Town of Northeastern Manitoulin and the Islands

Asset Management Plan

August 2025

The preparation of this project was carried out with assistance from the Government of Canada and the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them.

1 TABLE OF CONTENTS

2 EXECUTIVE SUMMARY

The following summarizes the findings of the Town of Northeastern Manitoulin and the Islands (NEMI) Asset Management Plan (the Plan). The Plan applies to infrastructure assets related to: roads, sidewalks, street lighting, bridges and culverts, water, wastewater, stormwater, vehicles, machinery and equipment, buildings, and other infrastructure.

The Asset Management Plan is designed to assist with identifying where the gaps and priorities are based on the current state of infrastructure, desired level of service and expected outcome. The Plan will contribute to better decision-making as part of the capital budgeting and planning process.

An essential element of the asset management plan is an understanding of what is required of the infrastructure to meet the needs and expectations of residents, and the associated costs.

2.1 ASSET MANAGEMENT STRATEGY

The Town of Northeastern Manitoulin and the Island (NEMI) takes pride in promoting community safety and growth. An Asset Management Plan is vital to maintaining a high quality of life within the community while maintaining the integrity and quality of services provided by the municipality.

The Asset Management Plan addresses all infrastructure for which NEMI is responsible for (including but not limited to roads, sidewalks, street lighting, bridges and culverts, water, wastewater, stormwater, vehicles, machinery and equipment, and buildings) and the methods by which we maintain and operate them throughout their life cycle to best realize their value in delivering services to our clients and stakeholders.

The purpose of the Plan is to build on existing practices by identifying how best to manage Town infrastructure over a short, medium and long term. The Plan has been prepared with reference to the Town's current performance measures as well as minimum maintenance standards and safety regulations, Additional stipulations within O. Reg. 588/17: Asset Management Planning for Municipal Infrastructure, as stipulated by the *Infrastructure for Jobs and Prosperity* Act in 2015 govern aspects of life cycle management and reporting requirements. Asset Management is a process and decision-making framework tha structures decision making over the entire life cycle of the asset, from Acquisition, Creation of a new project or service, Maintenance and Operations of the Asset by the township or professional contractors, and the final Disposal or Renewal of the asset at end of life. The Plan will provide Management and Council with information to guide sustainable infrastructure investment decisions, and inform the stakeholders on municipal decision-making criteria.

The functional objectives of this Asset Management Plan are as follows:

- To undertake an effective asset management planning process that is efficient and utilizes financial resources in the most effective way possible for the benefit of the entire community.

- To facilitate the collection, coordination, sharing and communication of tangible asset information.

- To identify, quantify and deliver levels of service that meets the needs of the community, and establish parameters to continually re-evaluate municipal service delivery and customer service needs

- To establish operating, maintenance and capital funding plans that supports the defined levels of service expected by the community.

- To provide the tools to manage infrastructure assets in a sustainable manner.

2.2 FINANCING STRATEGY

It is a priority to cover all capital expenditures in the current year or with funds raised by the annual levy. Available funding tools are property taxes, user fees, and reserve funds. Funding from other sources such as federal and provincial grants are available at times to support the repair and replacement of capital assets. It is not the preferred strategy but if needed, debt financing is an option.

The Town has a focus on upgrading overdue assets at the end of their useful life, as detailed in Appendix 15.2 by asset category, or those that can no longer perform efficiently to meet future growth and demand.

The asset inventory is updated annually, and the remaining useful life and condition rating reviewed for each asset. Those that will need repair or replacement within the next 12 months are implemented in the budget. The remaining assets are reviewed, and short term, medium term and long-term capital expenditures are forecasted. Maintenance and rehabilitation are performed on the assets to extend their useful life and maintain the integrity of the assets.

Overall, the Town will need to continue to contribute to reserves and secure funding to cover capital expenditures and to address current and future infrastructure requirements to further develop our sustainable asset management planning.

- Assets approaching the mid-point of their expected life will likely require repair or replacement within the next ten years. Should these repairs and replacements not take place asset conditions and service levels may decline.

- The Town currently has limited reserves available but will continue to place any surplus into reserve where possible.

- To fund capital projects the Town will continue to seek funding from federal and provincial government programs.

2.3 KEY FINDINGS AND RECOMMENDATIONS

The Town, through its annual capital budgeting process, has been working on addressing assets in need of repair or replacement. It has been identified that the following projects are in critical need of replacement or rehabilitation.

- The Little Current and Sheguiandah Water Treatment Plant infrastructure requires an assessment and required upgrades.

- The Little Current Cast Iron Water Main Replacement and Upgrade project is critical to meet future growth and demand, eliminate water loss caused by leaks and deterioration, and reduce health and safety risks.

- Upgrading Little Current's Lagoon facility is critical to ensure continued growth and quality of service within the town.

- Little Current Critical Road Reconstruction with resurfacing to the top layer of asphalt and rehabilitation to curbs and sidewalks. It is estimated that the reconstruction would increase the useful life by 25+ years.

- Extension of Cockburn Street is necessary to ensure an adequate inventory of residential lots to support housing starts within the municipality.

- Rehabilitation of the Arena Roof, along with repairs to secondary systems and resurfacing of the parking lot, is critical to extend the useful life of the asset.

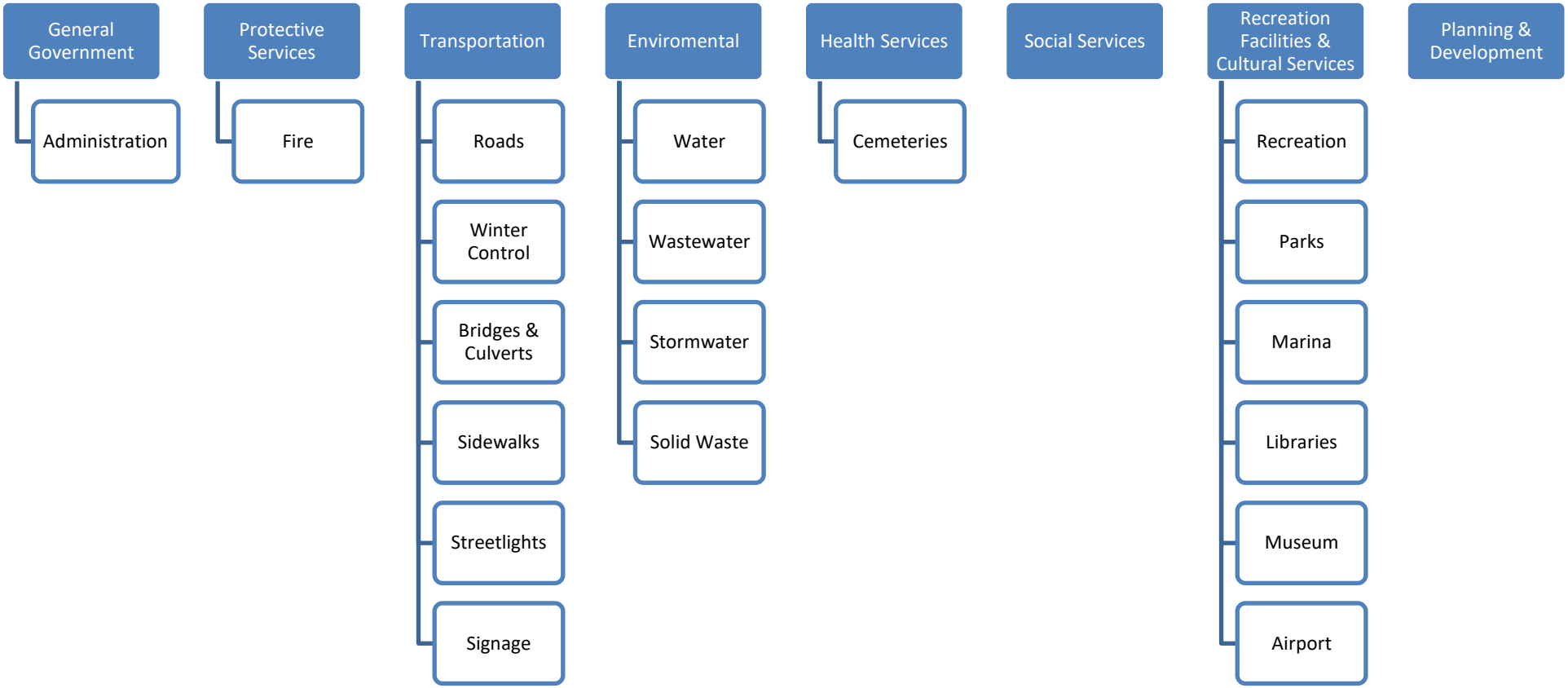
- Paving the gravel driveway to the Little Current Fire Hall to allow unobstructed movement of fire response vehicles to improve emergency response times.

- Improving repair and storage infrastructure at the Airport by adding a full-service maintenance hangar, to improve service delivery and attract additional traffic and business to the underutilized facility.

3 CURRENT SERVICES

The Town provides a variety of services throughout the community. The following displays the departments and the services they provide. Moving forward, the services below will also outline the asset categories laid out in the Asset Management Plan.

Figure 3.1 – Asset Categorization by Services Delivered



The following chart provides additional information on the types of assets that may be included in each cateogory.

Figure 3.1 – Asset Category Breakdown

Department	Services	Applicable Assets
General Government	Administration	Equipment, facilities & vehicles
Protection Services	Fire	Equipment, facilities & vehicles
Transportation Services	Roads	Road base, surface & curbsides
	Winter Control	Equipment, facilities & vehicles
	Bridges and culverts	Structure, deck & surface
	Sidewalks	Sidewalks
	Streetlights	Poles, lights & controllers
	Signage	Signs
Environmental	Water Distribution	Water mains, wells, pumps, valves & hydrants
	Water Treatment	Treatment plans facilities – treatment system, chlorination, pumps, chemical injection and filtration, piping SCADA, pump houses
	Wastewater Collection	Mains, lift stations and man holes
	Wastewater Treatment	Treatment plans facilities – treatment system, separators, aeration system, pumps, chemical systems, SCADA and settlement pounds
	Stormwater	Open ditches and culverts
	Solid Waste Collection	Equipment, facilities & vehicles
	Solid Waste Disposal	Landfill, monitoring wells, equipment, facilities & vehicles
	Solid Waste Diversion	Equipment, facilities & vehicles
Health Services	Cemeteries	Land, facilities & equipment
Recreation & Cultural Services	Recreation Facilities	Building facilities, equipment & vehicles
	Marina	Building facilities, equipment & vehicles
	Parks	Building facilities, equipment, land & vehicles
	Library	Building facilities & equipment
	Museum	Building facilities & equipment
	Airport	Building facilities, equipment & vehicles

The following breaks down each department by the service it provides.

Figure 3.2 – Asset Categorization Summary

Asset Category	Comments
Administration	Assets that help with day-to-day administration and operations are categories under administration.
Fire & Protection	Fire suppression services is provided to all residents. Protection services are contracted out to the OPP, who maintain a central station within the municipality.
Roads	The Town owns and maintains approximately (149.80 km) 149,800 linear meters of roadway, of which are classified as surface treatment, gravel and pavement.
Winter Control	The Town provides winter control maintenance on approximately (146.07km) 146,070 linear meters of roadway directly as one of the primary responsibilities of our Public Works department.
Bridges and Culverts	The Town owns and maintains 1 bridge within the municipality. The Town owns and maintains approximately (13.578km) 13,578 linear meters of culverts.
Sidewalks	The Town owns and maintains approximately (6.775km) 6775 linear meters sidewalk, of which about 91% is classified as cement, 8% interlock brick and 1% pavement.
Streetlights	The Town owns and maintains approximately 250 streetlights, in both rural and urban environments.
Signage	The Town provides and maintains informational and directional signs within the municipality's boundaries.
Water Distribution & Treatment	The infrastructure is used to transport water which supports many patient services, commercial businesses and over 130 homes within the municipality.
Wastewater Collection & Treatment	The Little Current lagoon system provides basic sewage treatment for serviced residential and commercial properties in the community of Little Current as well as two sanitary trucking companies that service private septic systems. The facility is located south of the settlement at rural address 277 Highway 540. The lagoon's effluent release quantity and quality are stipulated in NEMI's
Stormwater	The Towns stormwater and drainage system diverts water from the west end of the Little Current towards the downtown core and into the North Channel, preventing damage to residential properties and roadways during snowmelt or storm events.
Solid Waste Collection, Disposal & Diversion	The NEMI Landfill recycles plastics 1 through 6. Accessible at the landfill twice a week and three times from May – October. Curbside waste pick up is also provided to residents located in ward 2.
Cemeteries	The Town of NEMI owns and maintains several cemeteries throughout the municipality including Holy Trinity Anglican Cemetery, Mountain View Cemetery, St. Bernard's Catholic Cemetery, Cold Springs Cemetery, Green Bay Cemetery, Elmview Cemetery and The Skippen Cemetery.

Asset Category	Comments
Recreation Facilities	The NEMI Recreation Centre offers many rental opportunities for various events with a main hall, kitchen, Lions Den, curling lounge, an ice rink and curling rink.
Marina	Spider Bay Marina and the Port of Little Current operate seasonal for the months of May – October. The facilities connect boaters to Lake Huron and allows them to enjoy the Towns waterfront, including two waterfront pavilions, restroom and shower facilities.
Parks	There are 7 Parks that the Town owns and maintain throughout the spring to fall months.
Library	The Library offers the community a collection of over 13,000 volumes, a reference section and a variety of periodicals, as well as special children's area. It also has a Community Access Portal to the internet, featuring five workstations.
Museum	The Centennial Museum of Sheguiandah offers exhibits about life and times of the pioneers. Brought to life in the barn, sugar shack and reconstructed log homes. The museum also hosts a registered archaeological site and offers tours during the summer months.
Airport	The Manitoulin East Municipal Airport (CYEM) is jointly managed between NEMI and Assiginack, with NEMI covering 66% of operational expenses. The airport offers hangar rentals, aircraft fuel sales, and year-round access for civilian and commercial flights from a 3500' x 100' paved runway

* Note: Land is not included in the average age calculation, except for the cemetery asset class. It was determined that the land inflated the average age calculation and did not result in an accurate and useful calculation.

The Town owns and maintains land in various locations for the use of municipal buildings, roads & road allowances, parks, forests, cemeteries and vacant land. The inventory of land valued is approximately $6.6 million and an average age of 11.57 years.

4 CONDITION ASSESSMENT APPROACH

Assets are rated based on a physical inspection of the actual condition of the asset and its individual elements and services. Maintenance work required is noted to bring the condition of the asset and its services up to, or maintain it at, the specified condition standard as identified. Maintenance work is ranked in order of priority and critical need.

Each asset category condition is assessed based on a 4-point scale of excellent, good, fair or acceptable.

Figure 4.1 – Condition Assessment Criteria by Asset Category

Asset Category	Condition Assessment Rating
Water Assets	**Excellent -** Sound physical condition. Asset likely to perform adequately without major work for 25 years or more. **Good -** Acceptable physical condition; but potential for deterioration in long-term (10 years plus). Only minor work required (if any). **Fair -** Deterioration evident. Minor work required within next 2 years but further deterioration likely and major replacement likely within next 10 years. Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service. Work required but asset is still serviceable. **Acceptable -** Likely need to replace most or all of asset within 2 years. No immediate risk to health or safety but work required in near future to ensure asset remains safe. Substantial work required in short-term, asset is serviceable.
Wastewater Assets	**Excellent -** Sound physical condition. Asset likely to perform adequately without major work for 25 years or more. **Good -** Acceptable physical condition; but potential for deterioration in long-term (10 years plus). Only minor work required (if any). **Fair -** Deterioration evident. Minor work required within next 2 years but further deterioration likely and major replacement likely within next 10 years. Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service. Work required but asset is still serviceable. **Acceptable -** Likely need to replace most or all of asset within 2 years. No immediate risk to health or safety but work required in near future to ensure asset remains safe. Substantial work required in short-term, asset is serviceable.
Stormwater Management Assets	**Excellent -** Sound physical condition. Asset likely to perform adequately without major work for 25 years or more. **Good -** Acceptable physical condition; but potential for deterioration in long-term (10 years plus).

	Only minor work required (if any). **Fair -** Deterioration evident. Minor work required within next 2 years but further deterioration likely and major replacement likely within next 10 years. Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service. Work required but asset is still serviceable. **Acceptable -** Likely need to replace most or all of asset within 2 years. No immediate risk to health or safety but work required in near future to ensure asset remains safe. Substantial work required in short-term, asset is serviceable.
Roads	**Excellent -** No potholes. No crack filling required. Complies with engineering standards. **Good -** Some potholes. Minimal crack filing required. Complies with engineering standards. **Fair -** Evidence of deterioration. Has numerous potholes and regular crack filling requirements. Complies with engineering standards. **Acceptable -** Pavement deteriorating. Extensive potholes and cracks. Joint failures. Needs resurfacing. Complies with engineering standards.
Bridges and Culverts	**Excellent -** Only cyclic maintenance required. Complies with engineering standards. **Good -** Minor maintenance required plus cyclic maintenance. Complies with engineering standards. **Fair -** Significant maintenance required. Complies with engineering standards. **Acceptable –** Renewal or upgrade required in future. No immediate risk to health or safety but work required in near future to ensure asset remains safe. Complies with engineering standards.
Buildings and Facilities	**Excellent -** Sound physical condition. Asset likely to perform adequately without major work for 25 years or more. **Good -** Acceptable physical condition; but potential for deterioration in long-term (10 years plus). Only minor work required (if any). **Fair -** Deterioration evident. Minor work required within next 2 years but further deterioration likely and major replacement likely within next 10 years. Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service. Work required but asset is still serviceable. **Acceptable -** Likely need to replace most or all of asset within 2 years. No immediate risk to health or safety but work required in near future to ensure asset remains safe. Substantial work required in short-term, asset is serviceable.

	Condition Rating – Buildings (Elements)				
	Element	Excellent	Good	Fair	Adequate
	Structure	Sound physical structure. Asset likely to perform adequately without major work for 25 years or more.	Functionally sound structure; but potential for deterioration in long-term (10 years plus). Only minor work required (if any).	Adequate structure, deterioration evident. Minor work required within next 2 years but further deterioration likely and potential replacement likely within next 10 years.	Evidence of deterioration. Likely need to replace most or all of asset within 2 years. No immediate risk to health or safety but work required in near future to ensure asset remains safe.
	Services	All components operable and well maintained.	All components operable.	Occasional outages, breakdowns or blockages. Increased maintenance required.	Failures of plumbing electrical and mechanical components common place.
	Maintenance	Well maintained and clean.	Increased maintenance inspection required.	Minor components or isolated sections of the asset need replacement or repair now but asset still functions safely at adequate level of service.	Frequent maintenance inspections essential. Short term element replacement/rehabilitation.
Vehicles, Equipment & Machinery	**Excellent -** Only cyclic maintenance required. **Good -** Minor maintenance required plus cyclic maintenance. **Fair -** Significant maintenance required. **Acceptable –** Renewal or upgrade required within 2-3 years.				

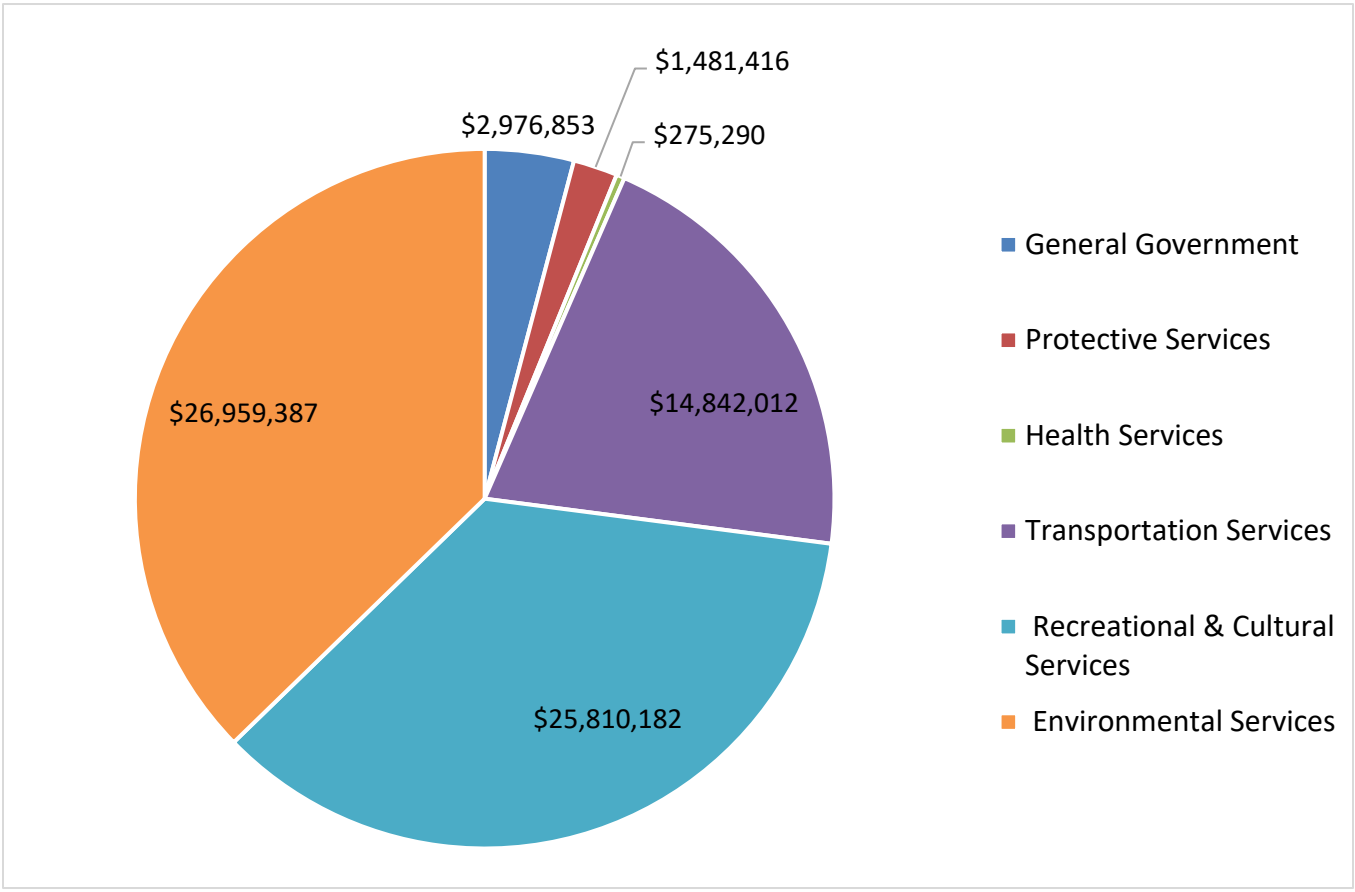
5 STATE OF LOCAL INFRASTRUCTURE

This section of the Plan provides a summary of the state of the Town assets with reference to infrastructure quantity and quality.

The current (2018) total replacement cost of all Town assets is estimated at $72.3 million. The largest share of the Town total asset base is related to environmental services with a combined total replacement cost of $26.9 million, followed by recreational and cultural services infrastructure with a replacement cost of approximately $25.8 million.

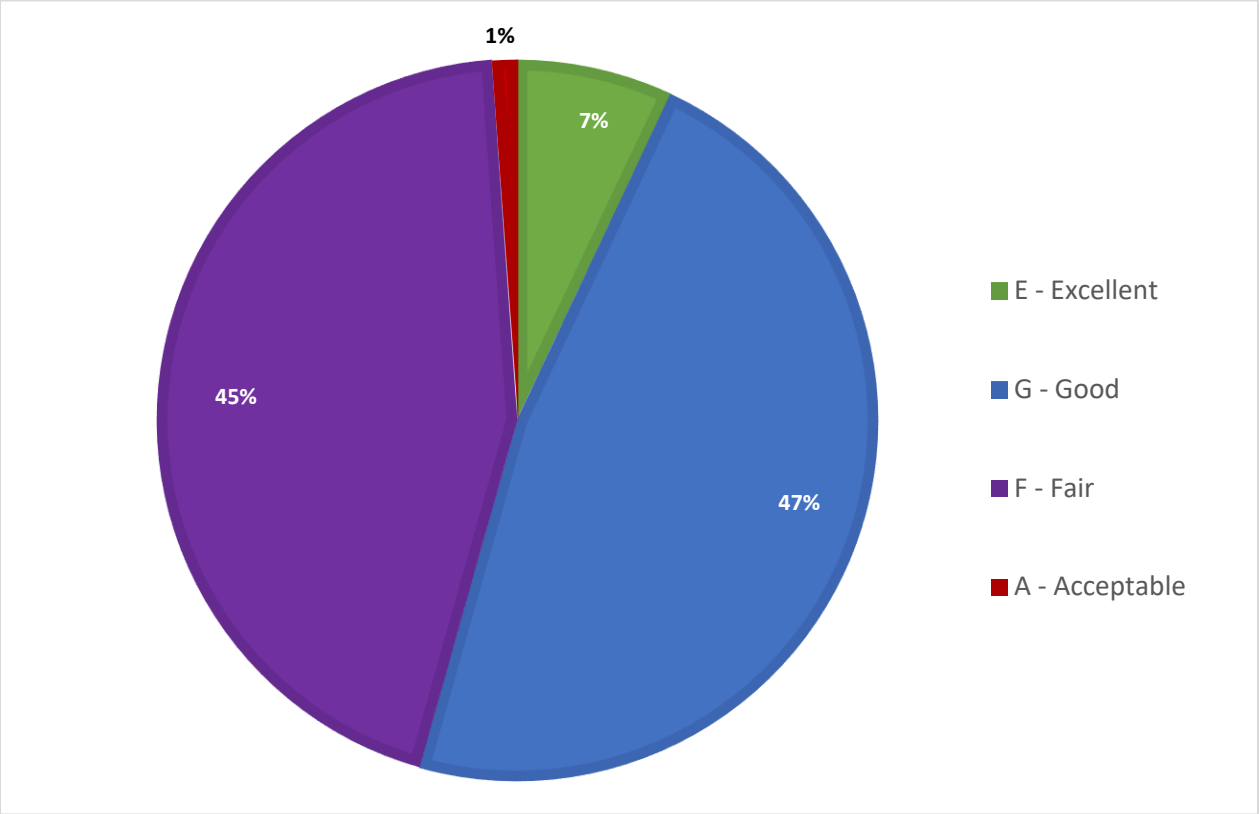
The following depicts the Towns total asset inventory and the current placement cost, broken down by department.

***Figure 5-1**: Current Replacement Cost by Asset Category*



As per Ontario Regulation 588/17 asset categories were created to assess the state of the infrastructure and how it contributes to its ability to provide services throughout the Town. Each asset category includes data from all assets that are needed to provide the service.

