

ASSET MANAGEMENT PLAN

Asset Management Plan
Township Of Val Rita-Harty

2025



Doing What We Can, Well: A Realistic and Sustainable Infrastructure Plan for Val Rita-Harty

Preamble

This Asset Management Plan (AMP) has been developed by the Council of the Township of Val Rita-Harty (VRH) with support from E4m (Expertise for Municipalities). E4m was engaged to assist in the development of this plan and to help the community prepare for a sustainable and resilient future. The plan represents a significant evolution in municipal financial planning, asset stewardship, and service delivery alignment. It is designed to meet the requirements of Ontario Regulation 588/17 while positioning VRH for informed and adaptive infrastructure decision-making that is understandable to the public, based on consistent logic, and supported by evidence that can be clearly explained and justified.

This AMP is not merely a compliance exercise—it is a blueprint for purposeful action. It acknowledges fiscal constraints, aging infrastructure, and demographic realities, while empowering Council and the community to make informed, responsible decisions about which services to maintain, adapt, or transition over time. The plan emphasizes clarity, accountability, and sustainability, ensuring that VRH can remain viable, safe, and vibrant for current and future generations.

Council has adopted a new financial framework that separates the municipal budget into three clear components:

1. **Service Delivery** – which reflect the actual cost of delivering each municipal service at its defined level of service (LOS)
2. **Lifecycle Investment** – which estimate the annualized cost required to maintain current assets in a state of good repair based on useful life and replacement value
3. **Capital Renewal and Upgrades** – which reflect major rehabilitation, replacement, or enhancement projects needed to preserve or improve service levels

In addition, separate, stand-alone budgets have been established for:

- Solar Project(s) (green energy initiatives)
- Cemetery Operations (regulated public health and heritage function)
- Water and Wastewater Systems (full cost recovery under provincial regulation)

These distinctions support clearer reporting, better cost attribution, and improved public understanding of how tax dollars are invested.

Foundational Assumptions and Data Sources

In preparing this AMP, the following assumptions and methodologies were applied:

- E4m has relied on the asset inventory prepared by KPMG and PSD Citywide as the foundational dataset.
- Asset values were inflation-adjusted to 2025 using a compounded 5% annual rate unless otherwise noted. This rate reflects a conservative approximation of inflation specific to construction and infrastructure-related costs over the period 2022–2025. It accounts for rising material prices, labour shortages, fuel and transportation costs, and global supply chain volatility that have significantly impacted capital project delivery across Ontario. A compounded rate approach was used to represent the cumulative effects of inflation across multiple years, ensuring that asset values reflect estimated replacement costs in today's market.
- The total asset value has not increased significantly since 2023 and as such no revaluation of existing assets has occurred due to the absence of material capital investments.
- Through our review of financial records and Council minutes, we determined that historical investment in infrastructure has been insufficient to trigger changes in asset condition or valuation.
- All lifecycle cost projections are based on accepted industry standards, expected useful life, and risk-based prioritization.
- This AMP does not include a full technical re-evaluation of physical asset condition or geospatial analysis but rather reflects a policy-based strategic planning lens designed to guide Council in making sustainable and defensible long-term decisions.

E4m's work is based on the best available information at the time of writing and is intended to support the Township's statutory compliance, public transparency, and financial resilience.

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Executive Summary

The 2025 Asset Management Plan (AMP) Update for the Township of Val Rita-Harty (VRH) sets a new course toward long-term sustainability, resilience, and transparency. VRH is facing a fundamental truth: while it owns nearly \$96 million in infrastructure, it does not have the financial capacity to maintain past levels of service. This plan reframes that challenge as an opportunity.

By aligning service delivery with what is financially achievable, Council is taking proactive steps to protect essential services, stabilize finances, and foster a more resilient and community-focused future. Through the introduction of a "Services/Levels of Service Bylaw," VRH will clearly define what services it offers, and the level of service residents can reasonably expect. This is not a retreat—it is a realignment, designed to ensure the community can continue to thrive without risking insolvency or infrastructure failure.

The AMP identifies critical funding gaps, prioritizes risk-based decision-making, and emphasizes transparency in setting service expectations. It also incorporates a 50-year sustainability horizon to help VRH weather economic, demographic, and climate-related pressures. This plan is both a compliance document and a blueprint for a thriving small community that understands its limits and builds wisely within them.

The Positive Case for Change

VRH is not retreating or giving in. It is choosing a new path—one of true sustainability and bold leadership. Instead of trying to do everything, VRH is sharply focused on doing what truly matters, protecting the heart of community life:

-  Safe, dependable roads
-  Water systems and emergency services you can count on
-  A local government that is open, approachable, and truly serves its people

This is not about cutting back. It is about transforming the way a small community thrives in a complex world. VRH is redefining what success looks like by:

-  Concentrating energy and resources where they create the most lasting value
-  Ending the cycle of crisis management and preventing asset failure before it starts
-  Making every tax dollar work smarter: preserving safety, quality of life, and the spirit that makes VRH home

By embracing fresh ideas, building strong partnerships, and keeping a transparent conversation with residents, VRH is shaping a future where it stands strong, proud, and independent for generations.

This plan is a declaration: small communities don't have to settle for less. VRH is proving that with vision, courage, and purpose, it is possible to build a vibrant, sustainable future on its own terms.

Introduction & Context

About VRH

VRH is a welcoming and close-knit community nestled in the heart of Northern Ontario. Known for its peaceful surroundings and strong community spirit, it offers residents a high quality of life rooted in safety, affordability, and natural beauty. Whether you're raising a family, starting a business, or enjoying retirement, VRH provides a supportive environment where everyone can feel at home.

At the heart of VRH's vision is a commitment to being a vibrant, inclusive community where residents of all backgrounds thrive together in a safe, affordable environment. Guided by a spirit of unity and sustainability, VRH aims to be a model of small-town living with a stable economy, sufficient housing for all, and the capacity to grow while preserving its unique charm and fostering a deep sense of belonging.

With a mission centered on diversity, growth, and community engagement, VRH is committed to maintaining a dynamic and resilient municipality. Through strategic planning, accessible services, and a shared commitment to progress, the Township continues to build a future that balances tradition with innovation—making it a place everyone is proud to call home.

Guiding Growth with Purpose: Infrastructure-Informed Development

Although VRH is not experiencing rapid growth, every new development carries long-term implications for service delivery, infrastructure capacity, and financial sustainability. For this reason, growth management is not treated as a separate planning exercise, it is integrated directly into VRH's asset management strategy.

This Plan reinforces a critical principle: growth should support infrastructure, not strain it. By directing new development into areas where municipal services already exist, and ensuring those developments are compact, efficient, and aligned with community values, VRH can minimize new liabilities while strengthening the tax base.

A Smarter Approach to Rural Growth

- Growth will be encouraged in serviced areas, where roads, water, and sewer infrastructure are already in place.
- New development will be evaluated for its ability to optimize existing capacity before considering expansion.
- Opportunities such as infill housing, rural intensification near serviced roads, and the reuse of existing buildings will be prioritized.

This approach improves infrastructure cost-efficiency and reduces the long-term burden on ratepayers, while still making room for thoughtful, community-aligned growth.

Growth as a Cost-Sharing Tool

Strategic growth can help share the cost of maintaining aging infrastructure. Each new household or business:

- Expands the tax base
- Contributes to fixed infrastructure costs
- Can support renewal efforts through fees or development charges (if implemented)

While growth alone will not close VRH's infrastructure funding gap, it is an important tool when managed wisely.

Aligned with Regulation, Grounded in Reality

Under Ontario Regulation 588/17, municipalities must consider how growth impacts service levels and infrastructure needs. This plan reflects:

- Modest growth assumptions rooted in the need for increased assessment
- A focus on targeted, sustainable intensification
- A commitment to update growth projections in future AMPs to ensure continued alignment

Staying Future-Ready

To maintain flexibility and foresight, VRH will:

- Monitor building activity and service demand regularly
- Assess infrastructure capacity prior to approving major developments
- Maintain an inventory of infill and redevelopment opportunities
- Advocate for stronger rural infrastructure investment support

By embedding these principles early in the AMP, VRH is clearly stating *we will grow responsibly, in a way that protects our infrastructure, supports our services, and reflects who we are as a community.*

Legislative Framework: O. Reg. 588/17

Ontario Regulation 588/17 (under the Infrastructure for Jobs and Prosperity Act, 2015) mandates that municipalities prepare strategic asset management plans that define:

- Current and proposed levels of service
- Asset condition and risk
- Lifecycle and financial strategies
- By July 1, 2025, municipalities must:
 - Establish proposed levels of service for each asset class
 - Develop strategies to fund and achieve those service levels over the long term

VRH has completed the required analysis and is using this AMP update not just to comply, but to excel.

Why This Plan Matters

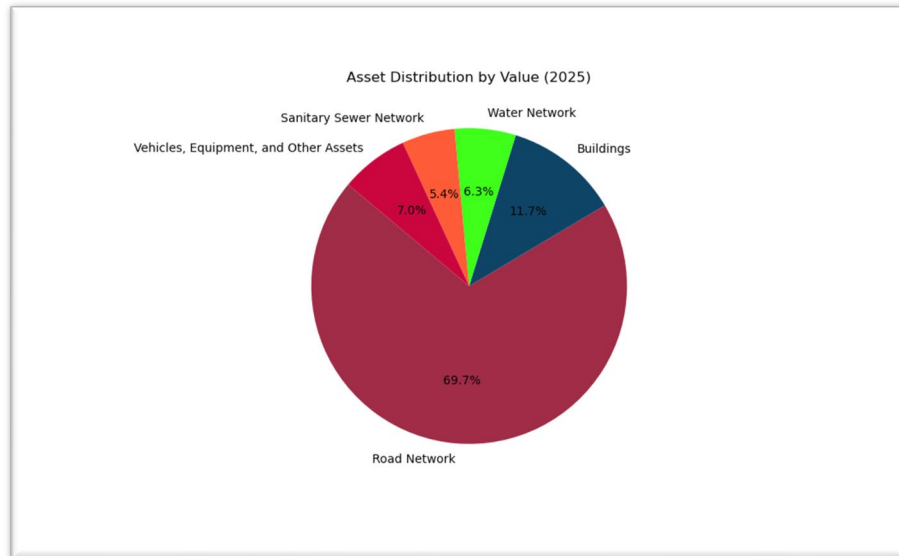
This is more than a technical document—it is a turning point. The plan recognizes that VRH cannot afford to replace everything it owns. It offers a path forward by answering three essential questions:

1. *What services must we deliver to remain a viable community?*
2. *What service levels can we realistically afford?*
3. *How can we preserve community identity while doing less, better?*

This plan helps Council, staff, and the public make informed, principled decisions about infrastructure, services, and priorities for the next 50 years.

Asset Distribution by Value in 2025

VRH owns and manages a wide range of municipal assets that support municipal services and community wellbeing. These assets include road networks, water systems, buildings, vehicles, and equipment. Understanding how these assets are distributed by class is an important step in effective asset management. Each class of asset plays a different role in service delivery and requires specific strategies for maintenance, renewal, and financial planning. This section provides a summary of VRH's asset portfolio by class, outlining the value and significance of each group. This information supports informed decision-making, helps identify infrastructure priorities, and contributes to long-term financial sustainability.



State of Infrastructure

As of 2025, the VRH's infrastructure portfolio has an estimated replacement value of \$95.9 million, adjusted from \$83 million in 2022 to reflect inflation. The breakdown by asset category is as follows:

- Road Network: \$66.8M (70%)
- Buildings: \$11.2M (12%)
- Water Network: \$6.0M (6%)
- Sanitary Sewer Network: \$5.2M (5%)
- Vehicles, Equipment, and Other Assets: \$6.7M (7%)

Despite this significant investment, only 26% of assets are in fair or better condition, based on age-based modeling and condition data. Roads and sanitary systems show the most severe deterioration.¹

Aging infrastructure, rising costs, limited reserves, and low fiscal capacity have created a structural mismatch between the Township's asset obligations and its ability to meet them.

Key Observations:

The majority of infrastructure is past its midlife and in need of significant reinvestment.

- Roads, which are most used and most vulnerable, have the lowest reinvestment history.
- VRH does not currently fund lifecycle replacement at the required annual rate of 2%.

¹ 2022 AMP – PSD Citywide

- III. This highlights the need to prioritize renewal over expansion and to embrace asset rationalization strategies to manage risk and avoid financial overextension.

Asset Replacement Timing Overview

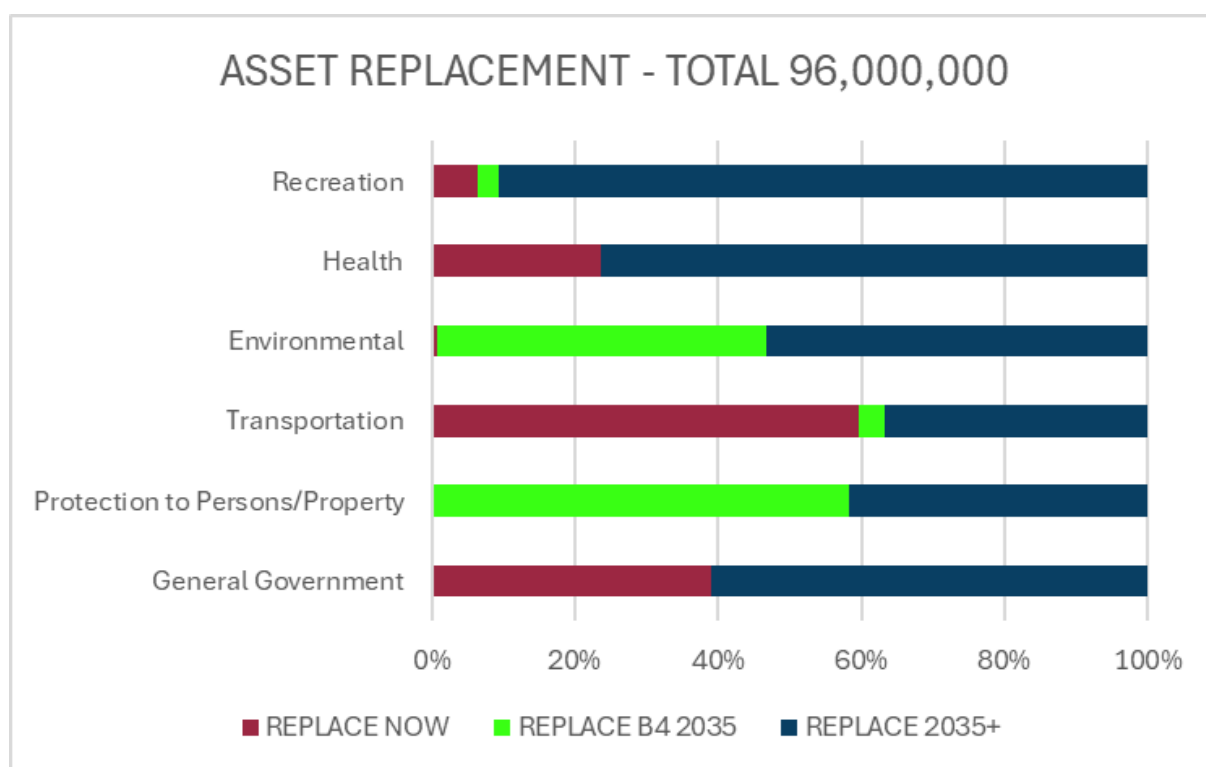
The chart below provides a high-level overview of when VRH's existing assets, with a total replacement value of approximately 96 million dollars, are expected to require renewal. Assets are grouped by service category and categorized into three timeframes:

Replace Now (dark red): Assets that are already due or overdue for replacement based on age and condition.

Replace Before 2035 (bright green): Assets that are expected to reach end-of-life and require replacement within the next 10 years.

Replace After 2035 (dark blue): Assets with longer remaining useful life that are projected for replacement in 2035 or later.

This visual illustrates both the urgency and timing of capital needs. It highlights areas such as Transportation and Health, where a significant portion of assets already require attention, as well as areas like Protection to Persons and Property, where much of the infrastructure will require investment before 2035. The chart is a valuable tool for prioritizing capital planning and aligning future budgets with infrastructure lifecycle demands.



Future Asset Replacement Value Projections (2025 to 2075)

To support long term infrastructure sustainability, VRH has projected the future replacement value of its current assets using a conservative annual cost escalation rate of 2.5 percent. This rate reflects typical long term construction inflation and sector specific cost increases.

Based on this projection, the total replacement value of VRH's assets is expected to increase as follows:

-  **83 million dollars** in 2022 (original baseline)
-  **95.9 million dollars** in 2025 (adjusted for recent inflation)
-  **193.3 million dollars** in 2050
-  **351.0 million dollars** in 2075

This represents 3.7 times increase in replacement value over the next 50 years, if VRH does not expand its infrastructure network.

