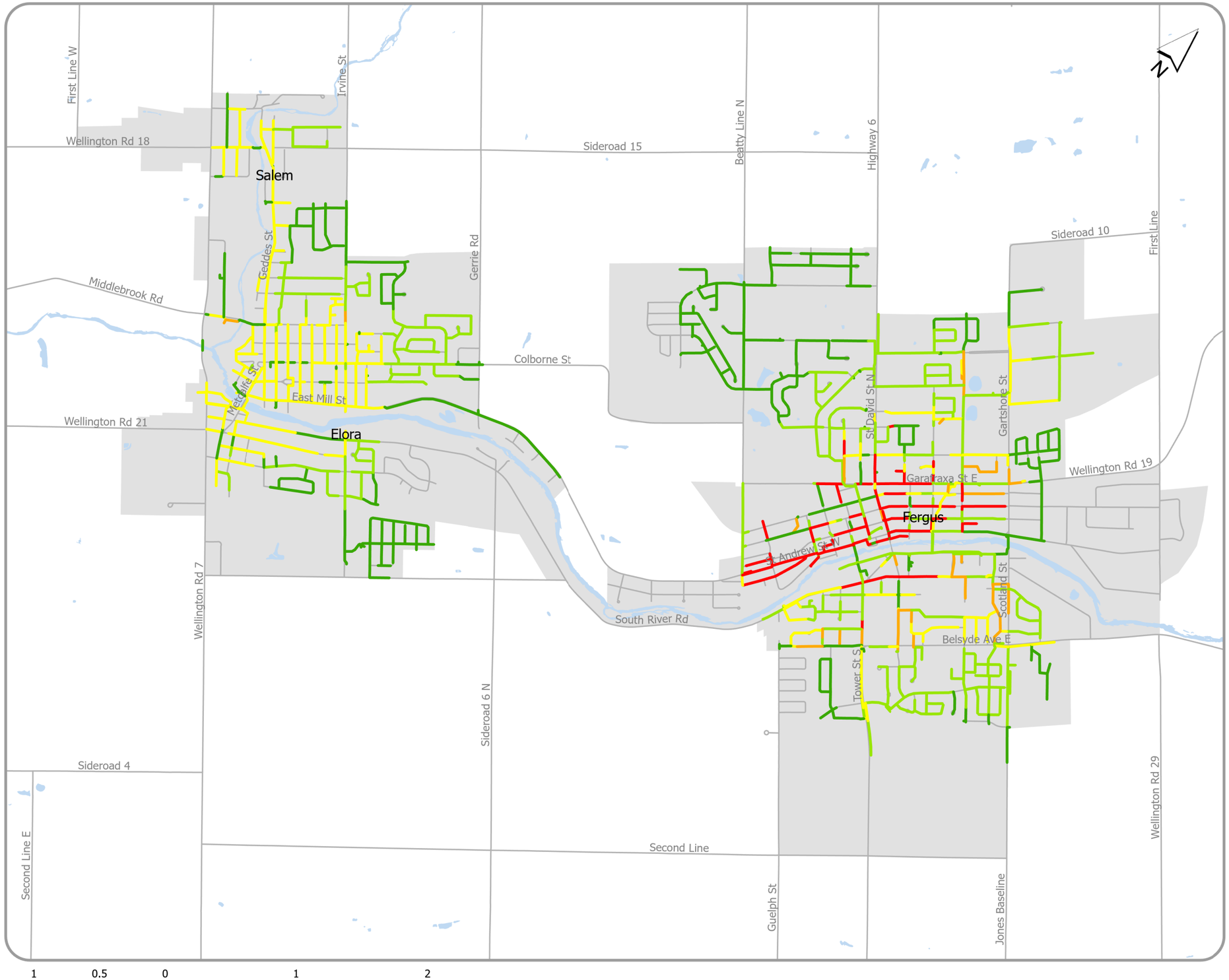


Figure B-20

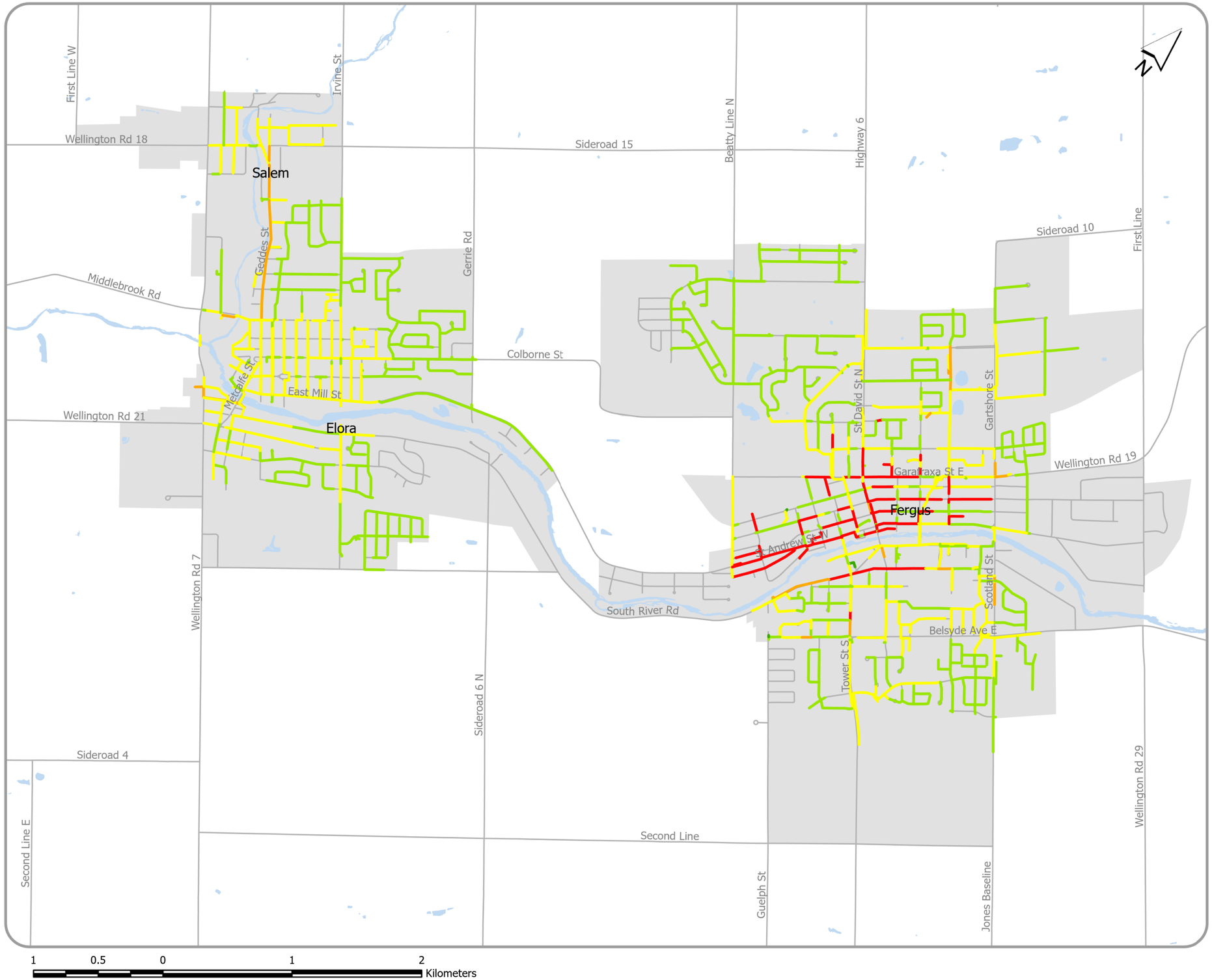
Wastewater Mains - Condition

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington



Wastewater Mains

Risk

- Very Low
- Low
- Moderate
- High
- Critical

- Roads
- Waterbody
- Urban Areas & Hamlets

Figure B-21

Wastewater Mains - Risk

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

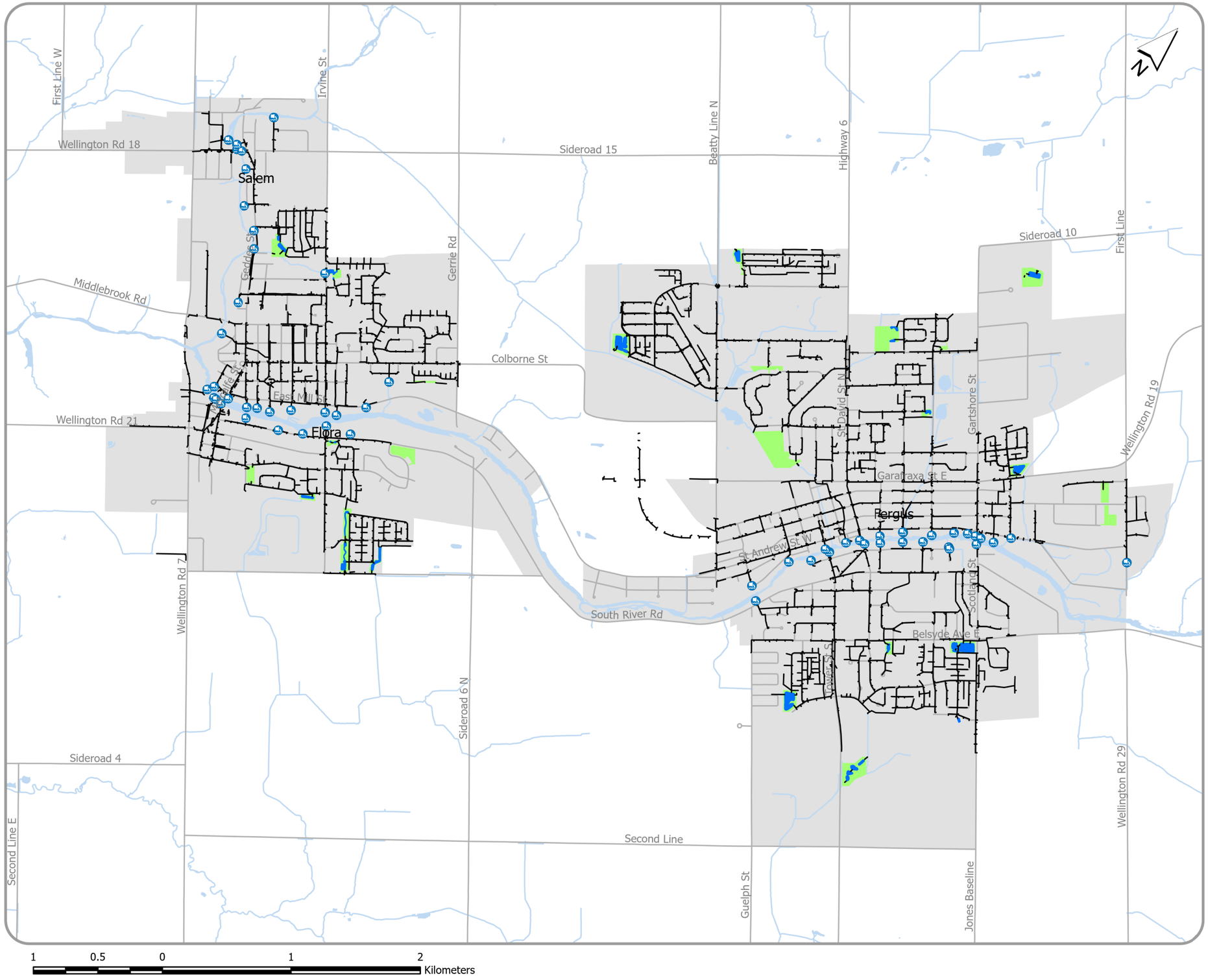


Figure B-22

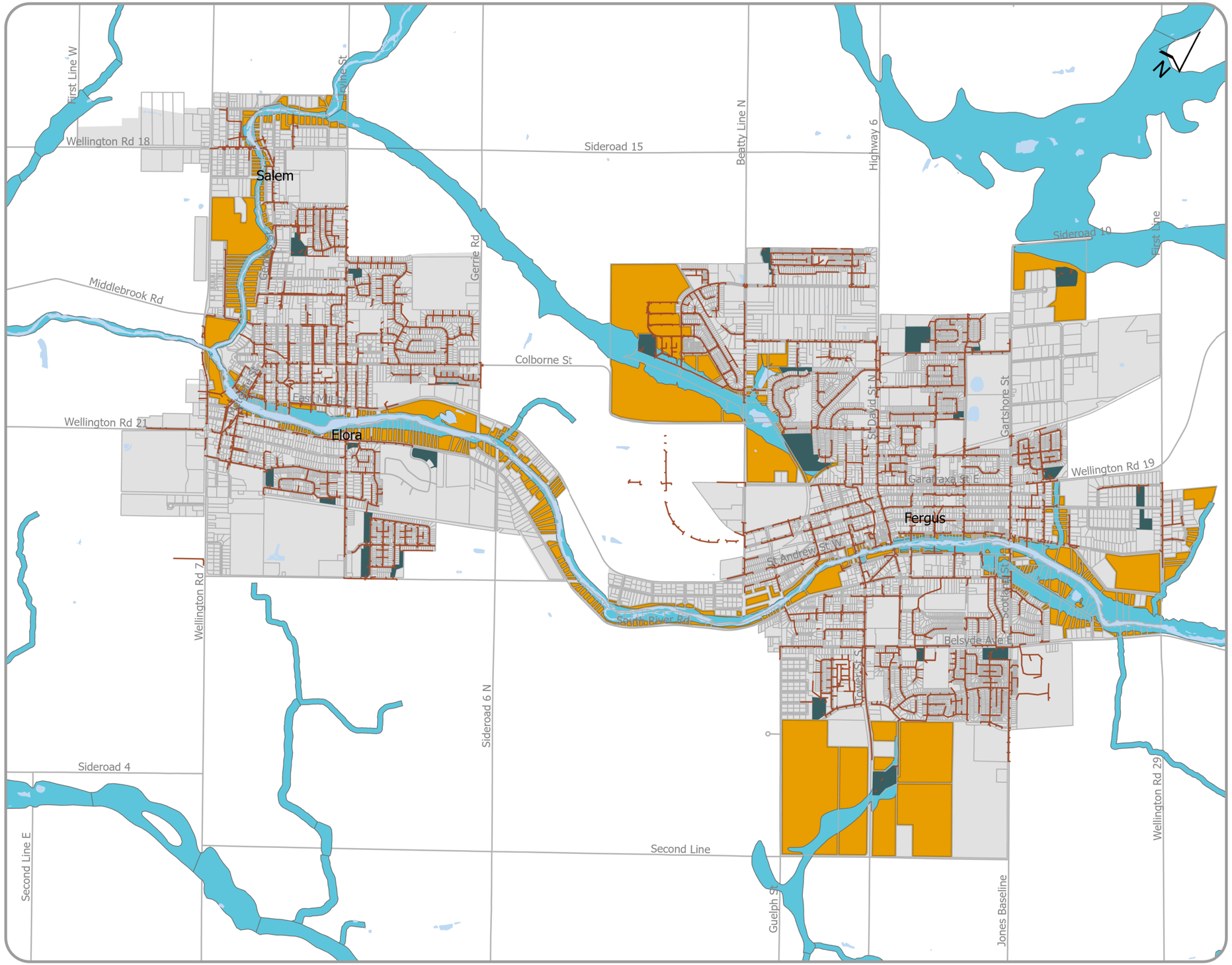
Storm Water System Overview

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington



Storm Water Main
Storm Water Management Area
100 Yr Floodplain (GRCA)
Properties Outside the Floodplain
Properties Intersect the Floodplain