Figure 5-2: *NEMI Asset Portfolio Condition Assessment*



Average Asset Condition Rating: **GOOD/FAIR**

5.1 INFRASTRUCTURE SNAPSHOT

6 LEVEL OF SERVICE

Community Expectations - Based on the service the community and customers expect to receive.

Strategic Level of Service - (Customers perspective) Based on the community expectations measured against attributes such as reliability, quality, safety, efficiency, and capacity. How the customer and community received the services provided by the municipality.

Technical Level of Service - (Municipalities perspective) Based on how the Town strives to provide the level of service.

Figure 6.1: Service Target Breakdown by Department

Department	Services	Strategic Level of Service	Current Level of Service	Technical Level of Service
General Government	Administration	Provide a safe, reliable and accessible facility	Accessible, reliable and well maintained.	100% of facilities that meet accessibility standards
Protection Services	Fire	Provide reliable and responsive fire services	Responsive and reliable fire services. Meet legislative requirements. Maintain overall vehicle and equipment maintenance	22.73 % of properties that have fire flow available (fire hydrant access).
Transportation Services	Roads	Provide safe, reliable and accessible roads all year round	Roads are safe and the majority are accessible all year-round. Roads are maintained as per minimum Maintenance Standards	0 (zero) non-compliance events with Minimum Maintenance Standards
	Winter Control	Provide safe and accessible road	Roads are safe and the majority	0 (zero) non-compliance

Department	Services	Strategic Level of Service	Current Level of Service	Technical Level of Service
		access in winter months	are accessible in winter months. Roads are maintained Minimum Maintenance Standards	events with Minimum Maintenance Standards*
	Bridges and culverts	Provide safe and reliable structures with adequate access and capacity	Bridge is safe and reliable with capacity and load restrictions.	0 (zero) non-compliance events with Minimum Maintenance Standards*
	Sidewalks	Provide safe and accessible sidewalks to town core and heavy foot traffic locations	Sidewalks are safe and accessible all year. Access to the towns core is adequate.	0 (zero) non-compliance events with Minimum Maintenance Standards*
	Streetlights	Provide reliable lighting	Streetlighting in urban residential areas is adequate and reliable.	0 (zero) non-compliance events with legislation -Safe Water Drinking Act. 0 (zero) days disconnected due to a boil water advisories per year
	Signage	Provide reliable and aureate signage	Reliable and accurate.	1 of bypass incidents per year Rate of capacity Operating within regulated capacity limits.

Department	Services	Strategic Level of Service	Current Level of Service	Technical Level of Service
Environmental	Water Distribution & Treatment	Provide affordable, quality water with sufficient capacity and accessibility	Adequate water treatment. Overall efficient water distribution with risk of failure in isolated areas.	0 (zero) of flooding incidents 0 (zero) road closures due to flooding per year
	Wastewater Collection & Treatment	Provide adequate capacity and quality collection and treatment facilities, while meeting legislative requirements. Minimize incidents of bypass.	Efficient wastewater collection and adequate treatment capacity.	0 (zero) days curbside pick-up disrupted per year
	Stormwater	Provide adequate capacity, and minimize potential flooding incidents.	Adequate capacity	100% of facilities that are maintained during operational season
	Solid Waste Collection, Disposal & Diversion	Provide reliable collection and adequate disposal capacity. Provide accessible disposal facilities within approved limits, and minimize complaints.	Adequate and responsiveness collection. Moderate disposal facilities access.	100% of facilities that meet accessibility standards
Health Services	Cemeteries	Provide quality service and well-maintained grounds and facilities, minimize complaints	Available and maintained cemetery grounds.	100% of facilities that meet accessibility standards

Department	Services	Strategic Level of Service	Current Level of Service	Technical Level of Service
Recreation & Cultural Services	Recreation Facilities	Provide reliable, accessible and safe facilities and a variety of programs, strive to maximize facility utilization throughout the year.	Safe, well maintained and accessible facilities. A variety of programs and events are available to a range of age groups.	0 (zero) non-compliance events with regulatory standards
	Marina	Provide reliable, accessible and safe facilities, maximize utilization of facilities during operational season.	Safe, well maintained and accessible facilities seasonally.	100% of facilities that meet accessibility standards
	Parks	Provide quality, accessible, and safe parks, where risk of injury is minimized for children at play.	Safe, well maintained and accessible parks.	% of facilities that meet accessibility standards 100%
	Library	Provide functional, accessible and safe facilities	Safe, well maintained and accessible facilities.	100% of facilities that meet accessibility standards
	Museum	Provide functional, accessible and safe facilities, and maximize use of facilities throughout operational season.	Safe, well maintained and accessible seasonally.	100% of facilities that meet accessibility standards

Community expectations and current service levels in NEMI have been developed based on a combination of internal asset management practices, community expectations, statutory requirements, and industry operation and safety standards. Unless otherwise stated the minimum maintenance standards (MMS) are set as the desired level of service. The Minimum Maintenance Standards can be found the Appendix 15.1.

7 ASSET PERFORMANCE & SERVICE DELIVERY

To maintain the current level of service, the Town must continue with ongoing demand management to help prioritize municipal capital spending to best meet the needs of our stakeholders. This involves a cycle of asset acquisition, maintenance and improvement in order to keep the condition of the infrastructure in safe and efficient working order and maintain expected quality of service delivery.

Financial projections have been developed for the 10-year period from 2019 to 2029. Taking into consideration the full life cycle activities of the assets, based on estimated yearly costs for operation, maintenance, and estimated replacement and disposal costs at the end of the asset's useful life. All dollars are stated in 2018 dollars. It is assumed that each year, regular operations and maintenance costs will be accrued until the year of replacement (end of useful life), though this will change throughout the asset life cycle and will depend on lifecycle improvement or replacement strategy.

These financial projections are not set in stone, allowing NEMI more flexibility with the asset acquisition process, ensuring changes in demand can be met with changes to our long-term financial planning, and to best make use of changes in funding availability for different types of assets.

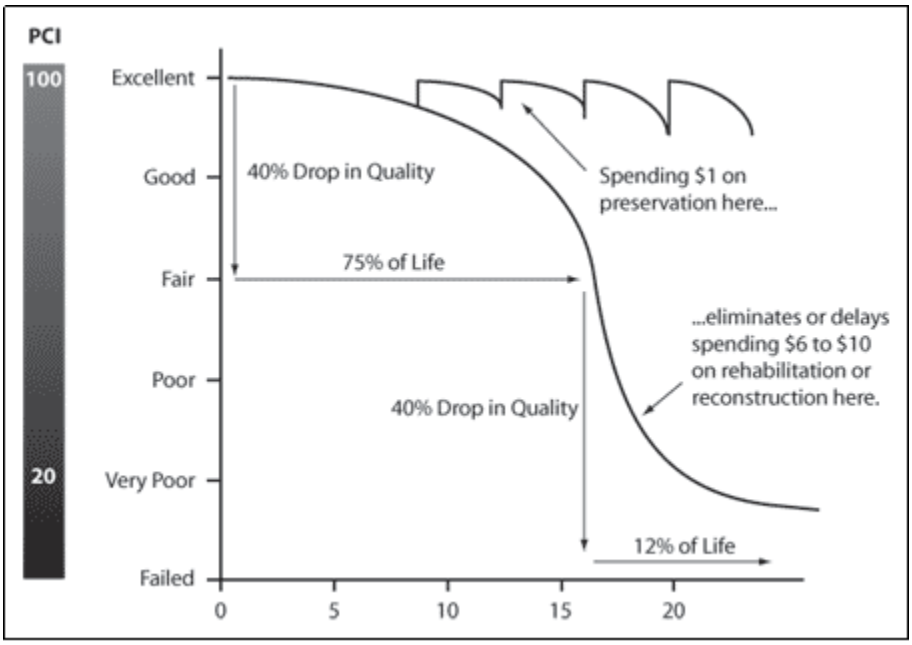
During the capital budgeting process, administrative staff will weigh options for purchase, refurbishment or replacement that can be undertaken for the lowest cost to maintain the current level of service, along with the options for life cycle activities to maintain the current level of services and risks associated with each option. These activities follow a value realization lifecycle as shown below:

Figure 7.1 – Lifecycle Activity Summary

Lifecycle Activity	Description	Examples
Acquisition	Construction or purchase of a new asset to maintain or expand service delivery	New road maintenance vehicle for public works, developing a new facility at the REC centre, expanding storm drainage for areas with seasonal flooding
Creation	Project structural decision-making for long-term asset use and maintenance procedure	Developing service delivery contract for water and wastewater management by a third party, planning infrastructure development of a new neighbourhood
Utilization	Regular Operations and Service Delivery	Day-to-day management of service delivery. Weekly waste pickup, water purification and sewage treatment operations, administrative and
Maintenance	Repair and Replace	Regular maintenance, equipment replacement, road grading and winter control, small equipment replacement and refurbishment.

Improvement	Asset rehabilitation to extend its useful lifespan	Ongoing road resurfacing, roof retrofits and replacement in older buildings, installing additional sewage treatment capacity, replacing major equipment for the water treatment facility.
Renewal/Disposal	End-of-life asset decision making	Moving older snow removal equipment from primary use to only during high demand periods, scrapping older waterfront docks and replacing with new, Road base reconstruction and major overhaul. Scrapping or selling vehicles unfit for adequate service delivery within risk tolerance.

Figure 7-1 Asset Deterioration Curve (Asset Sustainability Index: A Proposed Measure for Long Term Performance)



Financial projections have been developed for each asset group covering a 10-year period from 2023 to 2033. Taking into consideration the full life cycle activities of the assets, based on estimated yearly costs for operation, maintenance, and estimated replacement and disposal costs at the end of the asset's useful life. All dollars are stated in 2024 dollars. It is assumed that each year, regular operations and maintenance costs will be accrued until the year of replacement (end of useful life), though this will change throughout the asset life cycle and will depend on lifecycle improvement or replacement strategy.

These financial projections are not set in stone, allowing NEMI more flexibility with the asset acquisition process, ensuring changes in demand can be met with changes to our long-term financial planning, and to best make use of changes in funding availability for different types of

assets. Budgetary planning will be confirmed by the annual budgets produced by each department, though certain planned projects will be hastened or delayed depending on outside funding availability. For example, opportunities to perform projects in tandem with another such as timing sewer replacement with road resurfacing or improving building envelope performance before replacing heating or cooling systems, can reduce total combined cost. During the capital budgeting process, administrative staff will weigh options for purchase, refurbishment or replacement that can be undertaken for the lowest cost to maintain the current level of service, along with the options for life cycle activities to maintain the current level of services and risks associated with each option.

7.1 CORE ASSETS

7.1.1 Water Treatment

Two Treatment Plants

Four pumping stations

26.67 km of water main pipes

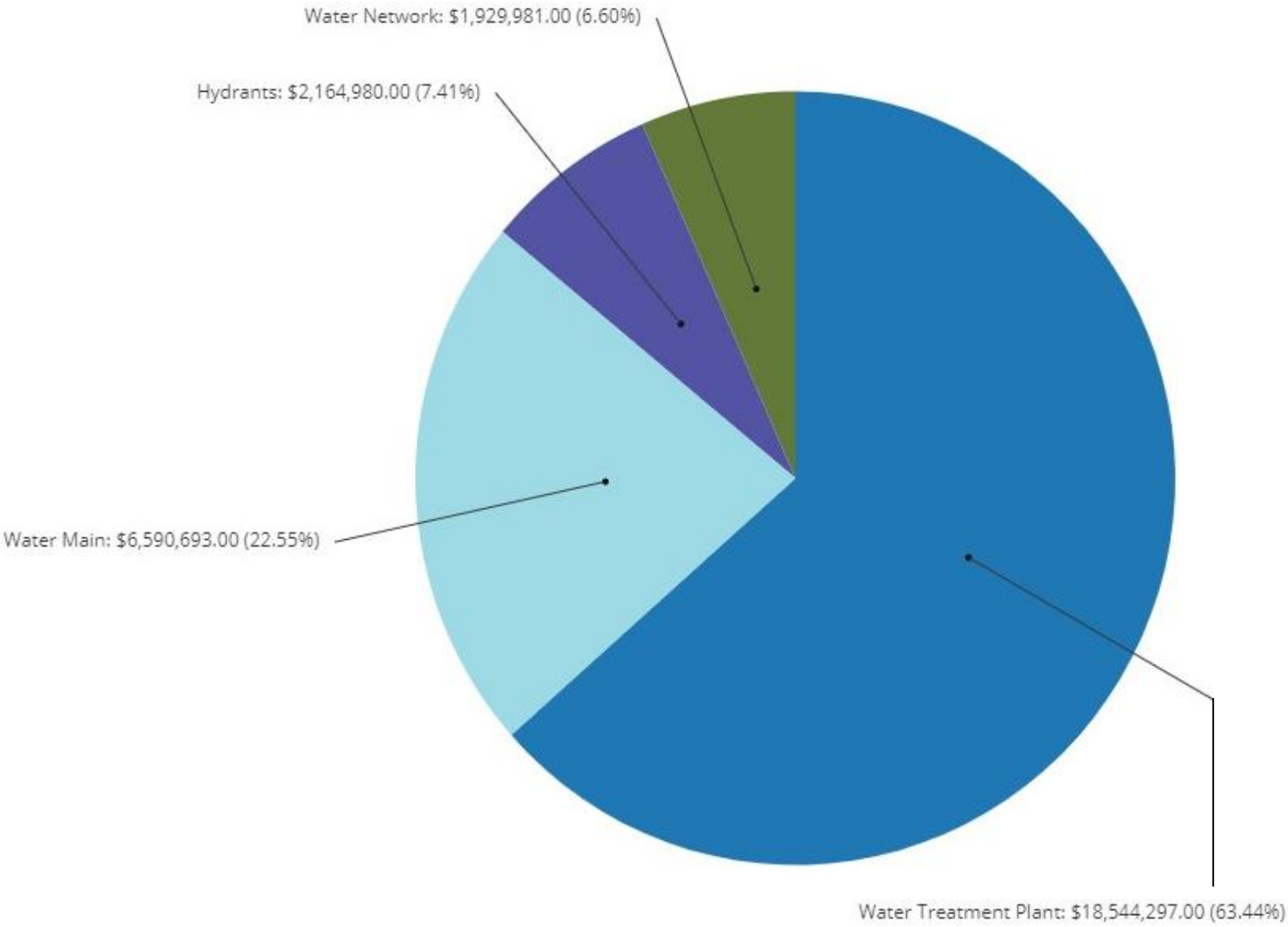
890 serviced properties

142 Hydrants

Average age of assets: **12.1 Years**

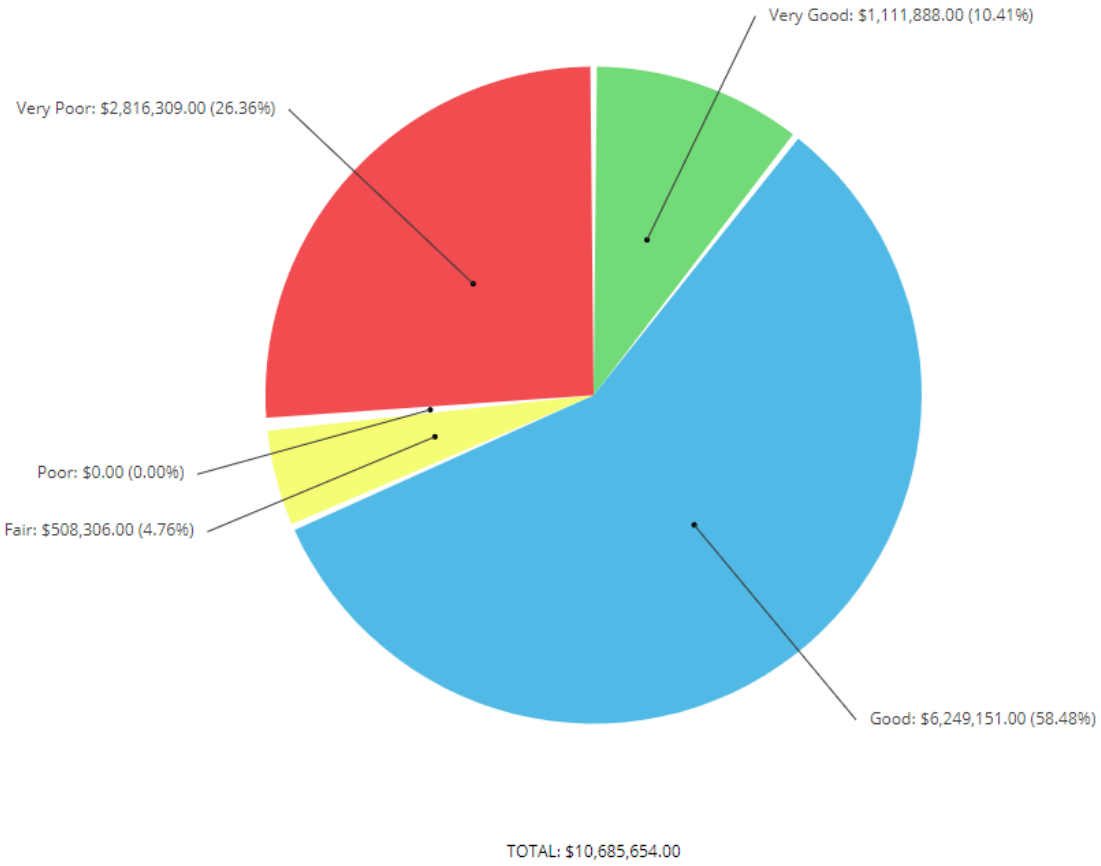
Total Asset Replacement Cost

$29.28 Million



Asset Condition

Figure 7-2: Water Treatment Asset Condition Assessment



The above condition graph does not include condition information for the water treatment plant, only for linear infrastructure components. The majority of asset condition data is age-based and tied to the financial condition of the asset, and may not be representative of the functional capabilities of the asset.

A more detailed breakdown and description of NEMI water treatment assets can be found in **Appendix 15.11**.

Operations and Maintenance

NEMI contracts their water treatment operations to the Ontario Clean Water Agency (OCWA), for both our Little Current and Sheguiandah facilities, to provide both operations and maintenance services as well as long-term planning and technical assistance with capital projects. OCWA has a history of professional service and supply water treatment operations expertise to many other Northern Ontario municipalities and will ensure NEMI fulfills its requirements under the *Safe Drinking Water Act* (SDWA) O. Reg. 128/04. They are retained on a ten-year service contract, up for renewal in 2026.

Maintenance procedures are jointly shared between OCWA staff and our Public Works department, while public works or contracted construction companies will perform infrastructure installations and manage service connections for new and existing customers. OCWA does retain several engineers on staff, and they are available for consulting for larger capital projects.

Operating budget is split between the isolated water systems, as the plants within Little Current and Sheguindah are operated separately as their own individual rate-payer systems. As the users of the Sheguindah system contain a much smaller group, they are also required to pay higher water rates per household compared to the Little Current water delivery system, as shown below in Table **6-2**.

Table 7-1: Water System Cost Comparison

Water System	Users	Minimum Rates	Total Consumption	Cost per unit
Little Current	700	$ 552.50	127,120 m^3	1.67 $/m^3$
Sheguiandah	87	$ 1,635.64	3,047 m^3	4.63 $/m^3$

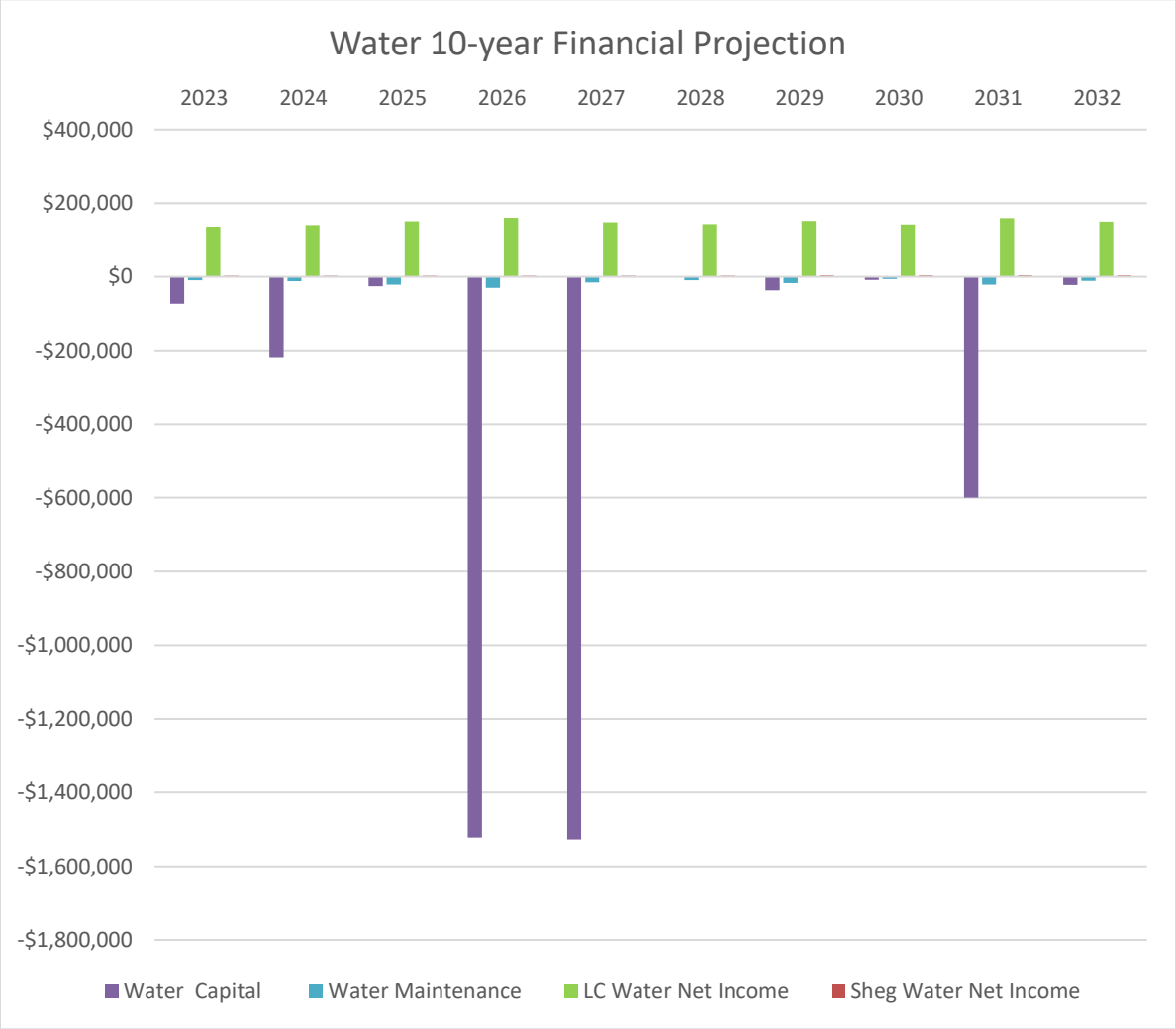
Net income from the ratepayer system is retained and contributed to the reserve fund for future capital expenditures. For the 2024 budget, this amounts to $2,858 annually for the Sheguiandah System, and $136,142 for the Little Current system. The shortfall in the Sheguiandah water funding severely limits potential capital spending flexibility, even through debt financing of new projects, and any unforeseen costs will result in increases to the ratepayer

Capital Investment

Figure 7-3 shows a 10-year financial projection prepared by OCWA covering 2023-2032 for water maintenance and capital projects, along with assumed operating cost and income from ratepayers. Major capital expenditures over the 10-year period are relining of the Sheguindah wet well in 2024, along with replacing a lift pump and ongoing improvements to the Backwash system and SCADA maintenance software. The potential project of a water tower for the Little Current system was spread across 2026-2027, with replacement of membrane cassettes at the

Little Current plant planned for 2031. The water tower project, even with long-term debt financing, and will need to be paired with external funding sources to be financially feasible. While it would increase the reliability of the system, especially with previous issues in 2022 with backup pump failures, it would represent a significant cost increase to the ratepayers.

Figure 7-3 Water 10 Year Financial Projection to Maintain Current Level of Service



NEMI is also looking into several other projects associated with water treatment assets for long term planning potential. The Little Current plant requires improvements to its chemical storage area, which will improve plant conditions through added ventilation, storage capacity and improving worker conditions. To try and reduce operational costs, NEMI is considering net metering solar arrays for both the Little current and Sheguiandah Water Treatment plants to be able to offset a portion of the energy cost through local generation.