Asset Category	2022 Cost (\$M)	2025 Cost (\$M)	2050 Cost (\$M)	2075 Cost (\$M)
Road Network	57.7	66.8	120.4	216.8
Buildings	9.7	11.2	20.2	36.3
Water Network	5.2	6	10.8	19.5
Sanitary Sewer Network	4.5	5.2	9.4	17
Vehicles	1.9	2.2	4	7.1
Machinery & Equipment	1.9	2.2	4	7.1
Bridges & Culverts	1.6	1.9	3.4	6.2
Storm Water Network	0.33	0.38	0.69	1.2
Land Improvements	0.18	0.21	0.38	0.68
Total	83	95.9	193.3	351

 **Important Notes:** These figures are based solely on the assets that currently exist. They reflect only what is physically in place in VRH today. They do not account for potential regulatory changes such as updates to the Minimum Maintenance Standards for roads, new service obligations, climate resiliency investments, or energy efficiency requirements. In addition, no adjustments have been made for the potential impact of material tariffs or supply chain pricing disruptions, due to the volatility and unpredictability of global and national markets at the time of this update. Should these pressures persist or intensify, actual replacement costs may be significantly higher than those shown here.

These projections are not predictions. They are a planning tool that helps illustrate the scale of investment required to maintain current services. This reinforces the need for thoughtful service level planning, sustainable financial strategies, and regular updates to the AMP as local, economic, and legislative conditions evolve.

Historical Investment Patterns

For many years, VRH has operated with a short-term, maintenance-focused approach to infrastructure management. This was driven by fiscal prudence, nominal (but insufficient) increases in taxation, and a desire to maintain high levels of service without increasing financial burden on residents.

However, this approach has resulted in:

- Deferred capital reinvestment
- Reliance on grants for infrastructure projects
- Underspending on key assets like roads, bridges, and storm infrastructure

Road rehabilitation is the clearest example. Despite making up the majority of asset value, roads have frequently been left out of capital budgets or received only minimal surface treatment. In other words, investments into roads have been surface reconstruction only and in some cases even less maintenance. This has resulted in:

- Accelerated degradation of critical transportation links
- Increased lifecycle costs
- Higher vulnerability to climate impacts (e.g., flooding, frost heaves)

VRH has also lacked a structured reserve strategy, limiting its ability to:

- Match provincial/federal grants without incurring debt
- Buffer inflation or emergency needs
- Replace assets at the end of useful life

This pattern is not unique to VRH, but the consequences are now known, immediate and pressing.

The 2025 AMP reframes this reality with a more proactive approach: one that focuses on managing risk, phasing service adjustments, and investing only where it aligns with community need and affordability.

Financial Analysis

Based on the updated asset valuation, VRH requires an estimated \$1.92 million annually to maintain its current infrastructure in a state of good repair. This figure is calculated using a 2% reinvestment rate on the \$95.9 million asset base.

However, historical capital funding falls significantly short of this benchmark, often fluctuating based on grant availability and emergency repairs rather than lifecycle planning.

Additionally infrastructure/asset improvements have been removed from budgets to allow for increased spending on non-essential services.

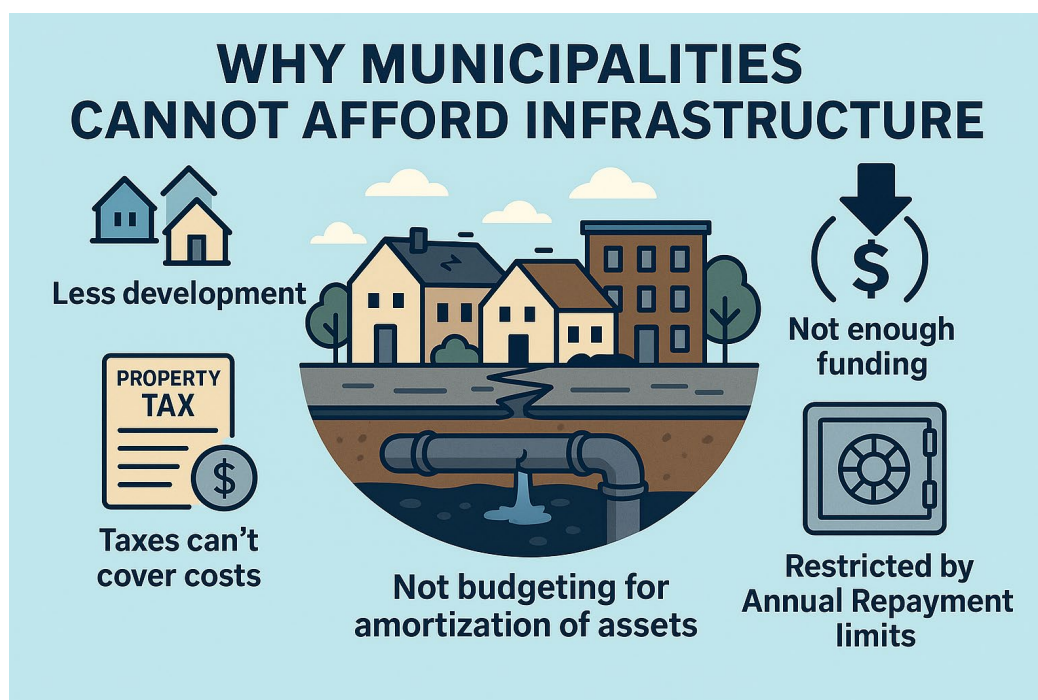
Financial Pressures:

- ☒ Limited ability to raise local revenues due to a small tax base
- ☒ Increasing cost of construction, materials, and labour
- ☒ Rising insurance and liability costs
- ☒ Unpredictable grant cycles

Financial Opportunities:

- ✎ Potential to adjust taxation gradually to match lifecycle needs
- ✎ Targeted use of debt for critical renewals
- ✎ Development of asset replacement reserves
- ✎ Partnerships and shared service agreements

A financial sustainability strategy must align desired levels of service with what is affordable, starting with the adoption of realistic targets and matching funding strategies.



Future Levels of Service

This section outlines the anticipated changes to Val Rita-Harty's levels of service over the coming decade, reflecting the municipality's current financial capacity and long-term asset management realities.

VRH currently holds approximately \$900,000 in reserves, a significant portion of which is committed to obligatory reserves and cannot be redirected. The 2025 operating and capital budget is projected at approximately \$2.5 million, excluding user-pay systems such as water and wastewater services.

Given these fiscal constraints, it is not possible to fully fund all required asset renewals, replacements, and maintenance activities at current service levels. As a result, the municipality must make difficult decisions to strategically reduce certain service levels in order to maintain overall financial sustainability and protect core infrastructure where possible.

These future service level adjustments are based on a comprehensive assessment of risk, asset condition, and community priorities. They acknowledge that some assets will experience extended lifecycles or reduced maintenance intensity, which may lead to increased service interruptions, slower response times, or accelerated deterioration in some cases.

By clearly defining these future levels of service and associated risks, VRH aims to maintain transparency with residents and stakeholders while taking a prudent, long-term approach to managing infrastructure and fiscal resources responsibly. The chart illustrates potential considerations for changes to current service levels.

Asset Class	Future Level of Service Target	Reason for Change	Risks and Trade-Offs
Roads	PCI target lowered from 7 to 5; fewer gravel re-gradings annually	Financial constraints and lower traffic volumes	Increased surface deterioration; more frequent complaints
Water System	Deferred replacement of older mains beyond lifecycle	Insufficient capital funding within current budget	Higher risk of breaks and costly repairs
Buildings	Focus on structural and safety repairs only; reduced capital upgrades	Preserve core functions within budget limits	Decline in aesthetics and potential deferred maintenance issues
Fleet & Equipment	Extended replacement cycles by 2 years or more	Prioritization of critical infrastructure spending	Increased maintenance costs; risk of breakdowns impacting service

Levels of Service Framework

Clearly defining municipal services—and the levels at which they are delivered—helps residents understand what they’re getting for their property taxes. But simply increasing annual budgets by the rate of inflation (CPI) is not enough to keep up with aging infrastructure. As assets near the end of their useful life, many communities face a tough reality: little or no money has been set aside for replacement, and borrowing options are often limited. Without adequate long-term planning and dedicated funding, even new assets may become unaffordable to replace in the future. That’s why it’s essential for

communities to engage in honest, forward-looking conversations about aligning service levels with what is financially sustainable—not just for today, but for generations to come.

Defining Service by Adopting a Level of Service Bylaw

Adopting a Level of Service Bylaw is a strategic investment in municipal sustainability, accountability, and transparency. This bylaw formally sets out which services a municipality is required to provide by law (mandatory) and which services are offered by choice (discretionary), along with the expected levels or standards for delivering each. These may include response times, service hours, maintenance schedules, or quality benchmarks. Taking the time to define and adopt these levels through a bylaw helps Council, staff, and the public understand *what* the municipality does, *why* it does it, and *how well* it is committed to doing it. This clarity creates a foundation for aligning resources—financial, physical, and human—with real community priorities.

Importantly, a Level of Service Bylaw acts as a bridge between policy and operations. It ensures that decisions about service delivery are intentional and informed—not reactive or historical. With clearly defined service levels, municipalities can:

-  **Understand the asset requirements tied to each service.** Roads, water systems, facilities, vehicles, equipment, and technology are all tools to deliver services. If the level of service is known, the types, condition, and performance of supporting assets can be properly planned and maintained.
-  **Plan for human resource needs.** Many municipal services rely heavily on people—clerks, operators, volunteer firefighters, recreation staff, bylaw officers, and others. A Level of Service Bylaw helps quantify how many staff (or contracted hours) are needed to meet service expectations, and whether that capacity is sustainable or needs adjustment.
-  **Connect budgeting to value.** When services and their expected standards are clearly laid out, budgets become more than numbers—they reflect the community's chosen priorities. Council can better explain taxation and fees by pointing to the specific services they support.
-  **Support asset management and risk planning.** Service levels inform lifecycle needs for infrastructure. If, for example, a municipality commits to keeping gravel roads open year-round, it must understand the grading, culvert maintenance, and winter control activities—and costs—required to make that possible.
-  **Provide a tool for adjusting services responsibly.** Over time, demographic shifts, climate risks, and financial pressures may force communities to re-evaluate what is affordable. A Level of Service Bylaw provides a clear, fair, and transparent way to

scale services up or down while still meeting legislative obligations and managing expectations.

Ultimately, adopting a Level of Service Bylaw is not just an administrative exercise—it's a governance tool. It puts the community in control of its future, supports responsible decision-making, and helps ensure that both today's residents and future generations benefit from thoughtful, well-managed public services.

What is a Level of Service (LOS)?

A level of service defines the standard at which a municipal service is delivered, balancing both technical performance and community expectations. On the technical side, it refers to measurable indicators such as road surface condition, water pressure, wastewater treatment compliance, or the frequency of facility inspections. These indicators help municipalities ensure that services are safe, reliable, and compliant with regulations.

Equally important, levels of service also capture the *customer experience*—the aspects of service delivery that matter most to residents. This might include how often snow is cleared from roads and sidewalks, how quickly bylaw complaints are addressed, how accessible municipal offices are, or how well-maintained public parks appear. These experience-based measures give Council and staff insight into what residents notice and value, helping prioritize resources where they will have the most visible and meaningful impact.

By formally defining these standards, municipalities can set realistic expectations for what services will be delivered, how, and how often, creating a shared understanding between Council, staff, and the public. It also allows service delivery to be evaluated consistently over time and provides a basis for assessing whether changes in funding, staffing, or infrastructure are needed to maintain—or adjust—those standards.

Ultimately, defining levels of service helps municipalities move from reactive, ad hoc decision-making to a more strategic and informed approach that links budgets, assets, and human resources with the outcomes communities expect.

LOS in Practice

Putting LOS into practice means making deliberate choices about how services are delivered, at what standard, and with what resources. It is not just a planning concept - it's a practical tool that can help municipalities adjust to changing financial, staffing, and infrastructure realities while continuing to meet community needs. By understanding the connection between service levels, asset performance, and costs, Councils can make informed, transparent decisions that protect core services and long-term sustainability.

The table below presents an example of how LOS can be adjusted over time to maintain essential service delivery while reducing overall costs and staff workload. It illustrates potential changes that municipalities *could* consider—not actions currently being taken in Val Rita-Harty. The intent is to demonstrate how thoughtful adjustments to service standards, frequency, or delivery methods can help communities remain financially and operationally sustainable, especially in the face of aging infrastructure, limited staff capacity, and constrained budgets. This example is meant to support future discussions about balancing service expectations with available resources, not to reflect existing decisions or planned reductions.

Service Area	Current LOS	Proposed LOS	Notes
 Gravel Roads	Graded 12x/year	Graded 6x/year	Based on usage, budget constraints, and risk tolerance
 Water System	24/7 availability	Same	Regulated discretionary service; no change proposed
 Parks	Maintained weekly	Maintained biweekly	Seasonal adjustment to reduce costs while maintaining usability
 Admin Services	In-person 5 days/week	Reduced in office services + remote professional support	Transition to hybrid model that includes digital services/ remote services

Fifty (50) -Year Resilience Plan

Looking Beyond the 10-Year Horizon

While Ontario municipalities are required to plan over a 10-year capital forecast, Val Rita-Harty is adopting a more forward-thinking, generational perspective. A 50-year resilience strategy enables the community to prepare for challenges and opportunities that extend beyond the current cycle — including aging infrastructure, shifting demographics, climate impacts, and evolving service expectations.

This approach isn't about predicting the future with certainty but about preparing with purpose. It supports decision-making that protects affordability, fosters community wellbeing, and positions VRH to remain viable, distinct, and proud of its identity.

Strategy for Long-Term Resilience

1. Generational Investment Thinking

- Embed infrastructure planning within a multi-decade framework.

- Align reserves, maintenance, and capital investments with long-term needs rather than short-term fixes.
- Emphasize life-cycle costing, full-cost recovery, and intergenerational equity.

2. Governance That Supports Resilience

- Council decisions must reflect the long-term impact on service delivery and infrastructure.
- Asset Management should not be a technical or reactive exercise — it must be central to governance and strategic leadership.
- Annual budgets and service reviews should consider resilience indicators and long-term performance metrics.

3. Sustainability & Wellbeing as Outcomes

- Infrastructure is not just physical — it's the backbone of community safety, opportunity, and health.
- Long-term planning helps manage tax pressure, avoid sudden service disruptions, and retain a high quality of life.
- Proactively planning for future major replacements (e.g., water system rebuilds in 20–30 years) avoids crisis-based decision-making.

4. Maintain Our Identity, Build Our Future

- VRH's rural, bilingual, and culturally distinct identity must be reflected in its infrastructure decisions.
- This means ensuring the services people rely on — water, roads, community spaces — are delivered reliably and sustainably, even if that requires hard choices today.
- Local governance must see asset management as a tool for autonomy and community continuity, not just compliance.

Strategic Actions for Long-Term Resilience

As part of its long-term approach to infrastructure planning, VRH is placing greater emphasis on understanding the composition and value of its municipal asset base. This begins with a clear picture of what VRH owns, how those assets are categorized, and how each asset class contributes to the delivery of core services.

Assets are grouped into major classes based on their function and characteristics: such as roads, water systems, buildings, fleet, and equipment. Each class plays a distinct role in supporting community wellbeing, and each requires a tailored approach to maintenance, renewal, and replacement.

The distribution of assets by class provides essential insight into the VRH'S financial exposure, service delivery risks, and future investment requirements. It also helps to

identify areas where service levels may be at risk due to asset age, condition, or funding gaps.

Understanding this distribution is a foundational step toward informed, strategic asset management. It allows Council and staff to evaluate where the highest-value assets reside, how infrastructure is aging across the network, and what trade-offs may be required to maintain affordability and reliability over time.

By taking a comprehensive view of asset distribution, VRH is strengthening its ability to align capital planning, risk management, and long-term service delivery in a way that reflects both community priorities and fiscal responsibility.

Action	Timeframe	Outcome
Adopt a long-term capital reserve strategy	2026–2027	Build dedicated savings for major asset replacements
Integrate asset management into budget deliberations	Annually	Ensure all spending reflects lifecycle and service value
Update AMP every 5 years to include a 50-year lens	2029, 2034...	Maintain alignment with future growth, risk, and costs
Develop long-range scenarios for core assets	By 2028	Identify investment thresholds and risk triggers
Align Council's strategic plan with AMP goals	Next strategic planning cycle	Governance alignment with infrastructure needs

Multi-Year Budget

This Asset Management Plan marks a turning point in how VRH approaches infrastructure planning and financial decision making. It reflects a shift toward a more strategic, transparent, and sustainable way of managing community assets and delivering services.

The ten-year capital and financial forecast included in this AMP is not a conventional budget. It is a forward-looking financial framework that aligns infrastructure investment with service level expectations, asset condition, and fiscal capacity. It incorporates lifecycle costing, risk-based prioritization, and affordability considerations to guide sustainable decision making.

This forecast supports a move from short term budgeting to long term planning. It enables Council to make informed choices about what services can be delivered, at what level, and at what cost, ensuring that infrastructure decisions today do not compromise the needs of tomorrow.

The full ten-year financial forecast is provided in **Appendix A**.

Final Summary: A Bold Step Toward Sustainable Community Building

Val Rita-Harty's Asset Management Plan represents a transformative shift in how small communities can think about infrastructure, services, and long-term sustainability. This is not just a compliance exercise or a technical document. It is a visionary framework that redefines how municipal decisions are made, how resources are allocated, and how the future is shaped.

At its core, the AMP connects the community's values with the practical realities of delivering services and maintaining infrastructure. It recognizes that every road, pipe, building, and vehicle has a lifecycle. It acknowledges that financial capacity is not unlimited. And it embraces the idea that responsible governance means planning not just for today, but for the next generation.