Roads
Waterbody
Urban Areas & Hamlets

Figure B-23

Properties Resilient to
100 Year Storm

Asset Management Plan

2022

Township of Centre Wellington

Centre Wellington

Appendix C

Levels of Service Financial Implications Tables

Roads, Storm, Bridges and Culverts Technical Levels of Service

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Operations	Administration, Operations & Maintenance	Provide adequate hours of operation, appropriate staffing, response time in compliance with Minimum Maintenance Standards.	$ 1,157,014	$ 1,205,598	$ 1,251,859	$ 1,251,859	Shortage of operations facility space to accommodate existing and future Township growth	Operating and Capital Implications: Construction of an Operations Facility as outlined in the Township Strategic Plan and Development Charges Background Study.	
	Garages (4)		$ 136,400	$ 135,780	$ 139,000	$ 139,000			
	Fleet Repair & Maintenance (before recoveries)		$ 713,775	$ 737,975	$ 763,250	$ 763,250			
	TOTAL		**$ 2,007,189**	**$ 2,079,353**	**$ 2,154,109**	**$ 2,154,109**			
	Bridges & Culverts	Purchasing of new/ replacement culverts (crossroad and driveway), not OSIM	$ 136,100	$ 136,100	$ 128,800	$ 128,800	Need for additional culverts due to growth and deterioration of current assets, assuming more culverts on a year-over-year basis	$ 170,100	5
	Grass Cutting & Weed Spraying	Municipal boulevards/ facilities, as required in a given year to address weeds (covering 25% of rural area per year, urban area as required)	$ 114,300	$ 114,300	$ 123,200	$ 123,200	No change	$ 123,200	N/A
	Brush/Tree Removal & Planting	Tree removals due to storm damage, general maintenance, coordinated with forestry group, ash program	$ 148,300	$ 153,000	$ 143,000	$ 143,000	Need to ensure 2:1 tree compensation in urban area for Township projects	$ 306,000	10
	Ditching	10kms per year	$ 100,500	$ 87,500	$ 88,000	$ 88,000	20km per year	$ 175,000	10
	Curbs, Gutters & Basins	All CBs repaired/ cleaned within 4 years	$ 57,800	$ 51,800	$ 52,500	$ 52,500	All CBs repaired/ cleaned within 2 years	$ 103,600	5
	Bituminous Pavement Patching	Patching potholes as needed, all potholes repaired per MMS	$ 154,400	$ 147,500	$ 146,700	$ 146,700	Continue meeting MMS, no change	$ 147,500	N/A
	Crack Sealing & Asphalt Repair	15,000 m	$ 25,000	$ 25,000	$ 25,000	$ 25,000	30,000 m	$ 50,000	5
	Street Cleaning	Spring and periodic Downtown, entire road network	$ 121,100	$ 128,800	$ 143,800	$ 143,800	No change	$ 128,800	N/A
	Shoulder Maintenance	Per MMS	$ 91,500	$ 91,500	$ 91,800	$ 91,800	No change	$ 91,500	N/A
	Road Patrol	MMS	$ 43,500	$ 76,000	$ 82,500	$ 82,500	No change	$ 76,000	N/A
	Debris/Leaf Pickup	N/A - County	$ 64,600	$ 23,800	$ 22,000	$ 22,000			

Roads, Storm, Bridges and Culverts Technical Levels of Service

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Maintenance	Grading	Every gravel road yearly	$ 244,900	$ 225,300	$ 217,900	$ 217,900	No change	$ 225,300	N/A
	Dust laying	Every gravel road yearly	$ 334,100	$ 346,500	$ 354,500	$ 354,500	No change	$ 346,500	N/A
	Gravel Resurfacing	50km, less than 4 inch lift (56800 tonnes for 64 kms)	$ 466,300	$ 476,500	$ 471,000	$ 471,000	50km, but need more quantity (achieve 4 inch lift)	$ 1,000,000	10
	Snow Removal	Parking lots, downtown	$ 56,300	$ 70,300	$ 64,500	$ 64,500	No change	$ 70,300	N/A
	Plowing, Sanding & Scarifying	Meet or exceed MMS	$ 1,199,500	$ 1,173,400	$ 1,146,750	$ 1,146,750	Continue meeting MMS, no change	$ 1,173,400	N/A
	Snow Fencing & Culvert Thawing	1km	$ 3,600	$ 3,700	$ 4,400	$ 4,400	No change	$ 3,700	N/A
	Safety Devices	Signs/ signals/ cones/ barrels, signal inspections, per MMS and OTM	$ 153,700	$ 161,300	$ 169,100	$ 169,100	Growing network and aging infrastructure	$ 322,600	10
	Street Lighting	LED for entire network, not decorative lights, over 1000 fixtures, repair as calls come in	$ 203,500	$ 210,000	$ 202,500	$ 202,500	100% LED (some decorative lighting still needs to be replaced)	$ 262,500	5
	Municipal Parking Lots	Sweeping, line painting, repairs (Assumed Elora arena and curling club)	$ 34,500	$ 59,900	$ 59,900	$ 59,900	No change	$ 59,900	N/A
	Sidewalk Winter Maintenance, Cleaning & Other Maintenance	Per MMS	$ 160,400	$ 160,800	$ 160,400	$ 160,400	MMS, but yearly budget needs to keep pace with growth (+5% year over year)	$ 168,840	Yearly growth
	Line Painting	Rural and urban roads, per OTM, every two years	$ 86,600	$ 86,100	$ 96,500	$ 96,500	No change	$ 86,100	N/A
	Storm Sewer	Flushing, 20 yr cycle	$ 25,900	$ 25,900	$ 26,000	$ 26,000	Governed under new ECA, entire system flushed every 5 years	$ 103,600	5
	Storm Water Pond Maintenance	Grass cutting, pond maintenance, beaver dams, inspections - all ponds inspected yearly deficiencies corrected	$ 16,100	$ 16,100	$ 16,100	$ 16,100	No change	$ 16,100	N/A

Roads, Storm, Bridges and Culverts Technical Levels of Service

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
	Municipal Drains	Drainage Super, address complaints in same season	$ 3,300	$ 3,300	$ 4,500	$ 4,500	No change	$ 3,300	N/A
	TOTAL		**$ 4,045,800**	**$ 4,054,400**	**$ 4,041,350**	**$ 4,041,350**			
Rehabilitation & Replacement	Urban Roads	Rehabilitation and replacement based on funding constraints	$ 2,285,000	$ 1,005,000	$ 3,931,400	$ 3,931,400	Based on lifecycle costing annual requirements	$ 8,344,613	1
	Rural Roads	Rehabilitation and replacement based on funding constraints	$ 2,345,000	$ 1,197,000	$ 1,342,300	$ 1,342,300	Based on lifecycle costing annual requirements	$ 2,000,000	1
	Bridges & Culverts	Rehabilitation and replacement based on bridge and culvert replacement schedule	$ 2,640,000	$ 1,810,000	$ 4,115,000	$ 4,115,000	Based on lifecycle costing annual requirements	$ 5,211,000	1
	Storm	Rehabilitation and replacement based on funding constraints	$ 120,000	$ 175,000	$ 40,000	$ 40,000	Based on lifecycle costing annual requirements	Included in Road requirements above.	1
	Public Works Other	Rehabilitation and replacement based on funding constraints	$ 710,000	$ 355,000	$ 1,354,000	$ 1,354,000	Based on lifecycle costing annual requirements	$ 1,354,000	1
	Vehicle & Equipment Replacement	Replacement based on vehicle & equipment replacement schedules	$ 837,800	$ 697,900	$ 827,600	$ 827,600	Replacement based on vehicle & equipment replacement schedules	$ 827,600	N/A
	TOTAL		**$ 8,937,800**	**$ 5,239,900**	**$ 11,610,300**	**$ 11,610,300**			
Upgrade/Expansion	Roads	Based on development charges cash flow constraints	$ 60,000	$ 688,000	$ 601,600	Based on requirements identified in the Township's development charge study, and Transportation Master Plan.			
	Bridges & Culverts		$ 220,000	$ 20,000	$ 420,000				
	Public Works - Other		$ 140,000	$ 350,000	$ -				
	TOTAL		**$ 420,000**	**$ 1,058,000**	**$ 1,021,600**	**$ -**			
GRAND TOTAL			**$ 15,410,789**	**$ 12,431,653**	**$ 18,827,359**	**$ 17,805,759**			

Water

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Operations	Administration - Cost Recovery		$ 1,123,596	$ 1,203,343	$ 1,285,012	$ 1,285,012	Shortage of operations facility space to accommodate existing and future Township growth	Operating and Capital Implications: Construction of an Operations Facility as outlined in the Township Strategic Plan and Development Charges Background Study.	
	TOTAL		**$ 1,123,596**	**$ 1,203,343**	**$ 1,285,012**	**$ 1,285,012**			
	Pump Plant Repairs & Maintenance	Proactive and reactive repairs and maintenance, routine service orders, labor, daily checks, well maintenance, pumps, contact chamber	$ 591,600	$ 586,200	$ 612,300	$ 612,300	Need to shift to proactive maintenance (vs. reactive), preventative maintenance	$ 706,200	5
	Hydrants & Mains Repairs & Maintenance	Hydrant painting to WM breaks, annual hydrant inspection & maintenance, 50-60 hydrants maintained per year, proactive valve replacements, leak detection	$ 304,400	$ 314,300	$ 259,100	$ 259,100	No change	$ 314,300	N/A
	Scada Repairs & Maintenance	General maintenance to SCADA, programming, trouble shooting	$ 37,950	$ 41,450	$ 50,900	$ 50,900	No change	$ 41,450	N/A

Water

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Maintenance	Purification	Chlorine purchasing, maintenance (chlorine feed system), scale maintenance	$ 202,000	$ 203,000	$ 188,300	$ 188,300	No change	$ 203,000	N/A
	Services	Main to c/s (water services), lowering c/s, replacement of c/s/b, frozen service program	$ 136,200	$ 119,400	$ 104,100	$ 104,100	No change	$ 119,400	N/A
	Backflow Prevention	Operator staff time and equipment for backflow testing	$ 7,700	$ 7,700	$ 178,700	$ 178,700	Upgrade software	$ 15,400	2
	Locates	Ontario OneCall fees, locating equipment, staff time for locates	$ 65,000	$ 81,900	$ 87,500	$ 87,500	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 85,995	Yearly increase
	Development Support	Preliminary checks on valves, staff time for WM connections, inspections	$ 33,050	$ 20,900	$ 24,700	$ 24,700	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 21,945	Yearly increase
	Other	Professional Fees, Cost of Centre Wellington Hydro billing services, Property taxes for water properties	$ 153,000	$ 162,700	$ 164,200	$ 164,200	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 170,835	Yearly increase
	Risk Management Inspector		$ 102,675	$ 104,325	$ 107,072	$ 107,072	No change	$ 104,325	N/A
	TOTAL		**$ 1,633,575**	**$ 1,641,875**	**$ 1,776,872**	**$ 1,776,872**			

Water

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Rehabilitation & Replacement	Water Capital	Annual Transfer to Capital Reserve: Rehabilitation and replacement funding of $2,090,398 (2022 $)	$ 1,728,500	$ 1,132,500	$ 2,427,000	$ 2,427,000	Based on lifecycle costing annual requirements	$ 3,502,000	5
	Vehicle & Equipment Replacement	Annual Transfer to Vehicle & Equipment Reserves: Replacement funding of $155,850 (2022 $)	$ 68,700	$ 380,500	$ 189,200	$ 189,200	Replacement based on vehicle & equipment replacement schedules	$ 134,748	1
	TOTAL		**$ 1,797,200**	**$ 1,513,000**	**$ 2,616,200**	**$ 2,616,200**			
Upgrade/Expansion	Water Capital	Based on development charges cash flow constraints	$ 2,973,500	$ 815,500	$ 441,000	Based on requirements identified in the Township's Development Charges Background Study, and Water Supply Master Plan			
	TOTAL		**$ 2,973,500**	**$ 815,500**	**$ 441,000**	**$ -**			
GRAND TOTAL			**$ 7,527,871**	**$ 5,173,718**	**$ 6,119,084**	**$ 5,678,084**			

Wastewater

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Operations	Administration - Cost Recovery		$ 1,551,633	$ 1,661,759	$ 1,774,540	$ 1,774,540	Shortage of operations facility space to accommodate existing and future Township growth	Operating and Capital Implications: Construction of an Operations Facility as outlined in the Township Strategic Plan and Development Charges Background Study.	
	TOTAL		**$ 1,551,633**	**$ 1,661,759**	**$ 1,774,540**	**$ 1,774,540**			
	Wastewater Mains	Flushing, reactive system repairs, blockages, CCTV	$ 127,500	$ 126,100	$ 134,300	$ 134,300	Proactive maintenance, regulatory changes, need to flush and camera on regulated cycle, yearly budget increase needed to keep pace with growth (+5% per year, plus initial increase to cover current funding gap)	$ 252,200	10
	Wastewater Laterals	Service cleanouts, repairs, reactive	$ 53,900	$ 53,900	$ 71,300	$ 71,300	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 56,595	Yearly increase
	Wastewater SCADA	New programming, troubleshooting, program extension	$ -	$ 12,550	$ 39,350	$ 39,350	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 13,178	Yearly increase

Wastewater

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Maintenance	Wastewater Pumping Stations	Repairs and maintenance to PSs, generator gas, electrical work, weekly inspections	$ 115,800	$ 109,650	$ 95,150	$ 95,150	Shift to preventative maintenance, increase needed to keep pace with growth (+5% per year, plus initial increase to cover current funding gap)	$ 159,650	5
	Grand River Agricultural Society Pumping Station	Operate on behalf of GRAS, labor	$ 11,986	$ 12,188	$ 11,709	$ 11,709	Same	NA	
	Fergus Water Pollution Control Plant	Treatment chemicals, labor, lab work, sampling, repairs to equipment, biosolids haulage, electrical	$ 642,000	$ 659,900	$ 726,575	$ 726,575	Shift to preventative maintenance, increase needed to keep pace with growth (+5% per year, plus initial increase to cover current funding gap)	$ 759,900	5
	Elora Water Pollution Control Plant	Treatment chemicals, labor, lab work, sampling, repairs to equipment, biosolids haulage, electrical	$ 559,700	$ 544,900	$ 579,925	$ 579,925	Shift to preventative maintenance, increase needed to keep pace with growth (+5% per year, plus initial increase to cover current funding gap)	$ 644,900	5
	Elora Low Pressure Sanitary Sewer	Preventative/ reactive maintenance to LPS, contractor costs, replacement equipment, H2S treatment	$ 114,300	$ 116,000	$ 116,800	$ 116,800	Need to inventory existing assets/ system, increase needed to keep pace with growth (+5% per year, plus initial increase to cover current funding gap)	$ 146,000	5