7.1.2 Wastewater Management

One Treatment Lagoon

3 Facultative Cells

1 Aerated Cell

4 Sewage Lift Stations

4 km of Sewer Pipes

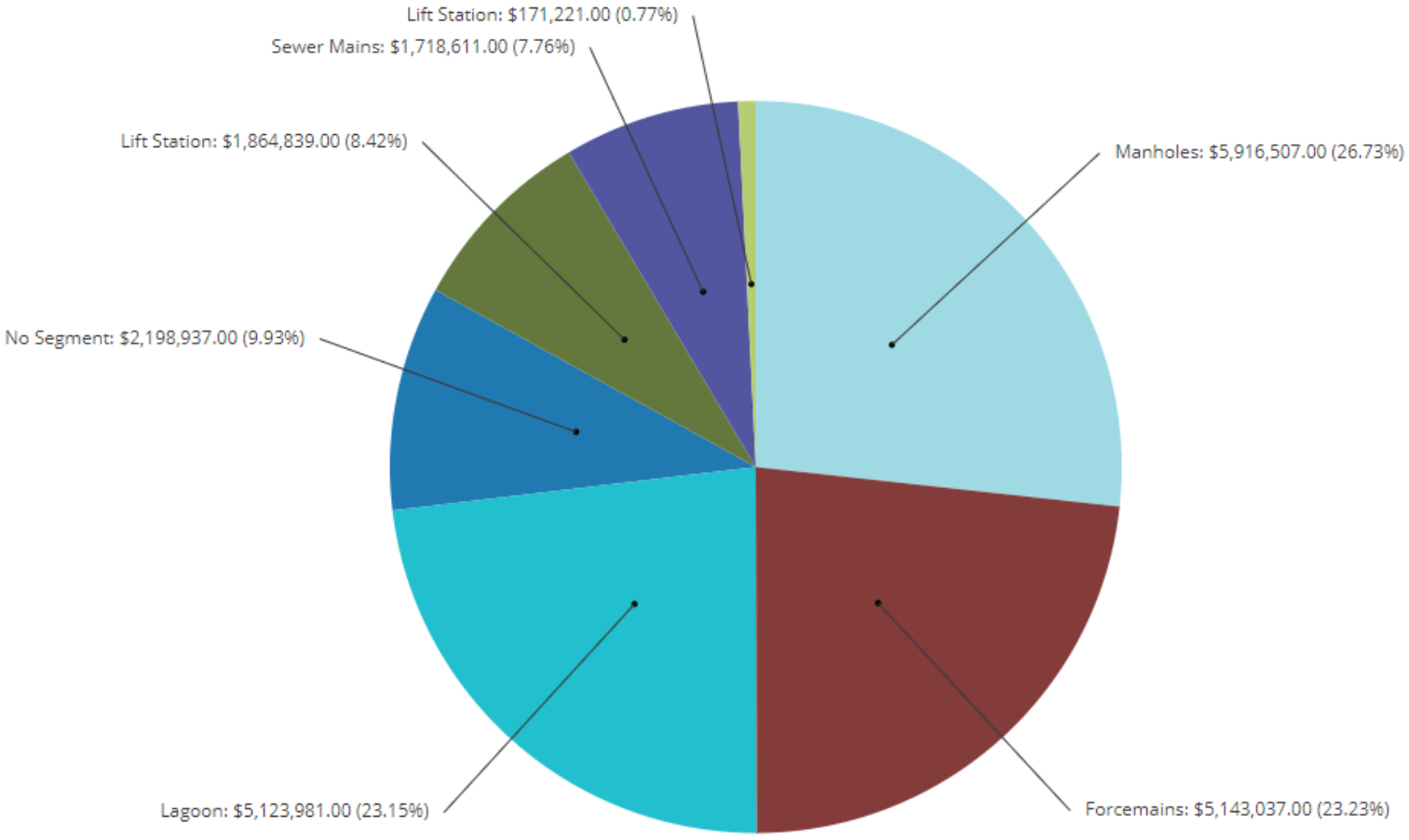
700 connected ratepayers

Average age of assets: **35 Years**

Total Asset Replacement Cost

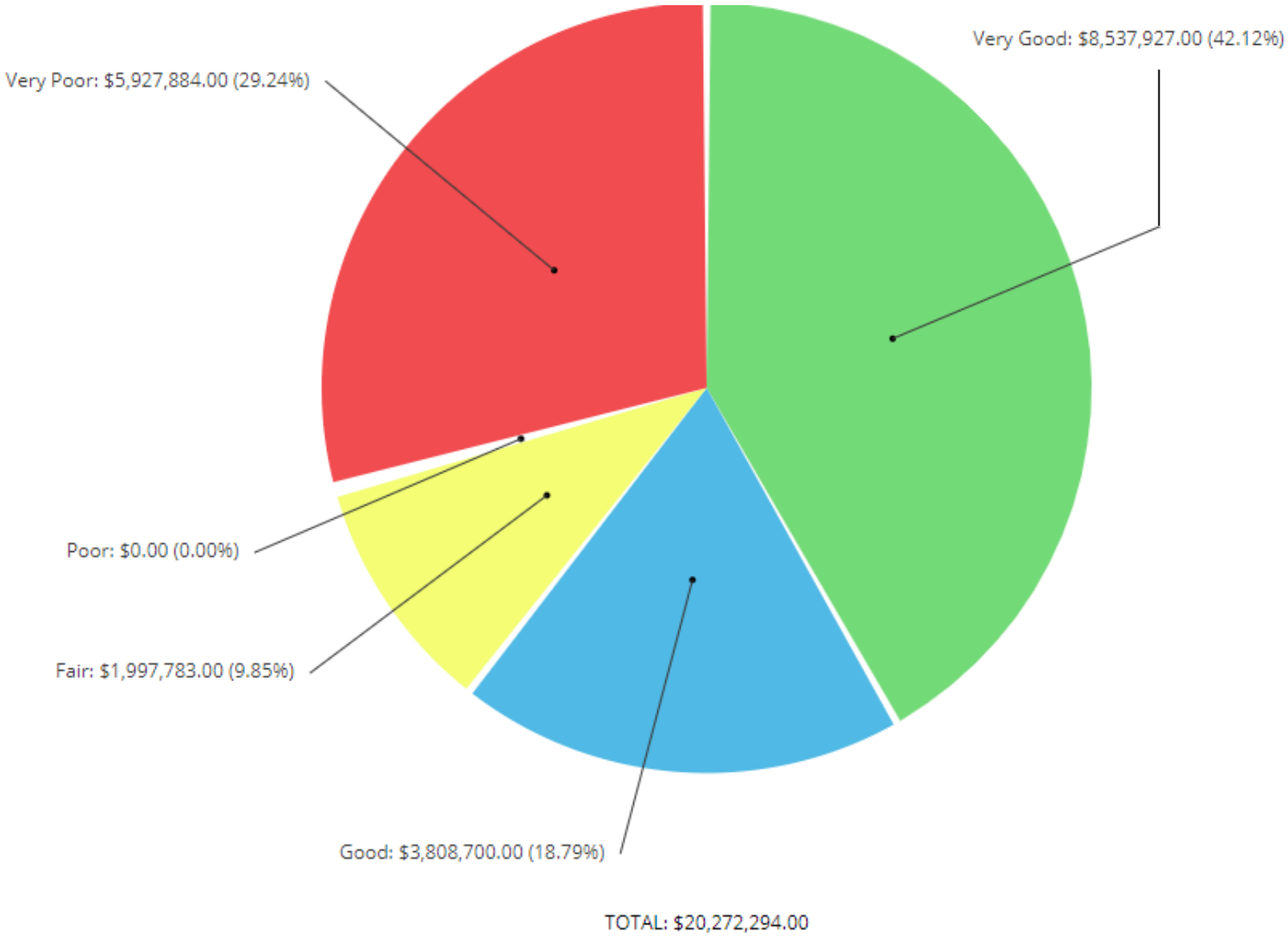
$22.14 Million

Figure 7-4: Asset Replacement Cost by Segment



Asset Condition

Figure 7-5: Wastewater Estimated Asset Condition



Many sewer assets, especially larger systems such as the Lagoon and sections of old cast iron sewer mains, were installed 30-40 years ago and contribute to both the high average asset age, as well as the age-based condition estimation in Figure **6-4.** To ensure the adequate functionality of the sanitary sewer system, the oldest assets should be prioritized for rehabilitation or replacement, with NEMI's collection of manholes and sewer mains as the two primary categories with very poor average projected condition.

Operations and Maintenance

NEMI contracts their wastewater treatment operations to the Ontario Clean Water Agency (OCWA), for both our Little Current and Sheguiandah facilities, to provide both operations and maintenance services as well as long-term planning and technical assistance with capital projects. OCWA has a history of professional service and supply wastewater treatment operations expertise to many other Northern Ontario municipalities and will ensure NEMI fulfills its requirements under our established Environmental Compliance Agreement and Consolidated Linear Infrastructure Obligations, as well as any requirements under the *Wastewater Systems Effluent Regulations* established under the Fisheries Act, SOR/2012-139. They are retained on a ten-year service contract, up for renewal in 2026.

The Lagoon facility services both sewer-connected clients within Little Current, as well as any customers within the municipality on septic systems through partnership with two local septic service companies. Wastewater production is not metered by dwelling, and billing is tied directly to drinking water consumption, regardless of end-use.

Table 7-2: Wastewater Billing Summary

Wastewater System	Users	Minimum Rates (quarterly)	Total Consumption	Cost per unit
Little Current	700	$ 552.50	127,120 m^3 (estimated)	1.67 $/$m^3$

Maintenance procedures are jointly shared between OCWA staff and our Public Works department, while public works or contracted construction companies will perform infrastructure installations and manage service connections for new and existing customers. OCWA does retain several engineers on staff, and they are available for consulting for larger capital projects. Typically, OCWA staff manages the equipment use and direct treatment operations, while Public Works staff manages connection and disconnection of clients, linear infrastructure, and repair and maintenance requiring heavier machinery, with regular collaboration on larger projects.

Due to ongoing high phosphorus levels within the wastewater influent, increasingly high doses of ferric sulphate have been required to maintain adequately low levels within effluent, with several exceedances of limits under our ECA over the last several years. At the recommendations of OCWA, reductions in retention time due to sludge buildup could be negatively affecting treatment capacity and must be prioritized to ensure adequate compliance with effluent limits.

Capital Investment

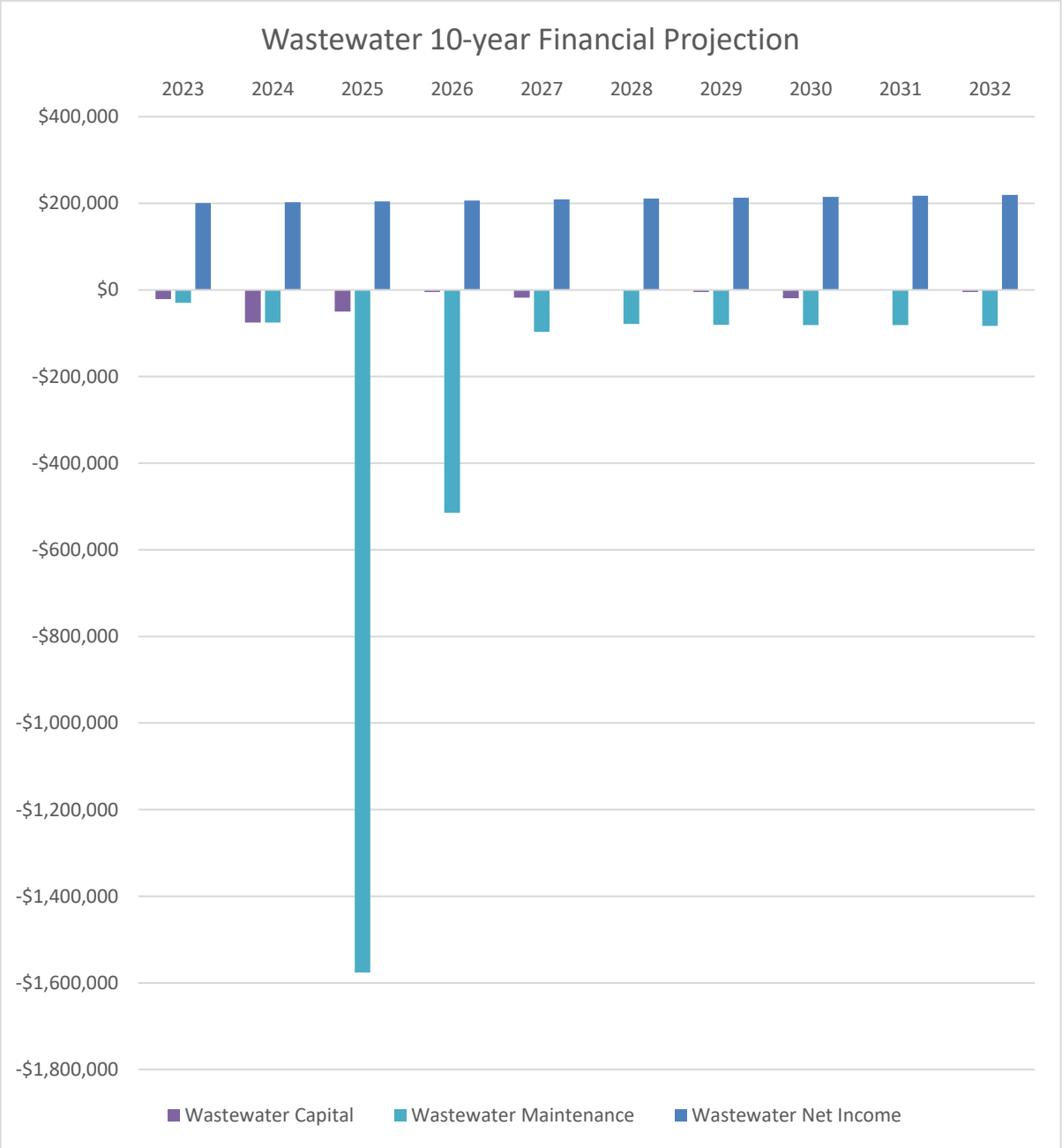
NEMI performed a major upgrade to our Facultative Lagoon in 2021 to increase our wastewater treatment capacity to match the rise in demand, increasing effluent release capacity from 937 m^3 to 1500m^3 with support from the Ministry of the Environment (MOE). This involved the addition of a small aerated treatment cell, to support year-round effluent release, as well as the addition of dosing equipment for ferric sulphate as a means to reduce phosphorus levels in effluent. As NEMI was approaching our capacity limits under the old ECA, expansion was needed to support higher than projected increases in demand from tourism and population growth. This represented a major capital investment but was crucial to provide the township room to grow. However, this process redesign was begun in 2014, and due to delays in the recertification process coupled with unexpected increases in influent flow levels, NEMI is already approaching the 80% limit on the new effluent release cap and further work on the system will need to be performed soon to ensure treatment capacity is available to support new development. This increase is due in part to higher-than-expected inflow and infiltration within the system, and addressing this is a funding priority for the town in the short to medium term. NEMI will also investigate engineering design for a continued expansion of the lagoon with a constructed wetland to improve treatment capacity, while maintaining the low energy cost of the existing system.

Addressing inflow and infiltration (groundwater entering the sewage delivery network) is a key priority for extending the capacity of the existing wastewater system. A water and wastewater capacity assessment performed by OCWA in 2022 showed a 307 m3/day discrepancy between water consumption and wastewater production, with potential for I&I rehabilitation to make some of that wastewater capacity available for further development. Several manhole assets have been determined by OCWA inspection to be sources of known inflow and infiltration within the system and should be prioritized for replacement or rehabilitation, along with additional inspection and flow metering to determine further locations of I&I within the system.

Figure 7-5 shows a 10-year financial projection prepared by OCWA covering 2022-2031 for water maintenance and capital projects, along with assumed operating cost and income from ratepayers. Major planned expenditures are $75,000 in 2024 to rebuild two main lift pumps, and $400,000 in 2026 to remove sludge buildup from the facultative lagoon cells. NEMI is continuing to finance debt related to of the capital expenditure from the previous lagoon expansion project and long-term debt related to sanitary sewer main replacement, with a cost of $185,032 per year (in 2024) and a remaining balance of $896,401.

Further capital expenses will benefit from additional grant income to avoid significant changes to sewer rates to the ratepayer, or use of an interim tax levy to cover further wastewater spending.

***Figure 7-6**: Wastewater & Stormwater 10 Year Financial Projection to Maintain Current Level of Service*



Smaller capital expenditures in 2025-2031 cover replacement of two sewage lift pump stations at Campbell St. East and Low Island, as well as phased replacements to assets in our manhole and catch basin pools as certain assets within the pool approach the end of their useful life. These manholes have been identified by OCWA as potential sources of I&I within the system and can be directly addressed to reduce wastewater influent to the treatment lagoon.

7.1.3 Roads & Transportation Services

36 km of Unpaved Roads

100 km of Hard Surface Roads

19 km of Paved Roads

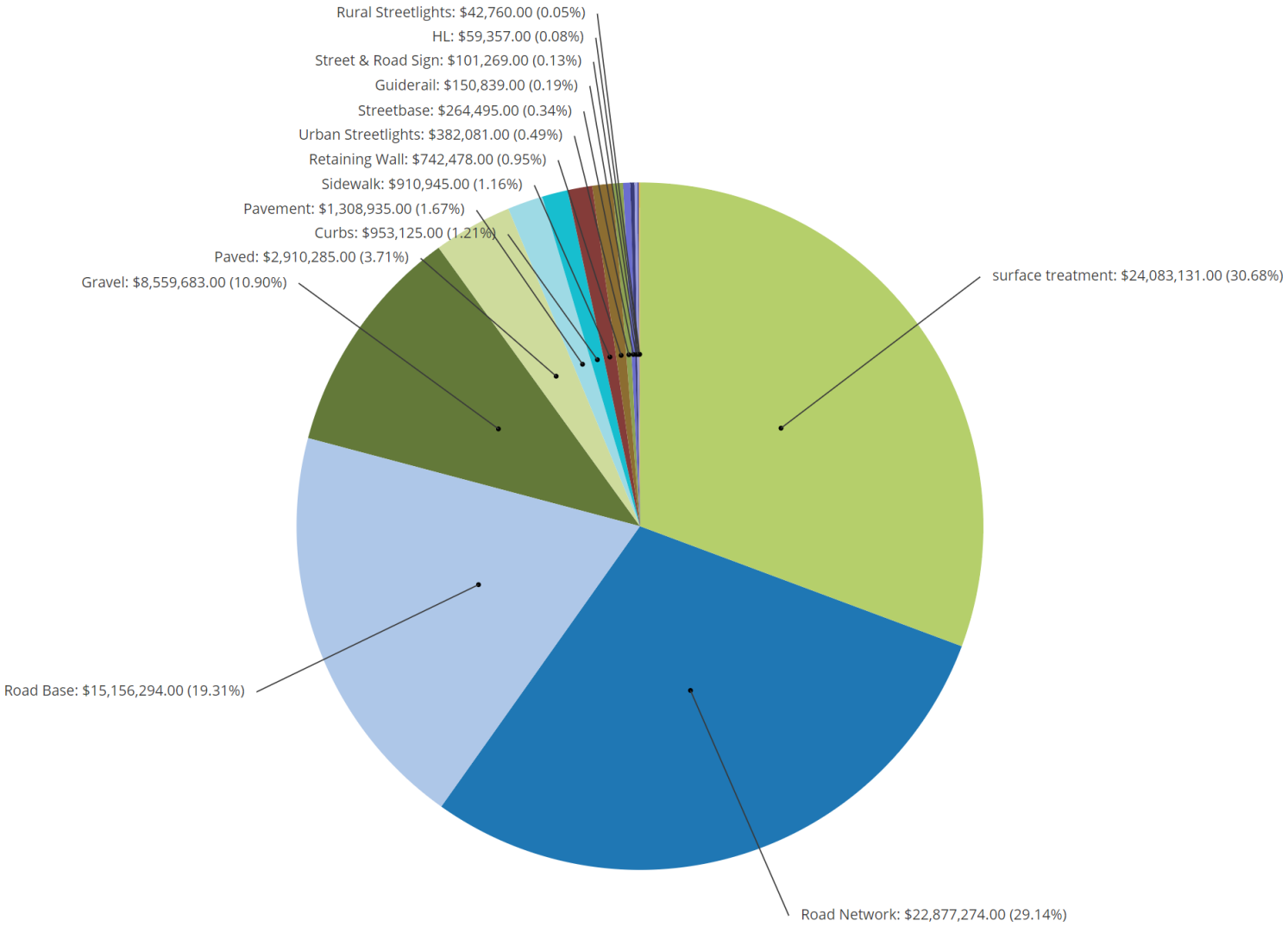
2 Public Works Facilities

7.5 km of sidewalk

15 Fleet Vehicles

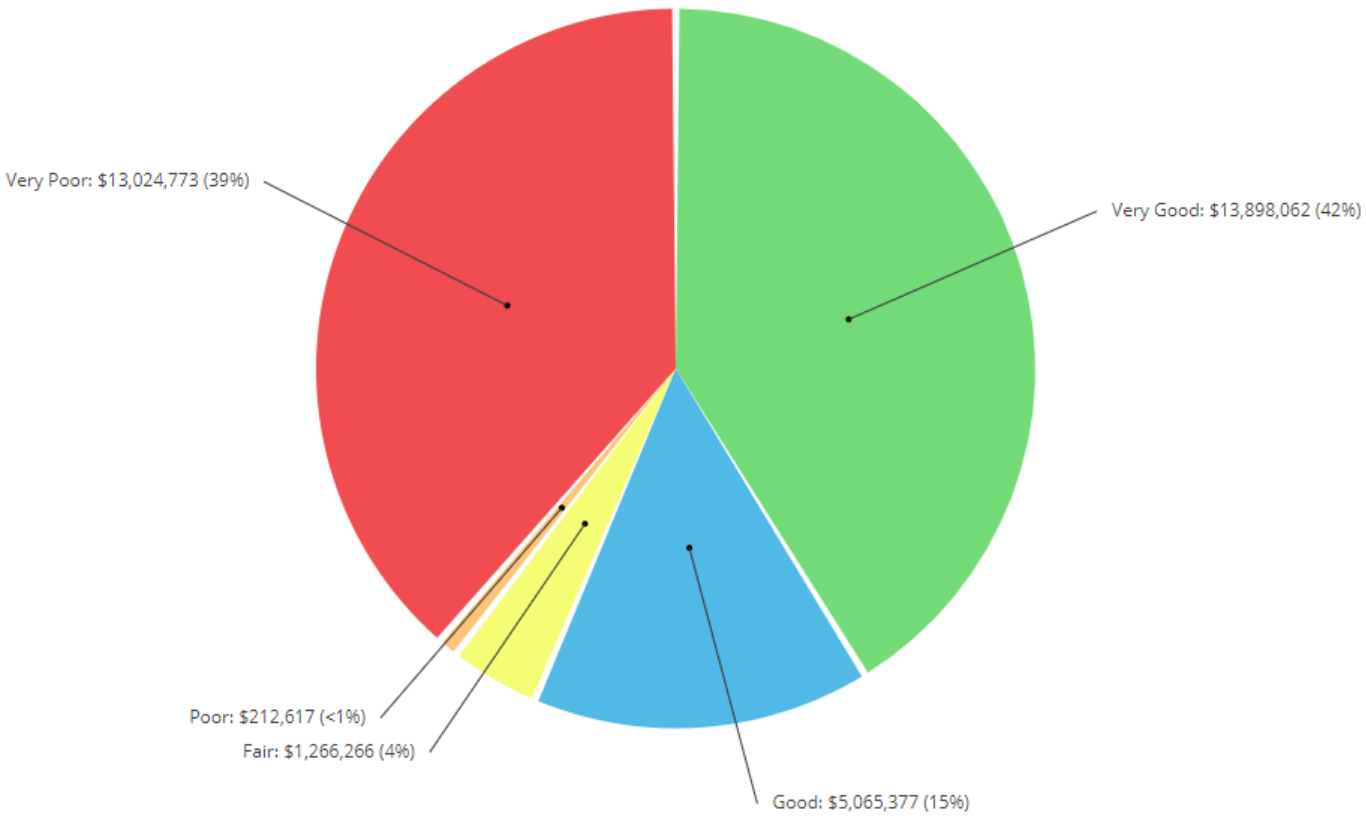
Average age of assets: **39.5 Years**

Total Asset Replacement Cost
$78.5 Million



Asset Condition

Figure 7-7: Combined Roads Condition Assessment



Average Asset Condition in Category: **50.93% / Fair**

Operations and Maintenance

Major resurfacing projects are typically contracted out to larger construction companies, with ongoing repairs, cleaning, maintenance, and winter control are performed by our Public Works department. Additionally, much of the prep work for road resurfacing or regrading is performed by Public Works staff, with transport of gravel, grading, compaction, and culvert installation, and replacement, with the contracted companies performing the final pass with either single or double surfacing for a chip and tar road surface.

The Town completed the installation of a sand and salt dome at the Sheguiandah Public Works location to reduce travel times, degradation of stored materials, and leachate into the surrounding environment.

The Town has prioritized the upgrading gravel roads to hard surfacing and those that are hard surface to pavement. This will help reduce the risk and increase the overall safety rating of the roads. With a reduced number of gravel roads greenhouse gases produced by the Town will also decrease by reduced use of machinery to maintain the roads (i.e. Less roads to grade with the grader).

Fleet replacement and maintenance is a continual process to maintain adequate capabilities for both winter control as well as construction and maintenance projects. Several vehicle assets will need to be either to overhauled and retrofitted or replaced with newer models as they approach the end of their service life over the 10-year planning period, with two Tandem Plow Trucks and one Trackless Street Sweeper will be in Disposal/Renewal phase for this financial planning cycle. The Town will also investigate the financial feasibility of purchasing a Bomag Packer to aid in road maintenance and construction in lieu of renting from local construction companies, though the utilization may not be worth the capital cost involved.

Capital Investment

Road investment prioritization is based on qualitative traffic volumes, radar trailer traffic records, freeze/thaw seasonal damage and condition assessment, with increased frequency of condition assessments on road assets approaching 50% of their lifespan to ensure adequate service delivery and change resurfacing plans accordingly.

The Town has been addressing issues on road base drainage, having rebuilt the road base of a section of Green Bay Road in 2023 (lift & resurface, & flex beam) to reduce surface deterioration issues and ongoing maintenance and control costs. 2024 projects included a double resurfacing of 3.2km of Green Bush Road ($190,000), and a shared 2km section of Red Lodge Road shared with neighbouring municipality of Assiginack ($120,000).

The Town is looking to investigate the feasibility of micro-sealing existing chip and tar roads as a potential method of life extension. 3km of Bidwell will be micro-sealed as part of a refinishing project, to investigate the long-term effects of this newer road surfacing methodology, which depending on success of the project could be further expanded across the NEMI road network.

A major expansion project planned for 2025 is the extension of Cockburn Street, with the small stub street off Highway 540 on the southwest side of Little Current extended 0.44km across to Highway 6 in the southeast. A small section of Walcot Street will be extended south to connect to the new Cockburn extension. With the increasing need for additional housing, and the lack of availability of open land, this extension should open 24 lots for development within a previously inaccessible area. This should allow for an additional housing unit capacity of at least 72 units, with potential for more with high density housing development.

Finally, the Town is always looking to modernize and maintain the integrity of our vehicle fleet. Several vehicle assets will need to be either to overhauled and retrofitted or replaced with newer models as they approach the end of their service life. The Garbage Compactor, two Tandem Plow Trucks and one Trackless Street Sweeper will be in Disposal/Renewal phase over the next 5 years; the compactor was ordered at the end of 2023, and will be delivered as part of 2025 budget. The Town will also investigate the financial feasibility of purchasing a Bomag Packer to aid in road maintenance and construction in lieu of renting from local construction companies as needed, to reduce annual cost and reduce planning overhead.