This plan introduces a new way of thinking—one that moves beyond short-term fixes and reactive budgeting. It brings together three essential cost components: the cost of delivering services, the full lifecycle cost of owning and operating assets, and the capital cost of renewal or replacement. By integrating these elements into a single, strategic approach, Val Rita-Harty is setting a new standard for small municipalities across the province and beyond.

What Comes Next

The AMP is not the end of the journey. It is the beginning of a new way of doing business. The next steps are clear and actionable:

- The AMP will be embedded into annual budgeting and strategic planning processes to ensure that every decision reflects long-term service and infrastructure goals.
- A capital reserve strategy will be developed to build financial resilience and prepare for future asset needs.
- Service levels will be continuously reviewed and refined to reflect what is affordable, sustainable, and aligned with community priorities.
- Communication with residents will be open and transparent, helping everyone understand the value of their property taxes and the trade-offs involved in service delivery.
- The AMP will be updated regularly to reflect new data, emerging risks, and evolving community needs.

By taking these steps, Val Rita-Harty is not only managing its infrastructure more effectively. It is demonstrating leadership, innovation, and a deep commitment to the well-being of its residents. This is a model of resilience in action—a small community thinking big, planning smart, and building a legacy of sustainability for the future.

APPENDIX A

Ten-Year Financial Forecast

APPENDIX A

Ten-Year Financial Forecast

APPENDIX B

VRH 2022 – Asset Management Plan (PSD Citywide)

PROJECT		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
ACCOUNT #	DESCRIPTION	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
LEVELS OF SERVICE/OPERATIONAL REVENUES																													
	TAXATION	1,427,502.00	1,417,604.22	1,477,240.00	1,477,580.84	1,562,422.00	1,571,068.90	1,725,000.00	0.00	1,925,000.00	2,125,000.00	2,325,000.00	2,525,000.00	2,725,000.00	2,925,000.00	3,125,000.00	3,325,000.00	3,525,000.00	3,725,000.00										
	HUMAN RESOURCES	4,200.00	4,200.00	4,200.00	10,322.00	4,636.00	4,637.00	4,000.00	0.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00										
	GENERAL GOVERNMENT SERVICES	416,367.00	418,168.93	422,667.00	454,322.69	396,067.00	448,143.91	442,065.00	216,367.37	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00	428,565.00										
	PROTECTION TO PERSONS & PROPERTY SERVICES	16,700.00	5,813.55	25,200.00	20,857.29	19,820.00	16,755.56	17,800.00	1,965.71	13,300.00	8,300.00	8,300.00	8,300.00	8,300.00	8,300.00	8,300.00	8,300.00	8,300.00	8,300.00										
	TRANSPORTATION SERVICES	8,750.00	4,003.75	8,750.00	6,257.41	7,250.00	5,161.87	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	ENVIRONMENTAL SERVICES	0.00	0.00	0.00	75.00	0.00	174.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	HEALTH SERVICES	0.00	1,808.00	0.00	1,600.00	0.00	3,616.00	3,500.00	0.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00										
	RECREATIONAL & CULTURAL SERVICES	19,760.00	12,626.42	31,640.00	44,996.12	17,701.00	17,155.60	19,199.00	10,010.44	16,140.00	15,640.00	15,640.00	15,640.00	15,640.00	15,640.00	15,640.00	15,640.00	15,640.00	15,640.00										
	PLANNING & DEVELOPMENT SERVICES	9,500.00	3,758.09	4,850.00	3,876.00	4,050.00	2,177.00	2,050.00	1,500.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00	2,050.00										
TOTAL LEVELS OF SERVICE/OPERATIONAL REVENUES		1,902,779.00	1,867,982.96	1,974,547.00	2,019,887.35	2,011,946.00	2,068,889.84	2,217,614.00	229,843.52	2,393,055.00	2,587,555.00	2,787,555.00	2,987,555.00	3,187,555.00	3,387,555.00	3,587,555.00	3,787,555.00	3,987,555.00	4,187,555.00										
LEVELS OF SERVICE/OPERATIONAL EXPENSE																													
	TAXATION	14,418.00	13,700.86	14,276.00	14,276.00	14,705.00	14,453.04	14,800.00	7,404.50	15,000.00	15,200.00	15,300.00	15,400.00	15,500.00	15,600.00	15,700.00	15,800.00	15,900.00	16,000.00										
	HUMAN RESOURCES	883,502.00	836,705.28	913,189.00	935,681.31	927,643.00	926,798.84	1,177,102.00	413,793.31	903,910.00	908,360.00	927,277.00	946,665.00	979,039.00	987,410.00	1,008,291.00	1,029,691.00	1,066,128.00	1,074,616.00										
	GENERAL GOVERNMENT SERVICES	71,529.00	73,990.25	82,400.00	68,335.35	77,601.00	74,172.56	73,474.00	34,535.36	76,900.00	75,300.00	75,400.00	75,500.00	75,600.00	75,700.00	75,800.00	75,900.00	76,000.00	76,100.00										
	PROTECTION TO PERSONS & PROPERTY SERVICES	145,471.00	532,959.53	156,346.00	154,724.32	166,887.00	165,877.37	167,875.00	29,247.50	177,060.00	182,060.00	187,060.00	192,060.00	197,060.00	202,060.00	207,060.00	212,060.00	217,060.00	222,060.00										
	TRANSPORTATION SERVICES	35,575.00	34,579.36	34,150.00	28,863.46	36,900.00	27,765.34	37,900.00	10,042.68	45,150.00	45,350.00	46,600.00	46,800.00	48,050.00	48,250.00	49,500.00	49,700.00	50,950.00	51,150.00										
	ENVIRONMENTAL SERVICES	67,472.00	63,764.84	69,250.00	65,536.54	76,203.00	80,337.52	76,153.00	2,183.74	81,700.00	84,400.00	87,100.00	89,800.00	92,500.00	95,200.00	97,900.00	100,600.00	103,300.00	106,000.00										
	PUBLIC HEALTH SERVICES	233,955.00	209,137.67	217,759.00	215,275.53	234,594.00	235,290.36	251,645.00	140,313.44	259,500.00	281,500.00	303,500.00	325,500.00	347,500.00	369,500.00	391,500.00	413,500.00	435,500.00	457,500.00										
	RECREATIONAL & CULTURAL SERVICES	15,100.00	17,896.31	34,250.00	43,850.50	12,750.00	7,411.97	7,550.00	616.08	14,400.00	14,715.00	15,030.00	15,346.00	15,662.00	15,979.00	16,296.00	16,614.00	16,932.00	17,250.00										
	PLANNING & DEVELOPMENT	227,112.00	177,128.62	105,348.00	76,329.52	22,950.00	9,279.46	12,500.00	3,701.95	9,000.00	9,300.00	9,600.00	9,900.00	10,200.00	10,500.00	10,800.00	11,100.00	11,400.00	11,700.00										
TOTAL LEVELS OF SERVICE/OPERATIONAL EXPENSE		1,694,134.00	1,959,862.72	1,626,968.00	1,602,872.53	1,570,233.00	1,541,386.46	1,818,999.00	641,838.56	1,582,620.00	1,616,185.00	1,666,867.00	1,716,971.00	1,781,111.00	1,820,199.00	1,872,847.00	1,924,965.00	1,993,170.00	2,032,376.00										
ASSET LIFECYCLE COSTS																													
	GENERAL GOVERNMENT SERVICES	34,625.00	39,112.48	24,975.00	27,764.70	24,912.00	24,912.00	25,000.00	0.00	25,200.00	25,400.00	25,600.00	25,800.00	26,000.00	26,200.00	26,400.00	26,600.00	26,800.00	2,700.00										
	PROTECTION TO PERSONS & PROPERTY SERVICES	16,906.00	18,299.44	19,090.00	14,523.09	19,301.00	20,369.46	22,924.00	6,226.69	24,200.00	24,808.00	25,428.00	26,065.00	26,716.00	27,384.00	28,068.00	28,772.00	29,490.00	30,226.00										
	TRANSPORTATION SERVICES	219,705.00	241,165.87	275,006.00	347,459.73	260,710.00	228,201.06	179,408.00	38,095.20	250,600.00	256,870.00	263,292.00	269,875.00	276,621.00	283,538.00	290,627.00	297,894.00	305,342.00	312,980.00										
	ENVIRONMENTAL SERVICES	29,954.00	28,262.60	24,622.00	25,756.95	26,225.00	18,232.04	29,263.00	8,204.96	34,300.00	34,785.00	35,282.00	35,792.00	36,314.00	36,849.00	37,397.00	37,959.00	38,535.00	39,125.00										
	RECREATIONAL & CULTURAL SERVICES	83,676.00	111,035.42	109,562.00	111,248.21	93,688.00	89,463.14	94,113.00	29,295.50	97,200.00	99,633.00	102,123.00	104,675.00	107,291.00	109,975.00	112,724.00	115,540.00	118,430.00	121,390.00										
TOTAL ASSET LIFECYCLE COSTS		384,866.00	437,875.81	453,255.00	526,752.68	424,836.00	381,177.70	350,708.00	81,822.35	431,500.00	441,496.00	451,725.00	462,207.00	472,942.00	483,946.00	495,216.00	506,765.00	518,597.00	506,421.00										
CAPITAL PROJECTS																													
	GENERAL GOVERNMENT SERVICES	96,320.00	482,190.51	77,570.00	180,716.68	35,000.00	-23,378.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	210,000.00	0.00	0.00											
	PROTECTION TO PERSONS & PROPERTY SERVICES	0.00	13,000.00	0.00	1,086.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81,148.00	0.00	0.00											
	TRANSPORTATION SERVICES	560,375.00	522,891.74	229,536.00	175,980.24	541,758.00	327,084.78	77,691.00	0.00	0.00	0.00	151,565.00	152,000.00	952,000.00	152,000.00	152,000.00	233,148.00	152,000.00	152,000.00										
	ENVIRONMENTAL SERVICES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,547,904.00	0.00	0.00											
	RECREATIONAL & CULTURAL SERVICES	133,500.00	132,000.00	0.00	0.00	0.00	0.00	16,460.00	16,460.90	0.00	0.00	0.00	0.00	0.00	0.00	240,000.00	0.00	0.00											
	PLANNING & DEVELOPMENT SERVICES	221,437.00	195,805.71	256,953.00	57,674.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
TOTAL CAPITAL REVENUE		1,011,632.00	1,345,887.96	564,059.00	415,457.56	576,758.00	303,706.70	94,151.00	16,460.90	0.00	0.00	151,565.00	152,000.00	952,000.00	152,000.00	152,000.00	2,312,200.00	152,000.00	152,000.00										
CAPITAL EXPENDITURES																													
	GENERAL GOVERNMENT SERVICES	28,234.00	854.39	13,500.00	3,182.55	4,700.00	1,711.32	21,000.00	20,925.79	0.00	0.00	35,000.00	35,000.00	35,000.00	35,000.00	35,000.00	35,000.00	35,000.00	35,000.00										
	PROTECTION TO PERSONS & PROPERTY SERVICES																												

BUDGET																			
ACCOUNT #	DESCRIPTION	2022		2023		2024		2025		2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
	PLANNING & DEVELOPMENT SERVICES	0.00	53,965.52	0.00	-169,722.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL CAPITAL EXPENDITURES	765,542.00	92,967.54	384,983.60	-124,670.56	481,948.00	63,594.43	136,130.00	101,376.15	361,885.00	509,120.00	785,538.00	911,119.00	1,806,946.00	1,155,523.00	1,325,904.00	3,743,374.00	1,578,704.00	1,751,855.00

SOLAR PANELS

REVENUE																			
Levels of Service	55,000.00	52,977.70	49,500.00	50,764.19	45,500.00	46,709.64	45,500.00	12,674.92	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00
Lifecycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL REVENUE	55,000.00	52,977.70	49,500.00	50,764.19	45,500.00	46,709.64	45,500.00	12,674.92	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00	45,500.00
EXPENSE																			
Levels of Service	8,760.00	8,654.60	13,518.00	10,302.96	9,900.00	13,591.21	9,900.00	0.00	13,200.00	13,800.00	14,400.00	15,000.00	15,600.00	16,200.00	16,800.00	17,400.00	18,000.00	18,600.00	18,600.00
Lifecycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL EXPENSE	8,760.00	8,654.60	13,518.00	10,302.96	9,900.00	13,591.21	9,900.00	0.00	13,200.00	13,800.00	14,400.00	15,000.00	15,600.00	16,200.00	16,800.00	17,400.00	18,000.00	18,600.00	18,600.00

LIBRARY

REVENUE																			
Levels of Service	119,536.00	114,946.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00	0.00	0.00
Lifecycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL REVENUE	119,536.00	114,946.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70,000.00	0.00	0.00
EXPENSE																			
Levels of Service	44,435.00	22,533.92	31,575.00	43,034.62	33,607.00	31,188.47	33,619.00	10,394.15	35,150.00	36,029.00	36,931.00	37,856.00	38,803.00	39,774.00	42,106.00	41,791.00	42,837.00	43,909.00	43,909.00
Lifecycle	7,500.00	7,500.00	3,000.00	3,000.00	3,000.00	3,000.00	1,000.00	0.00	5,000.00	5,125.00	5,254.00	5,386.00	5,521.00	5,660.00	5,802.00	5,948.00	6,097.00	6,250.00	6,250.00
Capital	82,535.00	9,407.65	0.00	362.83	0.00	0.00	0.00	0.00	0.00	0.00	10,000.00	20,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00	10,000.00
TOTAL EXPENSE	134,470.00	39,441.57	34,575.00	46,397.45	36,607.00	34,188.47	34,619.00	10,394.15	40,150.00	41,154.00	52,185.00	63,242.00	54,324.00	55,434.00	57,908.00	57,739.00	58,934.00	60,159.00	60,159.00

CEMETERY

REVENUE																			
Levels of Service	23,175.00	4,656.44	7,000.00	9,392.88	7,000.00	3,773.73	6,000.00	3,241.61	5,000.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00
Lifecycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	52,000.00	0.00	0.00
TOTAL REVENUE	23,175.00	4,656.44	7,000.00	9,392.88	7,000.00	3,773.73	6,000.00	3,241.61	5,000.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	3,500.00	55,500.00	3,500.00	3,500.00
EXPENSE																			
Levels of Service	3,200.00	5,181.77	3,700.00	3,266.56	3,700.00	2,141.03	2,500.00	1,554.40	3,600.00	4,200.00	4,550.00	4,900.00	5,250.00	5,600.00	5,950.00	6,300.00	6,650.00	6,750.00	6,750.00
Lifecycle	9,630.00	8,521.69	9,905.00	10,309.08	10,105.00	9,209.47	10,409.00	9,745.72	10,600.00	10,600.00	10,855.00	11,116.00	11,382.00	11,653.00	11,930.00	12,212.00	12,500.00	10,394.00	10,394.00
Capital	24,000.00	3,816.83	1,500.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	2,000.00	4,000.00	41,000.00	40,000.00	2,000.00	2,000.00	2,000.00	2,000.00	2,000.00
TOTAL EXPENSE	36,830.00	17,520.29	15,105.00	13,575.64	15,305.00	11,350.50	12,909.00	11,300.12	14,200.00	14,800.00	17,405.00	20,016.00	57,632.00	57,253.00	19,880.00	20,512.00	21,150.00	19,144.00	19,144.00

HARTY SEWAGE LAGOONS

REVENUE																			
Levels of Service	7,990.00	7,990.00	8,228.00	8,228.00	9,723.00	9,723.00	28,355.00	0.00	39,500.00	39,750.00	45,000.00	46,500.00	50,500.00	50,750.00	51,000.00	51,250.00	51,500.00	51,750.00	51,750.00
Lifecycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital	2,500.00	0.00	1,390.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL REVENUE	10,490.00	7,990.00	9,618.00	8,228.00	9,723.00	9,723.00	28,355.00	0.00	39,500.00	39,750.00	45,000.00	46,500.00	50,500.00	50,750.00	51,000.00	51,250.00	51,500.00	51,750.00	51,750.00

BUDGET

ACCOUNT #	DESCRIPTION	2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035
		BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET	BUDGET
EXPENSE																												
Levels of Service		7,987.00	6,486.60	8,150.00	6,652.69	8,355.00	6,484.84	8,355.00	24,985.57	8,500.00	8,750.00	9,000.00	9,250.00	9,500.00	9,750.00	10,000.00	10,250.00	10,500.00	10,750.00									
Lifecycle		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00									
Capital		2,500.00	0.00	1,500.00	0.00	1,500.00	0.00	20,000.00	0.00	31,000.00	31,000.00	36,000.00	37,250.00	41,000.00	41,000.00	41,000.00	41,000.00	41,000.00	41,000.00									
TOTAL EXPENSE		10,487.00	6,486.60	9,650.00	6,652.69	9,855.00	6,484.84	28,355.00	24,985.57	39,500.00	39,750.00	45,000.00	46,500.00	50,500.00	50,750.00	51,000.00	51,250.00	51,500.00	51,750.00									