Wastewater

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
	Wastewater Other	Cost of Centre Wellington Hydro billing services, property taxes for wastewater properties	$ 163,100	$ 165,200	$ 171,000	$ 171,000	Increase budget on a yearly basis to keep pace with growth (+5% per year)	$ 173,460	Yearly increase
	TOTAL		**$ 1,788,286**	**$ 1,800,388**	**$ 1,946,109**	**$ 1,946,109**			
Rehabilitation & Replacement	Wastewater Capital	Annual Transfer to Capital Reserve: Rehabilitation and replacement funding of $2,308,907 (2022 $)	$ 785,000	$ 1,685,000	$ 1,004,400	$ 1,004,400	Based on lifecycle costing annual requirements	$ 2,242,000	5
	Vehicle & Equipment Replacement	Annual Transfer to Vehicle & Equipment Reserves: Replacement funding of $149,150 (2022 $)	$ 98,000	$ 469,800	$ 104,100	$ 104,100	Replacement based on vehicle & equipment replacement schedules	$ 146,750	5
	TOTAL		**$ 883,000**	**$ 2,154,800**	**$ 1,108,500**	**$ 1,108,500**			
Upgrade/Expansion	Wastewater Capital	Based on development charges cash flow constraints	$ 40,000	$ 275,000	$ 35,600	Based on requirements identified in the Township's Development Charges Background Study			
	TOTAL		**$ 40,000**	**$ 275,000**	**$ 35,600**	**$ -**			
GRAND TOTAL			**$ 4,262,919**	**$ 5,891,947**	**$ 4,864,749**	**$ 4,829,149**			

Parks & Recreation Services

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget (COVID-19 Impacted)	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Operations	Administration	Provide adequate hours of operation, appropriate staffing, response time in compliance with Legislation.	$ 1,357,855	$ 1,391,948	$ 1,488,941	$ 1,498,941	Appropriate Staffing, Culture Coordinator FT,Property Manager	$ 1,672,256	1
	TOTAL		**$ 1,357,855**	**$ 1,391,948**	**$ 1,488,941**	**$ 1,498,941**			
Operations & Maintenance	Centre Wellington Community Sportsplex	Operations & Maintenance	$ 1,491,650	$ 1,479,694	$ 1,553,929	$ 1,663,929	Additional cleaning hours to maintain new LOS and Lead hand(move attendant up, not a new hire)	$ 1,668,505	1
		Aquatic Centre	$ 733,199	$ 692,167	$ 747,278	$ 747,278	Aquatic Supervisor, Caretaking Charges	$ 821,968	2
		Grounds	$ 76,602	$ 81,208	$ 83,326	$ 83,326	No Change	$ 83,326	N/A
		Fitness Program	$ 49,915	$ 38,860	$ 50,158	$ 50,158	No Change	$ 50,158	N/A
		Weight Room	$ 34,086	$ 28,736	$ 30,177	$ 30,177	Additional Caretaking Charges	$ 38,677	1
		Programs	$ 55,347	$ 53,984	$ 49,111	$ 49,111	Expanding Program(other)- Supplies, Seasonal recreation staff (drop in programs)	$ 60,223	2
		Total	**$ 2,440,799**	**$ 2,374,649**	**$ 2,513,979**	**$ 2,623,979**			
	Elora Community Centre	Operations & Maintenance	$ 638,201	$ 420,135	$ 410,056	$ 581,005	Original budget accounted for the renovation that has been delayed,PPT Customer Service Rep, and Program Expenses	$ 625,913	2
		Grounds	$ 18,178	$ 17,898	$ 18,136	$ 18,136	No Change	$ 18,136	N/A
		Total	**$ 656,379**	**$ 438,033**	**$ 428,192**	**$ 599,141**			

Parks & Recreation Services

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget (COVID-19 Impacted)	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
	Belwood Hall		$ 23,698	$ 23,640	$ 24,753	$ 24,753	No Change	$ 24,753	N/A
	Active Parks		$ 188,032	$ 180,036	$ 189,624	$ 189,624	No Change	$ 189,624	N/A
	Passive Parks		$ 215,621	$ 240,557	$ 295,563	$ 295,563	Seasonal Parks Student, Downtown Watering, Hoffer Park Washroom - Building Maintenance	$ 341,058	1
	Forestry		$ 50,000	$ 50,000	$ 50,000	$ 50,000	Public Tree By-law, Landscape Technician	$ 158,652	2
	Greenhouses		$ 20,935	$ 21,059	$ 21,868	$ 21,868	Planting material	$ 26,868	1
	Victoria Park Seniors Centre		$ 567,794	$ 430,268	$ 572,248	$ 572,248	No Change	$ 572,248	N/A
	Downtown Beautification		$ 85,548	$ 82,716	$ 85,294	$ 85,294	Watering/ Maintenance Crew	$ 111,646	1
	Downtown Washrooms (Weigh Scale/Elora Tourism)		$ 47,313	$ 38,493	$ 39,158	$ 39,158	No Change	$ 39,158	N/A
	Fergus Grand Theatre		$ 174,040	$ 95,926	$ 181,178	$ 181,178	No Change	$ 181,178	N/A
	Tourism		$ 249,020	$ 241,188	$ 252,655	$ 252,655	No Change	$ 252,655	N/A
	Celebrations		$ 20,000	$ 20,000	$ 20,000	$ 20,000	No Change	$ 20,000	N/A
	TOTAL		**$ 4,739,179**	**$ 4,236,565**	**$ 4,674,512**	**$ 4,955,461**			
Rehabilitation & Replacement	Facilities	Rehabilitation and replacement based on funding constraints	$ 30,000	$ 1,300,000	$ 338,800	$ 338,800	Based on annual intervention cost within Township's Building condition assessment	$ 1,032,115	1
	Vehicle & Equipment Replacement	Replacement based on vehicle & equipment replacement schedules	$ 1,252,800	$ 1,207,800	$ 658,500	$ 658,500	Annual budget is based on actual needs per year. Optimal annual budget looks at the total cost divided by the life of each piece of equipment or vehicle	$ 526,327	1

Parks & Recreation Services

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget (COVID-19 Impacted)	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
	TOTAL		**$ 1,282,800**	**$ 2,507,800**	**$ 997,300**	**$ 997,300**			
Upgrade/Expansion	Facilities	Based on development charges cash flow constraints	$ -	$ -	$ -	Based on requirements identified in the Township's Development Charge Study.			
	Vehicle & Equipment		$ 636,300	$ 271,500	$ 177,000				
	TOTAL		**$ 636,300**	**$ 271,500**	**$ 177,000**	**$ -**			
GRAND TOTAL			**$ 8,016,134**	**$ 8,407,813**	**$ 7,337,753**	**$ 7,451,702**			

Fire Services

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Operations	Salary, Wages & Administration	Provide adequate hours of operation, appropriate staffing, response time in compliance with Legislation.	$ 1,521,146	$ 1,517,758	$ 1,519,632	$ 1,519,632	Fire Master Plan indicates a need to introduce a 3rd Fire Station and additional Volunteer Firefighters to accommodate Township growth.	Operating and Capital Implications: Construction of a Fire Station and recruitment of firefighters as outlined in the Township's Fire Master Plan and Development Charges Background Study.	
	Operations & Maintenance		$ 92,750	$ 94,300	$ 96,200	$ 96,200			
	Fire Training Officer	Provide adequate training based on Township policies and procedures.	$ 151,200	$ 155,500	$ 158,100	$ 158,100	Fire Master Plan requirements on Training.	$ 161,300	1
	TOTAL		**$ 1,765,096**	**$ 1,767,558**	**$ 1,773,932**	**$ 1,773,932**			
Maintenance	Fleet Repairs & Maintenance	Fleet repairs, maintenance, insurance and gas.	$ 82,225	$ 86,295	$ 99,375	$ 99,375	Addition of new pumper for Fergus station, cost of labour for repairs has increased	$ 101,875	1
	Fergus Fire Station	Regular repair and maintenance activities to maintain station	$ 38,013	$ 36,455	$ 36,050	$ 36,050	No change	$ 36,050	N/A
	Elora Fire Station	Regular repair and maintenance activities to maintain station	$ 18,600	$ 18,250	$ 16,500	$ 16,500	Some repairs are required as per Building condition assessment	$ 19,000	N/A
	TOTAL		**$ 138,838**	**$ 141,000**	**$ 151,925**	**$ 151,925**			

Fire Services

Service Attribute	Service Activity Objective	Current Performance					Expected Level of Service		
		Description	2020 Budget	2021 Budget	2022 Budget	Cost to Maintain Current Service (2022 $)	Description	Optimum Annual Budget (2022 $)	Optimum Target (Years)
Rehabilitation & Replacement	Facilities	Rehabilitation and replacement based on funding constraints	$ 5,000	$ 15,000	$ 20,000	$ 20,000	Based on annual intervention cost within Township's Building condition assessment, capital requirements and roof repair required	$ 39,500	1
	Vehicle & Equipment Replacement	Replacement based on vehicle & equipment replacement schedules	$ 201,700	$ 331,300	$ 284,100	$ 284,100	Annual budget is based on actual needs per year. Optimal annual budget looks at the total cost divided by the life of each piece of equipment or vehicle	$ 502,985	1
	TOTAL		**$ 206,700**	**$ 346,300**	**$ 304,100**	**$ 304,100**			
Upgrade/Expansion	Facilities	Based on development charges cash flow constraints	$ 15,000	$ -	$ -	Based on requirements identified in the Township's Development Charge Study.			
	Vehicle & Equipment Replacement		$ -	$ 28,000	$ -				
	TOTAL		**$ 15,000**	**$ 28,000**	**$ -**	**$ -**			
GRAND TOTAL			**$ 2,125,634**	**$ 2,282,858**	**$ 2,229,957**	**$ 2,229,957**			

Appendix D

Priority Assets & Projects

The content presented in this Appendix provides a point-in-time identification of assets that are deemed to be critical in nature from a condition or risk perspective. It is important to note that these listings are not comprehensive in nature. Please refer to the technical appendix for a more exhaustive listing of township assets given consideration in this plan, and their associated criticality.