***Figure 7-8**: Combined Roads 10 Year Financial Projection to Maintain Current Level of Service*

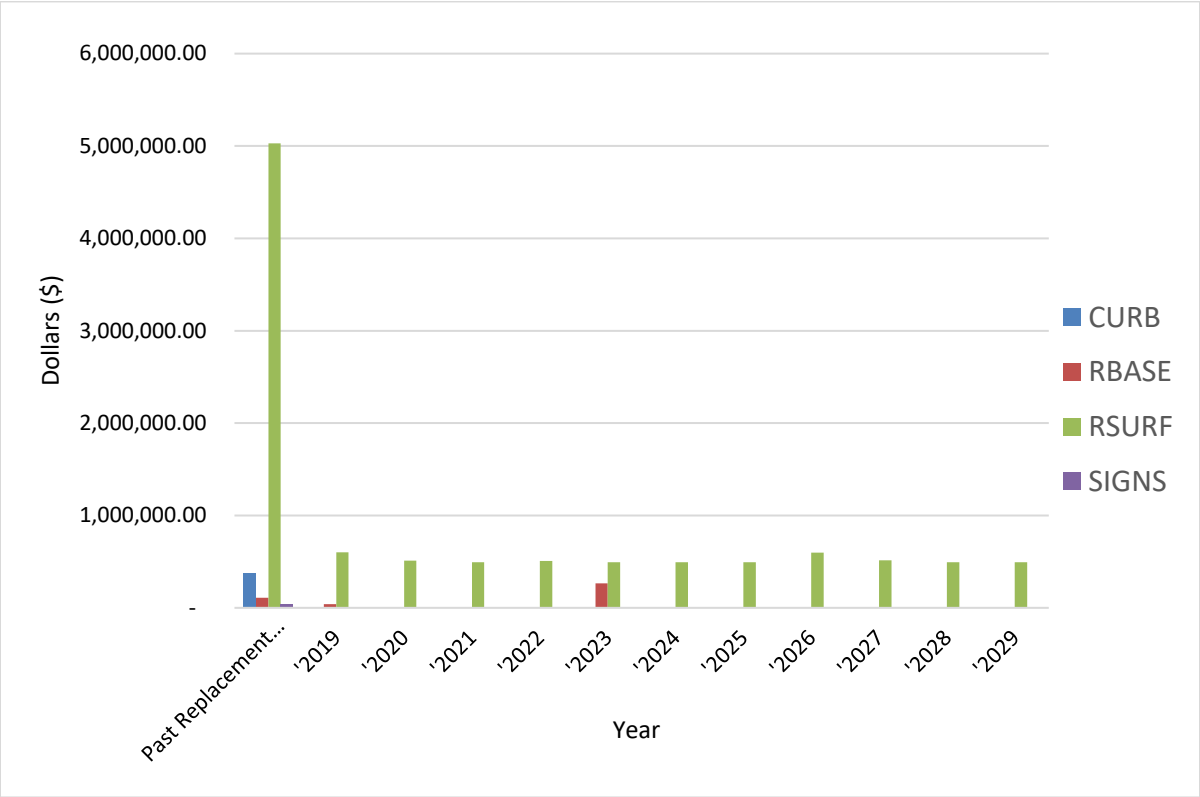
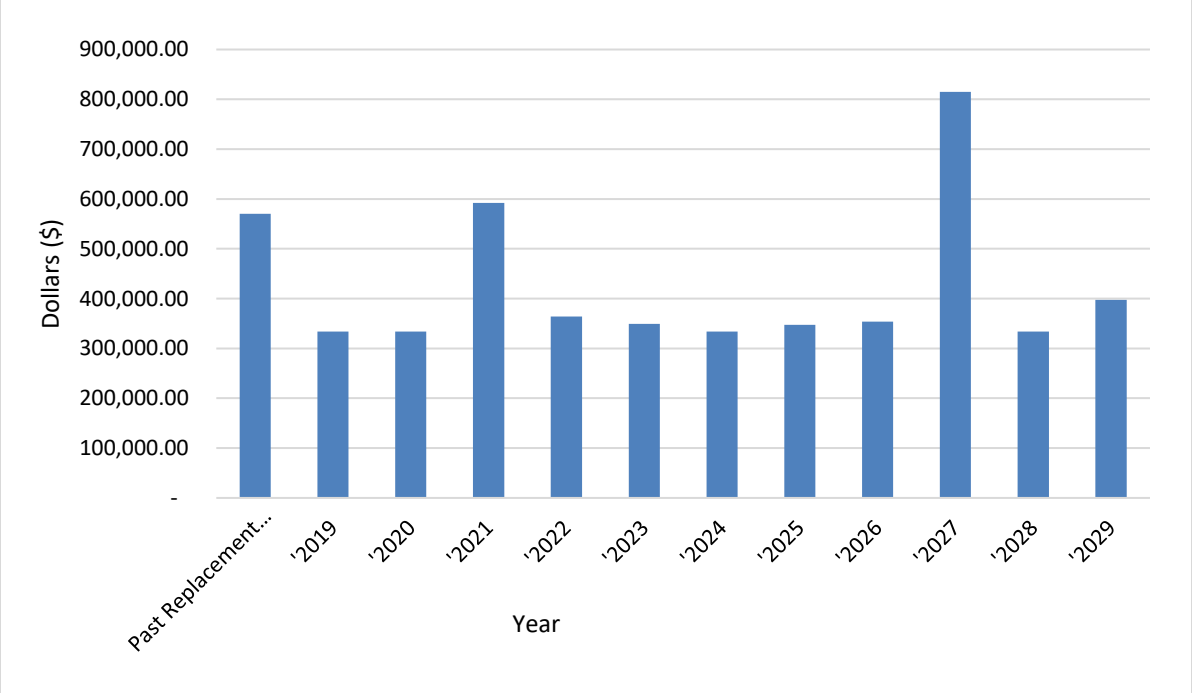


***Figure 7-9**: Winter Control 10 Year Financial Projection to Maintain Current Level of Service*



7.1.4 Bridges and Culverts

Limit Bridge in Sheguiandah

13.65 km of Culverts

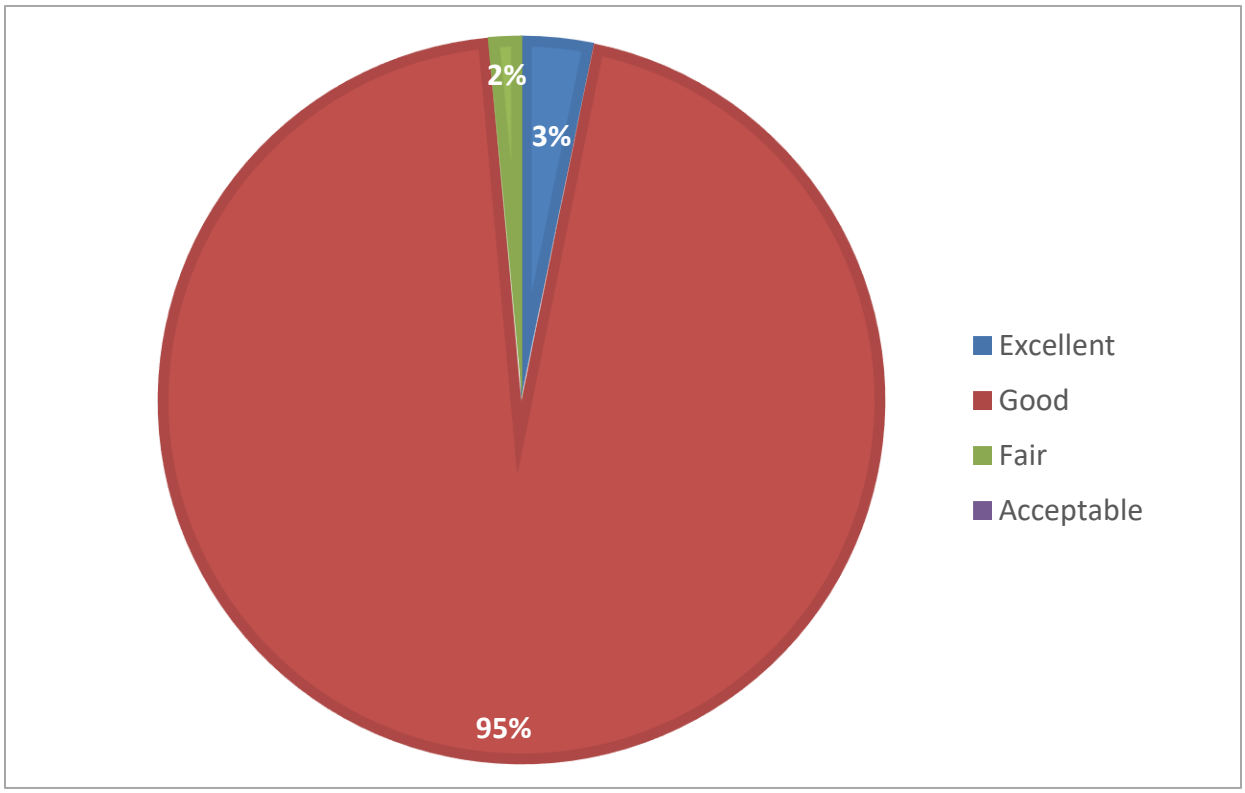
Total Asset Replacement Cost

$1.3 Million

Average age of assets:

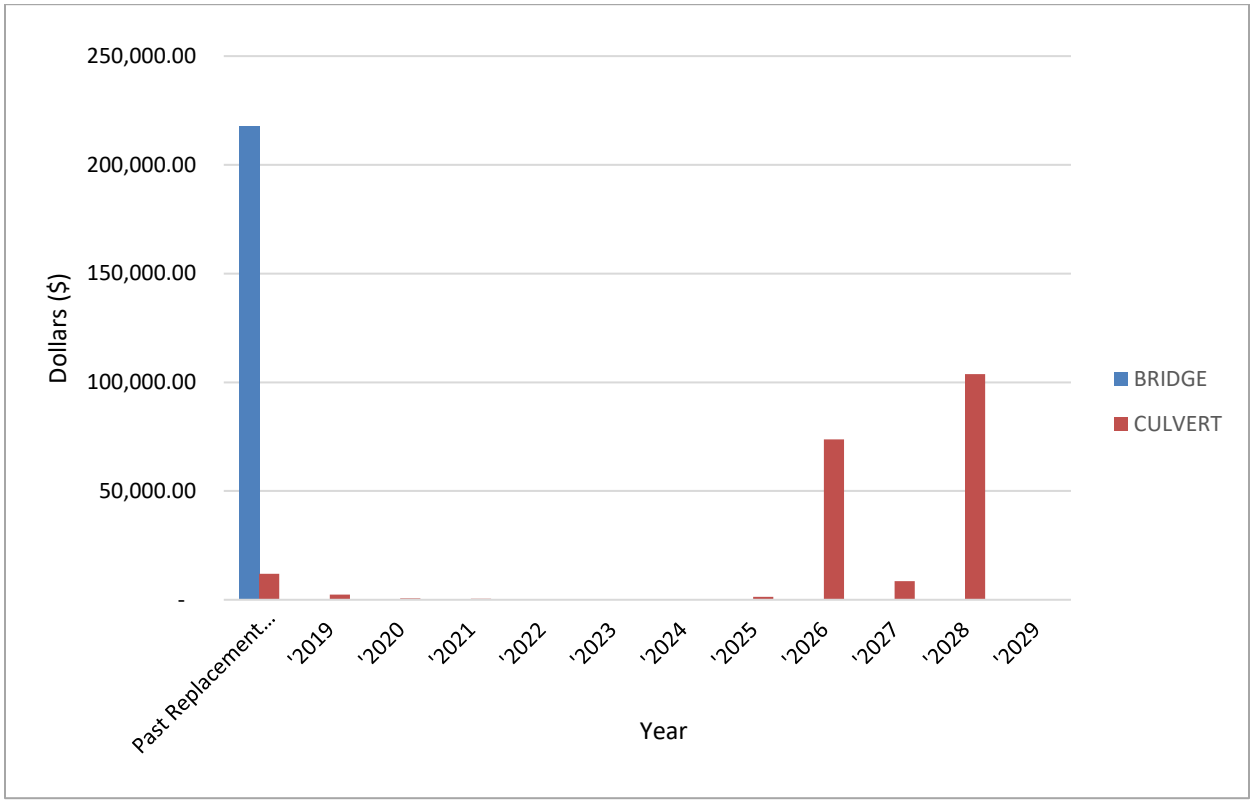
Bridges - 9.00 Years
Culverts – 26.8 Years

Figure 7-10: *Bridges & Culverts Asset Condition Assessment*



Average Asset Condition in Category: **GOOD**

Figure 7-11: *Bridges & Culverts 10 Year Financial Projection to Maintain Current Level of Service*



NEMI maintains one bridge in Sheguindah, Limit bridge, which supplies low-volume residential traffic with most larger vehicles and primary traffic using the local highway. We retain an engineering firm for biannual service and condition reviews. This bridge will be nearing the end of its rated service life in 2030, and the township is looking to study replacement or refurbishment options over the next capital purchase cycle.

Culvert lifecycle management is based on ongoing condition assessments and age-based replacement strategies. 2026 and 2028 capital purchasing is structured around replacing older culverts approaching end of life, as the town looks to replace all culvert assets with condition rating of *acceptable* to avoid service degradation.

7.2 SECONDARY ASSETS

Below is a quick summary of non-core asset condition, replacement cost, and some details involved in lifecycle planning. More detailed condition assessment data and 10-Year fiscal is provided where available.

Figure 7.2.1 - Asset Category Summary and Planning Priorities

Asset Category	Average Asset Condition	Estimated Replacement Cost	Average Age of Assets	Planning Priorities
Administration	**G**	$2,976,853	9.54	Development of an affordable seniors housing project in partnership with Manitoulin-Sudbury District Services Board. Council chambers sound system to support zoom meetings, update town office exterior, upgrade town accounting software. Building and energy retrofits to reduce hydro and Heating load. Install electric car charging station & upgrade parking lot.
Fire & Protective Services	**G**	$1,481,416	12.29	Paving of Fire Hall parking lot to provide a well-defined and smooth access in and out of fire hall with appropriate width, clearance, and turning radius will allow unobstructed movement of fire apparatus which will improve emergency response times.
Recreation Facilities	**G**	$9,003,780	9.57	<u>Short term:</u> 1. Roof rehabilitation 2. Air Conditioning System 3. Front entrance walkway 4. Boiler system upgrades 5. Replace Ice resurfacer 6. Lighting retrofit for event hall and stairway <u>Long term:</u>

Asset Category	Average Asset Condition	Estimated Replacement Cost	Average Age of Assets	Planning Priorities
				1. Repair and improve plumbing fixtures in large washrooms to reduce water consumption 2. Replace and improve kitchen equipment and ventilation 3. Pave back parking lot 4. Solar Net Metering
Marina	**G**	$11,946,164	17.75	Improve washroom accessibility at Wally's fuel station Replace or refurbish rural docks at the Sheguindah facility.
Parks	**E**	$3,472,798	10.95	Install Running track (at Low Island soccer field) Expand and improve public washrooms at Mcleans Mountain, Improve walking trail at the East end of municipality
Airport	**F**	$4,846,154	37	Build and staff a certified repair facility to increase civilian traffic and expand service delivery.
Library	**G**	$587,972	33.50	Building retrofits and modernization needed to maintain service quality. replace boiler or upgrade to heat pump.
Museum	**G**	$799,468	31.50	Continue development of the archaeological site, improving tours, exhibits (interpretive centre), educational programming, as well as refurbishing the washroom and trail construction and maintenance.
Signage	**G**	$52,445	16.33	-
Solid Waste Collection, Disposal & Diversion	**G**	$4,203,757	8.80	Changing our landfill type from leachate collection to attenuation, pending MOE approval. Expansion of Cell 2. Replacement/refurbishment of aging vehicles.
Cemeteries	**F**	$275,290	25	Expand fencing.

7.2.1 Administration

***Figure 7-12**: Administration Asset Condition Assessments*

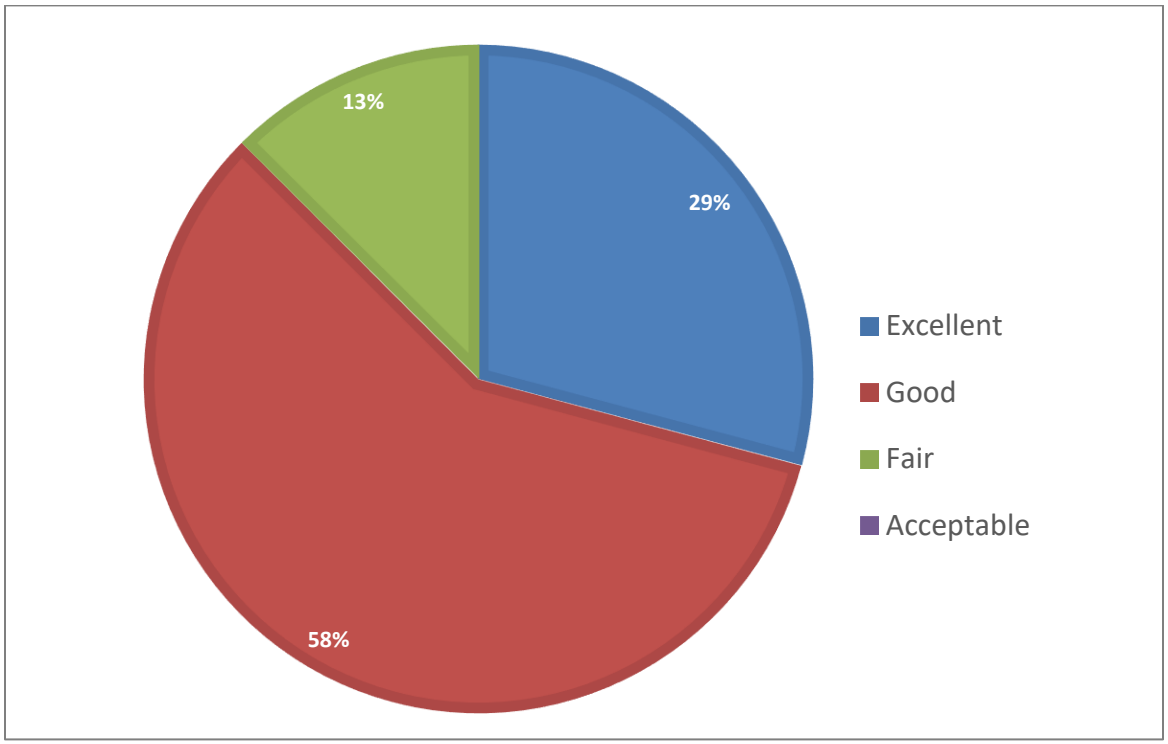
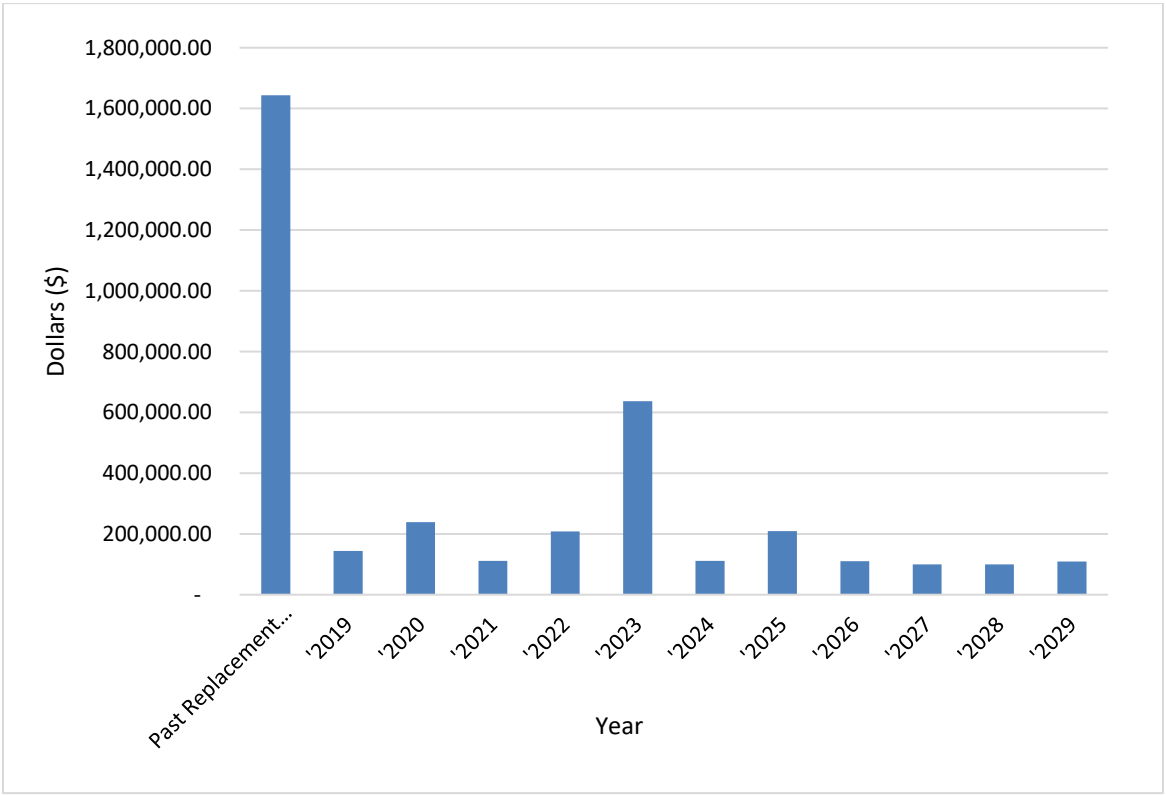


***Figure 7-13**: Administration 10 Year Financial Projection to Maintain Current Level of Service*



7.2.2 Fire and Protective Services

Figure 7-14: *Fire Asset Condition Assessment*

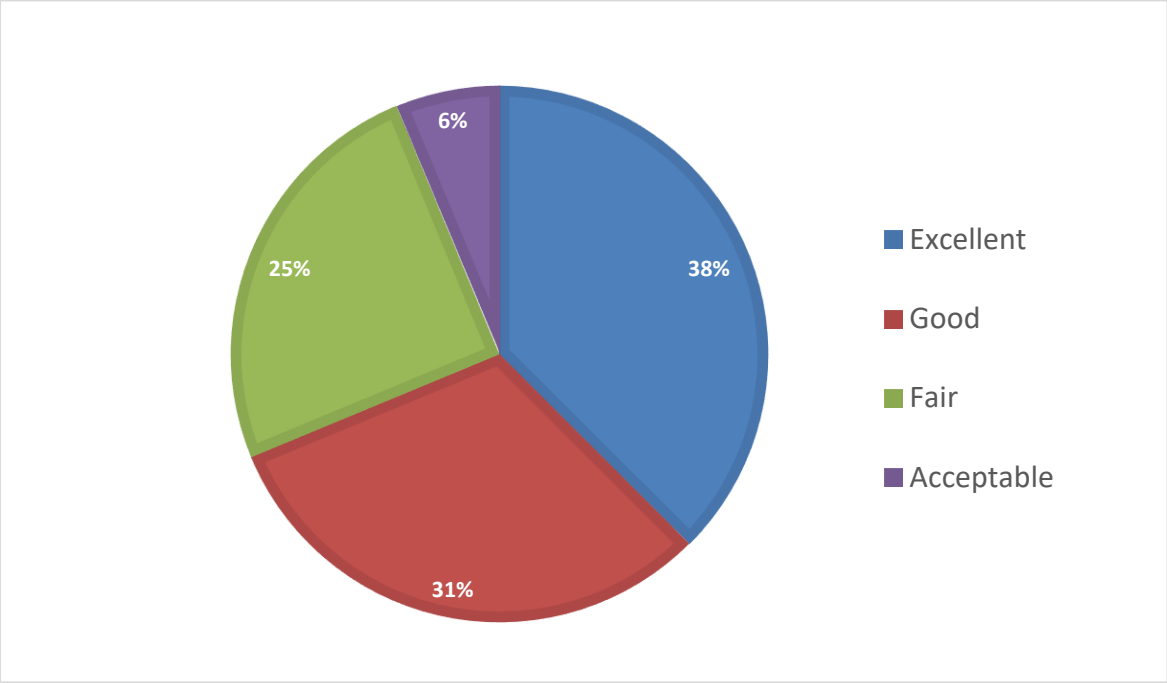
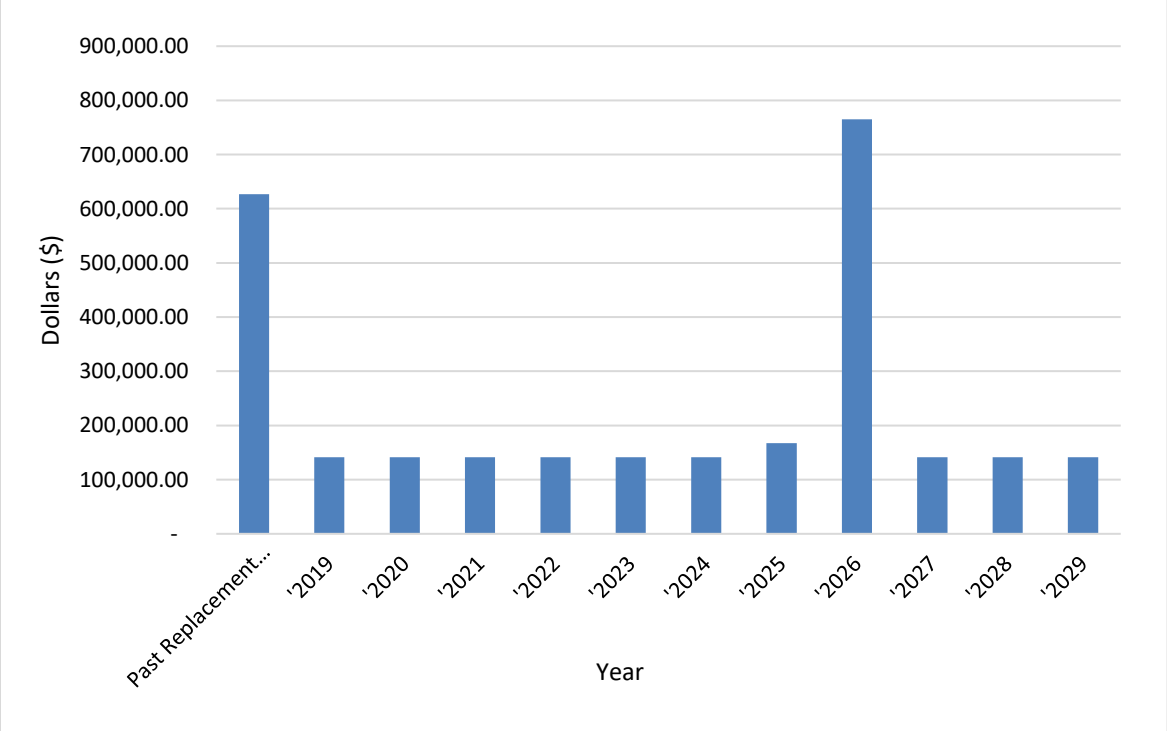


Figure 7-15: *Fire Services 10 Year Financial Plan to Maintain Levels of Service*