VAL RITA COMMUNAL WATER & SEWAGE LAGOONS

REVENUE																			
Levels of Service		225,106.00	226,662.00	232,416.00	232,432.00	242,854.00	242,854.00	362,724.00	0.00	589,618.00	859,559.00	1,179,526.00	788,216.00	828,114.00	645,700.00	649,125.00	653,225.00	654,625.00	666,275.00
Lifecycle		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Capital		22,500.00	0.00	359,214.00	68,698.07	500,000.00	44,597.64	666,650.00	0.00	3,770,919.00	1,603,616.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL REVENUE		247,606.00	226,662.00	591,630.00	301,130.07	742,854.00	287,451.64	1,029,374.00	0.00	4,360,537.00	2,463,175.00	1,179,526.00	788,216.00	828,114.00	645,700.00	649,125.00	653,225.00	654,625.00	666,275.00
EXPENSE																			
Levels of Service		147,668.00	153,142.17	150,300.00	149,574.69	155,317.00	160,448.91	154,317.00	64,521.85	157,339.00	160,476.00	163,665.00	166,909.00	170,407.00	167,700.00	169,700.00	171,700.00	173,700.00	176,200.00
Lifecycle		39,140.00	38,728.03	40,330.00	28,823.12	41,330.00	35,211.94	61,330.00	12,018.27	33,750.00	33,850.00	34,550.00	35,900.00	41,550.00	36,650.00	37,075.00	38,675.00	38,825.00	43,975.00
Capital		60,300.00	36,242.30	401,000.00	60,584.46	558,500.00	18,139.20	813,727.00	249,666.86	4,169,448.00	2,268,849.00	981,311.00	585,407.00	616,157.00	441,350.00	442,350.00	442,850.00	442,100.00	446,100.00
TOTAL EXPENSE		247,108.00	228,112.50	591,630.00	238,982.27	755,147.00	213,800.05	1,029,374.00	326,206.98	4,360,537.00	2,463,175.00	1,179,526.00	788,216.00	828,114.00	645,700.00	649,125.00	653,225.00	654,625.00	666,275.00

SOCIETE DE DEVELOPMENT ECONOMIQUE COMMUNAUTAIRE MUNICIPAL

TOTAL REVENUE		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL EXPENSE		88,200.00	77,812.60	84,700.00	81,298.16	89,950.00	84,800.08	0.00	-150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

GRAND TOTAL REVENE		3,370,218.00	3,621,103.81	3,196,354.00	2,804,860.05	3,393,781.00	2,720,254.55	3,420,994.00	262,220.95	6,843,592.00	5,139,480.00	4,212,646.00	4,023,271.00	5,067,169.00	4,285,005.00	4,488,680.00	6,975,230.00	4,894,680.00	5,106,580.00
GRAND TOTAL EXPENSE		3,370,397.00	2,868,734.23	3,214,384.60	2,402,163.82	3,393,781.00	2,350,373.74	3,420,994.00	1,197,773.88	6,843,592.00	5,139,480.00	4,212,646.00	4,023,271.00	5,067,169.00	4,285,005.00	4,488,680.00	6,975,230.00	4,894,680.00	5,106,580.00

Asset Management Plan

Township of Val Rita-Harty

2022



This Asset Management Plan was prepared by:



Empowering your organization through advanced
asset management, budgeting & GIS solutions

Key Statistics

Replacement cost of
asset portfolio

\$83.0 million

Replacement cost of
infrastructure per
household

\$217,408 (2021)

Percentage of assets in fair
or better condition

26%

Percentage of assets with
assessed condition data

78%

Target reinvestment
rate

2.0%

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Executive Summary

Municipal infrastructure provides the foundation for the economic, social, and environmental health and growth of a community through the delivery of critical services. The goal of asset management is to deliver an adequate level of service in the most cost-effective manner. This involves the development and implementation of asset management strategies and long-term financial planning.

Scope

This Asset Management Plan (AMP) identifies the current practices and strategies that are in place to manage public infrastructure and makes recommendations where they can be further refined. Through the implementation of sound asset management strategies, the Township can ensure that public infrastructure is managed to support the sustainable delivery of municipal services.

This AMP include the following asset categories:



With the development of this AMP the Township has achieved compliance with O. Reg. 588/17 to the extent of the requirements that must be completed by July 1, 2022. There are additional requirements concerning proposed levels of service and growth that must be met by July 1, 2024 and 2025.

Findings

The overall replacement cost of the asset categories included in this AMP totals \$83.0 million. 26% of all assets analysed in this AMP are in fair or better condition and assessed condition data was available for 78% of assets. For the remaining 22% of assets, assessed condition data was unavailable, and asset age was used to approximate condition – a data gap that persists in most municipalities. Generally, age misstates the true condition of assets, making assessments essential to accurate asset management planning, and a recurring recommendation in this AMP. The development of a long-term, sustainable financial plan requires an analysis of whole lifecycle costs. This AMP uses a combination of proactive lifecycle strategies (paved roads) and replacement only strategies (all other assets) to determine the lowest cost option to maintain the current level of service.

To meet capital replacement and rehabilitation needs for existing infrastructure, prevent infrastructure backlogs, and achieve long-term sustainability, the Township's average annual capital requirement totals \$1.7 million.

It is important to note that this AMP represents a snapshot in time and is based on the best available processes, data, and information at the Township. Strategic asset management planning is an ongoing and dynamic process that requires continuous improvement and dedicated resources.

Recommendations

Recommendations to guide continuous refinement of the Township's asset management program. These include:

- Review data to update and maintain a complete and accurate dataset
- Develop a condition assessment strategy with a regular schedule
- Review and update lifecycle management strategies
- Development and regularly review short- and long-term plans to meet capital requirements
- Measure current levels of service and identify sustainable proposed levels of service

1 Introduction & Context

Key Insights

- The Township of Val Rita-Harty is a small municipality in Northern Ontario and has identified the water network as an infrastructure priority
- The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio
- The Township's asset management policy provides clear direction to staff on their roles and responsibilities regarding asset management
- An asset management plan is a living document that should be updated regularly to inform long-term planning
- Ontario Regulation 588/17 outlines several key milestone and requirements for asset management plans in Ontario between July 1, 2019 and 2025

1.1 Val Rita-Harty Community Profile

Census Characteristic	Val Rita-Harty	Ontario
Population 2021	757	14,223,942
Population Change 2016-2021	- 0.7	5.8
Total Private Dwellings	326	5,929,250
Population Density	2.0/km ²	15.9/km ²
Land Area	378.89 km ²	892,411.76 km ²

The Township of Val Rita-Harty is consisted of two communities, Val Rita and Harty, in Cochrane District of Northeastern Ontario. The Township is located along Highway 11 between Opasatika and Kapuskasing.

The first six pioneer families from Foleyet settled in Val Rita in 1922 and Ste-Rita Parish was formed in 1926. On the other hand, Alex Dubreuil arrived in Harty in 1923 and St-Stanislas Parish was formed in 1932. The first attempt to request the incorporation of the Township of Val Rita-Harty by the resident in 1961 failed. However, it was successfully incorporated as a township in 1973 by the second request.

Val Rita-Harty remains a rural and peaceful community with several lakes, a river and plenty of recreational and leisure options. The settlers' history and traditions are still reflected in the community today with a significant Christian and bilingual population; the majority of the community is fluent in both English and French. The proximity to the Town of Kapuskasing allows residents to commute to larger cities for retail and service-related operations and employment opportunities.

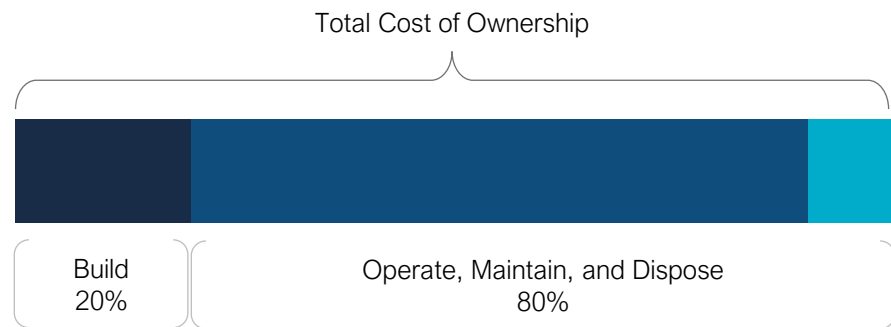
Demand in the region is notably driven by an aging population above the provincial average and the economic development. The Township continues to ensure the planning and development of the Township are accessible and attractive for elders.

Municipal staff have identified the water network as their primary infrastructure priority. The water treatment plant is the major concern, and the Township is planning to build a new water facility in the recent years. Risk-based project prioritization is essential for capital planning since major infrastructure projects are heavily reliant on the availability of grants. Staff intend to support continuous growth within the Val Rita-Harty by investing in critical infrastructure and advancing their asset management program.

1.2 An Overview of Asset Management

Municipalities are responsible for managing and maintaining a broad portfolio of infrastructure assets to deliver services to the community. The goal of asset management is to minimize the lifecycle costs of delivering infrastructure services, manage the associated risks, while maximizing the value ratepayers receive from the asset portfolio.

The acquisition of capital assets accounts for only 10-20% of their total cost of ownership. The remaining 80-90% derives from operations and maintenance. This AMP focuses its analysis on the capital costs to maintain, rehabilitate and replace existing municipal infrastructure assets.



These costs can span decades, requiring planning and foresight to ensure financial responsibility is spread equitably across generations. An asset management plan is critical to this planning, and an essential element of broader asset management program. The industry-standard approach and sequence to developing a practical asset management program begins with a Strategic Plan, followed by an Asset Management Policy and an Asset Management Strategy, concluding with an Asset Management Plan.

This industry standard, defined by the Institute of Asset Management (IAM), emphasizes the alignment between the corporate strategic plan and various asset management documents. The strategic plan has a direct, and cascading impact on asset management planning and reporting.

1.2.1 Asset Management Policy

An asset management policy represents a statement of the principles guiding The Township's approach to asset management activities. It aligns with the organizational strategic plan and provides clear direction to municipal staff on their roles and responsibilities as part of the asset management program.

1.2.2 Asset Management Strategy

An asset management strategy outlines the translation of organizational objectives into asset management objectives and provides a strategic overview of the activities required to meet these objectives. It provides greater detail than the policy on how The Township plans to achieve asset management objectives through planned activities and decision-making criteria.

1.2.3 Asset Management Plan

The asset management plan (AMP) presents the outcomes of The Township's asset management program and identifies the resource requirements needed to achieve a defined level of service. The AMP typically includes the following content:

- State of Infrastructure
- Asset Management Strategies
- Levels of Service
- Financial Strategies

The AMP is a living document that should be updated regularly as additional asset and financial data becomes available. This will allow The Township to re-evaluate the state of infrastructure and identify how the organization's asset management and financial strategies are progressing.

1.3 Key Concepts in Asset Management

Effective asset management integrates several key components, including lifecycle management, risk management, and levels of service. These concepts are applied throughout this asset management plan and are described below in greater detail.

1.3.1 Lifecycle Management Strategies

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment. Asset deterioration has a negative effect on the ability of an asset to fulfill its intended function, and may be characterized by increased cost, risk and even service disruption.

To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

There are several field intervention activities that are available to extend the life of an asset. These activities can be generally placed into one of three categories: maintenance, rehabilitation and replacement. The following table provides a description of each type of activity and the general difference in cost.

Lifecycle Activity	Description	Example (Roads)	Cost
Maintenance	Activities that prevent defects or deteriorations from occurring	Crack Seal	\$
Rehabilitation/ Renewal	Activities that rectify defects or deficiencies that are already present and may be affecting asset performance	Mill & Re-surface	\$\$
Replacement/ Reconstruction	Asset end-of-life activities that often involve the complete replacement of assets	Full Reconstruction	\$\$\$

Depending on initial lifecycle management strategies, asset performance can be sustained through a combination of maintenance and rehabilitation, but at some point, replacement is required. Understanding what effect these activities will have on the lifecycle of an asset, and their cost, will enable staff to make better recommendations.

The Township's approach to lifecycle management is described within each asset category outlined in this AMP. Developing and implementing a proactive lifecycle strategy will help staff to determine which activities to perform on an asset and when they should be performed to maximize useful life at the lowest total cost of ownership.

1.3.2 Risk Management Strategies

Municipalities generally take a 'worst-first' approach to infrastructure spending. Rather than prioritizing assets based on their importance to service delivery, assets in the worst condition are fixed first, regardless of their criticality. However, not all assets are created equal. Some are more important than others, and their failure or disrepair poses more risk to the community than that of others. For example, a road with a high volume of traffic that provides access to critical services poses a higher risk than a low volume rural road. These high-value assets should receive funding before others.

By identifying the various impacts of asset failure and the likelihood that it will fail, risk management strategies can identify critical assets, and determine where maintenance efforts, and spending, should be focused.

This AMP includes a high-level evaluation of asset risk and criticality. Each asset has been assigned a probability of failure score and consequence of failure score based on available asset data. These risk scores can be used to prioritize maintenance, rehabilitation and replacement strategies for critical assets.

1.3.3 Levels of Service

A level of service (LOS) is a measure of what The Township is providing to the community and the nature and quality of that service. Within each asset category in this AMP, technical metrics and qualitative descriptions that measure both technical and community levels of service have been established and measured as data is available.

These measures include a combination of those that have been outlined in O. Reg. 588/17 in addition to performance measures identified by The Township as worth measuring and evaluating. The Township measures the level of service provided at two levels: Community Levels of Service, and Technical Levels of Service.

Community Levels of Service

Community levels of service are a simple, plain language description or measure of the service that the community receives. For core asset categories (roads, bridges and culverts, water, wastewater, stormwater) the Province, through O. Reg. 588/17, has provided qualitative descriptions that are required to be included in

this AMP. For non-core asset categories, The Township has determined the qualitative descriptions that will be used to determine the community level of service provided. These descriptions can be found in the Levels of Service subsection within each asset category.

Technical Levels of Service

Technical levels of service are a measure of key technical attributes of the service being provided to the community. These include mostly quantitative measures and tend to reflect the impact of The Township's asset management strategies on the physical condition of assets or the quality/capacity of the services they provide.

For core asset categories (roads, bridges and culverts, water, wastewater, stormwater) the Province, through O. Reg. 588/17, has provided technical metrics that are required to be included in this AMP. For non-core asset categories, The Township has determined the technical metrics that will be used to determine the technical level of service provided. These metrics can be found in the Levels of Service subsection within each asset category.

Current and Proposed Levels of Service

This AMP focuses on measuring the current level of service provided to the community. Once current levels of service have been measured, The Township plans to establish proposed levels of service over a 10-year period, in accordance with O. Reg. 588/17.

Proposed levels of service should be realistic and achievable within the timeframe outlined by The Township. They should also be determined with consideration of a variety of community expectations, fiscal capacity, regulatory requirements, corporate goals and long-term sustainability. Once proposed levels of service have been established, and prior to July 2025, The Township must identify a lifecycle management and financial strategy which allows these targets to be achieved.

1.4 Climate Change

Climate change can cause severe impacts on human and natural systems around the world. The effects of climate change include increasing temperatures, higher levels of precipitation, droughts, and extreme weather events. In 2019, Canada's Changing Climate Report (CCCR 2019) was released by Environment and Climate Change Canada (ECCC).

The report revealed that between 1948 and 2016, the average temperature increase across Canada was 1.7°C; moreover, during this time period, Northern Canada experienced a 2.3°C increase. The temperature increase in Canada has doubled that of the global average. If emissions are not significantly reduced, the temperature could increase by 6.3°C in Canada by the year 2100 compared to 2005 levels. Observed precipitation changes in Canada include an increase of approximately 20% between 1948 and 2012. By the late 21st century, the projected increase could reach an additional 24%. During the summer months, some regions in Southern Canada are expected to experience periods of drought at a higher rate. Extreme weather events and climate conditions are more common across Canada. Recorded events include droughts, flooding, cold extremes, warm extremes, wildfires, and record minimum arctic sea ice extent.

The changing climate poses a significant risk to the Canadian economy, society, environment, and infrastructure. The impacts on infrastructure are often a result of climate-related extremes such as droughts, floods, higher frequency of freeze-thaw cycles, extended periods of high temperatures, high winds, and wildfires. Physical infrastructure is vulnerable to damage and increased wear when exposed to these extreme events and climate variabilities. Canadian Municipalities are faced with the responsibility to protect their local economy, citizens, environment, and physical assets.

1.4.1 Val Rita-Harty Climate Profile

The Township of Val Rita-Harty is located in Northeastern Ontario along Highway 11. The Township is expected to experience notable effects of climate change which include higher average annual temperatures, an increase in total annual precipitation, and an increase in the frequency and severity of extreme events. According to Climatedata.ca – a collaboration supported by Environment and Climate Change Canada (ECCC) – The Township of Val Rita-Harty may experience the following trends:

Higher Average Annual Temperature:

1. Between the years 1971 and 2000 the annual average temperature was 0.9 °C

2. Under a high emissions scenario, the annual average temperatures are projected to increase by 2.6 °C by the year 2050 and over 7 °C by the end of the century.

Increase in Total Annual Precipitation:

3. Under a high emissions scenario, Val Rita-Harty is projected to experience an 17% increase in precipitation by the year 2050 and a 21% increase by the end of the century.