Township of Centre Wellington
Critical Assets Summary
Bridges

Asset ID	ID	Structure Type	Location	Street	Length(m)	In Service Date	EUL	Remaining Useful Life	Replacement Cost (2022$)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-BR-00011	16-WG	Concrete Arch	West Garafraxa	Fifth Line	16.10	1910	90	0	$ 1,937,557.72	Critical	High	Critical	past due	Poor
TS-BR-00019	24-WG	Bowstring Arch	West Garafraxa	First Line	24.30	1922	90	0	$ 2,987,000.00	Critical	Moderate	Critical	past due	Poor
TS-BR-00042	32-P	T-beam	Pilkington	Noah Road	10.30	1926	90	0	$ 1,406,700.36	Critical	Moderate	Critical	past due	Very Poor
TS-BR-00043	33-P	T-beam	Pilkington	Noah Road	11.10	1922	90	0	$ 1,471,255.61	Critical	Moderate	Critical	past due	Poor
TS-BR-00055	3-E	Bowstring Arch	Eramosa	Sixth Line	14.50	1919	90	0	$ 1,872,102.25	Critical	Moderate	Critical	past due	Poor
TS-BR-00041	30-P	Through Girders	Pilkington	Sideroad 5	8.80	1929	90	0	$ 1,144,511.28	Critical	Low	Critical	past due	Very Poor
TS-BR-00059	7-E	Through Girders	Eramosa	Third Line	10.00	1920	90	0	$ 1,302,950.00	Critical	Low	Critical	past due	Poor
TS-BR-00024	30-WG	Steel Truss	West Garafraxa	Sideroad 15	26.00	1942	90	11	$ 2,088,840.00	Critical	Low	Critical	2032	Poor
TS-BR-00040	28-P	T-Beam	Pilkington	Sideroad 11	11.30	1925	90	0	$ 1,446,902.29	Critical	Low	Critical	past due	Very Poor
TS-BR-00026	1-P	Steel Truss	Pilkington	Sideroad 5	11.80	1925	90	0	$ 1,468,713.67	Critical	Low	Critical	past due	Very Poor
TS-BR-00029	5-P	Half-Through Girders	Pilkington/Waterloo	Weisenberg Road	13.70	1920	90	0	$ 881,972.78	Critical	Low	Critical	past due	Very Poor
TS-BR-00044	3-N	T-Beam	Nichol	Beatty Line North	26.30	1942	90	11	$ 1,866,432.10	High	Moderate	High	2032	Poor
TS-BR-00016	21-WG	Bowstring Arch	West Garafraxa	First Line	19.20	1929	90	0	$ 2,465,276.16	High	Moderate	High	past due	Poor
TS-BR-00037	22-P	Rigid Frame	Pilkington	Eighth Line West	18.00	1960	90	29	$ 2,377,291.50	Moderate	Critical	High	2050	Good
TS-BR-00025	31-WG	Steel Girder	West Garafraxa	Second Line	52.30	1962	90	31	$ 3,336,107.17	Moderate	Critical	High	2052	Good
TS-BR-00015	20-WG	Prestressed I-Girder	West Garafraxa	Second Line	23.30	1990	90	59	$ 1,851,642.85	Moderate	High	High	2080	Good
TS-BR-00023	29-WG	Bowstring Arch	West Garafraxa	Sideroad 15	22.60	1928	90	0	$ 1,632,602.53	High	Moderate	High	past due	Poor
TS-BR-00002	2-WG	Through Girders	West Garafraxa	Third Line	11.60	1921	90	0	$ 1,501,803.86	High	Moderate	High	past due	Poor
TS-BR-00027	3-P	Rigid Frame	Pilkington	Eighth Line East	13.80	1961	90	30	$ 1,827,493.98	Moderate	High	High	2051	Good
TS-BR-00032	14-P	T-Beam	Inverhaugh	Sideroad 4	10.50	1936	90	5	$ 1,380,534.75	Moderate	High	High	2026	Good
TS-BR-00031	11-P	Rigid Frame	Pilkington	Fourth Line East	8.30	1962	90	31	$ 1,102,094.34	Moderate	High	High	2052	Good
TS-BR-00061	20-P	Prestressed I-Girder	Pilkington	Eighth Line West	77.80	2010	90	79	$ 4,010,706.70	Moderate	High	High	2100	Good
TS-BR-00050	2-F	Prestressed I-Girder	Fergus	Highway 6 (St. David Street)	32.40	2018	90	87	$ 2,669,801.20	Moderate	High	High	2108	Good
TS-BR-00033	18-P	Rigid Frame	Pilkington	Middlebrook Road	3.60	1960	90	29	$ 429,973.50	Moderate	High	High	2050	Good
TS-BR-00056	4-E	T-Beam	Eramosa	Fifth Line	11.60	1957	90	26	$ 1,593,863.20	Moderate	High	High	2047	Good
TS-BR-00003	3-WG	T-Beam	West Garafraxa/Eramosa	Fourth Line	10.40	1978	90	47	$ 1,330,430.40	Moderate	High	High	2068	Good
TS-BR-00036	21-P	Steel Girder	Pilkington	Eighth Line West	33.80	1956	90	25	$ 2,163,690.10	Moderate	High	High	2046	Good
TS-BR-00046	9-N	Bowstring Arch	Nichol	Irvine Street	25.90	1929	90	0	$ 1,907,405.50	Moderate	Moderate	Modera	past due	Good
TS-BR-00007	8-WG	Through Girders	West Garafraxa	Seventh Line	14.20	1925	90	0	$ 1,833,369.10	High	Low	Modera	past due	Poor
TS-BR-00045	6-N	Prestressed I-Girder	Nichol	Gerrie Road	28.30	2007	90	76	$ 2,008,366.10	Moderate	Moderate	Modera	2097	Good
TS-BR-00057	5-E	Through Girders	Eramosa	Fourth Line	13.30	1923	90	0	$ 1,717,169.65	High	Low	Modera	past due	Poor
TS-BR-00001	1-WG	Guardian	West Garafraxa/Eramosa	Eramosa-West Garafraxa Townline	12.00	2012	90	81	$ 1,506,684.00	Low	Moderate	Modera	2102	Good
TS-BR-00030	10-P	Concrete Precast Box Beam Girders	Pilkington	Fourth Line East	11.20	2019	90	88	$ 1,138,257.12	Low	High	Modera	2109	Very Good
TS-BR-00062	19-P	Prestressed I-Girder	Pilkington	Middlebrook Road	23.20	2010	90	79	$ 1,661,966.80	Low	High	Modera	2100	Very Good
TS-BR-00009	11-WG	T-Beam	West Garafraxa/North Wellington	Sideroad 25	10.30	1991	90	60	$ 682,609.58	Moderate	Low	Modera	2081	Poor
TS-BR-00022	28-WG	Rigid Frame	West Garafraxa	Sideroad 20	9.60	1985	90	54	$ 1,271,300.16	Low	Moderate	Modera	2075	Good
TS-BR-00053	1-E	T-Beam	Eramosa	Seventh Line	10.70	1949	90	18	$ 1,343,459.90	Moderate	Low	Modera	2039	Poor
TS-BR-00012	17-WG	Prestressed I-Girder	West Garafraxa	Fifth Line	25.40	1993	90	62	$ 2,011,726.99	Low	Moderate	Modera	2083	Good
TS-BR-00017	22-WG	Steel Girder	West Garafraxa	First Line	24.80	1994	90	63	$ 1,867,905.00	Low	Moderate	Modera	2084	Good
TS-BR-00018	23-WG	T-Beam	West Garafraxa	First Line	14.50	1945	90	14	$ 1,818,858.98	Low	Moderate	Modera	2035	Good
TS-BR-00039	26-P	T-Beam	Pilkington	First Line West	10.20	1940	90	9	$ 1,280,681.40	Moderate	Low	Modera	2030	Good
TS-BR-00010	13-WG	Rigid Frame	West Garafraxa	Sixth Line	13.70	1988	90	57	$ 1,947,318.00	Low	Moderate	Modera	2078	Good
TS-BR-00013	18-WG	Acrow Panel Bridge	West Garafraxa	Fifth Line	24.80	1997	90	66	$ 2,133,894.67	Low	Moderate	Modera	2087	Good
TS-BR-00028	4-P	Rigid Frame	Pilkington	Sideroad 12	13.10	1965	90	34	$ 1,944,273.84	Low	Moderate	Modera	2055	Good
TS-BR-00004	4-WG	Bowstring Arch	West Garafraxa	Fifth Line	7.30	2021	90	90	$ 1,390,500.00	Low	High	Modera	2111	Very Good
TS-BR-00005	6-WG	Rigid Frame	Belwood	George Street, Belwood	4.20	1950	90	19	$ 524,851.95	Low	Moderate	Modera	2040	Good
TS-BR-00014	19-WG	Rigid Frame	West Garafraxa	Fifth Line	13.10	1994	90	63	$ 1,668,072.13	Low	Moderate	Modera	2084	Good
TS-BR-00021	27-WG	Prestressed I-Girder	West Garafraxa	Sideroad 20	19.00	2018	90	87	$ 2,340,572.00	Low	Moderate	Modera	2108	Very Good
TS-BR-00038	24-P	Concrete Precast Box Beam Girders	Pilkington	Third Line West	15.00	2019	90	88	$ 1,477,545.30	Low	Moderate	Modera	2109	Very Good
TS-BR-00064	25-WG	Prestressed I-Girder	West Garafraxa/Nichol	Jones Baseline	33.90	2011	90	80	$ 2,035,661.10	Low	Moderate	Modera	2101	Very Good
TS-BR-00008	9-WG	Box Beam Girders	West Garafraxa	Seventh Line	12.90	2018	90	87	$ 1,619,685.30	Low	Moderate	Modera	2108	Very Good
TS-BR-00060	8-E	Box Beam Girders	Eramosa	Third Line	19.80	1982	90	51	$ 2,790,918.90	Low	Low	Low	2072	Good
TS-BR-00054	2-E	Rigid Frame	Eramosa	Sideroad 30	12.60	1994	90	63	$ 1,628,284.77	Low	Low	Low	2084	Good
	170160	Rigid Frame	Pilkington	Weisenberg Road	3.60	1932	90	1	$ 360,500.00					
	180160	Through Truss	Pilkington	Weisenberg Road	47.50	1910	90	0						

Township of Centre Wellington
Critical Assets Summary
Culverts

Asset ID	ID	Structure Type	Material	Location	Street	Length (m)	In Service Date	EUL	Remaining Useful Life	Replacement Cost (2022$)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-CU-00019	23-P	Rigid Frame	Concrete	Pilkington	Eighth Line West	5.50	1950	75	4	$ 552,337.50	High	High	High	2025	Poor
TS-CU-00035	13-N	Rigid Frame	Concrete	Nichol	Second Line	4.30	1970	75	24	$ 450,367.50	Moderate	High	High	2045	Good
TS-CU-00024	35-P	SPCPA - 3.1x1.98x17.25	Steel	Pilkington	Sideroad 4	3.40	1980	60	19	$ 373,890.00	Moderate	High	High	2040	Good
TS-CU-00016	15-P	Twin Cell Box Culvert	Concrete	Pilkington	Fourth Line East	11.30	1986	75	40	$ 905,833.50	Moderate	High	High	2061	Good
TS-CU-00017	16-P	SPCPA - 5.05x3.33x27.5	Steel	Pilkington	Second Line East	5.40	1971	60	10	$ 543,840.00	Moderate	High	High	2031	Good
TS-CU-00027	38-P	Twin Cell	Concrete	Pilkington	Eighth Line West	13.70	1995	75	49	$1,082,581.50	Moderate	High	High	2070	Good
TS-CU-00034	11-N	SPCSA - 4.88x2.03x21.9	Steel	Nichol	Woolwich Street	5.20	1997	60	36	$ 526,845.00	Moderate	High	High	2057	Good
TS-CU-00036	14-N	Rigid Frame	Concrete	Nichol	Second Line	3.50	1990	75	44	$ 382,387.50	Moderate	High	High	2065	Good
TS-CU-00007	2050	SPCPA - 3.89x2.69x19.45	Steel	West Garafraxa	Sideroad 25	4.70	1973	60	12	$ 242,178.75	High	Moderate	High	2033	Very Poor
TS-CU-00015	13-P	Rigid Frame	Concrete	Pilkington	Second Line East	6.90	1959	75	13	$ 671,302.50	Moderate	High	High	2034	Good
TS-CU-00011	7-P	Twin Cell Box Culvert	Concrete	Pilkington	Sixth Line East	12.10	1991	75	45	$ 964,749.50	Moderate	High	High	2066	Good
TS-CU-00012	8-P	Rigid Frame	Concrete	Pilkington	Sixth Line East	6.00	1991	75	45	$ 594,825.00	Moderate	High	High	2066	Good
TS-CU-00013	9-P	Rigid Frame	Concrete	Pilkington	Sixth Line East	6.80	1946	75	0	$ 662,805.00	Moderate	High	High	past due	Good
TS-CU-00014	12-P	Rigid Frame	Concrete	Pilkington	Fourth Line East & Sideroad 10	5.20	1990	75	44	$ 526,845.00	Moderate	High	High	2065	Good
TS-CU-00026	37-P	Rigid Frame - 15.86 long	Concrete	Pilkington	Second Line East	5.00	1965	75	19	$ 509,850.00	Moderate	High	High	2040	Good
TS-CU-00047	22-N	SPCPA - 4.37x2.87x20.12	Steel	Nichol	Sideroad 5	4.50	1977	60	16	$ 467,362.50	Moderate	Moderate	Modera	2037	Poor
TS-CU-00018	17-P	Box Culvert - 3.66x17.02	Concrete	Pilkington	Middlebrook Road	4.30	1988	75	42	$ 450,367.50	Low	High	Modera	2063	Good
TS-CU-00023	34-P	Rigid Frame - 16.18 long	Concrete	Pilkington	Fourth Line West	5.80	1995	75	49	$ 577,830.00	Moderate	Moderate	Modera	2070	Good
TS-CU-00048	39-P	Rigid Frame - 16.18 long	Concrete	Pilkington	Fourth Line West	5.10	1992	75	46	$ 518,347.50	Moderate	Moderate	Modera	2067	Good
TS-CU-00008	32-WG	SPCPA - 3.89x2.69x22.0	Steel	West Garafraxa	Third Line	4.00	2017	60	56	$ 424,875.00	Low	High	Modera	2077	Good
TS-CU-00053	33-WG	SPCPA - 3.5x18x2.1	Steel	West Garafraxa	Second Line	3.20	1980	60	19	$ 356,895.00	Moderate	Moderate	Modera	2040	Good
TS-CU-00030	4-N	Rigid Frame	Concrete	Nichol	Sideroad 10	7.00	1959	75	13	$ 679,800.00	Low	Moderate	Modera	2034	Good
TS-CU-00031	5-N	Rigid Frame - 10.25 long	Concrete	Nichol	Gerrie Road	6.40	1960	75	14	$ 628,815.00	Moderate	Moderate	Modera	2035	Good
TS-CU-00022	31-P	SPCSA - 3.05x1.35x6.95	Steel	Pilkington	Third Line West	3.40	1975	60	14	$ 373,890.00	Low	Moderate	Modera	2035	Good
TS-CU-00043	21-N	Twin SPCSP - 2x2.74x18.2	Steel	Nichol	Gerrie Road	6.53	1998	60	37	$ 639,861.75	Low	Moderate	Modera	2058	Good
TS-CU-00005	14-WG	SPCSA - 5.49x2.72x16.5	Steel	West Garafraxa	Sixth Line	5.80	1977	60	16	$ 577,830.00	Low	High	Modera	2037	Good
TS-CU-00028	1-N	Bridge-Plate Box Culvert	Steel	Nichol	Nichol-Peel Townline	4.40	2004	60	43	$ 229,432.50	Low	Moderate	Modera	2064	Good
TS-CU-00038	16-N	Rigid Frame	Concrete	Nichol	Fourth Line	5.80	1955	75	9	$ 577,830.00	Low	Moderate	Modera	2030	Good
TS-CU-00021	29-P	Rigid Frame	Concrete	Pilkington	First Line West	5.10	1959	75	13	$ 518,347.50	Low	Moderate	Modera	2034	Good
TS-CU-00032	7-N	Rigid Frame	Concrete	Nichol	Sideroad 5	4.90	1985	75	39	$ 501,352.50	Low	Moderate	Modera	2060	Good
TS-CU-00051	10-N	Rigid Frame	Concrete	Nichol	Irvine Street	4.30	1932	75	0	$ 450,367.50	Low	Moderate	Modera	past due	Good
TS-CU-00037	15-N	SPCPA - 3.1x1.98X18.46	Steel	Nichol	Fourth Line	3.40	1997	60	36	$ 373,890.00	Low	Moderate	Modera	2057	Good
TS-CU-00040	18-N	Rigid Frame - 11.98 long	Concrete	Nichol	Sixth Line	4.30	1955	75	9	$ 450,367.50	Low	Moderate	Modera	2030	Good
TS-CU-00002	7-WG	Rigid Frame	Concrete	West Garafraxa	East-West Garafraxa Townline	4.30	1950	75	4	$ 225,183.75	Moderate	Low	Modera	2025	Poor
TS-CU-00054	34-WG	SPCPA - 3.0x19x2.0	Steel	West Garafraxa	Sideroad 10	3.20	1980	60	19	$ 356,895.00	Moderate	Low	Modera	2040	Poor
TS-CU-00001	5-WG	Rigid Frame	Concrete	West Garafraxa	Sixth Line	4.30	1950	75	4	$ 450,367.50	Low	Moderate	Modera	2025	Good
TS-CU-00009	2-P	Rigid Frame	Concrete	Pilkington	Sideroad 14	6.90	1958	75	12	$ 335,651.25	Low	Moderate	Modera	2033	Good
TS-CU-00004	12-WG	Rigid Frame	Concrete	West Garafraxa	Sixth Line	5.20	1950	75	4	$ 526,845.00	Low	Moderate	Modera	2025	Good
TS-CU-00045	15-WG	SPCPA - 3.89x2.69x22.6	Steel	West Garafraxa	Sixth Line	4.00	2011	60	50	$ 424,875.00	Low	Moderate	Modera	2071	Good
TS-CU-00046	3-F	SPCPA - 3.73x2.28x28.0	Steel	Fergus	Hill St. E.	4.00	1980	60	19	$ 424,875.00	Low	Moderate	Modera	2040	Good
TS-CU-00039	17-N	Rigid Frame	Concrete	Nichol	Fourth Line	3.60	1950	75	4	$ 390,885.00	Low	Moderate	Modera	2025	Good
TS-CU-00042	20-N	Twin SPCPA - 2x3.73x2.29x16.68	Steel	Nichol	Sideroad 6 North	9.30	1980	60	19	$ 758,543.50	Low	Moderate	Modera	2040	Good
TS-CU-00003	10-WG	SPCPA - 3.4x2.1x21.02	Steel	West Garafraxa	East-West Garafraxa Townline	3.70	1980	60	19	$ 199,691.25	Low	Moderate	Modera	2040	Good
TS-CU-00041	19-N	Rigid Frame	Concrete	Nichol	Sideroad 6 North	4.30	1955	75	9	$ 450,367.50	Low	Moderate	Modera	2030	Good
TS-CU-00050	6-E	Precast Quickspan Structure	Concrete	West Garafraxa/Eramosa	Third Line	11.60	2013	75	67	$ 927,927.00	Low	Moderate	Modera	2088	Very Good
TS-CU-00029	2-N	Rigid Frame	Concrete	Nichol	Beatty Line North	4.90	1980	75	34	$ 501,352.50	Low	Low	Low	2055	Good
TS-CU-00020	25-P	Twin SPCPA - 2x2.44x1.75x14.25	Steel	Pilkington	Sideroad 5	6.10	1980	60	19	$ 603,322.50	Low	Low	Low	2040	Good
TS-CU-00033	8-N	SPCPA - 6.25x3.91x20.9	Steel	Nichol	Irvine Street	6.60	1976	60	15	$ 645,810.00	Low	Low	Low	2036	Good
TS-CU-00044	9-E	SPCHE - 5.89x3.71x17.0	Steel	Eramosa	Sideroad 30	6.00	2005	60	44	$ 594,825.00	Low	Low	Low	2065	Good
TS-CU-00010	6-P	Rigid Frame	Concrete	Pilkington	Sideroad 12	7.10	1986	75	40	$ 688,297.50	Low	Low	Low	2061	Good
TS-CU-00025	36-P		Concrete	Pilkington	Weisenberg Road	3.66	1970	75	24	$ 197,991.75	Low	Low	Low	2045	Good
TS-CU-00052	23-N	SPCPA - 3.66x18x1.91	Steel	Nichol	Salem St	3.66	2008	60	47	$ 395,983.50	Low	Very Low	Low	2068	Good
	0016	Concrete Open Culvert	Concrete	West Garafraxa	East-West Garafraxa Townline	4.20	1960	75	14	$ -					