7.2.3 Recreation and Culture

***Figure 7-16**: Recreation & Culture Combined Asset Condition Assessment*

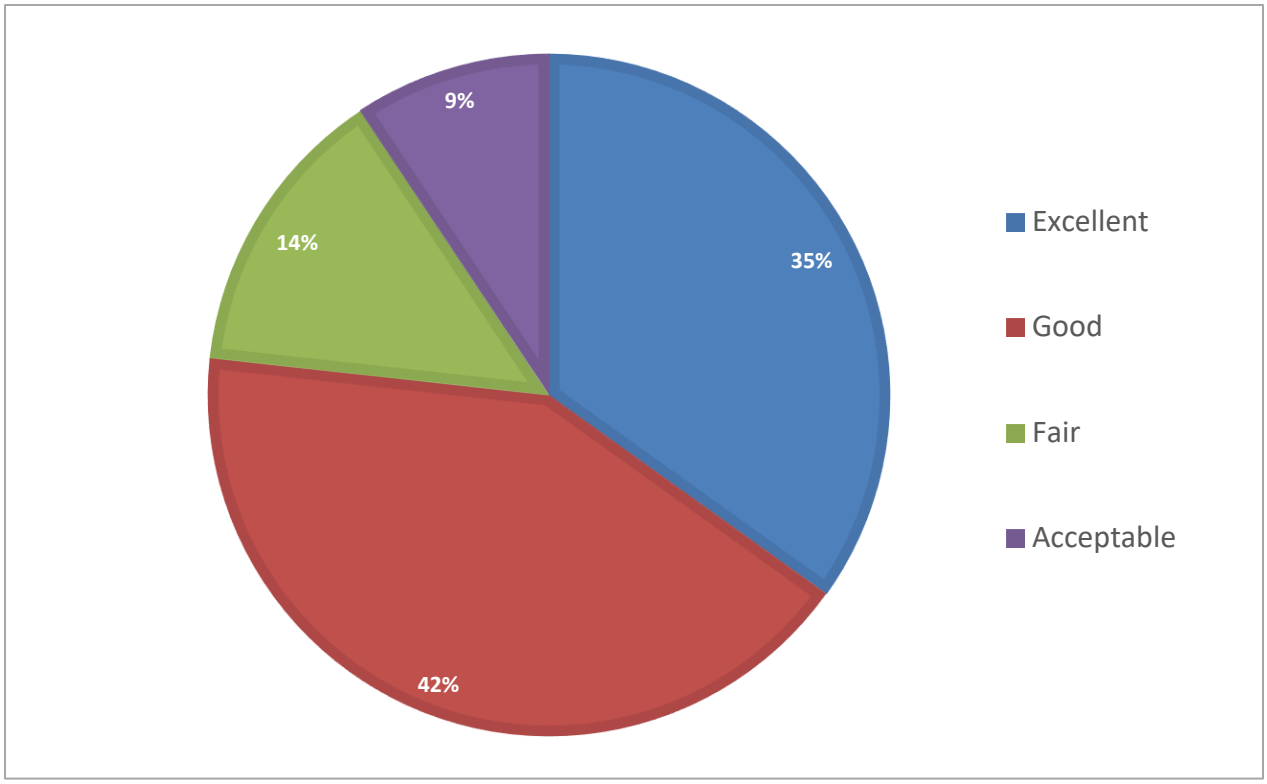


***Figure 7-17:** Recreation Financial Projection to Maintain Current Level of Service*

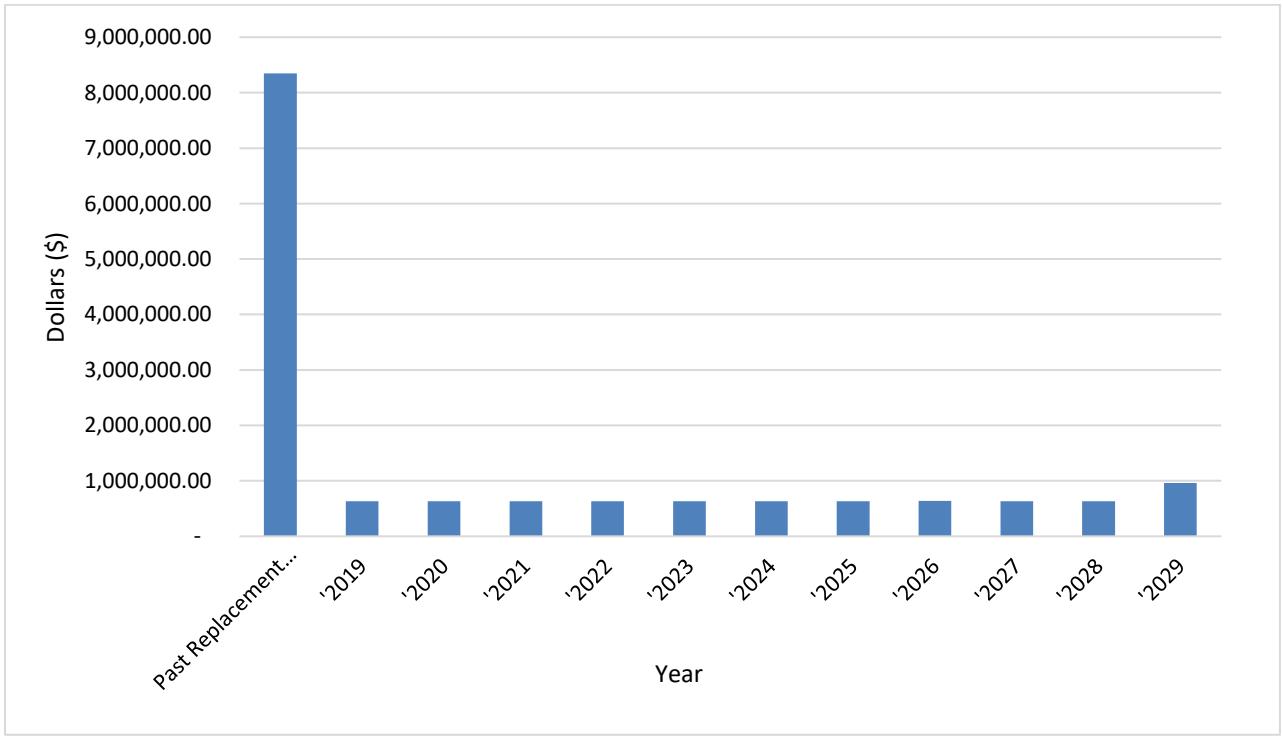


Figure 7-18: *Marina 10 Year Financial Projection to Maintain Current Level of Service*

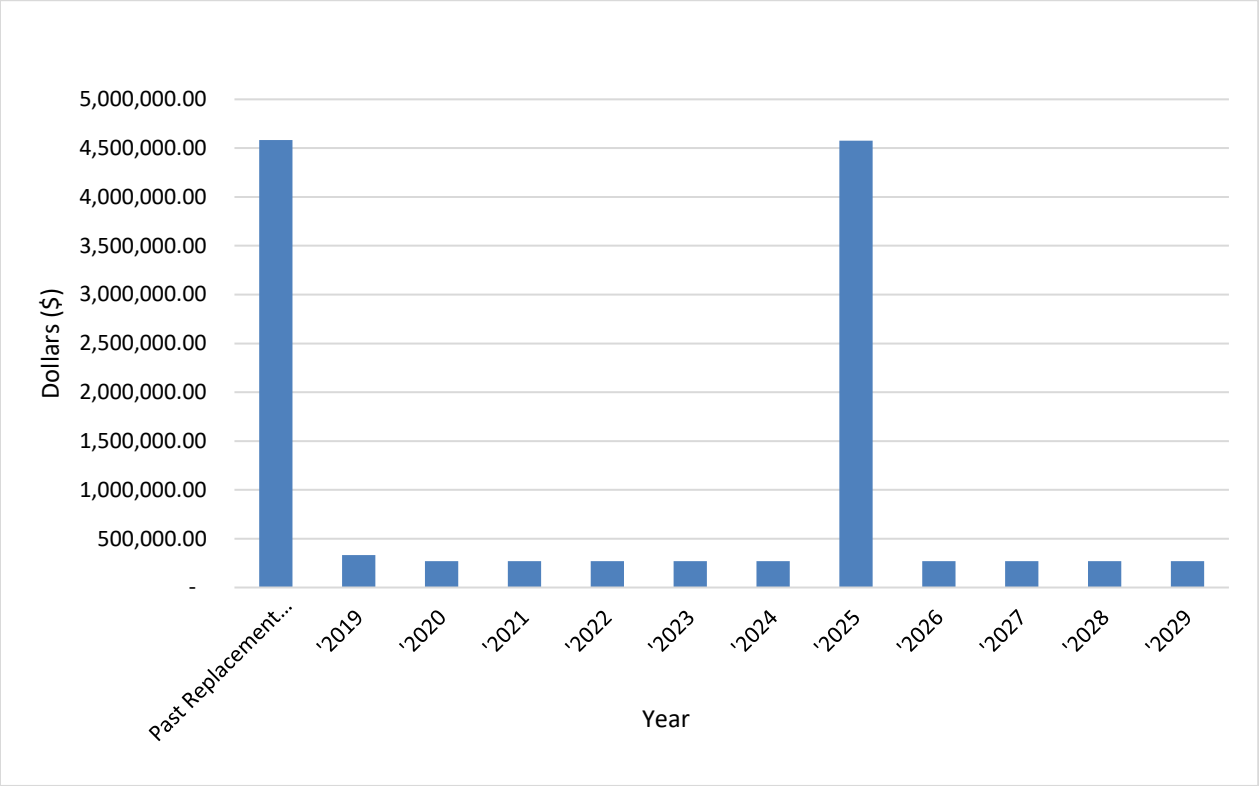


Figure 7-19: *Parks 10 Year Financial Projection to Maintain Current Level of Service*

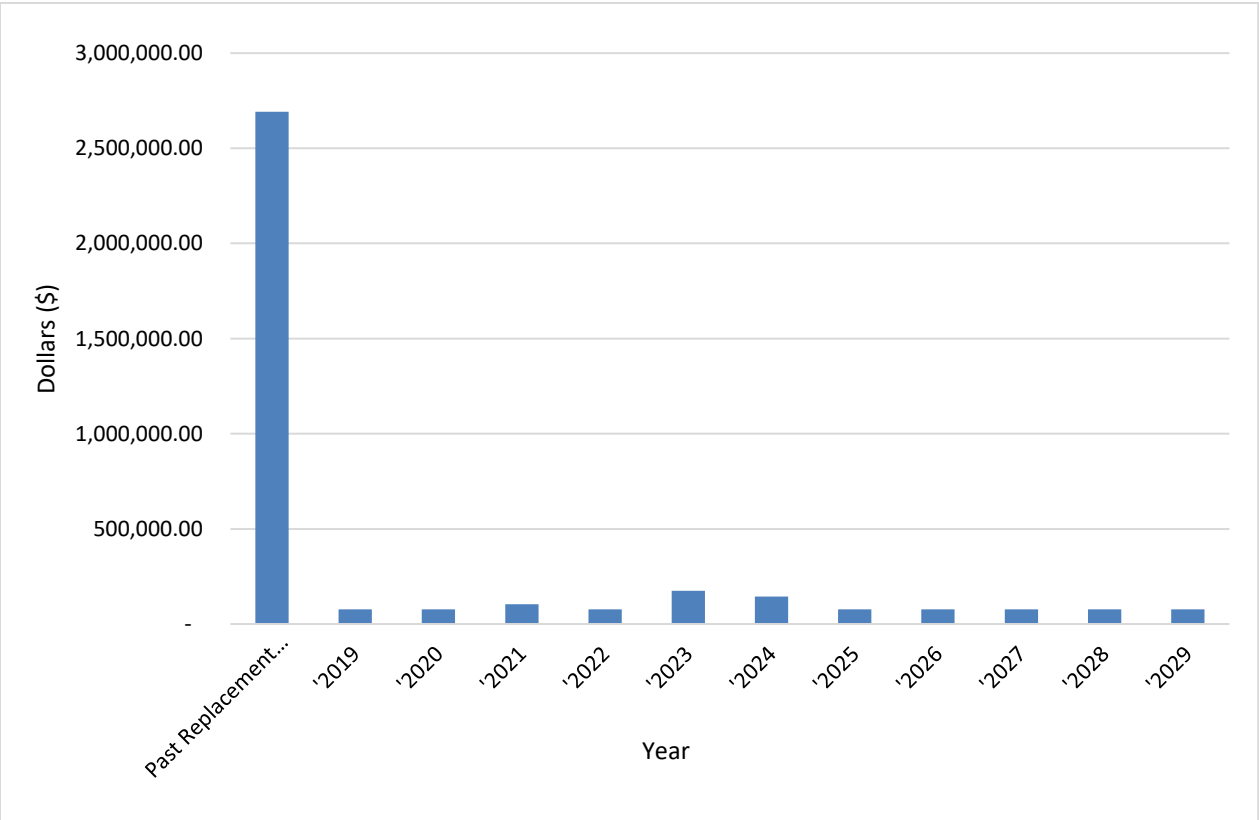


Figure 7-20: *Library 10 Year Financial Projection to Maintain Current Level of Service*

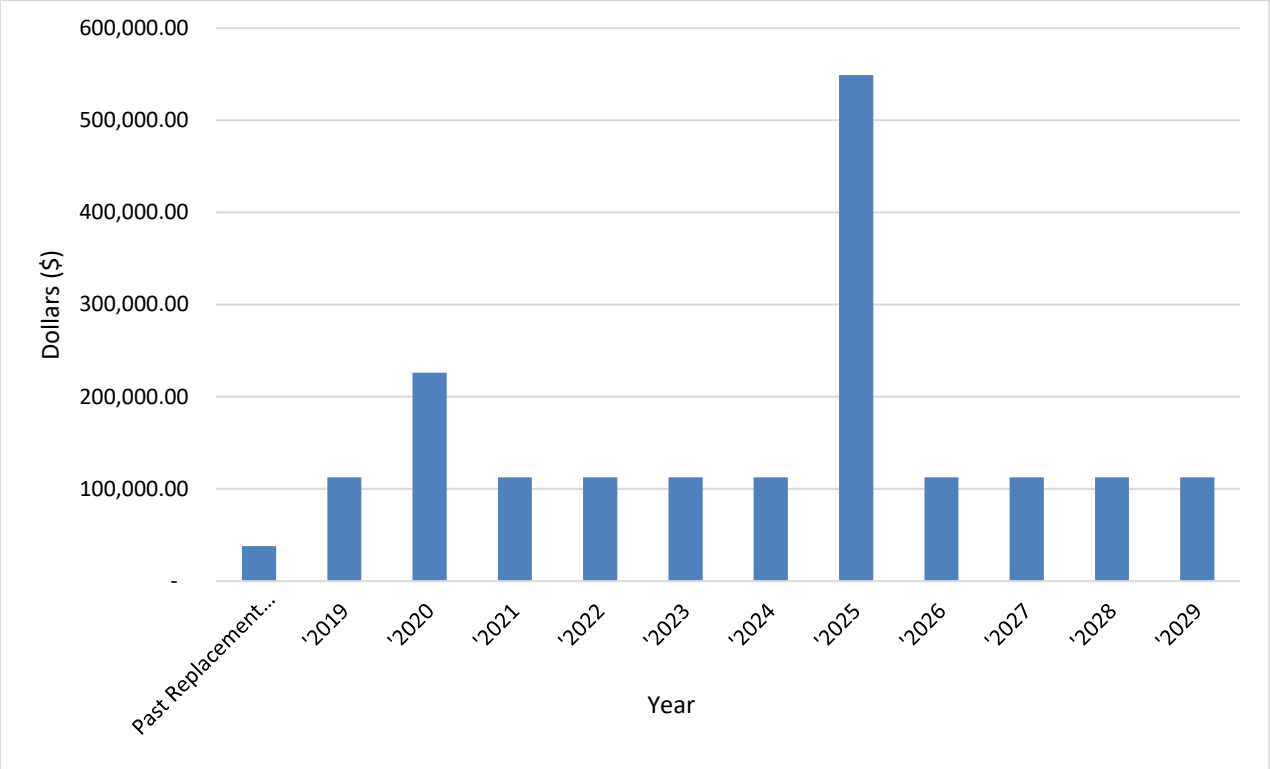
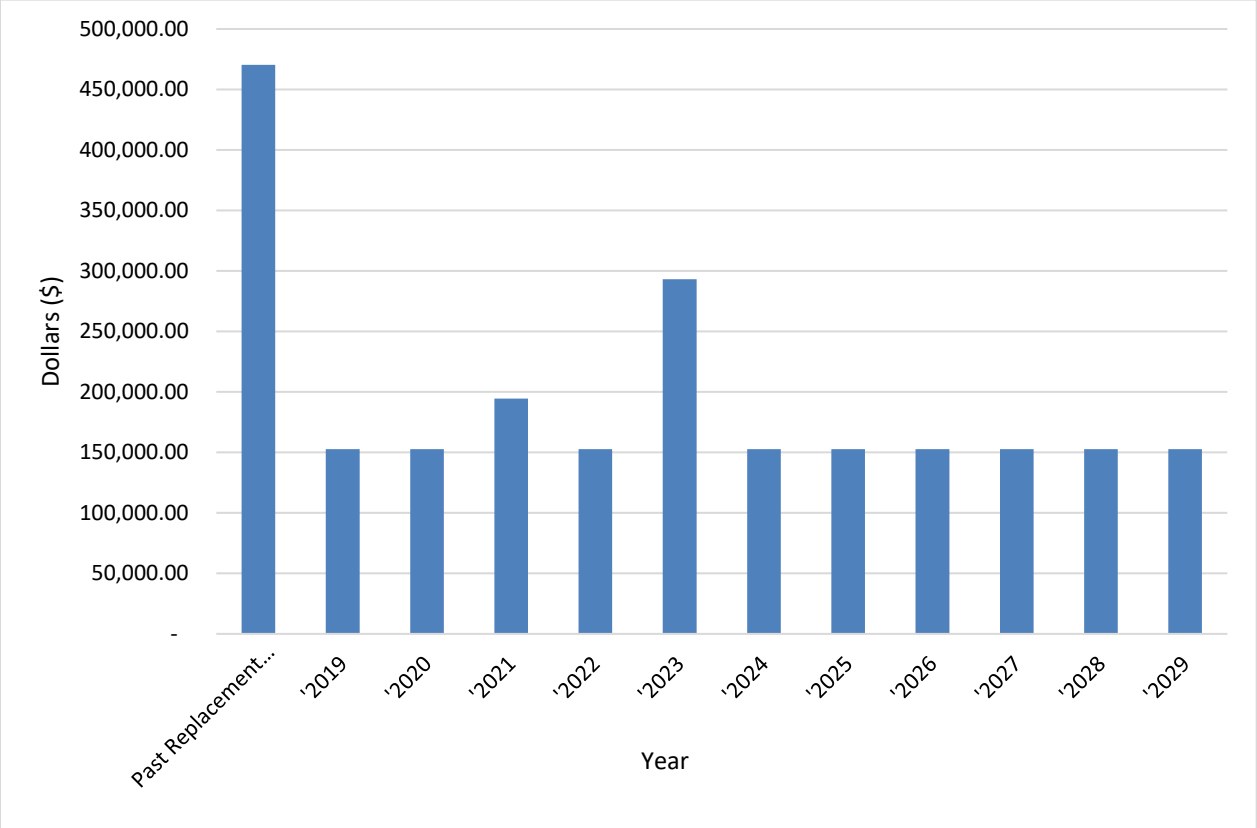


Figure 7-21: *Museum 10 Year Financial Projection to Maintain Current Level of Service*

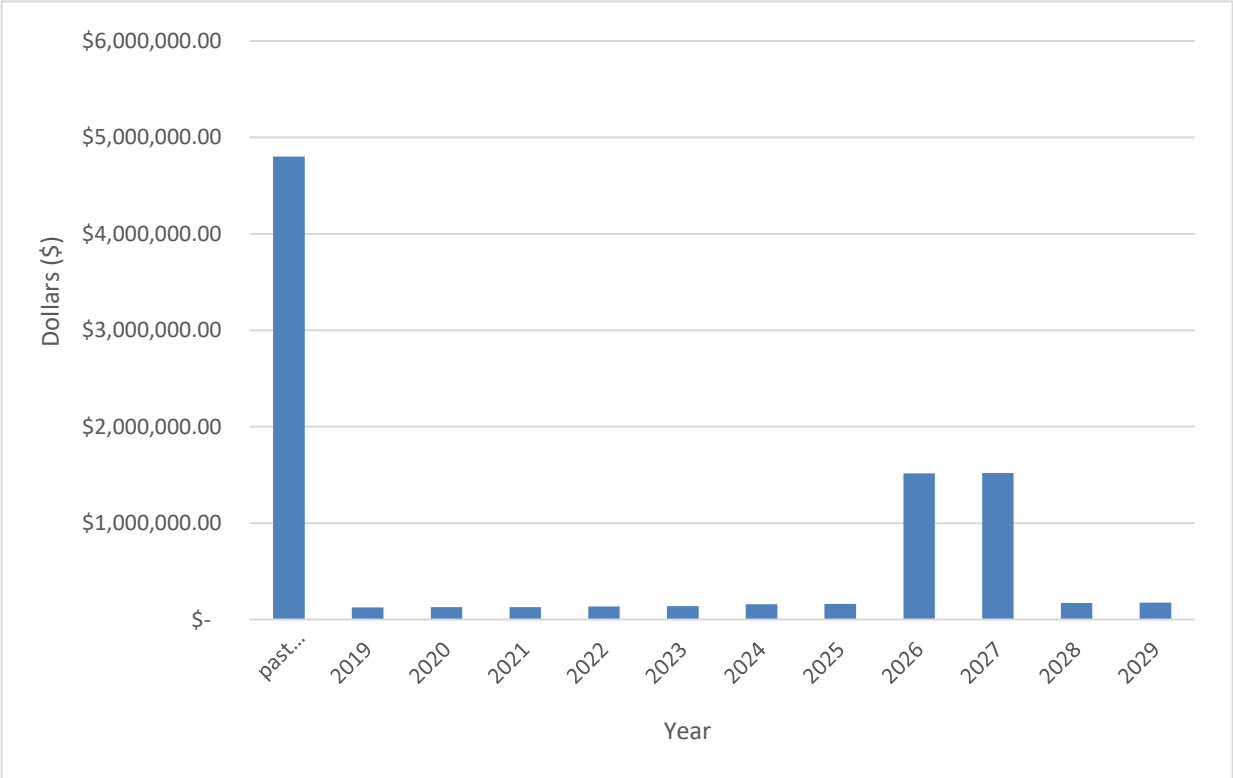


7.2.4 Airport

The Manitoulin East Municipal Airport (MEMA) was constructed in 1988 as a joint effort between the Township of Assiginack and the pre-amalgamation Township of Howland and the Town of Little Current. Current operations are jointly funded, with NEMI funding 67% of the costs and Assiginack covering the remaining 33%. The Airport operates as a separate corporation, with a governing committee populated by council members from the two governing municipalities (3 from NEMI and 2 from Assiginack) that approve yearly budgets for the facility. The airport offers air traffic support and refuelling to local civilian and small commercial users, primarily the police services and Ornge air ambulance services. Apart from the 3500' x 100' paved runway, the facility contains 8 buildings: a primary operations facility, 3 hangars, an equipment garage, a rental garage, a radio building, a small pump house.

The increase in cost over 2026-2027 is intended to cover the construction of a multi-use repair hangar. With an estimated cost of $2.7 million, this new facility would greatly expand the service offerings at the Airport, as well as provide additional rental hangar space and storage. With the plan to host between 3 and 7 new permanent positions for aircraft maintenance engineers and other support staff, this additional hangar would allow both civilian and commercial pilots to repair and recertify their vehicles locally, with the nearest facility with this type of service located approximately 400km southeast near Barrie, resulting in a long-term increase in facility traffic and utilization.