Increase in Frequency of Extreme Weather Events:

4. It is expected that the frequency and severity of extreme weather events will change.

1.4.2 Integration Climate change and Asset Management

Asset management practices aim to deliver sustainable service delivery - the delivery of services to residents today without compromising the services and well-being of future residents. Climate change threatens sustainable service delivery by reducing the useful life of an asset and increasing the risk of asset failure. Desired levels of service can be more difficult to achieve as a result of climate change impacts such as flooding, high heat, drought, and more frequent and intense storms.

In order to achieve the sustainable delivery of services, climate change considerations should be incorporated into asset management practices. The integration of asset management and climate change adaptation observes industry best practices and enables the development of a holistic approach to risk management. The Ontario government is providing funding through the Northern Ontario Heritage Fund Corporation (NOHFC) for several development projects. One of the major projects is to develop a feasibility study to establish a research isolation facility which will support research on climate change. This project will further advance The Township's capacity to develop asset management strategies that incorporate climate change mitigation and adaptation considerations.

1.5 Ontario Regulation 588/17

As part of the *Infrastructure for Jobs and Prosperity Act, 2015*, the Ontario government introduced Regulation 588/17 - Asset Management Planning for Municipal Infrastructure (O. Reg 588/17). Along with creating better performing organizations, more liveable and sustainable communities, the regulation is a key, mandated driver of asset management planning and reporting. It places substantial emphasis on current and proposed levels of service and the lifecycle costs incurred in delivering them.

The diagram below outlines key reporting requirements under O. Reg 588/17 and the associated timelines.

2019

Strategic Asset Management Policy

2022

Asset Management Plan for Core Assets with the following components:

1. Current levels of service
2. Inventory analysis
3. Lifecycle activities to sustain LOS
4. Cost of lifecycle activities
5. Population and employment forecasts
6. Discussion of growth impacts

2024

Asset Management Plan for Core and Non-Core Assets (same components as 2022) and Asset Management Policy Update

2025

Asset Management Plan for All Assets with the following additional components:

1. Proposed levels of service for next 10 years
2. Updated inventory analysis
3. Lifecycle management strategy
4. Financial strategy and addressing shortfalls
5. Discussion of how growth assumptions impacted lifecycle and financial

1.5.1 O. Reg. 588/17 Compliance Review

The following table identifies the requirements outlined in Ontario Regulation 588/17 for municipalities to meet by July 1, 2022. Next to each requirement a page or section reference is included in addition to any necessary commentary.

Requirement	O. Reg. Section	AMP Section Reference	Status
Summary of assets in each category	S.5(2), 3(i)	4.1 - 12.1	Complete
Replacement cost of assets in each category	S.5(2), 3(ii)	4.1 - 12.1	Complete
Average age of assets in each category	S.5(2), 3(iii)	4.2 - 12.2	Complete
Condition of core assets in each category	S.5(2), 3(iv)	4.2 - 12.2	Complete
Description of municipality's approach to assessing the condition of assets in each category	S.5(2), 3(v)	4.2.1 - 12.2.1	Complete
Current levels of service in each category	S.5(2), 1(i-ii)	4.5 - 12.5	Complete for Core Assets Only
Current performance measures in each category	S.5(2), 2	4.5 - 12.5	Complete for Core Assets Only
Lifecycle activities needed to maintain current levels of service for 10 years	S.5(2), 4	4.3 - 12.3	Complete
Costs of providing lifecycle activities for 10 years	S.5(2), 4	Appendix B	Complete
Growth assumptions	S.5(2), 5(i-ii) S.5(2), 6(i-vi)	13.1-13.2	Complete

2 Scope and Methodology

Key Insights

- This asset management plan includes 9 asset categories and is divided between tax-funded and rate-funded categories
- The source and recency of replacement costs impacts the accuracy and reliability of asset portfolio valuation
- Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life

2.1 Asset Categories Included in this AMP

This asset management plan for The Township of Val Rita-Harty is produced in compliance with Ontario Regulation 588/17. The July 2022 deadline under the regulation—the first of three AMPs—requires analysis of only core assets (roads, bridges and culverts, water, sanitary sewer, and storm water).

The AMP summarizes the state of the infrastructure for The Township’s asset portfolio, establishes current levels of service and the associated technical and customer oriented key performance indicators (KPIs), and outlines lifecycle strategies for optimal asset management and performance for the asset categories listed below.

Asset Category	Source of Funding
Road Network	Tax Levy
Bridges & Culverts	
Storm Water Network	
Buildings	
Vehicles	
Machinery & Equipment	
Land Improvements	User Rates
Water Network	
Sanitary Sewer Network	

2.2 Deriving Replacement Costs

There are a range of methods to determine the replacement cost of an asset, and some are more accurate and reliable than others. This AMP relies on two methodologies:

- **User-Defined Cost and Cost/Unit:** Based on costs provided by municipal staff which could include average costs from recent contracts; data from engineering reports and assessments; staff estimates based on knowledge and experience

- **Cost Inflation/CPI Tables:** Historical cost of the asset is inflated based on Consumer Price Index or Non-Residential Building Construction Price Index

User-defined costs based on reliable sources are a reasonably accurate and reliable way to determine asset replacement costs. Cost inflation is typically used in the absence of reliable replacement cost data. It is a reliable method for recently purchased and/or constructed assets where the total cost is reflective of the actual costs that The Township incurred. As assets age, and new products and technologies become available, cost inflation becomes a less reliable method.

2.3 Estimated Useful Life and Service Life Remaining

The estimated useful life (EUL) of an asset is the period over which The Township expects the asset to be available for use and remain in service before requiring replacement or disposal. The EUL for each asset in this AMP was assigned according to the knowledge and expertise of municipal staff and supplemented by existing industry standards when necessary.

By using an asset's in-service data and its EUL, The Township can determine the service life remaining (SLR) for each asset. Using condition data and the asset's SLR, The Township can more accurately forecast when it will require replacement. The SLR is calculated as follows:

$$\text{Service Life Remaining (SLR)} = \text{In Service Date} + \text{Estimated Useful Life (EUL)} - \text{Current Year}$$

2.4 Reinvestment Rate

As assets age and deteriorate they require additional investment to maintain a state of good repair. The reinvestment of capital funds, through asset renewal or replacement, is necessary to sustain an adequate level of service. The reinvestment rate is a measurement of available or required funding relative to the total replacement cost.

By comparing the actual vs. target reinvestment rate The Township can determine the extent of any existing funding gap. The reinvestment rate is calculated as follows:

$$\text{Target Reinvestment Rate} = \frac{\text{Annual Capital Requirement}}{\text{Total Replacement Cost}}$$

$$\text{Actual Reinvestment Rate} = \frac{\text{Annual Capital Funding}}{\text{Total Replacement Cost}}$$

2.5 Deriving Asset Condition

An incomplete or limited understanding of asset condition can mislead long-term planning and decision-making. Accurate and reliable condition data helps to prevent premature and costly rehabilitation or replacement and ensures that lifecycle activities occur at the right time to maximize asset value and useful life.

A condition assessment rating system provides a standardized descriptive framework that allows comparative benchmarking across The Township's asset portfolio. The table below outlines the condition rating system used in this AMP to determine asset condition. This rating system is aligned with the Canadian Core Public Infrastructure Survey which is used to develop the Canadian Infrastructure Report Card. When assessed condition data is not available, service life remaining is used to approximate asset condition.

Condition	Description	Criteria	Service Life Remaining (%)
Very Good	Fit for the future	Well maintained, good condition, new or recently rehabilitated	80-100
Good	Adequate for now	Acceptable, generally approaching mid-stage of expected service life	60-80
Fair	Requires attention	Signs of deterioration, some elements exhibit significant deficiencies	40-60
Poor	Increasing potential of affecting service	Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration	20-40
Very Poor	Unfit for sustained service	Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable	0-20

The analysis in this AMP is based on assessed condition data only as available. In the absence of assessed condition data, asset age is used as a proxy to determine asset condition. Appendix E includes additional information on the role of asset

condition data and provides basic guidelines for the development of a condition assessment program.

3

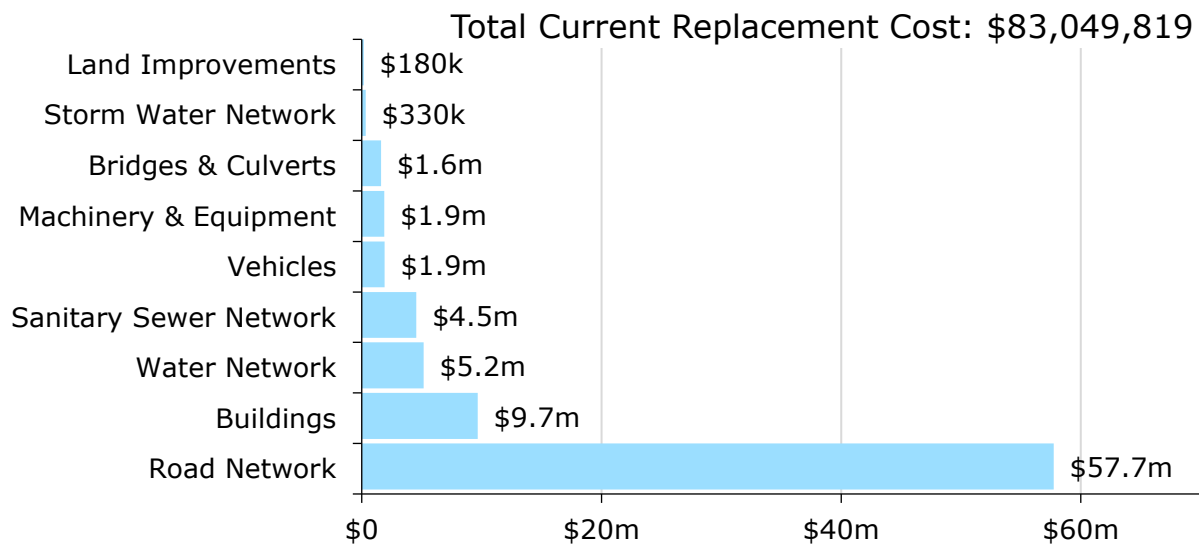
Portfolio Overview

Key Insights

- The total replacement cost of The Township's asset portfolio is \$83.0 million
- The Township's target re-investment rate is 2.0%
- 26% of all assets are in fair or better condition
- Average annual capital requirements total \$1.7 million per year across all assets

3.1 Total Replacement Cost of Asset Portfolio

The asset categories analyzed in this AMP have a total replacement cost of \$83.0 million based on inventory data from 2022. This total was determined based on a combination of user-defined costs and historical cost inflation. This estimate reflects replacement of historical assets with similar, not necessarily identical, assets available for procurement today.

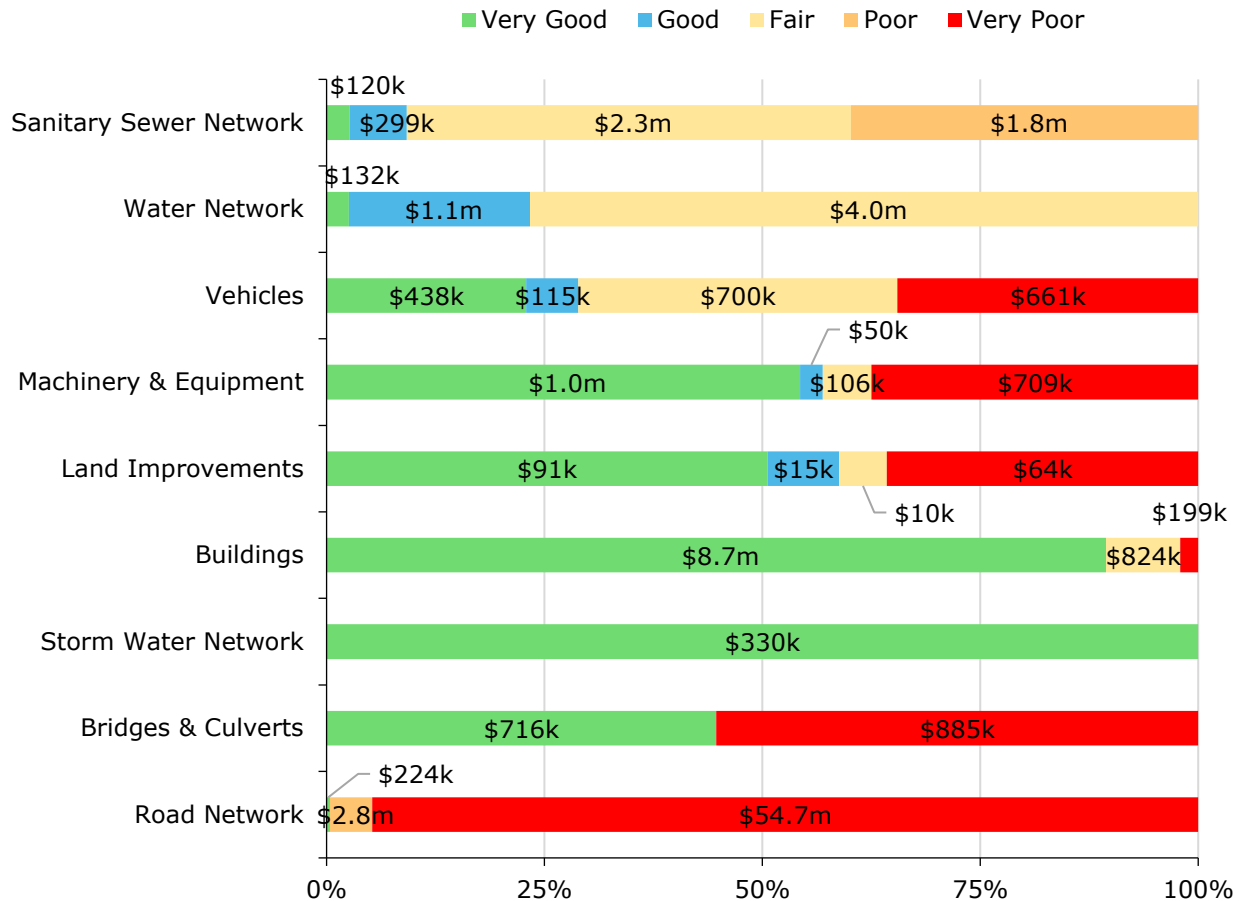


The following table identifies the methods employed to determine replacement costs across each asset category:

Asset Category	Replacement Cost Method
	Notes
Road Network	Inflated 2013 Cost per Unit & CPI Tables
Bridges & Culverts	CPI Tables
Storm Water Network	CPI Tables
Buildings	User-Defined Costs & CPI Tables
Land Improvements	CPI Tables
Machinery & Equipment	CPI Tables
Vehicles	CPI Tables
Water Network	Inflated 2013 Cost per Unit & CPI Tables & Inflated 2013 User-Defined Costs
Sanitary Sewer Network	Inflated 2013 Cost per Unit & CPI Tables & Inflated 2013 User-Defined Costs

3.2 Condition of Asset Portfolio

The current condition of the assets is central to all asset management planning. Collectively, 26% of assets in Val Rita-Harty are in fair or better condition. This estimate relies on both age-based and field condition data.