Township of Centre Wellington
Critical Assets Summary
Pedestrian Bridge

Asset ID	ID	Structure Type	Location	Street	Length (m)	In Service Date	Age	EUL	Remaining Useful Life	Replacement Cost (2022$)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-BR-00048	12-N	Concrete Arch	Salem	Washington Street	10.3	1925	96	90	0	$ 496,501.20	High	Moderate	High	past due	Poor
TS-BR-00052	2-EL	Steel Truss Pedestrian Bridge	Elora	Arthur Road R.O.W.	60.3	1998	23	90	67	$ 1,304,289.00	Low	High	Modera	2088	Good
TS-BR-00065	4-F	Wooden Deck	Fergus	St. Andrew St. W.	13.1	1990	31	90	59	$ 103,221.45	High	Low	Modera	2080	Poor
TS-BR-00006	6B-WG	Steel Girder Pedestrian Bridge	Belwood	George Street, Belwood	10.5	1985	36	90	54	$ 74,217.94	Low	Moderate	Modera	2075	Good
TS-BR-00049	1-F	T-Beam Pedestrian Bridge	Fergus	Menzies Lane	34.3	1991	30	90	60	$ 646,520.70	Low	Moderate	Modera	2081	Good
TS-BR-00051	1-EL	Concrete Precast Box Beam Girders	Elora	Victoria Street	63.3	2019	2	90	88	$ 1,515,876.75	Low	Low	Low	2109	Very Good

Township of Centre Wellington
Critical Assets Summary
Gravel Road Base

ASSETIDRB	Name	From	To	Date Constructed	Length	Age	EUL	Remaining Useful Life	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-RB-00971	Garlan St	South River Rd	Clarke St Pvt	1960-01-01	123.71	61	70	9	$ 231,078.85	Critical	High	Critical	2030	Very Poor
TS-RB-00830	Second Line	Highway 6	Scotland St	1970-09-13	1059.25	51	70	19	$ 992,564.57	High	High	High	2040	Fair
TS-RB-00210	First Line	Wellington Rd 19	Sideroad 10	1963-06-10	1765.62	58	70	12	$ 1,654,467.67	High	High	High	2033	Poor
TS-RB-00751	Beatty Line N	Sideroad 10	Sideroad 10	1962-10-23	401.55	59	70	11	$ 376,267.97	High	High	High	2032	Poor
TS-RB-00752	Beatty Line N	Sideroad 15	Sideroad 10	1961-11-05	2034.58	60	70	10	$ 1,906,496.52	High	High	High	2031	Poor
TS-RB-00781	First Line W	Sideroad 11	Sideroad 5	1963-11-09	2426.87	58	70	12	$ 2,274,083.99	High	High	High	2033	Poor
TS-RB-00783	First Line W	Wellington Rd 18	Sideroad 11	1965-12-16	2038.95	56	70	14	$ 1,910,591.63	High	High	High	2035	Poor
TS-RB-00785	Fourth Line	Guelph St	Highway 6	1961-04-15	199.98	60	70	10	$ 187,388.53	High	High	High	2031	Poor
TS-RB-00787	Fourth Line	Sideroad 6 N		1962-09-12	2197.55	59	70	11	$ 2,059,205.71	High	High	High	2032	Poor
TS-RB-00788	Fourth Line	Highway 6	Jones Baseline	1964-06-26	1542.07	57	70	13	$ 1,444,993.53	High	High	High	2034	Poor
TS-RB-00812	Jones Baseline	Sideroad 10	Sideroad 15	1962-07-20	312.84	59	70	11	$ 293,142.20	High	High	High	2032	Poor
TS-RB-00840	Sideroad 10	Highway 6	Jones Baseline	1965-02-02	1013.40	56	70	14	$ 949,602.79	High	High	High	2035	Poor
TS-RB-00855	Sideroad 15	Jones Baseline	First Line	1964-12-14	1125.31	57	70	13	$ 1,054,466.80	High	High	High	2034	Poor
TS-RB-00857	Sideroad 15	First Line	Second Line	1965-02-03	1340.13	56	70	14	$ 1,255,763.78	High	High	High	2035	Poor
TS-RB-00858	Sideroad 15	Second Line	Third Line	1963-07-09	1295.14	58	70	12	$ 1,213,601.46	High	High	High	2033	Poor
TS-RB-00862	Sideroad 15	Fifth Line	Sixth Line	1963-07-04	1399.01	58	70	12	$ 1,310,932.94	High	High	High	2033	Poor
TS-RB-00877	Sideroad 30	Wellington Rd 29	Third Line	1963-12-23	1453.01	58	70	12	$ 1,361,538.62	High	High	High	2033	Poor
TS-RB-00878	Sideroad 30	Third Line	Fourth Line	1964-09-20	1397.04	57	70	13	$ 1,309,087.15	High	High	High	2034	Poor
TS-RB-00897	Sixth Line	Sideroad 20	Sideroad 25	1964-03-13	3070.74	57	70	13	$ 2,877,421.62	High	High	High	2034	Poor
TS-RB-00901	Sixth Line	Sideroad 6 N	Elmslie Pl	1963-12-13	1816.27	58	70	12	$ 1,701,930.35	High	High	High	2033	Poor
TS-RB-00925	William St	Victoria St	Wellington Rd 7	1962-11-06	120.29	59	70	11	$ 224,688.05	High	High	High	2032	Poor
TS-RB-00742	Allen St	Millcreek St	Wellington Rd 18	1964-09-17	100.40	57	70	13	$ 187,528.10	High	High	High	2034	Poor
TS-RB-00744	Anderson St S		Lamond St	1963-10-28	47.83	58	70	12	$ 89,334.13	High	High	High	2033	Poor
TS-RB-00746	Avruskin St	Ann St	Wellington Rd 7	1964-03-04	101.73	57	70	13	$ 95,008.78	High	High	High	2034	Poor
TS-RB-00747	Avruskin St	Elizabeth St	Ann St	1965-11-12	98.91	56	70	14	$ 184,745.81	High	High	High	2035	Poor
TS-RB-00748	Avruskin St	Mill St	Elizabeth St	1963-01-15	96.71	58	70	12	$ 180,633.15	High	High	High	2033	Poor
TS-RB-00750	Beatty Line N	Sideroad 10	Sideroad 5	1964-08-06	1642.95	57	70	13	$ 1,539,516.70	High	High	High	2034	Poor
TS-RB-00755	East-West Garafr	Sideroad 20	Sideroad 25	1964-01-22	3061.04	57	70	13	$ 2,868,330.61	High	High	High	2034	Poor
TS-RB-00762	Emily St		Erb St	1965-07-11	45.55	56	70	14	$ 42,537.56	High	High	High	2035	Poor
TS-RB-00778	First Line	Sideroad 20	Sideroad 25	1965-06-05	3070.08	56	70	14	$ 2,876,804.88	High	High	High	2035	Poor
TS-RB-00779	First Line	Sideroad 15	Sideroad 20	1965-12-12	3043.88	56	70	14	$ 2,852,255.40	High	High	High	2035	Poor
TS-RB-00784	Fourth Line	Wellington Rd 22	Sideroad 30	1964-05-20	3070.21	57	70	13	$ 2,876,927.67	High	High	High	2034	Poor
TS-RB-00799	Harvey St	Wellington Rd 18		1965-09-29	101.13	56	70	14	$ 188,894.54	High	High	High	2035	Poor
TS-RB-00800	Hill St	Wellington Rd 7	First Line	1963-05-23	372.28	58	70	12	$ 695,356.13	High	High	High	2033	Poor
TS-RB-00808	John St	Provost Lane	Tower St N	1963-12-09	136.62	58	70	12	$ 255,186.29	High	High	High	2033	Poor
TS-RB-00809	Jones Baseline	Nichol-Peel Townl	Sideroad 25	1962-07-23	2369.59	59	70	11	$ 2,220,416.00	High	High	High	2032	Poor
TS-RB-00810	Jones Baseline	Sideroad 5	Sideroad 20	1964-11-15	1313.31	57	70	13	$ 1,230,630.35	High	High	High	2034	Poor
TS-RB-00811	Jones Baseline	Sideroad 15	Sideroad 5	1962-08-18	1731.22	59	70	11	$ 1,622,227.51	High	High	High	2032	Poor
TS-RB-00813	Jones Baseline	Jones Baseline	Sideroad 10	1961-03-07	922.13	60	70	10	$ 864,082.08	High	High	High	2031	Poor
TS-RB-00822	Noah Rd		Eighth Line W	1961-05-28	1188.21	60	70	10	$ 1,113,407.18	High	High	High	2031	Poor
TS-RB-00825	North St		Sophia St	1964-11-25	57.39	57	70	13	$ 107,194.86	High	High	High	2034	Poor
TS-RB-00826	Queen St	Geddes St		1962-06-18	98.32	59	70	11	$ 91,821.84	High	High	High	2032	Poor
TS-RB-00828	Robert St		Avruskin St	1964-05-29	212.15	57	70	13	$ 396,257.86	High	High	High	2034	Poor
TS-RB-00833	Seventh Line	Wellington Rd 22	Sideroad 30	1961-04-03	3077.92	60	70	10	$ 2,884,148.02	High	High	High	2031	Poor
TS-RB-00835	Shoreline St	Wellington Rd 18		1963-08-05	86.58	58	70	12	$ 161,712.62	High	High	High	2033	Poor
TS-RB-00839	Sideroad 10	Beatty Line N	Highway 6	1964-01-30	1001.58	57	70	13	$ 938,526.39	High	High	High	2034	Poor
TS-RB-00846	Sideroad 11	Eighth Line W	Third Line W	1964-12-03	2065.66	57	70	13	$ 1,935,612.97	High	High	High	2034	Poor
TS-RB-00849	Sideroad 12	Weisenberg Rd	Eighth Line E	1964-06-14	1154.63	57	70	13	$ 1,081,941.55	High	High	High	2034	Poor
TS-RB-00850	Sideroad 12	Eighth Line E	Sixth Line E	1965-08-31	1285.72	56	70	14	$ 1,204,779.13	High	High	High	2035	Poor
TS-RB-00860	Sideroad 15	Seventh Line	East-West Garafrax	1963-10-17	1378.50	58	70	12	$ 1,291,718.70	High	High	High	2033	Poor