Figure 7-22: *Airport 10 Year Financial Projection to Maintain Current Level of Service*



7.2.5 Other Infrastructure

***Figure 7-23**: Streetlights 10 Year Financial Projection to Maintain Current Level of Service*

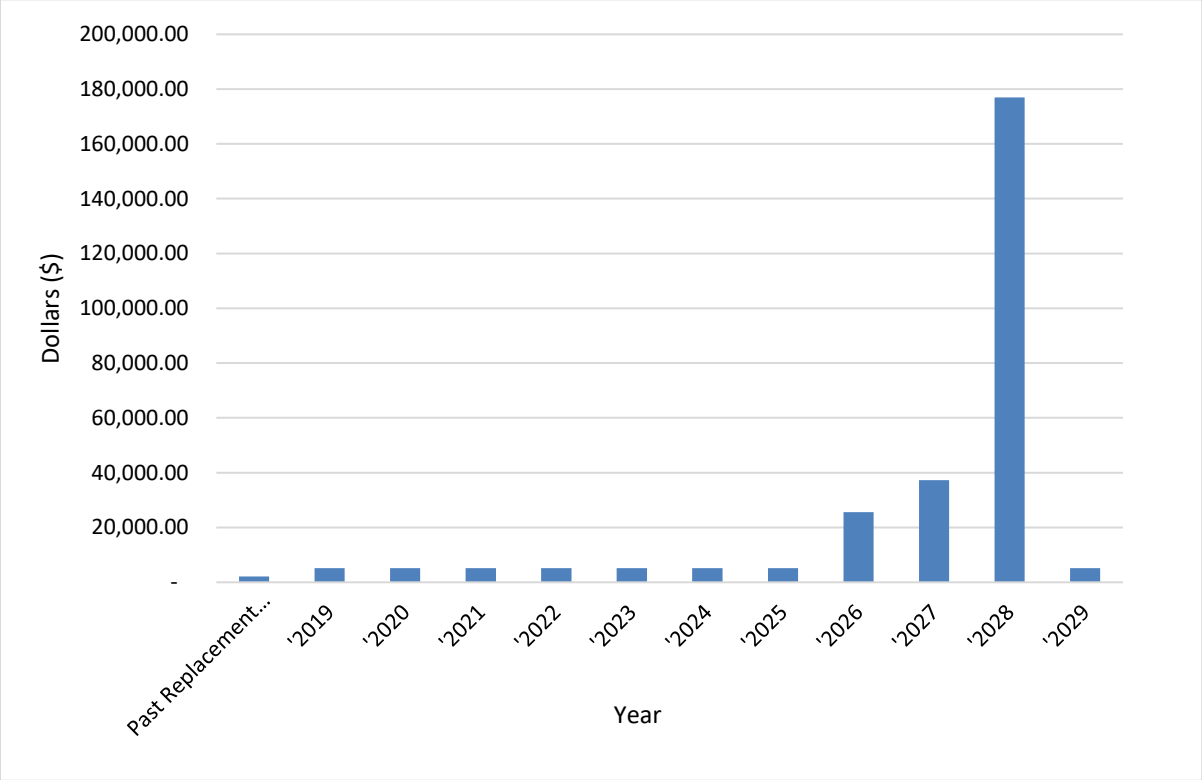


***Figure 7-24:** Solid Waste Collection, Disposal & Diversion 10 Year Financial Projection to Maintain Current Level of Service*

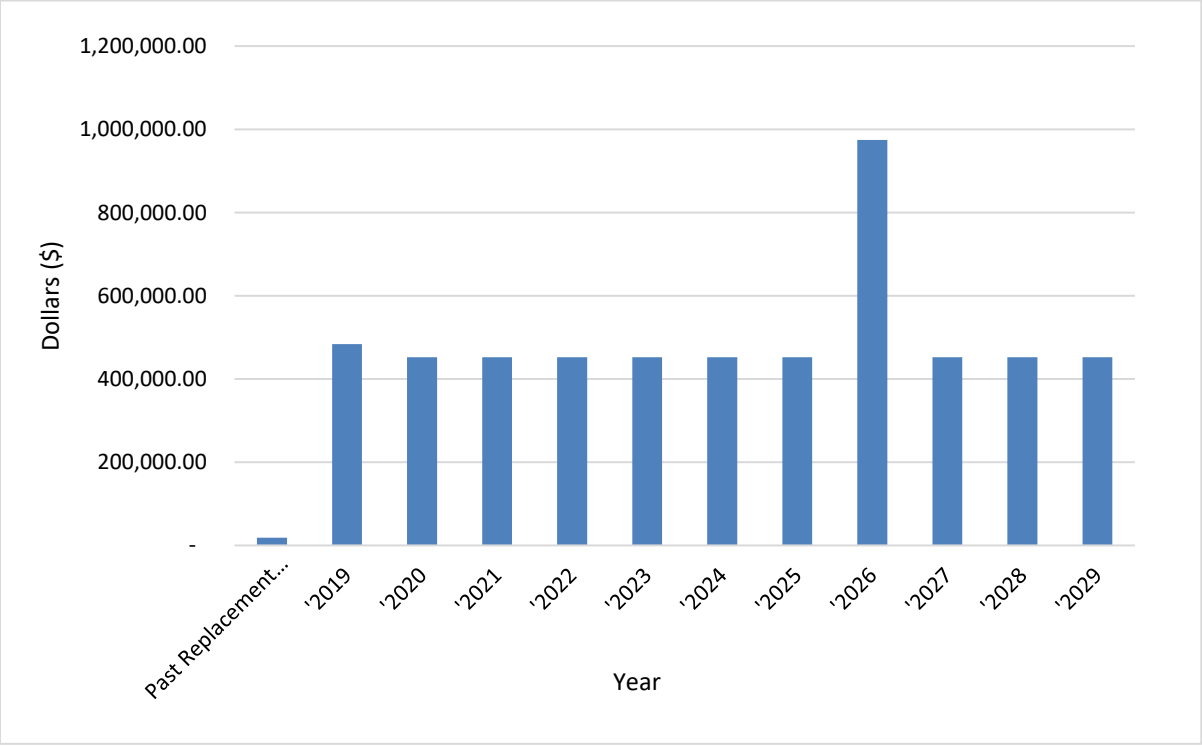


Figure 7-25: *Sidewalks 10 Year Financial Projection to Maintain Current Level of Service*

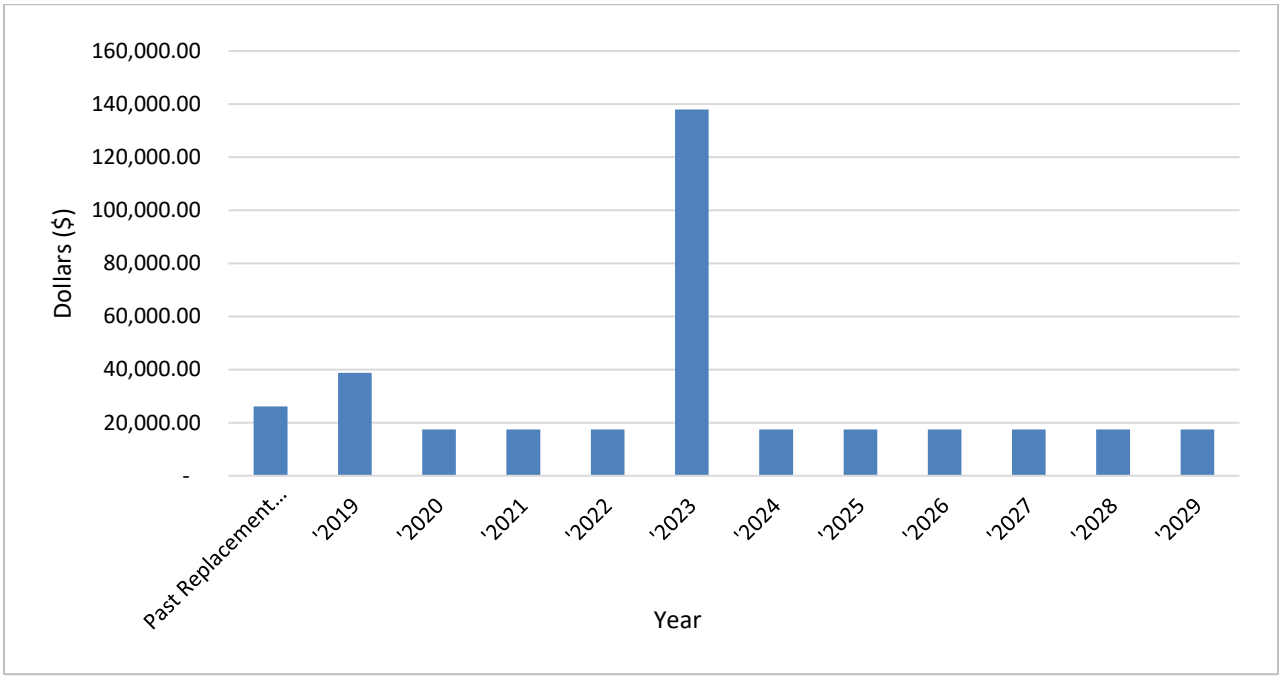
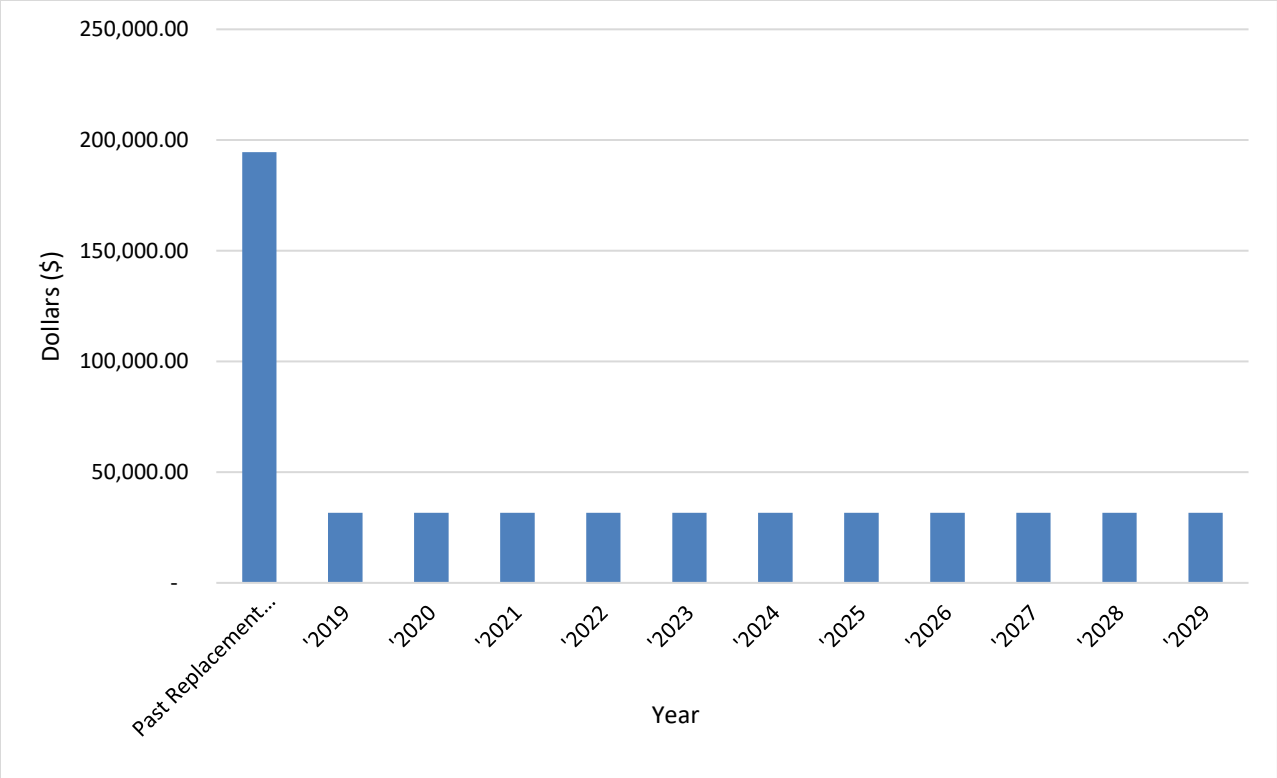


Figure 7-26*: Cemeteries 10 Year Financial Projection to Maintain Current Level of Service*



8 GROWTH & DEMAND

Growth throughout the community is critical in reaching the Town's mission of enhancing, diversifying and expanding its economic base and entrepreneurial spirit. With new infrastructure developments and population is expected to continue to rise, there will be an increased demand for services and stress on current assets. The need to construct new and replace current infrastructure, has made it more difficult to maintain and upgrade the existing, aging infrastructure. While the condition of the municipal assets is rated as being *good*, on average they are quickly approaching the mid-point of their expected life. This is the point where maintenance costs quickly accelerate. Further worsening the situation, of the limited availability of infrastructure funds, cost inflation, increased environmental and safety regulation and increased public service expectations.

Town of Northeastern Manitoulin and the Islands

Households	Population
2,313	2,712

2016 Statistics Canada Census

9 CLIMATE CHANGE

With a change in climate, infrastructure and assets are more susceptible to risk of meteorological and climatological events, which can lead to risk of increased asset deterioration, failure and service disruption. The Town has taken into consideration the potential impacts of climate change and climatological events on its infrastructure when forecasting the financial budgets, asset designs, level of service and asset lifecycle. The International Institute for Sustainable Development identified the following impacts of climate change on municipal infrastructure in Canada.

Figure 26 *Impacts of Climate Change on Infrastructure (International Institute for Sustainable Development)*

	Greater frequency of freeze-thaw cycles leading to thermal cracking, rutting, frost heave and thaw weakening.
	Soil instability, ground movement and slope instability
	Triggered instability of embankments and pavement structures
	Shortened life expectancy of roads
	Drier conditions affecting lifecycle of bridges and culverts
	Reduced structural integrity building components through mechanical, chemical and biological degradation
	Increased corrosion and mold growth
	Damaged or flooded structures
	Reduced service life and functionality of components and systems
	Increased repair, maintenance, reserve fund contingencies and energy costs.
	Increased water demand and pressure on infrastructure
	Loss of potable water
	Increased risk of flooding: stormwater infrastructure more frequently exceeded
	Rupture of drinking water lines, sewage lines and sewage storage tanks
	Saltwater intrusion in groundwater aquifers

The Town has taken steps towards mitigating and adapting to climate change.
Mitigation initiatives are underway with the implementation of energy efficient initiatives, such as replacement of the streetlight network to LED light bulbs and overall improvements in buildings. This is all in an effort to reduce operating costs and mitigate climate change. During the budgeting process, the Town takes into considerations actions that can be managed to reduce the risks of climate change impacts on the infrastructure.

10 ASSET MANAGEMENT STRATEGY

1. Overdue Assets (increasing efficiency and reducing operating costs)

As assets age, they work less efficiency and become costly to repair. An effort to reduce operating costs and the Town's overall impact on the environment, assets that are overdue will need to be replaced. With the assistance of the 10-year financial projections and an understanding of the full lifecycle cost of an asset, the Town will determine the most cost-effective approach to asset management. Forecasts of annual infrastructure replacement and rehabilitation needs is determined based on current condition, current replacement values and the useful life assigned to each asset and asset class.

2. Future growth to meet demand

    a. Little Current water transmission infrastructure

Parts of the Little Current water transmission infrastructure dates back approximately 80 years. It transports water through nearly 1450 meters of cast iron pipes to over 130 homes, numerous commercial businesses and critical services such as, but not limited to the Manitoulin Health Centre (hospital), Manitoulin Centennial Manor, NEMI Fire Department, Ontario Provincial Police (OPP) and Emergency Medical Services (EMS).

The purpose of the 'Little Current Cast Iron Water Main Replacement' is to take a proactive approach protecting and replacing aging infrastructure (water mains). The project will assist with meeting growing demand, specifically with seniors' developments and the construction of a new OPP station in the near future. Completion of this project will also eliminate water loss caused by leaks and deterioration, and reduce health and safety risks to the public. The Meredith Street cast iron water main system has experienced water loss due to deteriorating mains, as well as varying issues all resulting in limited/no/intermittent water service to users of the system.

By replacing and upgrading the cast iron pipes The Town hopes to reduce the number of emergency water main repairs, in-turn reducing the number of disturbances to users of the system, and health and safety risks associated with loss of pressure/contamination.

    b. Facultative Lagoon

The Little Current lagoon system provides basic sewage treatment for serviced residential and commercial properties in the community of Little Current as well as two sanitary trucking companies that service private septic systems. The facility is located south of the settlement at rural address 277 Highway 540.

The purpose of the 'Little Current Lagoon Expansion and Upgrade' project is to expand wastewater services to accommodate new development in the Town of Little Current. At this point, we have two significant commercial developments slated to begin construction in Little Current in the short-term that will bring a minimum of 30 full time, 15 part time, and 10 seasonal jobs to our Town (not including the construction jobs required). In addition to these commercial developments, there are two confirmed senior housing initiatives with scheduled construction in the short-term that will create roughly 24 additional jobs in our community.

Due to severe capacity issues faced at the Little Current Lagoon, the Town of NEMI has been working with the Ministry of the Environment (MOECC) on lagoon expansion options in order to avoid forced orders. If progress is not made to expand the Little Current lagoon, MOECC orders could include restricting new connections to the system (and therefore losing the anticipated new jobs/businesses/etc.).

It is critical that the Lagoon Expansion and Upgrade project is completed in the immediate future so that we do not lose businesses and jobs in our small, rural community. The future economic development of our community hinges on our ability to complete this project, and continue to offer wastewater services to new and expanding businesses (commercial and industrial). As discussed, the MOECC has previously suggested they could place orders on the municipality to restrict new connections to the system. As per our municipal by-laws, lots in the Town of Little Current cannot be developed if they are not connected to the wastewater system (i.e. they have no other waste water options).

11 FINANCING STRATEGY

This section of the Plan is intended to provide a framework for the Town to integrate asset management with annual budgeting and long-term financial planning. The Town has traditionally completed capital projects by prioritizing and approving them with reference to the availability of funds. The Town has historically set aside funds in reserves and reserve funds in an effort to maintain its capital assets. Additionally, the Town has often relied on funding assistance from Federal and Provincial Government grants to undertake necessary capital projects.

11.1 AVAILABLE FUNDING TOOLS

1. Federal and Provincial Grants

Historically, the Town has had some success in securing grant funding from the Federal and Provincial government to assist in funding capital projects. The Town will continue to seek financial assistance from upper levels of government to fund this project as it is crucial to support the expected demand from community growth.

The Town of Northeastern Manitoulin and the Islands also expects to continue receiving Gas Tax grant revenue. These funds can be applied to fund future capital road work.

The Town acknowledges that external funding is not a guaranteed source of revenue.

2. Property Taxes

Property taxes represent approximately 57% of revenues in the 2018 Consolidated Budget. The use of property taxes to fund municipal services is the most secure source of funding for the Town. As such, the Town may be required to increase property tax revenue to fund additional capital expenditures. To that end, the Town could explore the use of a dedicated tax/infrastructure levy for the purpose of capital asset repair and replacement. However, the average total income of population aged 15 years and over in NEMI is $34,456 (*Statistics Canada, 2016 Census*) so any tax increase will place a financial burden on residents.

3. User Fees

User fees are a largest funding source of revenues for the Town. To the extent that user fees are being collected to fund repair and replacement of capital infrastructure, user fees should be allocated to capital reserves.

11.2 FINANCING AND FINANCIAL MANAGEMENT PRACTICES

On an annual basis, the Town determines where each asset is in the lifecycle and forecasts when it is most cost efficient to replace them. Those that are determined to need replacement within the next 12 months will be included in that fiscal year's budget.

1) Reserves

Reserves are to be used to cope with high capital investment periods by saving during low capital investment periods. This practice will smooth annual expenditures and ensure the Town can complete the required annual capital projects. In addition to contributions during low investment periods, the annual surpluses, should one arise, are contributed to increase reserves. In this respect, the Town could consider creating a dedicated reserve fund for the repair and replacement of capital assets. The Town could consider adopting a formal reserve policy which outlines the purpose, source of funds, use of funds, the ceiling and floor, and the duration of each reserve fund but this is difficult to do in a depressed economic area.

2) Debt Financing

Debt financing is a tool available to fund infrastructure projects. As a safe practice, any potential debt will not be financed for a period longer than the average useful life of the asset. With this method, the planned debt will spread the costs of a project over the life of an asset to ensure the ratepayers who benefit from the asset share the cost. Therefore, the burden of capital is distributed equally between the current taxpayer and future rate payers. The Town has often explored the ability to fund capital works through the issuance of debt but prefers to minimize the debt taken on by the Town as the associated carrying costs as it placed additional burden on tax payers. It is a priority to attempt to cover all capital costs in the current year or with the financial funds raised with the yearly levy. It should be noted that the lagoon expansion and upgrade will require debt financing.

12 CONCLUSIONS AND RECOMMENDATIONS

The objective of this Asset Management Plan is to identify where the gaps and priorities are, based on the current state of infrastructure, desired level of service and expected outcome. The Plan will contribute to better decision-making as to how best to manage capital assets in a sustainable and cost-efficient way. In this section, recommendations based on the analysis undertaken as part of the Plan are made.

12.1 SUMMARY OF KEY FINDINGS

Overall, the Town will need to continue to contribute to reserves and secure funding to cover capital expenditures and to address current and future infrastructure requirements in an effort to move forward with sustainable asset management planning.

1) The Town's asset base is extensive, with a replacement cost valued at $72.3 million, in relation to the total permanent population of about 2,712 persons. The responsibility to maintain existing infrastructure is challenging and the Town will need to continue to increase capital contributions to address current and future infrastructure requirements.

2) Assets approaching the mid-point of their expected life will likely require repair or replacement within the next ten years. Should these repairs and replacements not take place, asset conditions and service levels may decline.

3) Little Current Lagoon upgrade project is critical to avoid curtailing town development as the township wastewater production approaches our capacity. We must ensure that the wastewater facilities can meet current demand and have the ability to meet future growth.

4) The Little Current Cast Iron Water Main Replacement and Upgrade project is critical to meet future growth and demand, eliminate water loss caused by leaks and deterioration, and reduce health and safety risks. It is recommended that critical road construction performed at the same time and location as the water main replacement and upgrade. By replacing the water main and critical road construction at the same time it will cut down on initial capital costs.

5) Little Current Critical Road Reconstruction, resurfacing the top layer of asphalt and rehabilitation to curbs and sidewalks is critical to providing safe and reliable roads that connect the Municipality to the remainder of Manitoulin Island. It is estimated that the

reconstruction would increase the useful life by 25+ years and increase the condition of the road surface from adequate to excellent.

6) Within the Town the road network is (149.80km) 149,800 linear meters. Of that approximately 27% road base and 16% surface of the road asset class have a condition rating of *acceptable* and it is suggested that these roads are targeted for maintenance to ensure they remain safe and minimize risk for travel.

7) The Town currently has limited reserves available to fund capital projects and will continue to seek funding from federal and provincial government programs.

8) Paving the gravel driveway to the Little Current Fire Hall will help provide a well-defined and smooth access in and out of fire hall with appropriate width, clearance, and turning radius will allow unobstructed movement of fire apparatus which will improve emergency response times

9) Installation of a service hangar at the Manitoulin East Municipal Airport will improve service delivery and increase facility traffic, creating a Northern Ontario hub for civilian and small commercial aircraft repair.

13 RECOMMENDATIONS

1. The Town needs to continue to address priority assets approaching the end of their useful life. Immediate action should be taken on the following assets and service areas:
    a. The Little Current and Sheguiandah Water Treatment Plant infrastructure analysis
    b. The Little Current Cast Iron Water Main Replacement and Upgrade (Worthington Street)
    c. Little Current Critical Road Reconstruction
    d. Lagoon Capacity Upgrade Project

2. It is recommended that the Town begin to plan for financing options for the replacement or major rehabilitation of assets that have reached the mid point in their expected useful life.

3. It is recommended that the Town upgrades or replaces assets that are at the end of their useful life and have a rating less than fair.

4. It is recommended that the Town continue to save surplus funds by transferring them into reserve funds for future use.

5. The Municipality needs to continue to seek funding assistance from other levels of government based on the modest income level of its residents.

14 ASSUMPTIONS

The Town's Asset Management Plan has been based on assumptions regarding economic, environmental, political, and social landscape. Changes within these areas many have an impact on the delivery of the services outlined in the Asset Management Plan. The following outlines key assumptions that have been made and associated uncertainties.

- **Climate change** is incorporated but extraordinary events have not been planned for, due to lack of previous extraordinary events.
- **Economic environment** will remain unchanged or will move to a period of gradual improvement.
- **Future population** will maintain – increase.
- **External funding sources** will remain the same or more likely decrease.

15 APPENDIX

15.1 MINIMUM MAINTENANCE STANDARDS

Municipal Act, 2001
Loi de 2001 sur les municipalités

ONTARIO REGULATION 239/02

MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS

Consolidation Period: From May 3, 2018 to the e-Laws currency date.

Last amendment: 366/18.

Legislative History: 288/03, 613/06, 23/10, 47/13, 366/18.

This Regulation is made in English only.

Definitions

1. (1) In this Regulation,

"bicycle facility" means the on-road and in-boulevard cycling facilities listed in Book 18 of the Ontario Traffic Manual;

"bicycle lane" means,

(a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or

(b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer;

"cm" means centimetres;

"day" means a 24-hour period;

"encroachment" means anything that is placed, installed, constructed or planted within the highway that was not placed, installed, constructed or planted by the municipality;

"ice" means all kinds of ice, however formed;

"motor vehicle" has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*, except that it does not include a motor assisted bicycle;

"non-paved surface" means a surface that is not a paved surface;

"Ontario Traffic Manual" means the Ontario Traffic Manual published by the Ministry of Transportation, as amended from time to time;

"paved surface" means a surface with a wearing layer or layers of asphalt, concrete or asphalt emulsion;

"pothole" means a hole in the surface of a roadway caused by any means, including wear or subsidence of the road surface or subsurface;

"roadway" has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*;

"shoulder" means the portion of a highway that provides lateral support to the roadway and that may accommodate stopped motor vehicles and emergency use;

"sidewalk" means the part of the highway specifically set aside or commonly understood to be for pedestrian use, typically consisting of a paved surface but does not include crosswalks, medians, boulevards, shoulders or any part of the sidewalk where cleared snow has been deposited;

"significant weather event" means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality;

"snow accumulation" means the natural accumulation of any of the following that, alone or together, covers more than half a lane width of a roadway:

1. Newly-fallen snow.
2. Wind-blown snow.
3. Slush;

"substantial probability" means a significant likelihood considerably in excess of 51 per cent;

"surface" means the top of a sidewalk, roadway or shoulder;

"utility" includes any air, gas, water, electricity, cable, fiber-optic, telecommunication or traffic control system or subsystem, fire hydrants, sanitary sewers, storm sewers, property bars and survey monuments;

"utility appurtenance" includes maintenance holes and hole covers, water shut-off covers and boxes, valves, fittings, vaults, braces, pipes, pedestals, and any other structures or items that form part of or are an accessory part of any utility;

"weather" means air temperature, wind and precipitation.

"weather hazard" means the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program. O. Reg. 239/02, s. 1 (1); O. Reg. 23/10, s. 1 (1); O. Reg. 47/13, s. 1; O. Reg. 366/18, s. 1 (1, 2).

(2) For the purposes of this Regulation, every highway or part of a highway under the jurisdiction of a municipality in Ontario is classified in the Table to this section as a Class 1, Class 2, Class 3, Class 4, Class 5 or Class 6 highway, based on the speed limit applicable to it and the average daily traffic on it. O. Reg. 239/02, s. 1 (2); O. Reg. 366/18, s. 1 (3).

(3) For the purposes of subsection (2) and the Table to this section, the average daily traffic on a highway or part of a highway under municipal jurisdiction shall be determined,

(a) by counting and averaging the daily two-way traffic on the highway or part of the highway; or

(b) by estimating the average daily two-way traffic on the highway or part of the highway. O. Reg. 239/02, s. 1 (3); O. Reg. 23/10, s. 1 (2); O. Reg. 366/18, s. 1 (3).

(4) For the purposes of this Regulation, unless otherwise indicated in a provision of this Regulation, a municipality is deemed to be aware of a fact if, in the absence of actual knowledge of the fact, circumstances are such that the municipality ought reasonably to be aware of the fact. O. Reg. 366/18, s. 1 (4).

TABLE
CLASSIFICATION OF HIGHWAYS

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

O. Reg. 366/18, s. 1 (5).

Application

2. (1) This Regulation sets out the minimum standards of repair for highways under municipal jurisdiction for the purpose of clause 44 (3) (c) of the Act. O. Reg. 288/03, s. 1.

(2) REVOKED: O. Reg. 23/10, s. 2.

(3) This Regulation does not apply to Class 6 highways. O. Reg. 239/02, s. 2 (3).

Purpose

2.1 The purpose of this Regulation is to clarify the scope of the statutory defence available to a municipality under clause 44 (3) (c) of the Act by establishing maintenance standards which are non-prescriptive as to the methods or materials to be used in complying with the standards but instead describe a desired outcome. O. Reg. 366/18, s. 2.

MAINTENANCE STANDARDS

Patrolling

3. (1) The standard for the frequency of patrolling of highways to check for conditions described in this Regulation is set out in the Table to this section. O. Reg. 23/10, s. 3 (1); O. Reg. 366/18, s. 3 (2).

(2) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on roadways, ice formation on roadways or icy roadways, the standard for patrolling highways is, in addition to that set out in subsection (1), to patrol highways that the municipality selects as representative of its highways, at intervals deemed necessary by the municipality, to check for such conditions. O. Reg. 47/13, s. 2; O. Reg. 366/18, s. 3 (2).