Value and Percentage of Assets by Replacement Cost

Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Road Network	\$1,261,470	2%	\$56,485,728	98%	3%
Bridges & Culverts	\$715,661	45%	\$885,104	55%	44%
Storm Water Network	\$330,162	100%	\$0	0%	99%

Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Buildings	\$8,670,077	90%	\$1,010,929	10%	94%
Land Improvements	\$144,056	80%	\$36,243	20%	59%
Machinery & Equipment	\$1,182,890	63%	\$709,408	37%	53%
Vehicles	\$1,253,140	65%	\$660,717	35%	41%
Water Network	\$5,157,299	100%	\$0	0%	64%
Sanitary Sewer Network	\$1,199,155	26%	\$3,347,780	74%	53%
Total	\$19,913,910	24%	\$63,135,909	76%	23%

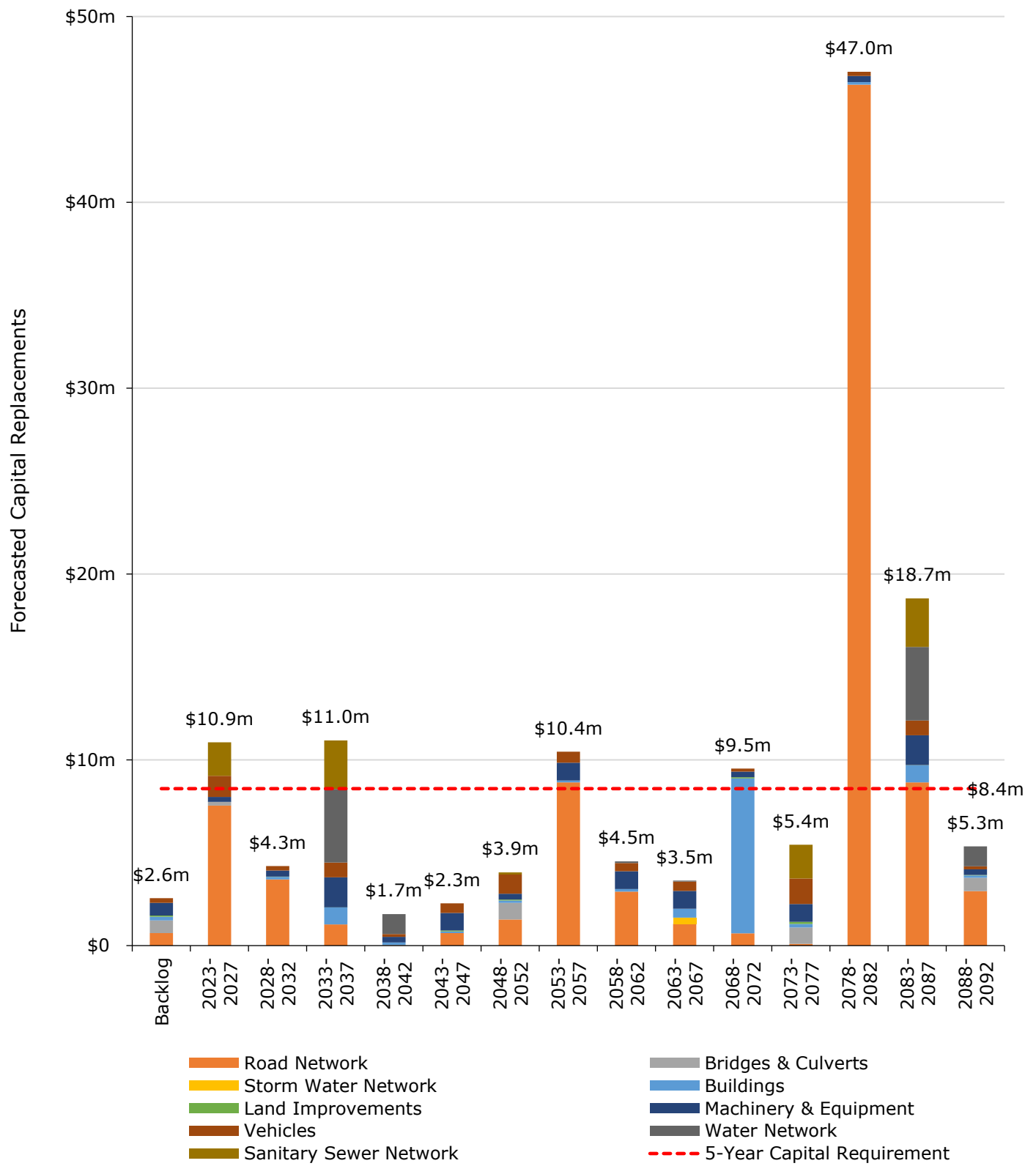
This AMP relies on assessed condition data for 78% of assets; for the remaining portfolio, age is used as an approximation of condition. Assessed condition data is invaluable in asset management planning as it reflects the true condition of the asset and its ability to perform its functions.

3.3 Service Life Remaining

Capital requirements over the next 10 years are identified in Appendix B.

3.4 Forecasted Capital Requirements

The development of a long-term capital forecast should include both asset rehabilitation and replacement requirements. With the development of asset-specific lifecycle strategies that include the timing and cost of future capital events, The Township can produce an accurate long-term capital forecast. The following graph identifies capital requirements until 2092. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements.



4 Road Network

The road network is a critical component of the provision of safe and efficient transportation services and represents the highest value asset category in The Township's asset portfolio. It includes all municipally owned and maintained roadways in addition to supporting roadside infrastructure such as road signs and street lights.

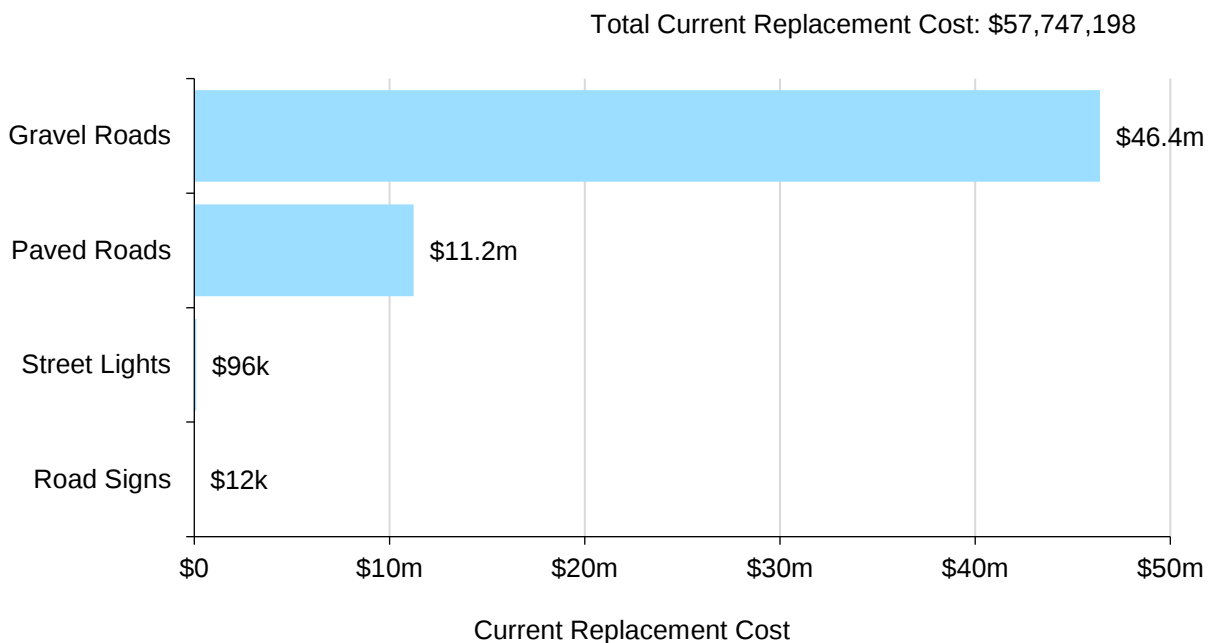
The state of the infrastructure for the road network is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$57.7 million	Very Poor (3%)	Annual Requirement: \$956,000

4.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in The Township's road network inventory.

Asset Segment	Quantity	Replacement Cost
Gravel Roads ¹	43 km	\$46,403,000
Paved Roads	6 km	\$11,236,000
Road Signs	106	\$12,000
Street Lights	69	\$96,000
Total		\$57,747,000



Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

¹ Gravel roads undergo perpetual operating and maintenance activities. If maintained properly, they can theoretically have a limitless service life.

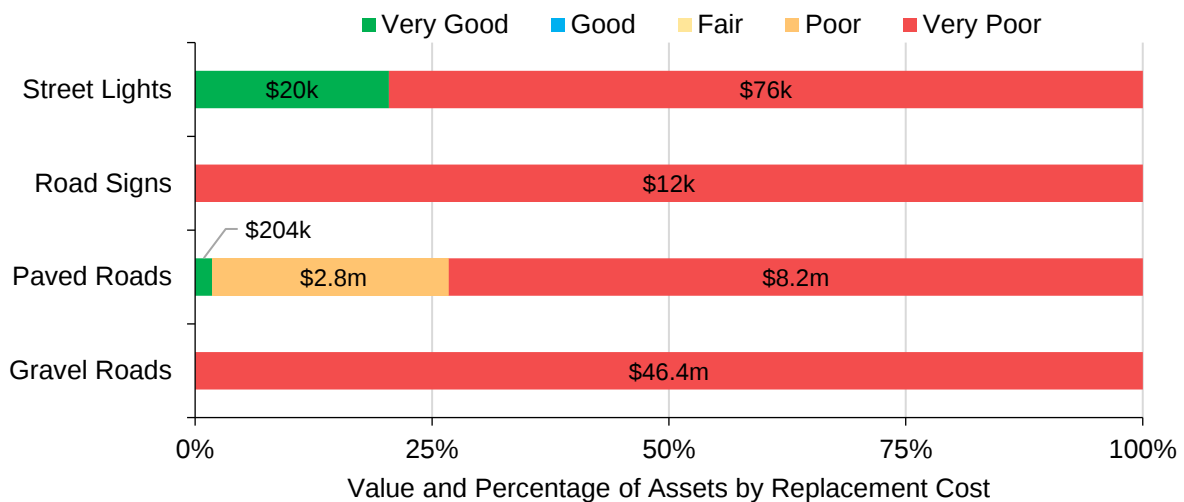
4.2 Asset Condition & Age

The conditions of roads are based on the 2013 assessment. The 2013 assessed condition may not be a good indicator for gravel roads as they are perpetually re-stoned every seven years.

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

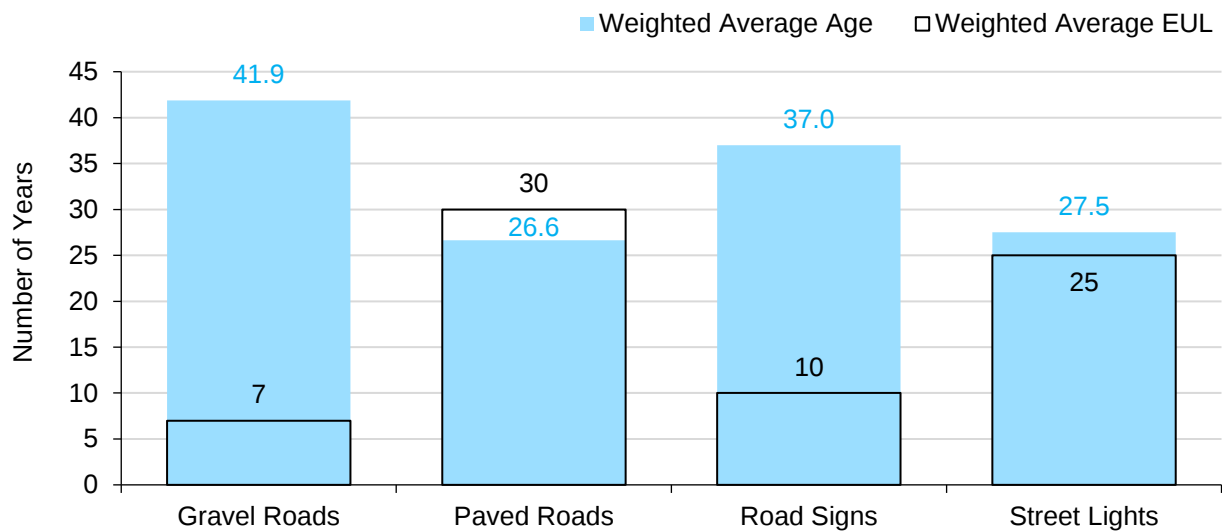
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Gravel Roads	\$0	0%	\$46,403,200	100%	0%
Paved Roads	\$204,157	2%	\$11,031,970	98%	14%
Road Signs	\$0	0%	\$11,721	100%	0%
Street Lights	\$19,671	20%	\$76,479	80%	20%
Total	\$223,828	0.4%	\$57,523,370	99.6%	3%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Gravel Roads	41.9	7
Paved Roads	26.6	30
Road Signs	37.0	10
Street Lights	27.5	25



To ensure that The Township's road network continues to provide an acceptable level of service, The Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation, and replacement activities is required to increase the overall condition of the roads.

Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

4.2.1 Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes The Township's current approach:

- Last road assessment was completed in 2013 that included a detailed assessment of the condition of each road segment
- Currently, the Township is working on the road assessment and expected to be completed in 2024
- Road inspection including road signs and streetlights are completed on a weekly basis by internal staff for operational purpose

In this AMP the following rating criteria is used to determine the current condition of road segments and forecast future capital requirements:

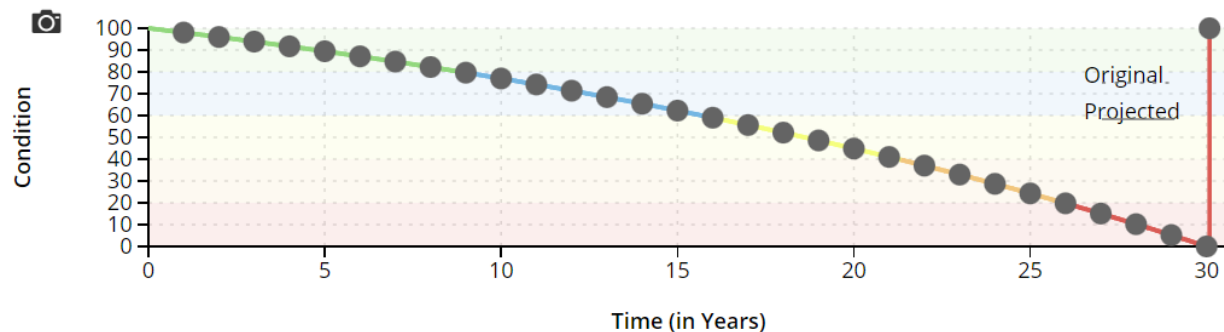
Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

4.3 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. This process is affected by a range of factors including an asset's characteristics, location, utilization, maintenance history and environment.

The following lifecycle strategies have been developed as a proactive approach to managing the lifecycle of paved roads and gravel roads. Instead of allowing the roads to deteriorate until replacement is required, strategic rehabilitation is expected to extend the service life of roads at a lower total cost.

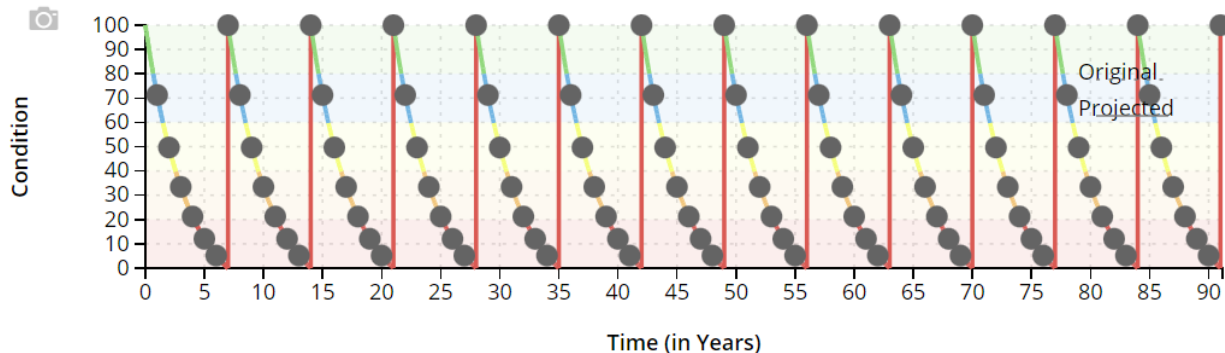
Paved Roads		
Event Name	Event Class	Event Trigger
Crack Sealing	Maintenance	Every 5 Years (Repeated)
Cold Mix Patching	Maintenance	Annually
Full Reconstruction	Replacement	40 Years



The following table outlines the Township’s current lifecycle management strategy that are not included in the tables above for Paved roads.

Activity Type	Description of Current Strategy
Maintenance	Regular maintenance including sweeping, snow removal is performed on a regular basis to compliant with minimum maintainace standards for Municipal Highways
	Cold mix patching are performed annually on the paved roads with identified deficiencies
	Crack sealing is performed every 5 years on the paved roads with identified deficiencies
Rehabilitation	Different rehabilitation strategies, such as mill and resurface, may be implemented based on the road condition, road classification, staff expertise and integration opportunities with underground infrastructure
Replacement	The full replacement of paved roads depends on road condition, road classification, staff expertise and integration opportunities with underground infrastructure

Gravel Roads		
Event Name	Event Class	Event Trigger
Dust Suppressant	Maintenance	Year 7 and Repeated every 14 Years
2 inch Re-stoning	Rehabilitation	Year 7 and Repeated every 14 Years
4 inch Re-stoning	Rehabilitation	Year 14 and Repeated every 14 Years
Full Reconstruction	Replacement	40 Years



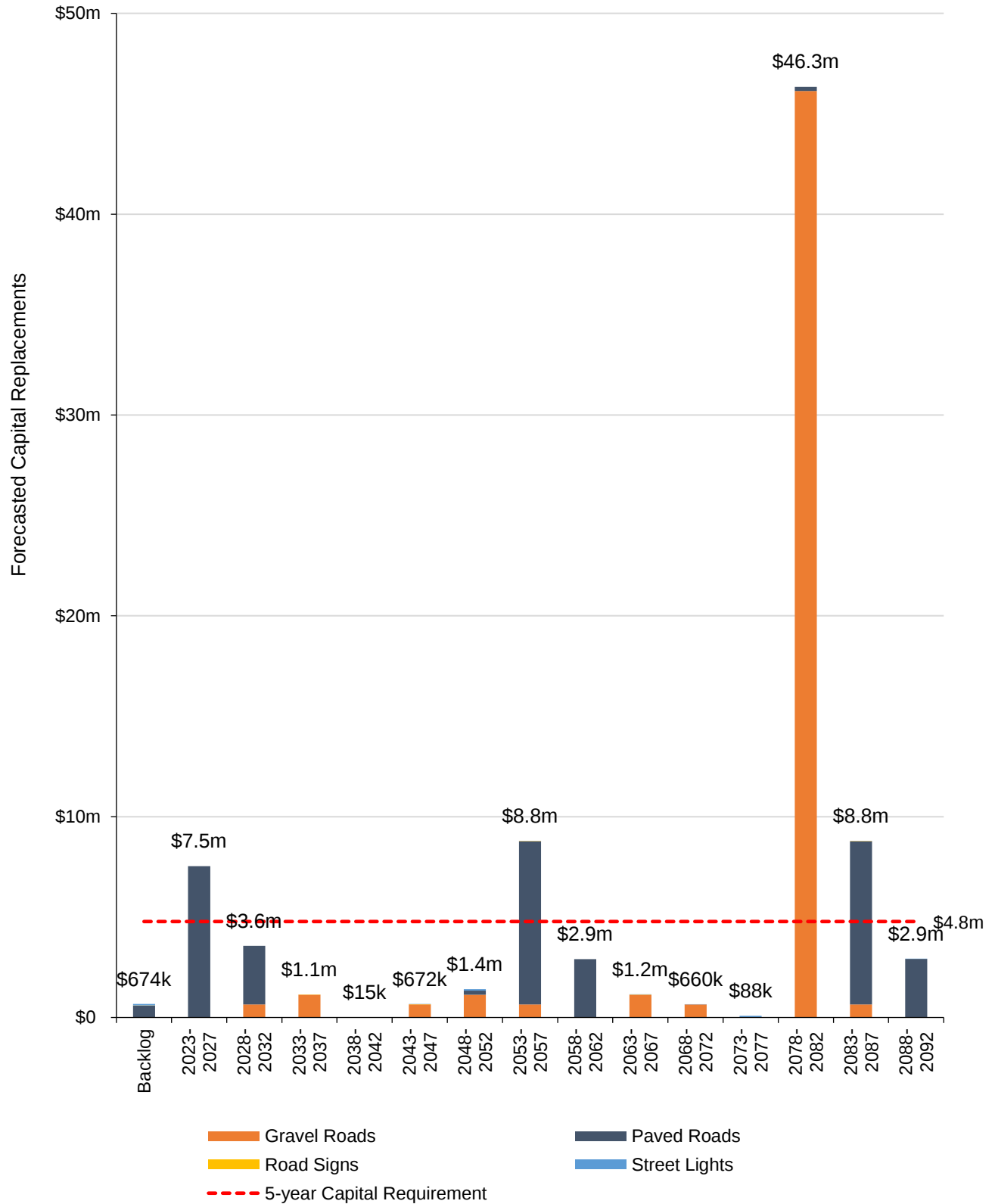
The following table outlines the Township’s current lifecycle management strategy that are not included in the tables above for Gravel roads.