Township of Centre Wellington
Critical Assets Summary
Paved Road Base

ASSETIDRB	Name	From	To	Date Constructed	Length	OCI	EUL	Remaining Useful Life	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-RB-00136	Colborne St	Gerrie Rd	Beatty Line N	1963-03-18	2356.40	5.01	70	12	$ 1,104,027.71	Critical	High	Critical	2033	Poor
TS-RB-00182	Eighth Line W	Sideroad 5	Wellington Rd 17	1961-10-14	2048.25	4.65	70	10	$ 1,919,306.84	Critical	High	Critical	2031	Poor
TS-RB-00183	Eighth Line W	Sideroad 11	Sideroad 5	1965-01-13	2049.53	4.47	70	14	$ 1,920,497.45	Critical	High	Critical	2035	Poor
TS-RB-00249	Gerrie Rd	Wellington Rd 18	Patrick Blvd	1962-06-06	260.63	6.61	70	11	$ 195,378.21	Critical	High	Critical	2032	Poor
TS-RB-00524	Sideroad 15	Beatty Line N	Highway 6	1963-11-05	1011.87	5.13	70	12	$ 948,171.22	Critical	High	Critical	2033	Poor
TS-RB-00534	Sideroad 4		Wellington Rd 7	1963-05-10	1292.44	5.74	70	12	$ 1,211,070.52	Critical	High	Critical	2033	Poor
TS-RB-00535	Sideroad 4	Fourth Line E		1961-05-30	1259.65	3.20	70	10	$ 1,180,352.04	Critical	High	Critical	2031	Poor
TS-RB-00719	Woolwich St E	James St	Millford Cres	1964-12-25	144.76	6.32	70	13	$ 325,544.84	Critical	High	Critical	2034	Poor
TS-RB-00721	Woolwich St E	Millford Cres	Irvine St	1965-05-16	150.51	5.53	70	14	$ 338,488.00	Critical	High	Critical	2035	Poor
TS-RB-01045	Sideroad 4	Inverhill Rd	Inverhaugh Rd	1961-12-05	153.82	#N/A	70	10	$ 144,140.01	Critical	High	Critical	2031	Poor
TS-RB-00075	Bridge St	Queen St W	Norman Craig Sq	1968-12-30	207.04	6.21	70	17	$ 167,703.70	High	High	High	2038	Fair
TS-RB-00076	Bridge St		Tower St S	1968-12-30	52.60	5.46	70	17	$ 127,812.01	High	High	High	2038	Fair
TS-RB-00077	Bridge St	St David St S	Queen St W	1968-12-30	56.86	6.82	70	17	$ 69,089.38	High	High	High	2038	Fair
TS-RB-00316	Tower St S	McQueen Blvd	Tower St S	1970-12-31	126.44	8.48	70	19	$ 102,423.28	High	High	High	2040	Fair
TS-RB-00576	St David St N		Forfar St E	1969-12-30	221.42	5.56	70	18	$ 179,353.52	High	High	High	2039	Fair
TS-RB-00577	St David St N	Woodhill Dr		1969-12-30	118.72	8.19	70	18	$ 96,162.05	High	High	High	2039	Fair
TS-RB-00578	St David St N	St Patrick St E	St George St W	1969-12-30	100.03	4.95	70	18	$ 81,022.92	High	High	High	2039	Fair
TS-RB-00579	St David St N	St Andrew St E	St Patrick St W	1969-12-30	99.66	5.27	70	18	$ 80,723.18	High	High	High	2039	Fair
TS-RB-00580	St David St N	Parkside Dr E	Strathallan St	1969-12-30	187.56	7.49	70	18	$ 227,897.87	High	High	High	2039	Fair
TS-RB-00581	St David St N	Edinburgh Ave	Parkside Dr E	1969-12-30	120.08	7.15	70	18	$ 97,266.87	High	High	High	2039	Fair
TS-RB-00582	St David St N	St George St E	Hill St W	1969-12-30	100.74	4.20	70	18	$ 81,597.75	High	High	High	2039	Fair
TS-RB-00583	St David St N	Bergin Ave	Black St	1969-12-30	101.74	6.32	70	18	$ 82,414.05	High	High	High	2039	Fair
TS-RB-00584	St David St N	Black St	Edinburgh Ave	1969-12-30	10.48	6.23	70	18	$ 8,488.55	High	High	High	2039	Fair
TS-RB-00585	St David St N	Gordon St	Sideroad 19	1969-12-30	96.11	8.34	70	18	$ 77,848.27	High	High	High	2039	Fair
TS-RB-00586	St David St N	Strathallan St	Woodhill Dr	1969-12-30	135.27	7.64	70	18	$ 109,569.98	High	High	High	2039	Fair
TS-RB-00587	St David St N	Hill St W	Garafraxa St W	1969-12-30	91.63	4.25	70	18	$ 74,219.00	High	High	High	2039	Fair
TS-RB-00588	St David St N	Forfar St E	Bergin Ave	1969-12-30	100.55	6.41	70	18	$ 81,450.55	High	High	High	2039	Fair
TS-RB-00657	Tower St S	Union St W	Albert St W	1970-12-31	96.34	4.61	70	19	$ 78,036.86	High	High	High	2040	Fair
TS-RB-00659	Tower St S	Tower St S	Elora St	1970-12-31	128.64	5.62	70	19	$ 104,199.57	High	High	High	2040	Fair
TS-RB-00660	Tower St S	Albert St W	Prince's St	1970-12-31	130.20	7.00	70	19	$ 105,468.47	High	High	High	2040	Fair
TS-RB-00661	Tower St S	Prince's St	Wellington St	1970-12-31	131.35	7.17	70	19	$ 106,394.05	High	High	High	2040	Fair
TS-RB-00184	Eighth Line W	Noah Rd	Sideroad 11	1970-11-14	1226.64	4.13	70	19	$ 1,149,415.21	High	High	High	2040	Fair
TS-RB-00185	Eighth Line W	Wellington Rd 18	Noah Rd	1969-11-25	821.88	4.18	70	18	$ 770,136.89	High	High	High	2039	Fair
TS-RB-00248	Gerrie Rd	Patrick Blvd	Colborne St	1970-11-25	113.27	9.60	70	19	$ 127,362.79	High	High	High	2040	Fair
TS-RB-00334	Irvine St	Moir St	David St E	1969-06-10	143.47	8.38	70	18	$ 89,324.29	High	High	High	2039	Fair
TS-RB-00335	Irvine St	Colborne St	Moir St	1967-05-13	147.25	9.30	70	16	$ 91,680.30	High	High	High	2037	Fair
TS-RB-00350	James St	Geddes St	Woolwich St E	1968-05-23	67.96	8.00	70	17	$ 76,416.78	High	High	High	2038	Fair
TS-RB-00367	Jones Baseline	Eramosa-Garafraxa Townline	Second Line	1970-02-12	1448.88	4.53	70	19	$ 1,357,669.89	High	High	High	2040	Fair
TS-RB-00499	Scotland St	McQueen Blvd	Second Line	1969-11-19	1001.44	5.67	70	18	$ 312,796.94	High	High	High	2039	Fair
TS-RB-00522	Sideroad 15	Gerrie Rd	Beatty Line N	1970-09-13	2012.51	5.68	70	19	$ 1,885,810.79	High	High	High	2040	Fair
TS-RB-00523	Sideroad 15	Irvine St	Gerrie Rd	1967-05-08	1017.49	4.82	70	16	$ 953,434.72	High	High	High	2037	Fair
TS-RB-00533	Sideroad 4	Inverhaugh Rd	Fourth Line E	1968-06-18	550.47	3.67	70	17	$ 515,813.25	High	High	High	2038	Fair
TS-RB-00662	Union St E	Gowrie St S	Hillside Dr	1969-12-30	330.47	7.52	70	18	$ 205,758.08	High	High	High	2039	Fair
TS-RB-00663	Union St E	Elgin St	Scotland St	1969-12-30	117.96	6.23	70	18	$ 110,167.99	High	High	High	2039	Fair
TS-RB-00664	Union St E	St David St S	Gowrie St S	1969-12-30	73.07	6.73	70	18	$ 45,492.65	High	High	High	2039	Fair
TS-RB-00665	Union St E	Thistle St	Elgin St	1969-12-30	214.77	6.63	70	18	$ 133,717.75	High	High	High	2039	Fair
TS-RB-00666	Union St E	Hillside Dr	Thistle St	1969-12-30	98.11	7.49	70	18	$ 61,083.82	High	High	High	2039	Fair
TS-RB-00694	Water St E	Bridge St	King St	1970-11-01	103.70	8.28	70	19	$ 77,737.91	High	High	High	2040	Fair
TS-RB-00695	Water St E	Cutting Dr	Cecilia St	1969-08-25	161.10	7.31	70	18	$ 120,766.18	High	High	High	2039	Fair
TS-RB-00720	Woolwich St E	Millford Cres	Millford Cres	1966-07-08	266.16	5.16	70	15	$ 299,290.23	High	High	High	2036	Fair
TS-RB-00731	Water St E	Metcalfe St	High St	1966-08-06	22.68	7.96	70	15	$ 51,009.78	High	High	High	2036	Fair
TS-RB-01044	Sideroad 4	Wellington Rd 21	Inverhill Rd	1969-02-20	431.62	#N/A	70	18	$ 404,443.48	High	High	High	2039	Fair

Township of Centre Wellington
Critical Assets Summary
Paved Road Surface

ASSETIDRS	Name	From	To	Date Constructed	OP Class	Length	EUL	Remaining Useful Life	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
TS-RS-00677	Victoria Cres	Henderson St	Smith St	1965-08-28	Local	204.24	20	0	$ 74,002.43	Critical	High	Critical	past due	Very Poor
TS-RS-00684	Victoria St			1966-03-15	Local	14.84	20	0	$ 5,376.63	Critical	High	Critical	past due	Very Poor
TS-RS-00685	Victoria St	Grand River	Carlton Pl	1970-12-08	Local	39.64	20	0	$ 14,361.78	Critical	High	Critical	past due	Very Poor
TS-RS-00035	Beatty Line N	Beatty Line N	Sideroad 15	2006-12-31	Collector	830.48	20	5	$ 223,082.72	Critical	High	Critical	2026	Very Poor
TS-RS-00469	Princess St	Moir St	David St E	1966-09-25	Local	142.81	20	0	$ 51,743.09	Critical	High	Critical	past due	Very Poor
TS-RS-00318	Hill St E	Herrick St	Gartshore St	1968-12-31	Local	356.20	20	0	$ 129,059.01	Critical	High	Critical	past due	Very Poor
TS-RS-00060	Blair St		Angelica St	1965-12-12	Local	235.69	20	0	$ 85,396.26	Critical	High	Critical	past due	Very Poor
TS-RS-00094	Chalmers St	Colborne St	Moir St	1967-07-06	Local	146.10	20	0	$ 52,935.58	Critical	High	Critical	past due	Very Poor
TS-RS-01000	Smith St	Victoria Cres	Smith St	1962-05-30	Local	25.34	20	0	$ 9,180.97	Critical	High	Critical	past due	Very Poor
TS-RS-00470	Princess St	Colborne St	Moir St	1969-09-19	Local	145.16	20	0	$ 52,593.78	Critical	High	Critical	past due	Very Poor
TS-RS-00083	Cameron St	St Patrick St E	St George St E	1981-12-31	Local	99.09	20	0	$ 35,902.63	Critical	High	Critical	past due	Very Poor
TS-RS-00602	St George St E	Herrick St	Gartshore St	1973-12-31	Local	357.45	20	0	$ 129,512.86	Critical	High	Critical	past due	Very Poor
TS-RS-00085	Cameron St	St George St E	Hill St E	1981-12-31	Local	95.55	20	0	$ 34,619.34	Critical	High	Critical	past due	Very Poor
TS-RS-00604	St George St E	Tom St	Barker St	1973-12-31	Local	193.18	20	0	$ 69,994.62	Critical	High	Critical	past due	Very Poor
TS-RS-00025	Argyll St	Belsyde Ave E	McAlister St	1972-12-31	Local	84.36	20	0	$ 30,565.56	Critical	High	Critical	past due	Very Poor
TS-RS-00307	Herrick St	St George St E	Hill St E	1989-12-31	Local	95.95	20	0	$ 34,765.15	Critical	High	Critical	past due	Very Poor
TS-RS-00447	North Queen St	Colborne St	Moir St	2002-12-31	Local	145.93	20	1	$ 52,875.46	Critical	High	Critical	2022	Very Poor
TS-RS-00411	Melville St	Colborne St	Moir St	2009-12-31	Local	145.99	20	8	$ 52,894.67	Critical	High	Critical	2029	Very Poor
TS-RS-00091	Carlton Pl	Wellington Rd 7	Victoria St	1964-09-07	Local	164.87	20	0	$ 59,737.10	High	High	High	past due	Very Poor
TS-RS-00451	Omar St	St Arnaud St	Can Robert St	1972-12-31	Local	239.82	20	0	$ 86,891.97	High	High	High	past due	Very Poor
TS-RS-00410	Melville St	Moir St	David St E	2009-12-31	Local	143.07	20	8	$ 51,835.93	High	High	High	2029	Very Poor
TS-RS-00045	Beatty Line N	Urban Boundary	Beatty Line N	2006-12-31	Collector	182.99	20	5	$ 91,449.34	High	High	High	2026	Very Poor
TS-RS-00610	St George St W	Tower St N	Tower St N	1975-12-31	Local	31.21	20	0	$ 11,307.34	High	High	High	past due	Very Poor
TS-RS-00352	James St	Margaret St	Price St	1963-06-07	Local	50.34	20	0	$ 18,239.09	High	High	High	past due	Very Poor
TS-RS-00186	Eighth Line W	Middlebrook Rd	Wellington Rd 18	1965-12-31	Local	2026.21	20	0	$ 544,278.80	High	High	High	past due	Very Poor
TS-RS-00062	Bon Acord St	Raglan St	St Arnaud St	1972-12-31	Local	246.67	20	0	$ 89,374.75	High	High	High	past due	Very Poor
TS-RS-00270	Gow St	Atchison Lane	St George St E	1986-12-31	Local	163.02	20	0	$ 59,067.45	High	High	High	past due	Very Poor
TS-RS-00576	St Arnaud St	Bon Acord St		1972-12-31	Local	53.69	20	0	$ 19,454.98	High	High	High	past due	Very Poor
TS-RS-00287	Guelph St	Barnett Cres S	Chambers Cres N	1969-06-27	Local	82.86	20	0	$ 30,021.14	High	High	High	past due	Very Poor
TS-RS-00698	Water St W	Victoria St		1961-09-05	Local	55.92	20	0	$ 20,260.68	High	High	High	past due	Very Poor
TS-RS-00232	Franklin Dr	John St		1963-06-20	Local	66.43	20	0	$ 24,070.38	High	High	High	past due	Very Poor
TS-RS-00387	Maiden Lane		River Alley	2000-12-31	Local	16.10	20	0	$ 5,834.02	High	High	High	past due	Very Poor
TS-RS-00550	Smith St	Victoria Cres	David St W	1968-10-16	Local	82.27	20	0	$ 29,807.71	High	High	High	past due	Very Poor
TS-RS-00606	St George St E	Atchison Lane	Dianne Cres	1973-12-31	Local	73.97	20	0	$ 26,800.03	High	High	High	past due	Very Poor
TS-RS-00290	Guelph St	Cummings Cres S	Stephen's Crt	1962-05-29	Local	156.56	20	0	$ 56,727.16	High	High	High	past due	Very Poor
TS-RS-00719	Woodside St	Forfar St W	Black St	1980-12-31	Local	201.52	20	0	$ 73,015.28	High	High	High	past due	Very Poor
TS-RS-00061	Blair St	Breadalbane St	Johnston St S	1970-01-02	Local	388.11	20	0	$ 140,621.23	High	High	High	past due	Very Poor
TS-RS-00064	Bon Acord St		Angelica St	1972-12-31	Local	238.40	20	0	$ 86,378.62	High	High	High	past due	Very Poor
TS-RS-00284	Guelph St	Cummings Cres N	Cummings Cres S	1965-08-05	Local	82.07	20	0	$ 29,734.72	High	High	High	past due	Very Poor
TS-RS-00007	Allan Dr	Skeen St	Amalia Cres	1964-08-23	Local	178.78	20	0	$ 64,775.78	High	High	High	past due	Very Poor
TS-RS-00608	St George St E	Gowrie St N	Cameron St	1973-12-31	Local	174.88	20	0	$ 63,363.81	High	High	High	past due	Very Poor