(3) Patrolling a highway consists of observing the highway, either by driving on or by electronically monitoring the highway, and may be performed by persons responsible for patrolling highways or by persons responsible for or performing highway maintenance activities. O. Reg. 23/10, s. 3 (1).

(4) This section does not apply in respect of the conditions described in section 10, subsections 11 (0.1) and 12 (1) and section 16.1, 16.2, 16.3 or 16.4. O. Reg. 23/10, s. 3 (1); O. Reg. 366/18, s. 3 (3).

TABLE
PATROLLING FREQUENCY

Class of Highway	Patrolling Frequency
1	3 times every 7 days
2	2 times every 7 days
3	once every 7 days
4	once every 14 days
5	once every 30 days

O. Reg. 239/02, s. 3, Table; O. Reg. 23/10, s. 3 (2).

Weather monitoring

3.1 (1) From October 1 to April 30, the standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once every shift or three times per calendar day, whichever is more frequent, at intervals determined by the municipality. O. Reg. 47/13, s. 3; O. Reg. 366/18, s. 4.

(2) From May 1 to September 30, the standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once per calendar day. O. Reg. 47/13, s. 3; O. Reg. 366/18, s. 4.

Snow accumulation, roadways

4. (1) Subject to section 4.1, the standard for addressing snow accumulation on roadways is,

(a) after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and

(b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table within the time set out in the Table,

(i) to provide a minimum lane width of the lesser of three metres for each lane or the actual lane width, or

(ii) on a Class 4 or Class 5 highway with two lanes, to provide a total width of at least five metres. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (1).

(2) If the depth of snow accumulation on a roadway is less than or equal to the depth set out in the Table to this section, the roadway is deemed to be in a state of repair with respect to snow accumulation. O. Reg. 47/13, s. 4.

(3) For the purposes of this section, the depth of snow accumulation on a roadway and, if applicable, lane width under clause (1) (b), may be determined in accordance with subsection (4) by a municipal employee, agent or contractor, whose duties or responsibilities include one or more of the following:

1. Patrolling highways.
2. Performing highway maintenance activities.
3. Supervising staff who perform activities described in paragraph 1 or 2. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (2).

(4) The depth of snow accumulation on a roadway and lane width may be determined by,

(a) performing an actual measurement;

(b) monitoring the weather; or

(c) performing a visual estimate. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (3).

(5) For the purposes of this section, addressing snow accumulation on a roadway includes,

(a) plowing the roadway;

(b) salting the roadway;

(c) applying abrasive materials to the roadway;

(d) applying other chemical or organic agents to the roadway;

(e) any combination of the methods described in clauses (a) to (d). O. Reg. 366/18, s. 5 (4).

(6) This section does not apply to that portion of the roadway,

(a) designated for parking;

(b) consisting of a bicycle lane or other bicycle facility; or

(d) used by a municipality for snow storage. O. Reg. 366/18, s. 5 (4).

TABLE
SNOW ACCUMULATION - ROADWAYS

Class of Highway	Depth	Time
1	2.5 cm	4 hours
2	5 cm	6 hours
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours

O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (5).

Snow accumulation on roadways, significant weather event

4.1 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on roadways, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 7.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4 expires following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 7.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address snow accumulation on roadways in accordance with section 4. O. Reg. 366/18, s. 7.

Snow accumulation, bicycle lanes

4.2 (1) Subject to section 4.3, the standard for addressing snow accumulation on bicycle lanes is,

(a) after becoming aware of the fact that the snow accumulation on a bicycle lane is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and

(b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table to this section to provide a minimum bicycle lane width of the lesser of 1 metre or the actual bicycle lane width. O. Reg. 366/18, s. 7.

(2) If the depth of snow accumulation on a bicycle lane is less than or equal to the depth set out in the Table to this section, the bicycle lane is deemed to be in a state of repair in respect of snow accumulation. O. Reg. 366/18, s. 7.

(3) For the purposes of this section, the depth of snow accumulation on a bicycle lane and, if applicable, lane width under clause (1) (b), may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3), with necessary modifications. O. Reg. 366/18, s. 7.

(4) For the purposes of this section, addressing snow accumulation on a bicycle lane includes,

(a) plowing the bicycle lane;

(b) salting the bicycle lane;

(c) applying abrasive materials to the bicycle lane;

(d) applying other chemical or organic agents to the bicycle lane;

(e) sweeping the bicycle lane; or

(f) any combination of the methods described in clauses (a) to (e). O. Reg. 366/18, s. 7.

TABLE
SNOW ACCUMULATION – BICYCLE LANES

Column 1 Class of Highway or Adjacent Highway	Column 2 Depth	Column 3 Time
1	2.5 cm	8 hours
2	5 cm	12 hours
3	8 cm	24 hours
4	8 cm	24 hours
5	10 cm	24 hours

O. Reg. 366/18, s. 7.

Snow accumulation on bicycle lanes, significant weather event

4.3 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on bicycle lanes until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on bicycle lanes, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 7.

(2) If the municipality complies with subsection (1), all bicycle lanes within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4.2 expires following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 7.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address snow accumulation on bicycle lanes in accordance with section 4.2. O. Reg. 366/18, s. 7.

Ice formation on roadways and icy roadways

5. (1) The standard for the prevention of ice formation on roadways is doing the following in the 24-hour period preceding an alleged formation of ice on a roadway:

1. Monitor the weather in accordance with section 3.1.
2. Patrol in accordance with section 3.
3. If the municipality determines, as a result of its activities under paragraph 1 or 2, that there is a substantial probability of ice forming on a roadway, treat the roadway, if practicable, to prevent ice formation within the time set out in Table 1 to this section, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 8.

(2) If the municipality meets the standard set out in subsection (1) and, despite such compliance, ice forms on a roadway, the roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that the roadway is icy. O. Reg. 366/18, s. 8.

(3) Subject to section 5.1, the standard for treating icy roadways is to treat the icy roadway within the time set out in Table 2 to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that a roadway is icy. O. Reg. 366/18, s. 8.

(4) For the purposes of this section, treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand. O. Reg. 366/18, s. 8.

(5) For greater certainty, this section applies in respect of ice formation on bicycle lanes on a roadway, but does not apply to other types of bicycle facilities. O. Reg. 366/18, s. 8.

TABLE 1
ICE FORMATION PREVENTION

Class of Highway	Time
1	6 hours
2	8 hours
3	16 hours
4	24 hours
5	24 hours

O. Reg. 366/18, s. 8.

TABLE 2
TREATMENT OF ICY ROADWAYS

Class of Highway	Time
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

O. Reg. 366/18, s. 8.

Icy roadways, significant weather event

5.1 (1) If a municipality declares a significant weather event relating to ice, the standard for treating icy roadways until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to treat icy roadways, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 8.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to any ice which forms or may be present until the applicable time in Table 2 to section 5 expires after the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 8.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) treat icy roadways in accordance with section 5. O. Reg. 366/18, s. 8.

Potholes

6. (1) If a pothole exceeds both the surface area and depth set out in Table 1, 2 or 3 to this section, as the case may be, the standard is to repair the pothole within the time set out in Table 1, 2 or 3, as appropriate, after becoming aware of the fact. O. Reg. 239/02, s. 6 (1); O. Reg. 366/18, s. 8 (1).

(1.1) For the purposes of this section, the surface area and depth of a pothole may be determined in accordance with subsections (1.2) and (1.3), as applicable, by a municipal employee, agent or contractor whose duties or responsibilities include one or more of the following:

1. Patrolling highways.
2. Performing highway maintenance activities.
3. Supervising staff who perform activities described in paragraph 1 or 2. O. Reg. 366/18, s. 8 (2).

(1.2) The depth and surface area of a pothole may be determined by,

(a) performing an actual measurement; or

(b) performing a visual estimate. O. Reg. 366/18, s. 8 (2).

(1.3) For the purposes of this section, the surface area of a pothole does not include any area that is merely depressed and not yet broken fully through the surface of the roadway. O. Reg. 366/18, s. 8 (2).

(2) A pothole is deemed to be in a state of repair if its surface area or depth is less than or equal to that set out in Table 1, 2 or 3, as appropriate. O. Reg. 239/02, s. 6 (2); O. Reg. 47/13, s. 6.

TABLE 1
POTHOLES ON PAVED SURFACE OF ROADWAY

Class of Highway	Surface Area	Depth	Time
1	600 cm^2	8 cm	4 days
2	800 cm^2	8 cm	4 days
3	1000 cm^2	8 cm	7 days
4	1000 cm^2	8 cm	14 days
5	1000 cm^2	8 cm	30 days

O. Reg. 239/02, s. 6, Table 1.

TABLE 2
POTHOLES ON NON-PAVED SURFACE OF ROADWAY

Class of Highway	Surface Area	Depth	Time
3	1500 cm^2	8 cm	7 days
4	1500 cm^2	10 cm	14 days
5	1500 cm^2	12 cm	30 days

O. Reg. 239/02, s. 6, Table 2.

TABLE 3
POTHOLES ON PAVED OR NON-PAVED SURFACE OF SHOULDER

Class of Highway	Surface Area	Depth	Time
1	1500 cm^2	8 cm	7 days
2	1500 cm^2	8 cm	7 days
3	1500 cm^2	8 cm	14 days
4	1500 cm^2	10 cm	30 days
5	1500 cm^2	12 cm	60 days

O. Reg. 239/02, s. 6, Table 3.

Shoulder drop-offs

7. (1) If a shoulder drop-off is deeper than 8 cm, for a continuous distance of 20 metres or more, the standard is to repair the shoulder drop-off within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 9 (1).

(2) A shoulder drop-off is deemed to be in a state of repair if its depth is less than 8 cm. O. Reg. 366/18, s. 9 (1).

(3) In this section,

"shoulder drop-off" means the vertical differential, where the paved surface of the roadway is higher than the surface of the shoulder, between the paved surface of the roadway and the paved or non-paved surface of the shoulder. O. Reg. 239/02, s. 7 (3).

TABLE
SHOULDER DROP-OFFS

Class of Highway	Time
1	4 days
2	4 days
3	7 days
4	14 days
5	30 days

O. Reg. 366/18, s. 9 (2).

Cracks

8. (1) If a crack on the paved surface of a roadway is greater than 5 cm wide and 5 cm deep for a continuous distance of three metres or more, the standard is to repair the crack within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 10 (1).

(2) A crack is deemed to be in a state of repair if its width or depth is less than or equal to 5 cm. O. Reg. 366/18, s. 10 (1).

TABLE
CRACKS

Column 1 Class of Highway	Column 2 Time
1	30 days
2	30 days
3	60 days
4	180 days
5	180 days

O. Reg. 366/18, s. 10 (2).

Debris

9. (1) If there is debris on a roadway, the standard is to deploy resources, as soon as practicable after becoming aware of the fact, to remove the debris. O. Reg. 239/02, s. 9 (1); O. Reg. 366/18, s. 11.

(2) In this section,

"debris" means any material (except snow, slush or ice) or object on a roadway,

(a) that is not an integral part of the roadway or has not been intentionally placed on the roadway by a municipality, and

(b) that is reasonably likely to cause damage to a motor vehicle or to injure a person in a motor vehicle. O. Reg. 239/02, s. 9 (2); O. Reg. 47/13, s. 9.

Luminaires

10. (0.1) REVOKED: O. Reg. 366/18, s. 12.

(1) The standard for the frequency of inspecting all luminaires to check to see that they are functioning is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 366/18, s. 12.

(2) For conventional illumination, if three or more consecutive luminaires on the same side of a highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 12.

(3) For conventional illumination and high mast illumination, if 30 per cent or more of the luminaires on any kilometre of highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 366/18, s. 12.

(4) Despite subsection (2), for high mast illumination, if all of the luminaires on consecutive poles on the same side of a highway are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires. O. Reg. 366/18, s. 12.

(5) Despite subsections (1), (2) and (3), for conventional illumination and high mast illumination, if more than 50 per cent of the luminaires on any kilometre of a Class 1 highway with a speed limit of 90 kilometres per hour or more are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires. O. Reg. 366/18, s. 12.

(6) Luminaires are deemed to be in a state of repair,

(a) for the purpose of subsection (2), if the number of non-functioning consecutive luminaires on the same side of a highway does not exceed two;

(b) for the purpose of subsection (3), if more than 70 per cent of luminaires on any kilometre of highway are functioning;

(c) for the purpose of subsection (4), if one or more of the luminaires on consecutive poles on the same side of a highway are functioning;

(d) for the purpose of subsection (5), if more than 50 per cent of luminaires on any kilometre of highway are functioning. O. Reg. 366/18, s. 12.

(7) In this section,

"conventional illumination" means lighting, other than high mast illumination, where there are one or more luminaires per pole;

"high mast illumination" means lighting where there are three or more luminaires per pole and the height of the pole exceeds 20 metres;

"luminaire" means a complete lighting unit consisting of,

(a) a lamp, and

(b) parts designed to distribute the light, to position or protect the lamp and to connect the lamp to the power supply. O. Reg. 239/02, s. 10 (7).

TABLE
LUMINAIRES

Class of Highway	Time
1	7 days
2	7 days
3	14 days
4	14 days
5	14 days

O. Reg. 239/02, s. 10, Table.

Signs

11. (0.1) The standard for the frequency of inspecting signs of a type listed in subsection (2) to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 7 (1); O. Reg. 47/13, s. 11 (1); O. Reg. 366/18, s. 13.

(0.2) A sign that has been inspected in accordance with subsection (0.1) is deemed to be in a state of repair with respect to the retro-reflectivity requirements of the Ontario Traffic Manual until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the sign has ceased to meet these requirements. O. Reg. 47/13, s. 11 (2).

(1) If any sign of a type listed in subsection (2) is illegible, improperly oriented, obscured or missing, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair or replace the sign. O. Reg. 239/02, s. 11 (1); O. Reg. 23/10, s. 7 (2); O. Reg. 366/18, s. 13.

(2) This section applies to the following types of signs:

1. Checkerboard.

2. Curve sign with advisory speed tab.
3. Do not enter.

3.1 Load Restricted Bridge.

3.2 Low Bridge.

3.3 Low Bridge Ahead.

4. One Way.
5. School Zone Speed Limit.
6. Stop.
7. Stop Ahead.
8. Stop Ahead, New.
9. Traffic Signal Ahead, New.
10. Two-Way Traffic Ahead.
11. Wrong Way.
12. Yield.
13. Yield Ahead.
14. Yield Ahead, New. O. Reg. 239/02, s. 11 (2); O. Reg. 23/10, s. 7 (3).

Regulatory or warning signs

12. (1) The standard for the frequency of inspecting regulatory signs or warning signs to check to see that they meet the retro-reflectivity requirements of the Ontario Traffic Manual is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 8; O. Reg. 47/13, s. 12 (1); O. Reg. 366/18, s. 13.

(1.1) A regulatory sign or warning sign that has been inspected in accordance with subsection (1) is deemed to be in a state of repair with respect to the retro-reflectivity requirements of the Ontario Traffic Manual until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the sign has ceased to meet these requirements. O. Reg. 47/13, s. 12 (2).

(2) If a regulatory sign or warning sign is illegible, improperly oriented, obscured or missing, the standard is to repair or replace the sign within the time set out in the Table to this section after becoming aware of the fact. O. Reg. 23/10, s. 8; O. Reg. 366/18, s. 13.

(3) In this section,

"regulatory sign" and "warning sign" have the same meanings as in the Ontario Traffic Manual, except that they do not include a sign listed in subsection 11 (2) of this Regulation. O. Reg. 23/10, s. 8.

TABLE
REGULATORY AND WARNING SIGNS

Class of Highway	Time
1	7 days
2	14 days
3	21 days
4	30 days
5	30 days

O. Reg. 239/02, s. 12, Table.

Traffic control signal systems

13. (1) If a traffic control signal system is defective in any way described in subsection (2), the standard is to deploy resources as soon as practicable after becoming aware of the defect to repair the defect or replace the defective component of the traffic control signal system. O. Reg. 239/02, s. 13 (1); O. Reg. 366/18, s. 13.

(2) This section applies if a traffic control signal system is defective in any of the following ways:

1. One or more displays show conflicting signal indications.

2. The angle of a traffic control signal or pedestrian control indication has been changed in such a way that the traffic or pedestrian facing it does not have clear visibility of the information conveyed or that it conveys confusing information to traffic or pedestrians facing other directions.
3. A phase required to allow a pedestrian or vehicle to safely travel through an intersection fails to occur.
4. There are phase or cycle timing errors interfering with the ability of a pedestrian or vehicle to safely travel through an intersection.
5. There is a power failure in the traffic control signal system.
6. The traffic control signal system cabinet has been displaced from its proper position.
7. There is a failure of any of the traffic control signal support structures.
8. A signal lamp or a pedestrian control indication is not functioning.
9. Signals are flashing when flashing mode is not a part of the normal signal operation. O. Reg. 239/02, s. 13 (2).

(3) Despite subsection (1) and paragraph 8 of subsection (2), if the posted speed of all approaches to the intersection or location of the non-functioning signal lamp or pedestrian control indication is less than 80 kilometres per hour and the signal that is not functioning is a green or a pedestrian "walk" signal, the standard is to repair or replace the defective component by the end of the next business day. O. Reg. 239/02, s. 13 (3); O. Reg. 366/18, s. 13.

(4) In this section and section 14,

"cycle" means a complete sequence of traffic control indications at a location;

"display" means the illuminated and non-illuminated signals facing the traffic;

"indication" has the same meaning as in the *Highway Traffic Act*;

"phase" means a part of a cycle from the time where one or more traffic directions receive a green indication to the time where one or more different traffic directions receive a green indication;

"power failure" means a reduction in power or a loss in power preventing the traffic control signal system from operating as intended;

"traffic control signal" has the same meaning as in the *Highway Traffic Act*;

"traffic control signal system" has the same meaning as in the *Highway Traffic Act*. O. Reg. 239/02, s. 13 (4).

Traffic control signal system sub-systems

14. (1) The standard is to inspect, test and maintain the following traffic control signal system sub-systems once per calendar year, with each inspection taking place not more than 16 months from the previous inspection:

1. The display sub-system, consisting of traffic signal and pedestrian crossing heads, physical support structures and support cables.
2. The traffic control sub-system, including the traffic control signal cabinet and internal devices such as timer, detection devices and associated hardware, but excluding conflict monitors.
3. The external detection sub-system, consisting of detection sensors for all vehicles, including emergency and railway vehicles and pedestrian push- buttons. O. Reg. 239/02, s. 14 (1); O. Reg. 47/13, s. 13 (1); O. Reg. 366/18, s. 13.

(1.1) A traffic control signal system sub-system that has been inspected, tested and maintained in accordance with subsection (1) is deemed to be in a state of repair until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the traffic control signal system sub-system has ceased to be in a state of repair. O. Reg. 47/13, s. 13 (2).

(2) The standard is to inspect, test and maintain conflict monitors every five to seven months and at least twice per calendar year. O. Reg. 239/02, s. 14 (2); O. Reg. 47/13, s. 13 (3); O. Reg. 366/18, s. 13.

(2.1) A conflict monitor that has been inspected, tested and maintained in accordance with subsection (2) is deemed to be in a state of repair until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge that the conflict monitor has ceased to be in a state of repair. O. Reg. 47/13, s. 13 (4).

(3) In this section,

"conflict monitor" means a device that continually checks for conflicting signal indications and responds to a conflict by emitting a signal. O. Reg. 239/02, s. 14 (3).

Bridge deck spalls

15. (1) If a bridge deck spall exceeds both the surface area and depth set out in the Table to this section, the standard is to repair the bridge deck spall within the time set out in the Table after becoming aware of the fact. O. Reg. 239/02, s. 15 (1); O. Reg. 366/18, s. 13.

(2) A bridge deck spall is deemed to be in a state of repair if its surface area or depth is less than or equal to that set out in the Table. O. Reg. 239/02, s. 15 (2); O. Reg. 47/13, s. 14.

(3) In this section,

"bridge deck spall" means a cavity left by one or more fragments detaching from the paved surface of the roadway or shoulder of a bridge. O. Reg. 239/02, s. 15 (3).

TABLE
BRIDGE DECK SPALLS

Class of Highway	Surface Area	Depth	Time
1	600 cm^2	8 cm	4 days
2	800 cm^2	8 cm	4 days
3	1,000 cm^2	8 cm	7 days
4	1,000 cm^2	8 cm	7 days
5	1,000 cm^2	8 cm	7 days

O. Reg. 239/02, s. 15, Table.

Roadway surface discontinuities

16. (1) If a surface discontinuity on a roadway, other than a surface discontinuity on a bridge deck, exceeds the height set out in the Table to this section, the standard is to repair the surface discontinuity within the time set out in the Table after becoming aware of the fact. O. Reg. 23/10, s. 9; O. Reg. 366/18, s. 13.

(1.1) A surface discontinuity on a roadway, other than a surface discontinuity on a bridge deck, is deemed to be in a state of repair if its height is less than or equal to the height set out in the Table to this section. O. Reg. 47/13, s. 15.

(2) If a surface discontinuity on a bridge deck exceeds five centimetres, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the surface discontinuity on the bridge deck. O. Reg. 23/10, s. 9; O. Reg. 366/18, s. 13.

(2.1) A surface discontinuity on a bridge deck is deemed to be in a state of repair if its height is less than or equal to five centimetres. O. Reg. 47/13, s. 15.

(3) In this section,

"surface discontinuity" means a vertical discontinuity creating a step formation at joints or cracks in the paved surface of the roadway, including bridge deck joints, expansion joints and approach slabs to a bridge. O. Reg. 23/10, s. 9.

TABLE
SURFACE DISCONTINUITIES

Class of Highway	Height	Time
1	5 cm	2 days
2	5 cm	2 days
3	5 cm	7 days
4	5 cm	21 days
5	5 cm	21 days

O. Reg. 239/02, s. 16, Table.

Sidewalk surface discontinuities

16.1 (1) The standard for the frequency of inspecting sidewalks to check for surface discontinuity is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 23/10, s. 10; O. Reg. 47/13, s. 16 (1); O. Reg. 366/18, s. 13.

(1.1) A sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair with respect to any surface discontinuity until the next inspection in accordance with that subsection, provided that the municipality does not acquire actual knowledge of the presence of a surface discontinuity in excess of two centimetres. O. Reg. 47/13, s. 16 (2).

(2) If a surface discontinuity on or within a sidewalk exceeds two centimetres, the standard is to treat the surface discontinuity within 14 days after acquiring actual knowledge of the fact. O. Reg. 366/18, s. 14.

(2.1) REVOKED: O. Reg. 366/18, s. 14.

(3) A surface discontinuity on or within a sidewalk is deemed to be in a state of repair if it is less than or equal to two centimetres. O. Reg. 366/18, s. 14.

(4) For the purpose of subsection (2), treating a surface discontinuity on or within a sidewalk means taking reasonable measures to protect users of the sidewalk from the discontinuity, including making permanent or temporary repairs, alerting users' attention to the discontinuity or preventing access to the area of discontinuity. O. Reg. 366/18, s. 14.

(5) In this section,

"surface discontinuity" means a vertical discontinuity creating a step formation at any joint or crack in the surface of the sidewalk or any vertical height difference between a utility appurtenance found on or within the sidewalk and the surface of the sidewalk. O. Reg. 366/18, s. 14.

Encroachments, area adjacent to sidewalk

16.2 (1) The standard for the frequency of inspecting an area adjacent to a sidewalk to check for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection. O. Reg. 366/18, s. 15.

(2) The area adjacent to a sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair in respect of any encroachment present. O. Reg. 366/18, s. 15.

(3) For greater certainty, the area adjacent to a sidewalk begins at the outer edges of a sidewalk and ends at the lesser of the limit of the highway, the back edge of a curb if there is a curb and a maximum of 45 cm. O. Reg. 366/18, s. 15.

(4) The area adjacent to a sidewalk is deemed to be in a state of repair in respect of any encroachment present unless the encroachment is determined by a municipality to be highly unusual given its character and location or to constitute a significant hazard to pedestrians. O. Reg. 366/18, s. 15.

(5) If a municipality determines that an encroachment is highly unusual given its character and location or constitutes a significant hazard to pedestrians, the standard is to treat the encroachment within 28 days after making such a determination, and the encroachment is deemed in a state of repair for 28 days from the time of the determination by the municipality. O. Reg. 366/18, s. 15.

(6) For the purpose of subsection (4), treating an encroachment means taking reasonable measures to protect users, including making permanent or temporary repairs, alerting users' attention to the encroachment or preventing access to the area of the encroachment. O. Reg. 366/18, s. 15.

Snow accumulation on sidewalks

16.3 (1) Subject to section 16.4, the standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is,

a) to reduce the snow to a depth less than or equal to 8 centimetres within 48 hours; and

b) to provide a minimum sidewalk width of 1 metre. O. Reg. 366/18, s. 15.

(2) If the depth of snow accumulation on a sidewalk is less than or equal to 8 centimetres, the sidewalk is deemed to be in a state of repair in respect of snow accumulation. O. Reg. 366/18, s. 15.

(3) If the depth of snow accumulation on a sidewalk exceeds 8 centimetres while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair with respect to snow accumulation, until 48 hours after the snow accumulation ends. O. Reg. 366/18, s. 15.

(4) For the purposes of this section, the depth of snow accumulation on a sidewalk may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3) with necessary modifications. O. Reg. 366/18, s. 15.

(5) For the purposes of this section, addressing snow accumulation on a sidewalk includes,

(a) plowing the sidewalk;

(b) salting the sidewalk;

(c) applying abrasive materials to the sidewalk;

(d) applying other chemical or organic agents to the sidewalk; or

(e) any combination of the methods described in clauses (a) to (d). O. Reg. 366/18, s. 15.

Snow accumulation on sidewalks, significant weather event

16.4 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 15.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any snow present until 48 hours following the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 15.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address snow accumulation on sidewalks in accordance with section 16.3. O. Reg. 366/18, s. 15.

Ice formation on sidewalks and icy sidewalks

16.5 (1) Subject to section 16.6, the standard for the prevention of ice formation on sidewalks is to,

(a) monitor the weather in accordance with section 3.1 in the 24-hour period preceding an alleged formation of ice on a sidewalk; and

(b) treat the sidewalk if practicable to prevent ice formation or improve traction within 48 hours if the municipality determines that there is a substantial probability of ice forming on a sidewalk, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 15.

(2) If ice forms on a sidewalk even though the municipality meets the standard set out in subsection (1), the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the municipality first becomes aware of the fact that the sidewalk is icy. O. Reg. 366/18, s. 15.

(3) The standard for treating icy sidewalks after the municipality becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated. O. Reg. 366/18, s. 15.

(4) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk. O. Reg. 366/18, s. 15.