Activity Type	Description of Current Strategy
Maintenance	Dust Suppression is applied on gravel roads on an annual basis
Rehabilitation /	2-4 inches of gravel is applied on gravel roads on a 6-to-7-year
Replacement	cycle depends on the road conditions and staff expertise
	The schedule of the rehabilitation is often depends on the
	integration opportunities with underground infrastructure

4.3.1 Forecasted Capital Requirements

Based on the lifecycle strategies identified previously for paved and gravel roads, and assuming the end-of-life replacement of all other assets in this category, the following graph forecasts capital requirements for the road network.

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that The Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2092. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$956,000, which equals to \$4.8 million over a five-year period. Current backlog for road network is \$674,000.

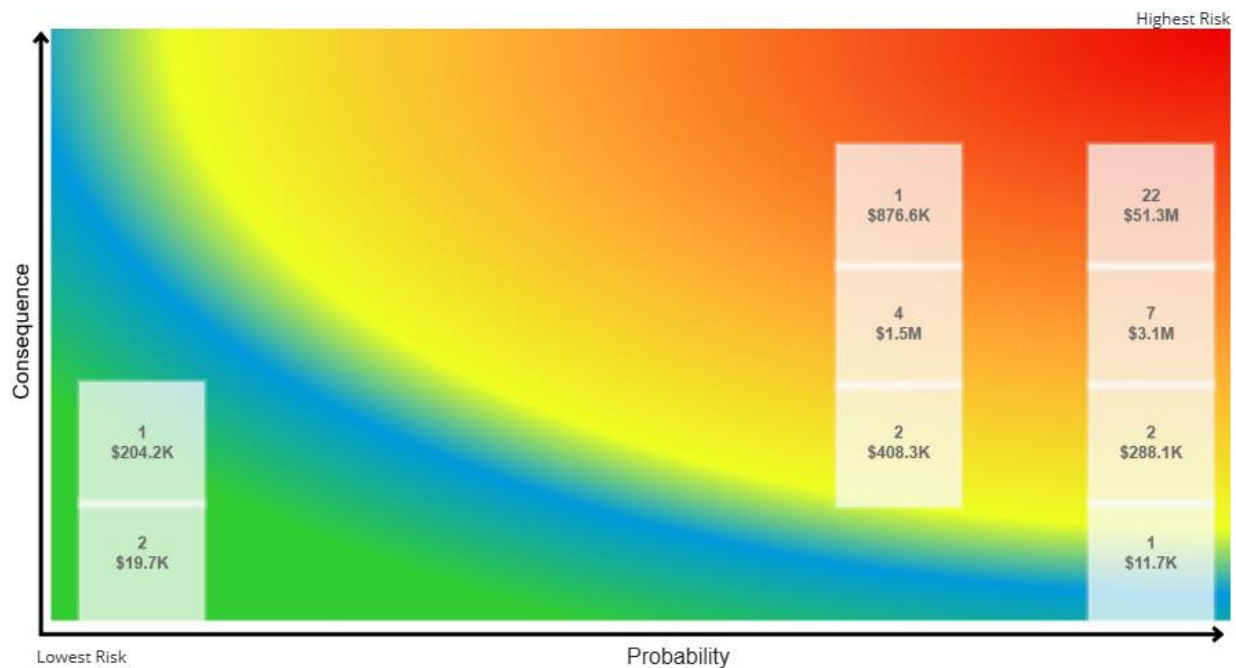


The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

4.4 Risk & Criticality

4.4.1 Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2022 inventory data. See Appendix D for the criteria used to determine the risk rating of each asset.



This is a high-level model developed for the purposes of this AMP and Town staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.

The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the road network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)
	Road Types (Social)

The identification of critical assets allows The Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

4.4.2 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that The Township is currently facing:



Infrastructure Design

Past designs of road network have been inadequate since the extreme weather impacts and heavy vehicles are not considered. The roads do not have road bases and may cause an accelerated deterioration of the road surfaces. To improve asset resiliency, staff should identify the critical areas and incorporating a proactive monitoring and maintenance program to support infrastructure resiliency and help mitigate the risk.



Aging Infrastructure and Capital Funding Strategies

As all the roads are constructed in 1991, a large number of roads are approaching the end of their useful life at the same time. Roads with poor condition pose higher demand on maintenance and rehabilitation. Current level of financial investment does not sufficiently address capital rehabilitation requirements proactively or replace a large number of assets at once. Some roadway projects may be deferred due to budget constraints. An annual capital funding strategy can reduce dependency on grant funding and help prevent deferral of capital works.

4.5 Levels of Service

The following tables identify The Township's current level of service for the road network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that The Township has selected for this AMP.

4.5.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the road network.

Service Attribute	Qualitative Description	Current LOS (2020)
Scope	Description, which may include maps, of the road network in The Township and its level of connectivity	See Appendix C
Quality	Description or images that illustrate the different levels of road class pavement condition	The Township condition ratings are based on visual inspections . Every road section received a 1-10 condition rating.
		Very Poor: Widespread signs of deterioration. Requires remedial work to bring road up to standard. Service is affected severely. (score 0 - 2)
		Poor: Large portions of road exhibiting deterioration. Road is mostly below standard. (score 2 - 4)
		Fair: Some sections of road starting to deteriorate. Requires some remedial work and surface upgrade in near future. (score 4 - 6)
		Good: Road is in overall good condition. Few sections are starting to show signs of minimal deterioration. (score 6 - 8)
		Very Good: Surface was newly or recently upgraded. No signs of deterioration or remedial work required. (score 8 - 10)

4.5.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the road network.

Service Attribute	Technical Metric	Current LOS (2020)
Scope	Lane-km of arterial roads (MMS classes 1 and 2) per land area (km/km ²)	0 km / 379 km ²
	Lane-km of collector roads (MMS classes 3 and 4) per land area (km/km ²)	0 km / 379 km ²
	Lane-km of local roads (MMS classes 5 and 6) per land area (km/km ²)	6.4 km / 379 km ²
Quality	Average pavement condition index for paved roads in The Township	14%
	Average surface condition for unpaved roads in The Township (e.g. excellent, good, fair, poor)	Very Poor

4.6 Recommendations

Asset Inventory

- Review road culverts and sidewalk inventory to determine whether all municipal assets within these asset segments have been accounted for.

Condition Assessment Strategies

- The last comprehensive assessment of the road network was completed in 2013. Consider completing an updated assessment of all roads within the next 1-2 years.

Lifecycle Management Strategies

- Continue to implement the identified lifecycle management strategies for paved and gravel roads to realize potential cost avoidance and maintain a high quality of road pavement condition.
- Evaluate the efficacy of The Township's lifecycle management strategies at regular intervals to determine the impact cost, condition and risk.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that The Township believes to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

5 Bridges & Culverts

Bridges and culverts represent a critical portion of the transportation services provided to the community. The Township is responsible for the maintenance of all bridges and culverts located across municipal roads with the goal of keeping structures in an adequate state of repair and minimizing service disruptions.

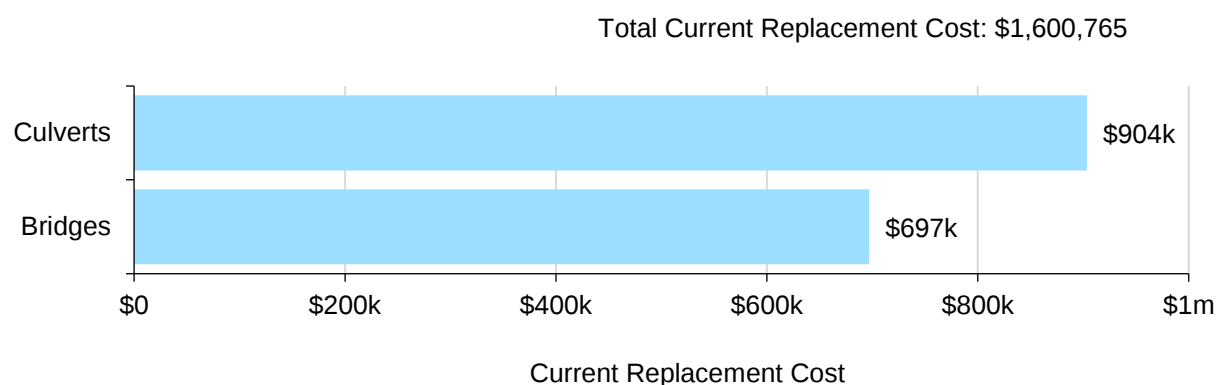
The state of the infrastructure for bridges and culverts is summarized in the following table.

Replacement Cost	Condition	Financial Capacity	
\$1.6 million	Fair (44%)	Annual Requirement:	\$45,000

5.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in The Township's bridges and culverts inventory.

Asset Segment	Quantity	Replacement Cost
Bridges	1	\$697,000
Culverts	12	\$904,000
Total		\$1,601,000



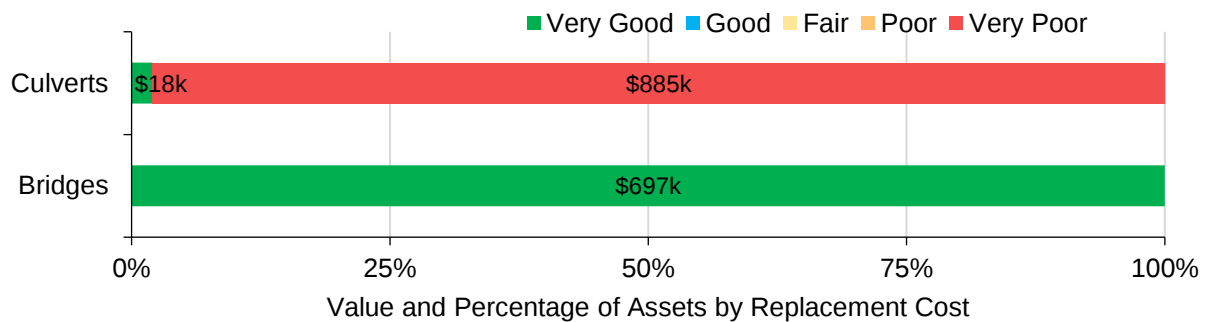
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

5.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

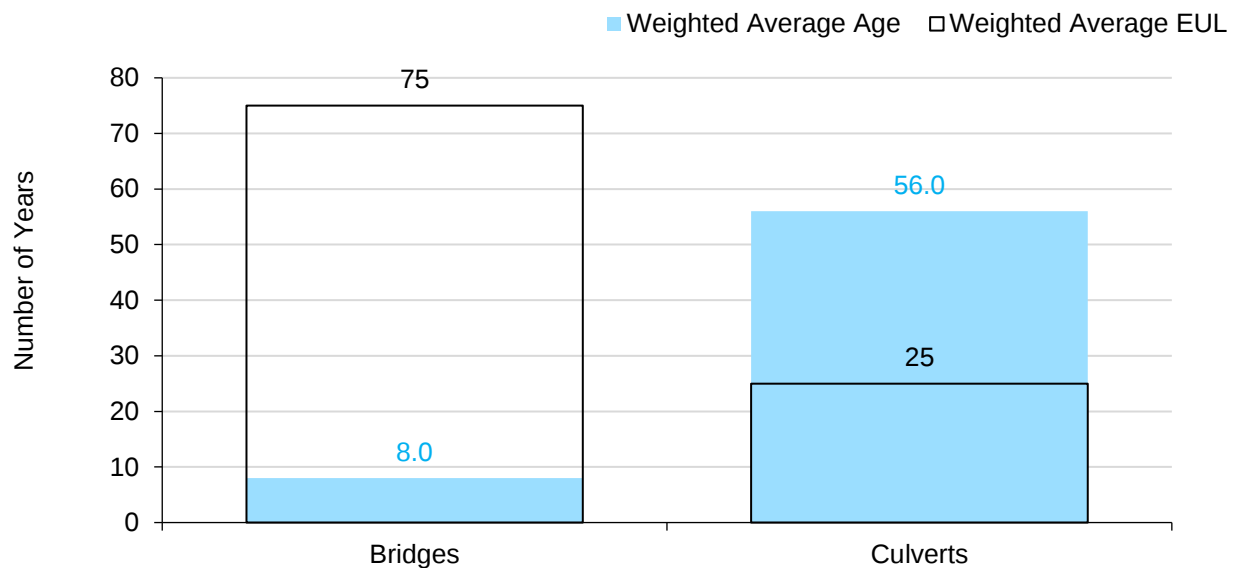
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Bridges	\$697,192	100%	\$0	0%	99%
Culverts	\$18,469	2%	\$885,104	98%	2%
Total	\$715,661	45%	\$885,104	55%	44%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Bridges	8.0	75
Culverts	56.0	25



To ensure that The Township's bridges and culverts continue to provide an acceptable level of service, The Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance,

rehabilitation, and replacement activities is required to increase the overall condition of the bridges and culverts.

Each asset’s Estimated Useful Life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

5.2.1 Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes The Township’s current approach:

- In-house condition assessments of all bridges and culverts with a span greater than or equal to 3 meters are completed every 3 years by internal staff in accordance with the requirements of Ontario Structure Inspection Manual (OSIM)
- Drainage culverts are inspected on weekly basis by internal staff.

In this AMP, the following rating criteria is used to determine the current condition of bridges and culverts and forecast future capital requirements:

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

5.3 Lifecycle Management Strategy

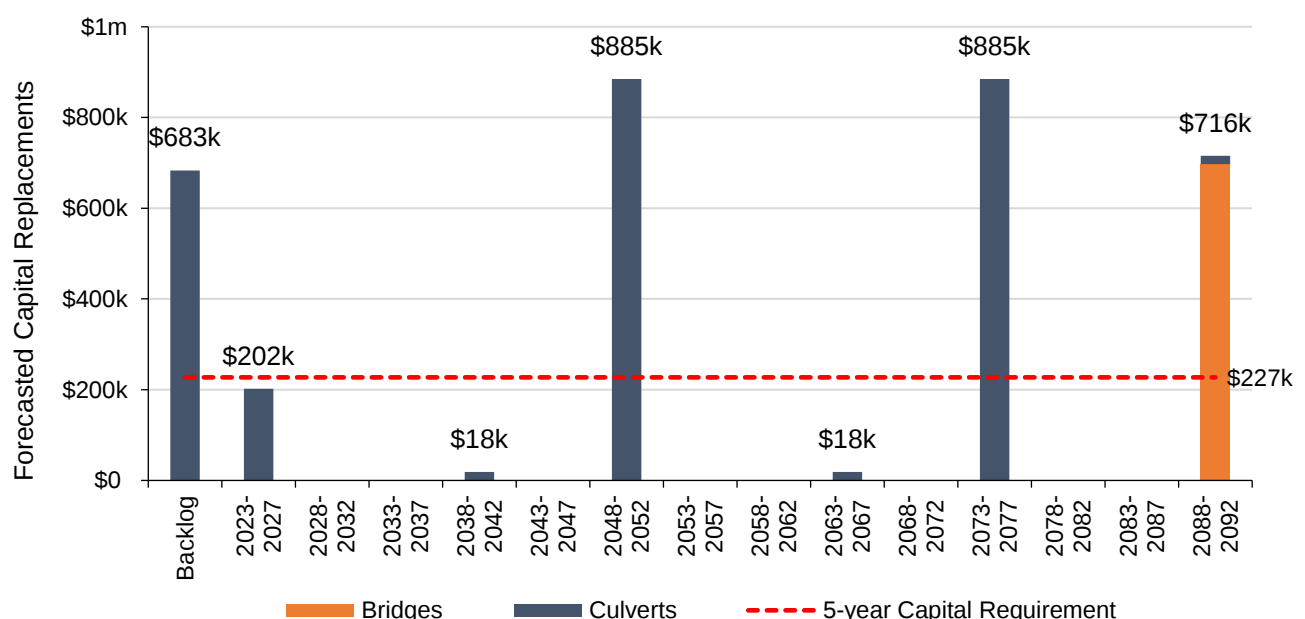
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines The Township’s current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Signage and bridge sweeping is completed on an annual basis by internal staff.
	Beaver dams are removed by internal staff on as needed basis.
Rehabilitation and Replacement	Drainage culverts are cleaned and maintained by internal staff on as needed basis.
	Bridge repairs are performed on as needed basis by internal staff.
	Major rehabilitation activities and replacement are driven by the results of the structural assessment.