Township of Centre Wellington
Critical Assets Summary
Gravel Road Surface

ASSETIDRS	Name	From	To	Date Constructed	OP Class	Length	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Risk	Condition
TS-RS-00896	Sideroad 6 N	Second Line	First Line	1970-11-12	Local	2064.43	$ 18,775.78	Critical	High	Critical	Very Poor
TS-RS-00961	Jones Baseline	Sixth Line	Fourth Line	2015-08-01	Local	1861.70	$ 16,931.94	Critical	High	Critical	Very Poor
TS-RS-00853	Sideroad 14	Eighth Line E	Sixth Line E	2003-12-31	Local	1286.72	$ 11,702.57	Critical	High	Critical	Very Poor
TS-RS-00799	Guelph St	Fourth Line	Second Line	1969-09-18	Local	1979.25	$ 18,001.07	Critical	High	Critical	Very Poor
TS-RS-00852	Sideroad 14		Eighth Line E	2003-12-31	Local	885.13	$ 8,050.18	Critical	High	Critical	Very Poor
TS-RS-00956	Sideroad 5	Gerrie Rd	Beatty Line N	2015-08-01	Local	2008.23	$ 18,264.64	Critical	High	Critical	Very Poor
TS-RS-01045	Jones Baseline	Sixth Line	Fourth Line	2015-08-01	Local	206.86	$ 1,881.33	Critical	High	Critical	Very Poor
TS-RS-00840	Sideroad 10	Beatty Line N	Highway 6	1964-01-30	Local	1001.58	$ 9,109.28	Critical	High	Critical	Very Poor
TS-RS-00839	Sideroad 10	Gerrie Rd	Beatty Line N	1966-07-18	Local	2012.34	$ 18,302.02	Critical	High	Critical	Very Poor
TS-RS-00842	Sideroad 10	Gartshore St	First Line	1969-03-14	Local	1146.52	$ 10,427.50	Critical	High	Critical	Very Poor
TS-RS-00838	Sideroad 10	Irvine St	Gerrie Rd	1965-12-31	Local	1017.22	$ 9,251.49	Critical	High	Critical	Very Poor
TS-RS-00963	Fourth Line	Highway 6	Jones Baseline	2015-08-01	Local	1542.07	$ 14,025.01	Critical	High	Critical	Poor
TS-RS-00973	Sideroad 15	Seventh Line	East-West Garafraxa Townline	2015-08-01	Local	1378.50	$ 12,537.34	Critical	High	Critical	Poor
TS-RS-00836	Shoreline St	Wellington Rd 18		1963-08-05	Local	86.58	$ 787.41	Critical	High	Critical	Poor
TS-RS-00837	Sideroad 10	Wellington Rd 7	Irvine St	1965-12-31	Local	1023.14	$ 9,305.37	Critical	High	Critical	Poor
TS-RS-00846	Sideroad 11	First Line W	Wellington Rd 7	1967-07-26	Local	1030.27	$ 9,370.23	Critical	High	Critical	Poor
TS-RS-00821	Millcreek St		Allen St	1966-03-29	Local	61.81	$ 562.20	Critical	High	Critical	Poor
TS-RS-00825	North St		Mathieson St	1969-04-01	Local	45.45	$ 413.38	Critical	High	Critical	Poor
TS-RS-00792	Gartshore St	Gregson Crt	Sideroad 10	1969-08-10	Local	344.22	$ 3,130.63	Critical	High	Critical	Poor
TS-RS-00775	Erin-Garafraxa Townlir	Wellington Rd 26	East-West Garafraxa Townline	1969-01-05	Local	1338.87	$ 12,176.91	Critical	High	Critical	Poor
TS-RS-00855	Sideroad 14	Fourth Line E	Second Line E	2003-12-31	Local	1272.33	$ 11,571.73	Critical	High	Critical	Poor
TS-RS-00832	Second Line	Eramosa-Garafraxa Townline	Wellington Rd 18	2001-12-31	Local	3048.28	$ 27,723.80	Critical	High	Critical	Poor
TS-RS-00901	Sixth Line	Wellington Rd 7	Sideroad 6 N	1967-01-18	Local	2191.23	$ 19,929.03	Critical	High	Critical	Poor
TS-RS-00820	Millcreek St	Allen St		1968-10-25	Local	109.93	$ 999.85	Critical	High	Critical	Poor
TS-RS-00902	Sixth Line	Sideroad 6 N	Elmslie Pl	1963-12-13	Local	1816.27	$ 16,518.83	Critical	High	Critical	Poor
TS-RS-00959	Hill St	Wellington Rd 7	First Line	2015-08-01	Local	372.28	$ 3,385.83	Critical	High	Critical	Poor
TS-RS-00847	Sideroad 11	Eighth Line W	Third Line W	1964-12-03	Local	2065.66	$ 18,786.94	Critical	High	Critical	Poor
TS-RS-00883	Sideroad 30	Seventh Line	Wellington Rd 26	1965-10-06	Local	1437.04	$ 13,069.72	Critical	High	Critical	Poor
TS-RS-00899	Sixth Line	Wellington Rd 22	Sideroad 30	1964-12-15	Local	3051.59	$ 27,753.88	Critical	High	Critical	Poor
TS-RS-00774	Erb St		Sophia St	1970-08-13	Local	97.35	$ 885.43	Critical	High	Critical	Poor
TS-RS-00957	Sideroad 6 N	Fourth Line	Second Line	2015-08-01	Local	1982.08	$ 18,026.80	Critical	High	Critical	Poor
TS-RS-00958	Sideroad 6 N	Eighth Line	Sixth Line	2015-08-01	Local	2050.39	$ 18,648.09	Critical	High	Critical	Poor
TS-RS-00904	Sixth Line	Sideroad 9	Seventh St Pvt	1961-09-15	Local	456.13	$ 4,148.48	Critical	High	Critical	Poor
TS-RS-00922	Weisenberg Rd	Sideroad 12	Sideroad 10	1969-12-15	Local	1318.62	$ 11,992.75	Critical	High	Critical	Poor
TS-RS-00881	Sideroad 30	Fifth Line	Sixth Line	1969-08-22	Local	1407.63	$ 12,802.27	Critical	High	Critical	Poor
TS-RS-00803	Irvine St	Sideroad 15	Sideroad 10	1968-12-13	Local	2031.00	$ 18,471.76	Critical	High	Critical	Poor
TS-RS-00743	Allen St	Millcreek St	Wellington Rd 18	1964-09-17	Local	100.40	$ 913.11	Critical	High	Critical	Poor
TS-RS-00812	Jones Baseline	Sideroad 15	Sideroad 5	1962-08-18	Local	1731.22	$ 15,745.24	Critical	High	Critical	Poor
TS-RS-00826	North St		Sophia St	1964-11-25	Local	57.39	$ 521.95	Critical	High	Critical	Poor
TS-RS-00750	Beatty Line N	Sideroad 5	Wellington Rd 17	1968-07-16	Local	2041.05	$ 18,563.18	Critical	High	Critical	Poor
TS-RS-00811	Jones Baseline	Sideroad 5	Sideroad 20	1964-11-15	Local	1313.31	$ 11,944.42	Critical	High	Critical	Poor
TS-RS-00824	North St	Mathieson St	Sophia St	1968-09-24	Local	120.85	$ 1,099.16	Critical	High	Critical	Poor
TS-RS-00804	Irvine St	Bricker Ave	Woolwich St E	2009-12-31	Collector	456.30	$ 4,150.00	Critical	High	Critical	Poor
TS-RS-00751	Beatty Line N	Sideroad 10	Sideroad 5	1964-08-06	Local	1642.95	$ 14,942.45	Critical	High	Critical	Poor
TS-RS-00831	Second Line	Highway 6	Scotland St	1970-09-13	Local	1059.25	$ 9,633.77	Critical	High	Critical	Poor
TS-RS-00977	East-West Garafraxa T	Sideroad 20	Sideroad 25	2015-08-01	Local	3061.04	$ 27,839.83	Critical	High	Critical	Poor
TS-RS-00955	Sideroad 5	Beatty Line N	Highway 6	2015-08-01	Local	932.82	$ 8,483.89	Critical	High	Critical	Poor
TS-RS-00800	Harvey St	Wellington Rd 18		1965-09-29	Local	101.13	$ 919.77	Critical	High	Critical	Poor
TS-RS-00888	Sideroad 5	First Line W	Wellington Rd 7	1965-01-20	Local	1030.21	$ 9,369.70	Critical	High	Critical	Poor
TS-RS-00962	Jones Baseline	Wellington Rd 22	Sixth Line	2015-08-01	Local	2190.07	$ 19,918.51	High	High	High	Fair

Township of Centre Wellington
Critical Assets Summary
Watermain

Asset ID	Street	From	To	Material	Date Constructed	Length (m)	EUL	Remaining Useful Life	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Overall Classification	Risk Matrix	Replacement Year	Condition
ES-WM-00489	East Mill St	Metcalfe St	Geddes St	CI	1960-12-31	123.203957	60	0	$ 113,138.71	Critical	High	High	Critical	past due	Very Poor
ES-WM-00207	East Mill St	Melville St	Chalmers St	CI	1960-12-31	83.834172	60	0	$ 73,319.31	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00669	East Mill St	North Queen St	Mary St	CI	1960-12-31	97.206154	60	0	$ 85,014.12	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00340	St Andrew St W	St David St N	Provost Lane	CI	1930-12-31	258.21274	60	0	$ 225,826.52	Critical	High	Moderate	Critical	past due	Very Poor
ES-WM-00395	David St E	Princess St	Melville St	CI	1960-12-31	88.777365	60	0	$ 81,524.63	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00244	Forfar St E	James St	Victoria Ter	CI	1960-12-31	160.596937	60	0	$ 164,531.99	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00306	Forfar St E	Victoria Ter	Gzowski St	CI	1960-12-31	15.15088	60	0	$ 15,522.12	Critical	High	Moderate	Critical	past due	Very Poor
ES-WM-00203	East Mill St	Irvine St	Wellesley St	CI	1960-12-31	65.89558	60	0	$ 57,630.66	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00204	East Mill St	John St	Irvine St	CI	1960-12-31	72.990832	60	0	$ 63,835.99	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00208	East Mill St	Princess St	Melville St	CI	1960-12-31	64.318858	60	0	$ 56,251.69	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00522	Tower St S	Union St W	Albert St W	CI	1930-12-31	357.560858	60	0	$ 312,713.95	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00574	Garafraxa St W	Woodside St	Provost Lane	CI	1930-12-31	42.65285	60	0	$ 37,303.14	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00602	James St	Metcalfe St	Margaret St	CI	1960-12-31	125.766374	60	0	$ 109,992.18	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00720	David St E	Geddes St	Princess St	CI	1960-12-31	82.008464	60	0	$ 75,308.72	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00162	Tower St S	Tower St S	Elora St	CI	1930-12-31	129.314109	60	0	$ 113,094.94	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00131	Blair St	Breadalbane St	Johnston St S	CI	1930-12-31	121.431292	60	0	$ 106,200.83	Critical	Moderate	Moderate	Critical	past due	Very Poor
ES-WM-00043	Union St E	Gowrie St S	Hillside Dr	CI	1930-12-31	336.386556	60	0	$ 294,195.42	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00282	Victoria Ter	Garafraxa St E	Glencoe Ave	CI	1930-12-31	135.017621	60	0	$ 138,325.91	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00566	Princess St	St David St S	McAlister St	CI	1960-12-31	101.655108	60	0	$ 93,350.31	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00678	Colborne St	Wellesley St	Kertland St	CI	1960-12-31	70.569255	60	0	$ 61,718.14	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00014	Gzowski St	Garafraxa St E	Douglas Cres	CI	1930-12-31	124.025944	60	0	$ 108,470.05	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00224	Mary St	East Mill St	Church St E	CI	1960-12-31	168.948134	60	0	$ 147,757.89	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00227	John St	East Mill St	Church St E	CI	1960-12-31	175.090283	60	0	$ 153,129.66	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00232	Irvine St	East Mill St	Church St E	CI	1960-12-31	180.050231	60	0	$ 157,467.51	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00260	Garafraxa St W	St David St N	Woodside St	CI	1930-12-31	108.467827	60	0	$ 94,863.30	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00435	Smith St	Henderson St	Moir St	CI	1960-12-31	148.514415	60	0	$ 129,887.06	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00439	James St	Price St	Margaret St	CI	1960-12-31	137.506543	60	0	$ 120,259.85	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00440	Price St	James St	Church St W	CI	1970-12-31	58.683071	60	9	$ 51,322.77	Critical	Moderate	Low	Critical	2030	Poor
ES-WM-01005	Chalmers St	East Mill St	Church St E	CI	1960-12-31	138.090355	60	0	$ 120,770.43	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00451	McNab St W	High St	Wellington St	CI	1970-12-31	102.281177	60	9	$ 89,452.61	Critical	Moderate	Low	Critical	2030	Poor
ES-WM-00454	McNab St E	Waterloo St	Bridge St	CI	1970-12-31	330.191402	60	9	$ 288,777.29	Critical	Moderate	Low	Critical	2030	Poor
ES-WM-00111	Maiden Lane	St Andrew St W	St Patrick St W	CI	1930-12-31	97.445288	60	0	$ 85,223.26	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00116	Garafraxa St W	Provost Lane	Perry St	CI	1930-12-31	90.455925	60	0	$ 79,110.53	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00438	Victoria Cres	Henderson St	Smith St	CI	1950-12-31	208.669857	60	0	$ 182,497.53	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00863	Victoria Ter	Glencoe Ave	Forfar St E	CI	1930-12-31	83.024347	60	0	$ 85,058.67	Critical	Moderate	Low	Critical	past due	Very Poor
ES-WM-00233	Irvine St	Church St E	Colborne St	CI	1960-12-31	153.591569	60	0	$ 134,327.42	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00309	McAlister St	Highland Rd	Argyll St	CI	1960-12-31	244.684487	60	0	$ 213,995.05	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00397	North Queen St	Moir St	David St E	CI	1960-12-31	156.181093	60	0	$ 136,592.15	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00056	Hillside Dr	Queen St E	Union St E	CI	1960-12-31	173.332922	60	0	$ 151,592.72	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00214	Chalmers St	Moir St	David St E	CI	1960-12-31	275.885686	60	0	$ 241,282.85	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00219	North Queen St	Colborne St	Moir St	CI	1960-12-31	133.283794	60	0	$ 116,566.73	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00257	Forfar St E	St David St N	James St	CI	1960-12-31	213.489637	60	0	$ 186,712.80	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00294	Gzowski St	Douglas Cres	Forfar St E	CI	1930-12-31	89.869819	60	0	$ 78,597.94	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00390	Kertland St	East Mill St	Church St E	CI	1970-12-31	181.025787	60	9	$ 158,320.71	Critical	Low	Low	Critical	2030	Poor
ES-WM-00396	Melville St	Moir St	David St E	CI	1960-12-31	281.404174	60	0	$ 246,109.18	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00447	Water St W	Wellington Rd 7	Victoria St	CI	1950-12-31	125.151043	60	0	$ 109,454.03	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00579	St Patrick St W	Provost Lane	Tower St N	CI	1930-12-31	133.389897	60	0	$ 116,659.53	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-00869	St Patrick St W	Tower St N	Maiden Lane	CI	1930-12-31	143.867545	60	0	$ 125,823.02	Critical	Low	Low	Critical	past due	Very Poor
ES-WM-01056	McNab St E	Waterloo St	Bridge St	CI	1970-12-31	417.431703	60	9	$ 365,075.52	Critical	Low	Low	Critical	2030	Poor
ES-WM-00561	Elgin St	Ferrier St	Scotland St	CI	1960-12-31	172.65854	60	0	$ 151,002.92	Critical	Low	Low	Critical	past due	Very Poor