Icy sidewalks, significant weather event

16.6 (1) If a municipality declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the municipality deems appropriate to do so. O. Reg. 366/18, s. 15.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any ice which forms or is present until 48 hours after the declaration of the end of the significant weather event by the municipality. O. Reg. 366/18, s. 15.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address the prevention of ice formation on sidewalks or treat icy sidewalks in accordance with section 16.5. O. Reg. 366/18, s. 15.

Winter sidewalk patrol

16.7 (1) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard for patrolling sidewalks is to patrol sidewalks that the municipality selects as representative of its sidewalks at intervals deemed necessary by the municipality. O. Reg. 366/18, s. 15.

(2) Patrolling a sidewalk consists of visually observing the sidewalk, either by driving by the sidewalk on the adjacent roadway or by driving or walking on the sidewalk or by electronically monitoring the sidewalk, and may be performed by persons responsible for patrolling roadways or sidewalks or by persons responsible for or performing roadway or sidewalk maintenance activities. O. Reg. 366/18, s. 15.

Closure of a highway

16.8 (1) When a municipality closes a highway or part of a highway pursuant to its powers under the Act, the highway is deemed to be in a state of repair in respect of all conditions described in this Regulation from the time of the closure until the highway is re-opened by the municipality. O. Reg. 366/18, s. 15.

(2) For the purposes of subsection (1), a highway or part of a highway is closed on the earlier of,

(a) when a municipality passes a by-law to close the highway or part of the highway; and

(b) when a municipality has taken such steps as it determines necessary to temporarily close the highway or part of a highway. O. Reg. 366/18, s. 15.

Declaration of significant weather event

16.9. A municipality declaring the beginning of a significant weather event or declaring the end of a significant weather event under this Regulation shall do so in one or more of the following ways:

1. By posting a notice on the municipality's website.
2. By making an announcement on a social media platform, such as Facebook or Twitter.
3. By sending a press release or similar communication to internet, newspaper, radio or television media.
4. By notification through the municipality's police service.
5. By any other notification method required in a by-law of the municipality. O. Reg. 366/18, s. 15.

REVIEW OF REGULATION

Review

17. (1) The Minister of Transportation shall conduct a review of this Regulation and Ontario Regulation 612/06 (Minimum Maintenance Standards for Highways in the City of Toronto) made under the *City of Toronto Act, 2006* every five years. O. Reg. 613/06, s. 2.

(2) Despite subsection (1), the first review after the completion of the review started before the end of 2007 shall be started five years after the day Ontario Regulation 23/10 is filed. O. Reg. 23/10, s. 11.

18. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 239/02, s. 18.

Back to top

15.2 USEFUL SERVICE LIFE

Asset Category	Useful Service Life
Other Infrastructure	
Playground Equipment	20
Artificial Turf Field	20
Baseball Diamonds	20
Washrooms, Pavilions, Concessions & Picnic Shelters	30
Docks	25
Building Envelop	40
Building Components and Improvements	
Electrical, Plumbing, etc.	20
HVAC Systems	10
Roofs (Metal)	30
Roofs (Shingled / Gravel & Tar)	20
Site works – Asphalt parking lots	20
Elevators	25
Machinery & Equipment	
General Equipment	15
Heavy Construction Equipment	15
Vehicles	
Cars and Light Trucks	5
Fire Trucks	20
Heavy Trucks	10
IT Infrastructure	
Hardware	3
Software	3
Telephone System	5
Furniture	5
Road Infrastructure	
Road Surface - Gravel	5
Road Surface – Surface Treatment	8
Road Surface – Paved	20
Road Base	30
Signage	25
Water & Sewer Infrastructure	
Water	40
Sewer	40
Drainage	50
Landfill Site Cell Area	40

15.3 CURRENT LEVEL OF SERVICE

As per Ontario Regulation 588/17 qualitative descriptions and the technical metrics set out for all core municipal infrastructure. All data is from 2018.

TABLE 1
Water Assets

Service attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
Scope	**1. Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system.** The Little Current municipal water system extends from 308 Highway 540 to 9130 Highway 6 **Appendix 16.3A.** The Sheguiandah municipal water system extends from 68 Orr Side Rd to 160 Townline Rd. to 10993 Highway 540 (including Sheguiandah Hamlet) **Appendix 16.3B.** **2. Description, which may include maps, of the user groups or areas of the municipality that have fire flow.** Little Current has access to approximately 110 fire hydrants between 308 Highway 540 to 9131 Highway 6 **Appendix 16.3C.** Sheguiandah has access to approximately 22 fire hydrants between 10700 Highway 6 to 126 Townline Rd. 11001 Highway 6 (including Sheguiandah Hamlet) **Appendix 16.3D.**	**1. Percentage of properties connected to the municipal water system.** 22.43 % of total properties are connected to the municipal water system. Little Current 20.22 % Sheguiandah 2.21 % **2. Percentage of properties where fire flow is available.** Approximately 22.43 % properties have fire flow available (fire hydrant access). Sheguiandah approximately 22 fire hydrants Little Current approximately 110 fire hydrants
Reliability	**Description of boil water advisories and service interruptions.** An example of the boil water advisory can be found in **Appendix 16.3E.**	**1. The 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.** 0 (zero) days for 787 total properties connected to the municipal water system. ***2.*** **The number of connection-days per year due to water main breaks**

Service attribute	Community levels of service (qualitative descriptions)	Technical levels of service (technical metrics)
		compared to the total number of properties connected to the municipal water system. 0 (zero) days for 787 total properties connected to the municipal water system.

Table 2
Waste Water Assets

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	**Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal wastewater system.** The Little Current municipal wastewater system extends from Highway 540 & Howland Road to Highway 6 & Harbourview Road **Appendix 16.3F.**	**Percentage of properties connected to the municipal wastewater system.** 19.79 % of total properties are connected to the municipal wastewater system.
Reliability	**1. 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.** Controlled releases take place in order to prevent backup.	**1. The number 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.** Operating within regulated capacity limits, compared to approximately 685 properties are connected to the municipal wastewater system. **2. The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system.** 1 incident in 2018 compared to approximately 685 properties are connected to the municipal wastewater system.

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
		3. The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system. 1 incident in 2018 compared to approximately 685 properties are connected to the municipal wastewater system.

Table 3
Storm Water Management Assets

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	**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.** The municipality has storm drains along the roadways. Drainage from the west end of Little Current flows towards the downtown core and into the North Channel.	**1. Percentage of properties in municipality resilient to a 100-year storm.** Approximately 99% **2. Percentage of the municipal stormwater management system resilient to a 5-year storm.** Approximately 95%-99%

TABLE 4
Roads

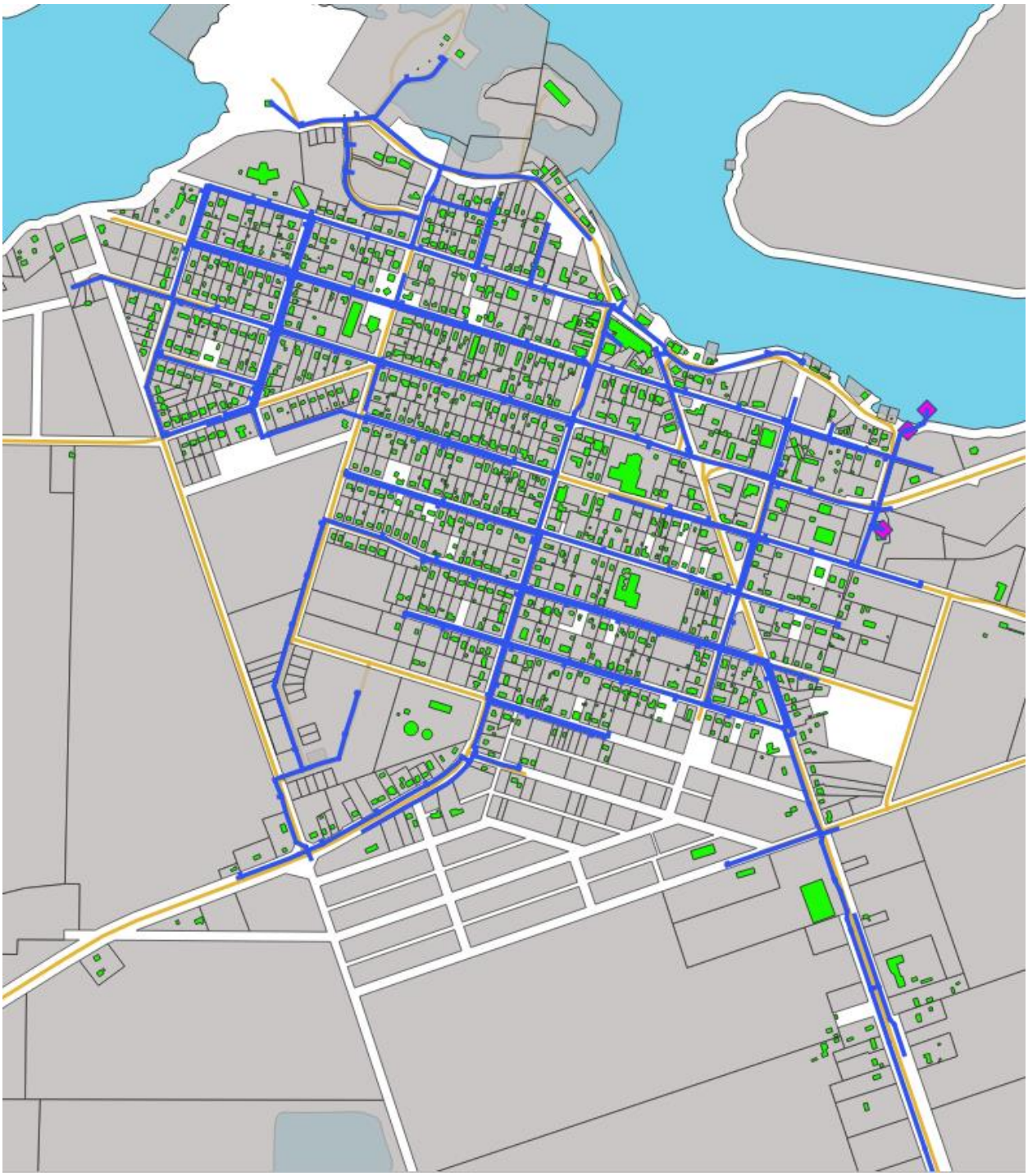
Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	**Description, which may include maps, of the road network in the municipality and its level of connectivity.** The Little Current downtown core is connected to both highway 540 & highway 6 by Worthington Street and Manitowaning Road respectively. In the rural, Townline Road, Bidwell Road and Indian Mountain Road connect highway 540 to highway 6. These two highways connect Little Current and the Town of NEMI to the remainder of Manitoulin Island.	**Number of lane-kilometres of each of arterial roads, collector roads and local roads as a proportion of square kilometres of land area of the municipality.** 149.80 km
Quality	**Description or images that illustrate the different levels of road class pavement condition.** Excellent - No potholes. No crack filling required. Complies with engineering standards. Good - Some potholes. Minimal crack filing required. Complies with engineering standards. Fair - Evidence of deterioration. Has numerous potholes and regular crack filling requirements. Complies with engineering standards. Acceptable - Pavement deteriorating. Extensive potholes and cracks. Joint failures. Needs resurfacing. Complies with engineering standards.	**1. For paved roads in the municipality, the average pavement condition index value.** Pavement condition index value data is not available but can be roughly estimated (based on qualitative condition assessment) at 65 **2. For unpaved roads in the municipality, the average surface condition (e.g. excellent, good, fair or poor).** Average surface condition rating for unpaved road surface is *good.*

TABLE 5
Bridges and Culverts

Column 1 Service attribute	Column 2 Community levels of service (qualitative descriptions)	Column 3 Technical levels of service (technical metrics)
Scope	**Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists).** The municipality has one bridge that supports local traffic, mainly motor vehicles and less than 10% of traffic being trucks. A 7 meters long single span bridge with a road way width of 4.3 meters and a deck-riding surface for approximately 37.8 meters squared (m^2).	**Percentage of bridges in the municipality with loading or dimensional restrictions.** 100% - Limit street bridge: Road way width of 4.3 meters
Quality	**1. Description or images of the condition of bridges and how this would affect use of the bridges.** The current condition of the bridge is good. Complies with engineering standards. No immediate risk to health or safety. Decrease in condition will result in an increase of minor maintenance plus cyclic maintenance. **2. Description or images of the condition of culverts and how this would affect use of the culverts.** The current condition of culverts if fair. Regular use of the culverts is acceptable. Minor cyclic maintenance. Complies with engineering standards. No immediate risk to health or safety. Decrease in condition will result in an increase of minor maintenance plus cyclic maintenance.	**1. For bridges in the municipality, the average bridge condition index value.** Bridge Condition Index not available. Good condition rating – as per November 25th 2020 engineer inspection report by Tulloch Engineering.

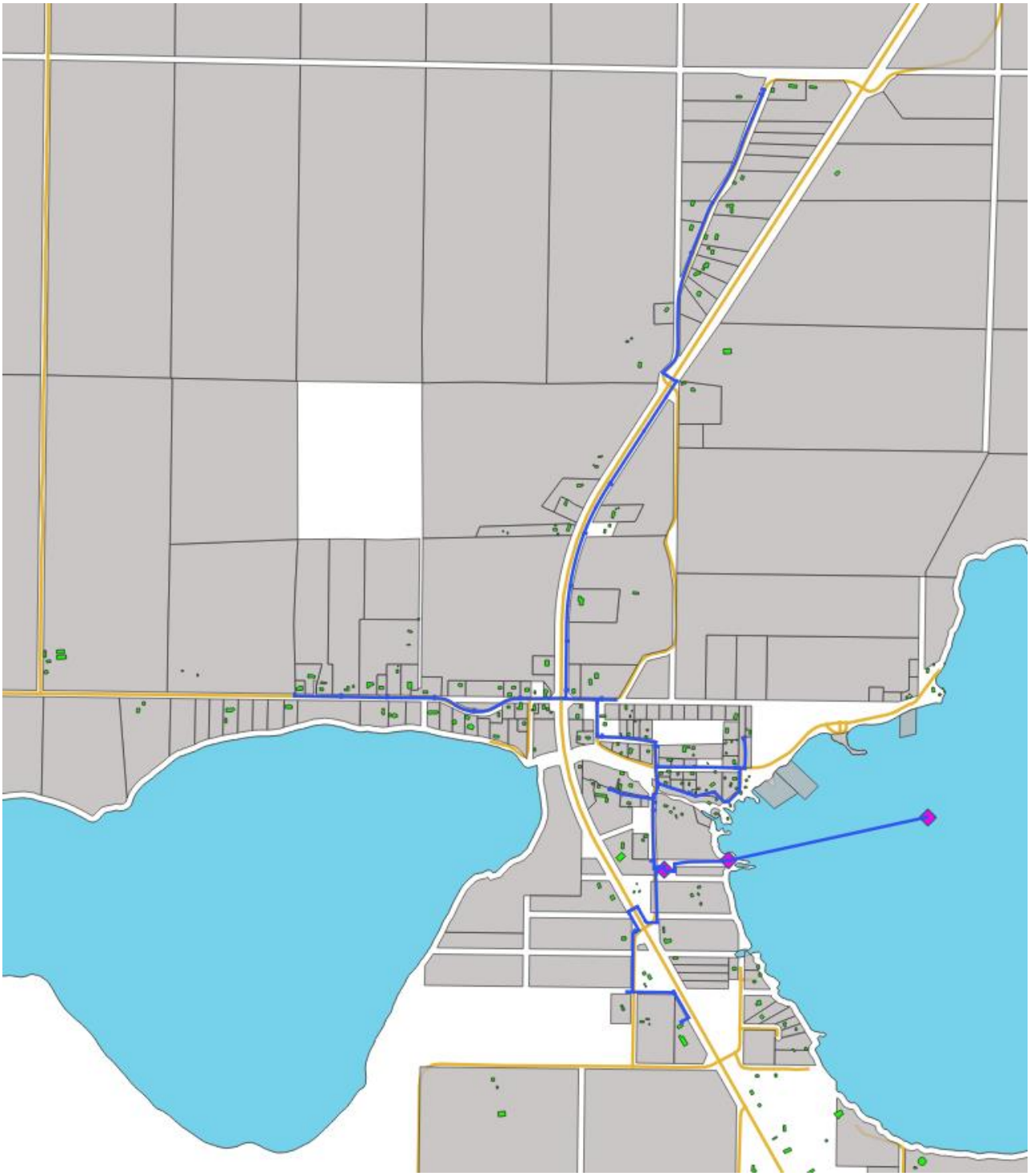
15.4 LITTLE CURRENT – MUNICIPAL WATER SYSTEM

Little Current user groups / areas connected to municipal water system. Building footprints are displayed in green, with water service shown in blue, and the water system facilities in magenta.



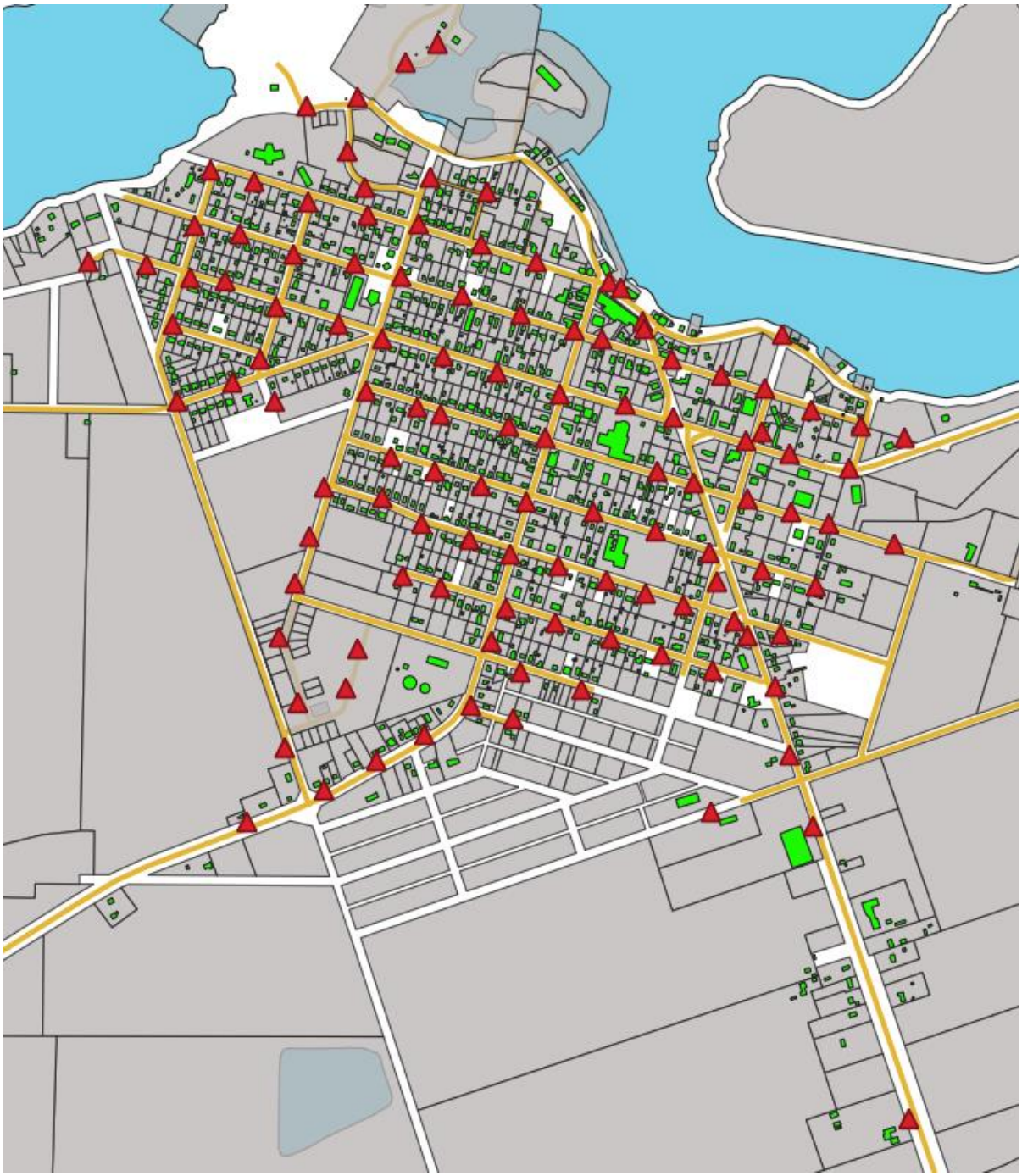
15.5 SHEGUINDAH– MUNICIPAL WATER SYSTEM

Sheguiandah user groups / areas connected to municipal water system (outlined on roadways in blue). Building footprints are displayed in green, with water service shown in blue, and the water system facilities in magenta.



15.6 LITTLE CURRENT – FIRE FLOW

Little Current user groups / areas that have access to fire flow (fire hydrants). Building footprints are displayed in green, with hydrants displayed with a red triangle symbol.

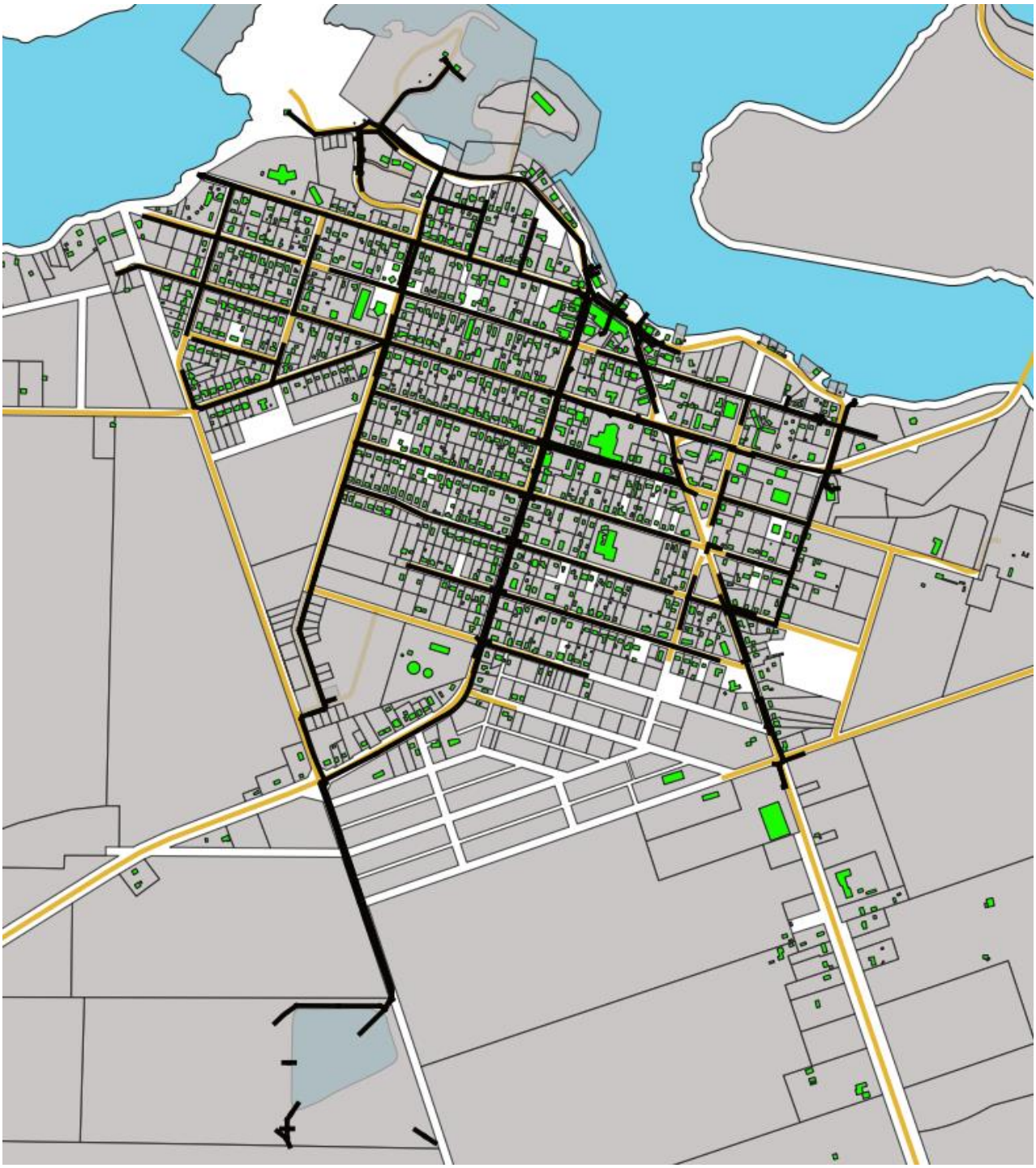


15.7 SHEGUIANDAH – FIRE FLOW

Sheguiandah user groups / areas connected to municipal water system. Building footprints are displayed in green, with hydrants displayed with a red triangle symbol.

15.8 LITTLE CURRENT – MUNICIPAL WASTEWATER SYSTEM

Little Current user groups / areas that are connected to municipal waste water system. Building footprints are displayed in green, with the sewer network shown in black.



15.9 BOIL WATER ADVISORY NOTICE

Box 608, Little Current, Ontario, P0P 1K0
705-368-3500

Notice
BOIL WATER ADVISORY

The municipal water system serving the properties located in _____, has had a adverse water sample and as a result, we are issuing a Boil Water Advisory effective _____ Because of an interruption in service there is a risk that contaminants may enter the distribution system; therefore, a Boil Water Advisory is in effect until further notice. You will be notified when the boil water advisory is lifted.

If water pressure is lost for any reason, there is a risk that contaminants may enter the distribution system. Therefore, it is recommended you take two steps:

Minimize the use of water (This will help to prevent loss of pressure)

Assume the water may not be safe to drink, use an alternative supply of drinking water or bring your drinking water to a rapid, rolling boil for one minute before use.

Following the restoration of water pressure, municipal employees will be testing the water and restoring full disinfection of the water system; *however,* it is recommended you take the following precautions in your home:

- Run the water until it feels noticeably cool and continue to allow the water to run for another minute. (This will flush the plumbing in your home.)
- Remove, rinse and replace any screen on the tap.
- For 72 hours following the return of power and water pressure, assume the water may not be safe to drink; use an alternative supply of drinking water or bring your drinking water to a rapid, rolling boil for one minute before use. This precaution applies to water for drinking, cooking and oral hygiene.
- Other household uses of water such as cleaning, clothes washing, dishwashing and bathing can commence immediately after the return of water pressure.
- If you have a water softener or other water treatment attached to the cold water supply line, you should consider additional flushing. Ask your supplier for appropriate directions.

For more information contact the municipal office, telephone (705) 368-3500