Township of Centre Wellington
Critical Assets Summary
Wastewater Main

Asset ID	Street	From	To	Material	Date Constructed	Length (m)	Age	EUL	Remaining Useful Life	Replacement Cost ($2022)	Probability of Failure	Consequence of Failure	Risk Matrix	Replacement Year	Condition
ES-SN-00885	St David St S	St Andrew St E	Menzies Lane	VC	1930-12-31	44.137482	91	80	0	$ 42,737.44	Critical	High	Critical	past due	Very Poor
ES-SN-00877	St Andrew St W	Tower St N	Maiden Lane	VC	1930-12-31	10.484959	91	80	0	$ 10,152.38	Critical	High	Critical	past due	Very Poor
ES-SN-00878	St Andrew St W	Tower St N	Maiden Lane	VC	1930-12-31	7.744148	91	80	0	$ 7,498.50	Critical	High	Critical	past due	Very Poor
ES-SN-00879	St Andrew St W	Tower St N	Maiden Lane	VC	1930-12-31	138.35149	91	80	0	$ 133,962.97	Critical	High	Critical	past due	Very Poor
ES-SN-00881	St Andrew St W	Menzies Lane	Tower St N	VC	1930-12-31	104.6592	91	80	0	$ 113,761.65	Critical	High	Critical	past due	Very Poor
ES-SN-01195	St Andrew St W	Maiden Lane	Breadalbane St	VC	1930-12-31	52.443658	91	80	0	$ 50,780.14	Critical	High	Critical	past due	Very Poor
ES-SN-01196	St Andrew St W	Maiden Lane	Breadalbane St	VC	1930-12-31	82.65377	91	80	0	$ 80,031.99	Critical	High	Critical	past due	Very Poor
ES-SN-00887	St Andrew St E	St David St N	Gowrie St N	VC	1930-12-31	62.031307	91	80	0	$ 60,063.67	Critical	High	Critical	past due	Very Poor
ES-SN-00895	St Andrew St E	St David St N	Gowrie St N	VC	1930-12-31	99.443114	91	80	0	$ 96,288.77	Critical	High	Critical	past due	Very Poor
ES-SN-01165	St Andrew St E	Gowrie St N	Cameron St	VC	1930-12-31	160.06012	91	80	0	$ 140,984.54	Critical	High	Critical	past due	Very Poor
ES-SN-00955	St David St S	Menzies Lane	St David St S	VC	1930-12-31	56.544065	91	80	0	$ 41,681.01	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01248	St Andrew St W	Maiden Lane	Breadalbane St	VC	1930-12-31	40.883029	91	80	0	$ 30,136.60	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01169	Menzies Lane	St David St S	St Andrew St W	VC	1930-12-31	32.973025	91	80	0	$ 35,840.77	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01247	St Andrew St W	Maiden Lane	Breadalbane St	VC	1930-12-31	81.838858	91	80	0	$ 60,326.87	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00239	St Andrew St W	Breadalbane St	Colquhoun St	VC	1930-12-31	82.63229	91	80	0	$ 67,519.12	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00888	St David St N	St Andrew St E	St Patrick St W	VC	1930-12-31	88.104744	91	80	0	$ 71,990.68	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01250	St David St S	Menzies Lane	St David St S	PVC	1930-12-31	75.405465	91	80	0	$ 55,113.49	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00238	St Andrew St W	Breadalbane St	Colquhoun St	VC	1930-12-31	20.176523	91	80	0	$ 16,486.30	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00265	St Andrew St W	Colquhoun St	Johnston St N	VC	1930-12-31	117.37332	91	80	0	$ 95,906.13	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00266	St Andrew St W	Colquhoun St	Johnston St N	VC	1930-12-31	88.386178	91	80	0	$ 72,220.64	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00883	Menzies Lane	St David St S	St Andrew St W	VC	1930-12-31	101.08298	91	80	0	$ 97,876.62	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00889	St David St N	St Patrick St E	St George St W	VC	1930-12-31	13.459581	91	80	0	$ 10,997.87	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01168	Menzies Lane	St David St S	St Andrew St W	VC	1930-12-31	41.742974	91	80	0	$ 45,373.46	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00020	St David St N		Forfar St E	VC	1930-12-31	100.59598	91	80	0	$ 74,153.54	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00229	St David St N		Forfar St E	VC	1930-12-31	32.787921	91	80	0	$ 24,169.36	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00277	St Andrew St W	Johnston St N	Beatty Line S	VC	1930-12-31	71.98034	91	80	0	$ 53,059.74	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00357	St Andrew St W	Johnston St N	Beatty Line S	VC	1930-12-31	120.65176	91	80	0	$ 88,937.50	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00375	St Andrew St W	Johnston St N	Beatty Line S	VC	1930-12-31	110.1224	91	80	0	$ 81,175.87	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00378	Breadalbane St	Blair St	St Andrew St W	VC	1930-12-31	12.902104	91	80	0	$ 12,492.85	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00609	St Andrew St W	Johnston St N	Beatty Line S	VC	1930-12-31	10.465696	91	80	0	$ 7,714.71	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00867	Tower St S	Prince's St	Wellington St	VC	1930-12-31	76.231774	91	80	0	$ 56,193.65	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00894	Gowrie St N	St Andrew St E	St Patrick St E	VC	1930-12-31	9.98541	91	80	0	$ 8,795.37	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00898	St David St N	St Patrick St E	St George St W	VC	1930-12-31	13.104054	91	80	0	$ 9,659.55	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00900	St David St N	St George St E	Hill St W	VC	1930-12-31	102.82112	91	80	0	$ 84,015.48	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00902	St David St N	Hill St W	Garafraxa St W	VC	1930-12-31	58.936243	91	80	0	$ 48,157.00	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01171	Bridge St		Tower St S	VC	1930-12-31	90.557835	91	80	0	$ 73,995.11	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01726	St David St N		Forfar St E	VC	1930-12-31	86.879576	91	80	0	$ 64,042.60	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00247	Union St W	Tower St S	Athol St	VC	1930-12-31	93.35133	91	80	0	$ 68,813.20	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00258	Provost Lane	St Patrick St W	St George St W	VC	1930-12-31	77.293041	91	80	0	$ 68,081.44	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01212	Provost Lane	St Andrew St W	St Patrick St W	VC	1930-12-31	65.112112	91	80	0	$ 57,352.21	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00017	Union St W	St David St S	Angus St	VC	1930-12-31	104.06666	91	80	0	$ 85,033.22	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00023	Union St E	Gowrie St S	Hillside Dr	VC	1930-12-31	93.738804	91	80	0	$ 76,594.29	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00024	Union St E	Gowrie St S	Hillside Dr	VC	1930-12-31	97.269495	91	80	0	$ 79,479.23	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00025	Union St E	St David St S	Gowrie St S	VC	1930-12-31	108.58692	91	80	0	$ 88,726.73	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00548	Union St W	Tower St S	Athol St	VC	1930-12-31	79.226204	91	80	0	$ 58,400.98	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00906	Garafraxa St W	St David St N	Woodside St	VC	1930-12-31	84.002348	91	80	0	$ 61,921.67	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00907	Garafraxa St E	St David St N	James St	VC	1930-12-31	101.40391	91	80	0	$ 74,749.10	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00911	Garafraxa St E	Gowrie St N	Cameron St	VC	1930-12-31	105.62284	91	80	0	$ 77,859.05	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00912	Garafraxa St E	Gowrie St N	Cameron St	VC	1930-12-31	95.375489	91	80	0	$ 70,305.29	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00932	Garafraxa St W		Maiden Lane	VC	1930-12-31	144.51555	91	80	0	$ 106,528.50	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00933	Garafraxa St W	Perry St	Tower St N	VC	1930-12-31	58.476079	91	80	0	$ 43,105.18	Critical	Moderate	Critical	past due	Very Poor
ES-SN-00934	Garafraxa St W	Woodside St	Provost Lane	VC	1930-12-31	42.511129	91	80	0	$ 31,336.75	Critical	Moderate	Critical	past due	Very Poor
ES-SN-01295	Garafraxa St E	St David St N	James St	VC	1930-12-31	124.51652	91	80	0	$ 91,786.38	Critical	Moderate	Critical	past due	Very Poor

Township of Centre Wellington
Critical Assets Summary
Tax Supported Facilities Summary

Building		Component Description	Condition	Risk
Belsyde Farm House	D4030 - Fire Protection Specialties	Smoke Detectors, fire extinguishers Entire Building	Very Poor	High
Belsyde Storage Pole Barn	B2010 - Exterior Walls	Wood framed walls and roof trusses Door Perimeters and Miscellaneous Building Penetrations & Joints	Poor	High
CW Community Sportsplex	B2010 - Exterior Walls	Sealants - future replacements East, West & South Elevations	Very Poor	High
CW Community Sportsplex	B2020 - Exterior Windows	Single pane windows (hall of fame) Exterior Building	Very Poor	High
CW Community Sportsplex	B3010 - Roof Coverings	Sloped corrugated metal roofing Roof Area C - North Elevation of Pad A	Very Poor	Critical
CW Community Sportsplex	B3010 - Roof Coverings	Tar and felt built up flat roofing system including prefinished metal perimeter flashings and parapet wall copings. Roof Area F - Weight Room	Very Poor	Critical
CW Community Sportsplex	B3010 - Roof Coverings	Tar and felt built up flat roofing system including prefinished metal perimeter flashings Roof Area J - Pool Change Rooms, etc.	Very Poor	Critical
CW Community Sportsplex	B3010 - Roof Coverings	Prefinished Aluminium Eavestroughs and Downspouts PAD B - Eavestroughs	Poor	High
CW Community Sportsplex	G2010 - Roadways	Asphalt paved parking areas and access roads - Localized Repairs (Short Term) Exterior Site	Poor	High
CW Community Sportsplex	G2030 - Pedestrian Paving	Asphalt walkway Exterior Site	Poor	High
Elora Cemetery Chapel	B3010 - Roof Coverings	Hot rubber flashings at roof parapets Entire Building	Very Poor	Critical
ECC picnic Shelter	B1010 - Floor Construction	Cast-in-Place Concrete Floor Slab, Wood Support Posts and Beams with Wood Roof Trusses Entire Structure	Poor	High
Elora Community Centre	B2010 - Exterior Walls	Sealants Exterior Pad (Arena)	Very Poor	High
Elora Community Centre	B2010 - Exterior Walls	Sealants Exterior Hall	Very Poor	High
Elora Community Centre	F1042-A - Ice Skating Equipment	Chiller Pad (Players Bench Area, Referee Room, Change Rooms 1-6, Pad Floor)	Fair	High
Elora Community Centre	F1042-A - Ice Skating Equipment	Ice Rink Cooling Infrastructure - Rink pipes embedded in concrete underlain by insulation. Pad (Players Bench Area, Referee Room, Change Rooms 1-6, Pad Floor)	Fair	High
Elora Community Centre	G2020 - Parking Lots	Asphalt Paved Parking Lot Exterior Site	Very Poor	High
Elora Community Centre	G2030 - Pedestrian Paving	Cast-in-place concrete sidewalks Exterior Site	Very Poor	High
Elora Fire Hall	B2010 - Exterior Walls	Sealants (Original) Original Building - Window & Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Elora Tourism Office	B2010 - Exterior Walls	Load Bearing Double Wythe Brick Masonry Walls - One Time Major Repair Original 1940 Building	Very Poor	High
Elora Tourism Office	B2010 - Exterior Walls	Sealants Window & Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	High
Pilkington Garage	B2010 - Exterior Walls	Sealants Window & Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	High
Pilkington Garage	G2020 - Parking Lots	Asphalt Paved Parking Lot and Cast in Place Concrete Curbs at Garden South of the Building	Very Poor	High
Pilkington Office	B2020 - Exterior Windows	Basement Windows Basement	Very Poor	High
Weigh Scale Building	B2010 - Exterior Walls	Sealants Window & Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	High

Note: The Belwood Hall has significant needs to meet AODA requirements however the building condition audit did not take AODA into account.
Although the Belwood Hall does not appear on this listing, there is significant renovations needed in order to meet these requirements in the near future.

Township of Centre Wellington
Critical Assets Summary

Water Facilities

Building		Component Description	Condition	Risk
Craighead House	C2010 - Stair Construction	Wood staircase with wooden handrail Entire Building	Very Poor	Critical
Cottontail Road Pump House	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Fergus Pump House 1	B2010 - Exterior Walls	Future Repairs - Stone masonry walls Original Building	Poor	Critical
Fergus Pump House 1	B2010 - Exterior Walls	One-time Assessment & Repairs - Stone masonry walls Original Building	Very Poor	Critical
Fergus Pump House 1	B3010 - Roof Coverings	Conventional tar and felt multiply built up roofing system with prefinished metal flashings Link corridor to waterworks building	Very Poor	Critical
Fergus Pump House 2	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Fergus Pump House 4	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Fergus Pump House 5	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Poor	High
Fergus Pump House 7	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Fergus Waterworks	G2020 - Parking Lots	Asphalt Paved Parking Area Exterior Site - East of Building	Very Poor	High

Wastewater Facilities

Building		Component Description	Condition	Risk
Clyde St Pumping Station	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	Critical
Elora WWTP	B2010 - Exterior Walls	Administration Building - Exterior sealants located around window and door perimeters, service penetrations and at building cladding joints.	Very Poor	High
Elora WWTP	D5020 - Lighting & Branch Wiring	Head Works Building - Ceiling mounted LED light fixtures	Very Poor	Critical
Elora WWTP	C2010 - Stair Construction	Secondary Treatment - Pump Gallery 1 - Cast-in-place concrete stairs with metal guardrails	Very Poor	High
Elora WWTP	D4030 - Fire Protection Specialties	Secondary Treatment - Pump Gallery 1 - Exit signs, fire extinguishers, smoke detectors	Very Poor	Critical
Elora WWTP	A1010 - Standard Foundations	Secondary Treatment - Aerators (Not in Service) - Partially below-grade cast-in-place concrete tanks	Very Poor	Critical
Fergus WWTP	B2010 - Exterior Walls	Administration Building - Exterior sealants located around window and door perimeters and at building cladding joints.	Very Poor	High
Fergus WWTP	B2010 - Exterior Walls	Head Works Building - Exterior sealants located around door perimeters and at building cladding joints.	Very Poor	High
Fergus WWTP	D5020 - Lighting & Branch Wiring	Biosolids Storage - HPS & Fluorescent light fixtures	Very Poor	High
Fergus WWTP	B1015 - Exterior Stairs and Fire Escapes	Secondary Treatment - Cast-in-place concrete stairs with steel guardrails	Poor	High
Fergus WWTP	B3010 - Roof Coverings	Secondary Treatment - Inverted roof with river washed stone ballast.	Very Poor	High
Fergus WWTP	B3012 - Traffic Toppings & Paving Membranes	Secondary Treatment - Concrete waterproofing membrane	Very Poor	High
Stafford St Pumping Station	B2010 - Exterior Walls	Sealants Door Perimeters and Miscellaneous Building Penetrations & Joints	Very Poor	High