5.3.1 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that The Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2092. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$45,000, which equals to \$227,000 over a five-year period. Current backlog for bridges and culverts is \$683,000.

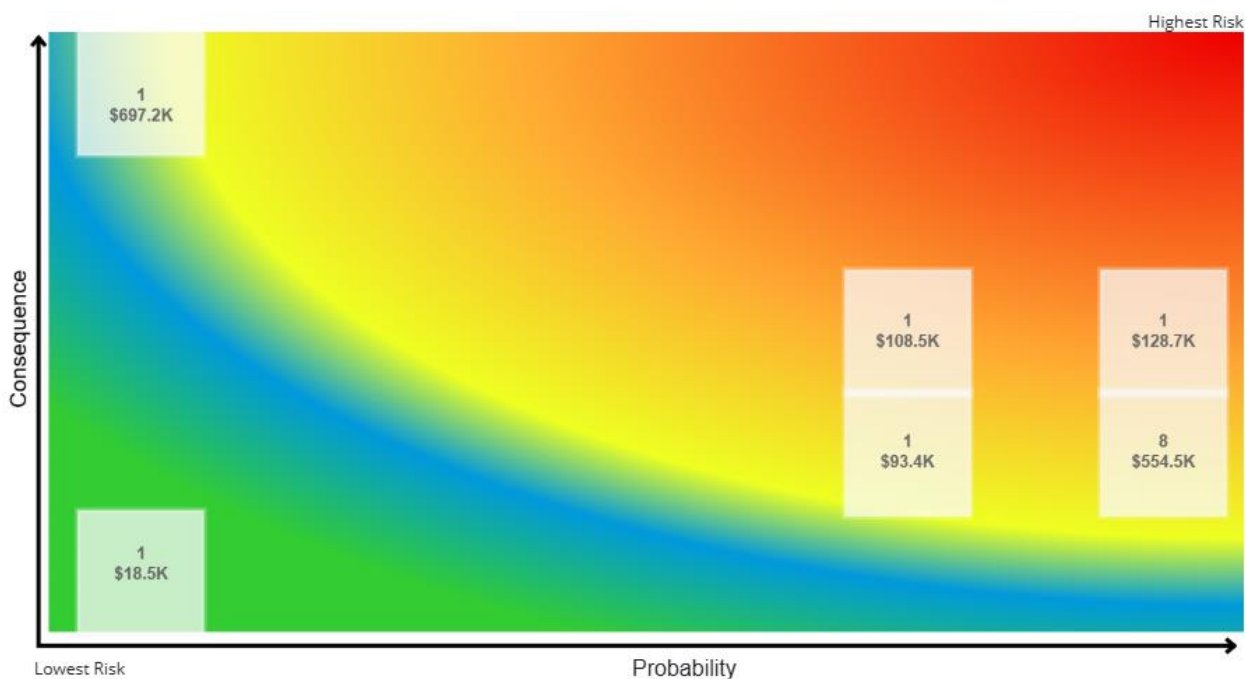


The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

5.4 Risk & Criticality

5.4.1 Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2022 inventory data. See Appendix D for the criteria used to determine the risk rating of each asset.



This is a high-level model developed for the purposes of this AMP and Town staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.

The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of bridges and culverts are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

The identification of critical assets allows The Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-

specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

5.4.2 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that The Township is currently facing:



Wildlife and Environmental Uncertainty

Beavers in the Township are attracted to build dams in culverts and other drainage structures to create ponds. However, the beaver dams constrict stream flowing, limit the capacity for water and increase the probability of flooding. As a result, it requires high maintenance costs and adequate staff to maintain the culverts and remove the beaver dams regularly. Incorporating a monitoring and maintenance program for all culverts in the critical areas with an annual capital plan can further support infrastructure resiliency and help mitigate the risk.

5.5 Levels of Service

The following tables identify The Township's current level of service for bridges and culverts. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that The Township has selected for this AMP.

5.5.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by bridges and culverts.

Service Attribute	Qualitative Description	Current LOS (2020)
Scope	Description of the traffic that is supported by municipal bridges (e.g. heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists)	There is only one bridge in the Township with 25 ton loading restriction. Currently, mostly pedestrian is using this bridge while other vehicles such as motor vehicles, emergency vehicles and cyclists can cross it.
Quality	Description or images of the condition of bridges and culverts and how this would affect use of the bridges and culverts	Every bridge is assigned a bridge condition index value between 100 and 0. Very Poor: Widespread signs of deterioration. Requires remedial work to bring bridge up to standard. Service is affected. (0-20%) Poor: Large portions of bridge exhibiting deterioration with notable defects to one or several components such as the road surface, deck, substructure, superstructure, and/or abutments. Bridge is mostly below standard. (20-40%) Fair: Some sections of bridge starting to deteriorate. Requires some remedial work and component upgrade in near future. (40-60%) Good: Bridge is in overall good condition. Few components are starting to show signs of minimal deterioration. (60-80%) Very Good: Bridge is well maintained and in excellent condition. Components were newly or recently upgraded. No signs of deterioration or remedial work required. (80-100%)

5.5.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by bridges and culverts.

Service Attribute	Technical Metric	Current LOS (2020)
Scope	% of bridges in the Township with loading or dimensional restrictions	1
Quality	Average bridge condition index value for bridges in The Township	99%
	Average bridge condition index value for structural culverts in the Township	2%

5.6 Recommendations

Data Review/Validation

- Continue to review and validate inventory data, assessed condition data and replacement costs for all bridges and structural culverts upon the completion of OSIM inspections every 2 years.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Lifecycle Management Strategies

- This AMP only includes capital costs associated with the reconstruction of bridges and culverts. The Township should work towards identifying projected capital rehabilitation and renewal costs for bridges and culverts and integrating these costs into long-term planning.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics identified in O. Reg. 588/17 and those metrics that the Township believe to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

6 Storm Water Network

The Township is responsible for owning and maintaining a stormwater network of storm mains, catch basins and manholes.

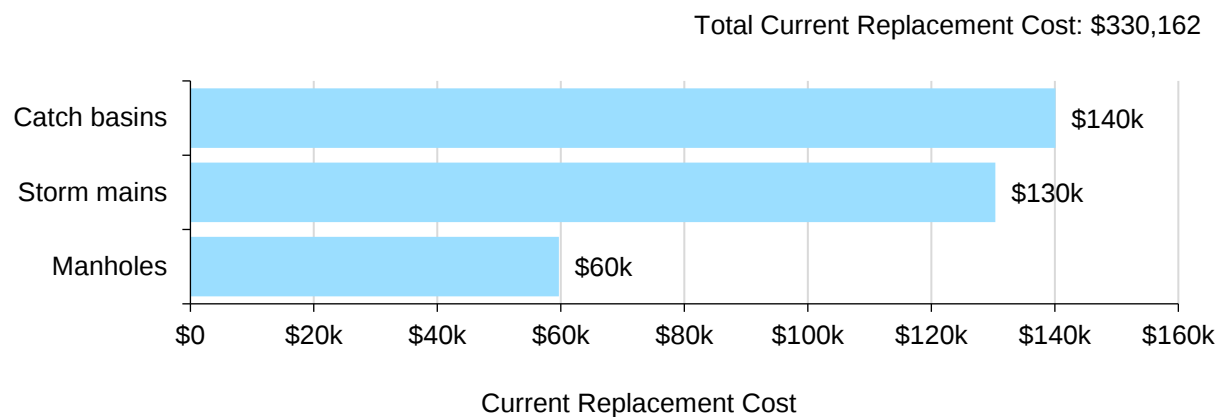
The state of the infrastructure for the stormwater network is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$0.3 million	Very Good (99%)	Annual Requirement: \$7,000

6.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's stormwater network inventory.

Asset Segment	Quantity	Replacement Cost
Catch basins	20	\$140,000
Manholes	7	\$60,000
Storm mains	450 m	\$130,000
Total		\$330,000



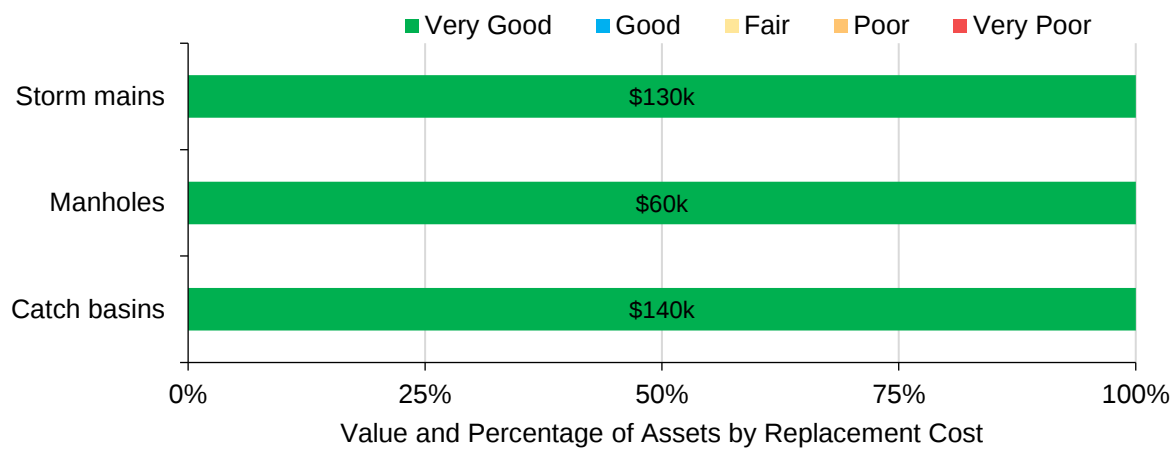
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

6.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

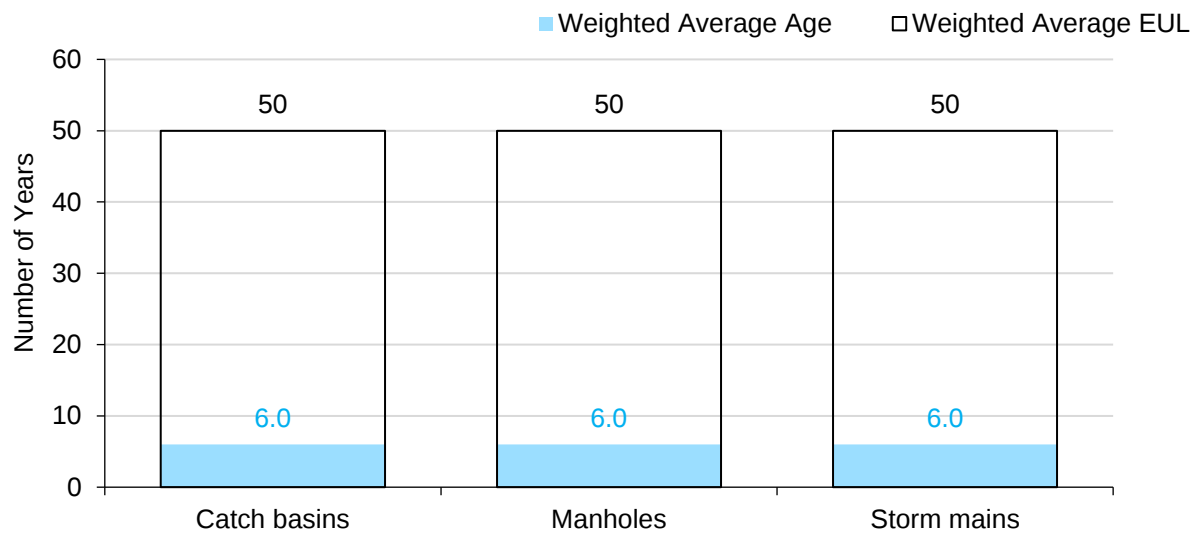
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Catch basins	\$140,106	100%	\$0	0%	99%
Manholes	\$59,697	100%	\$0	0%	99%
Storm mains	\$130,359	100%	\$0	0%	99%
Total	\$330,162	100%	\$0	0%	99%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Catch basins	6.0	50
Manholes	6.0	50
Storm mains	6.0	50



To ensure that the Township's stormwater network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the stormwater network.

Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

6.2.1 Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Township's current approach:

- There are no formal condition assessment programs in place for the storm water network
- The manholes and catch basins are inspected by internal staff on a regular basis
- As the Township refines the available asset inventory for the storm water network, a regular assessment cycle should be established

In this AMP the following rating criteria is used to determine the current condition of road segments and forecast future capital requirements:

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

6.3 Lifecycle Management Strategy

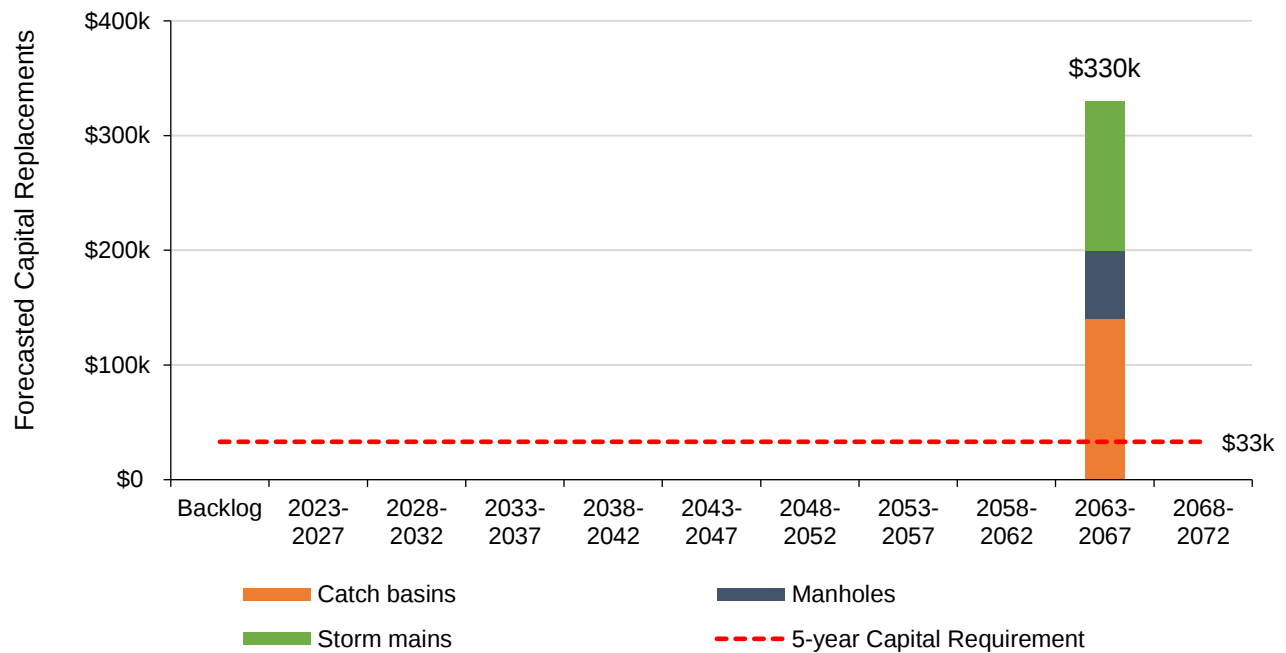
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Storm pipes flushing is performed on a 5-year basis.
	Catch basin and manholes cleaning is performed on a 3-year basis.
Rehabilitation / Replacement	Rehabilitation and repairs of catch basins and manholes are driven by the inspection results during cleaning.
	Full replacement of the storm pipe is based on the condition, age, staff expertise and the integration opportunities with road network.
	Trenchless re-lining has the potential to reduce total lifecycle costs. However, storm mains are relatively new and don't require rehabilitation in the near future.
	Without the availability of up-to-date condition assessment information replacement activities are purely reactive in nature.

6.3.1 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$7,000, which equals to \$33,000 over a five-year period. The asset inventory includes a single pooled asset for each storm structure, therefore, does not account for rehabilitation and replacement activities of each asset that make up the structure. This graph simply shows when the entire structure is likely to require renewal or replacement.



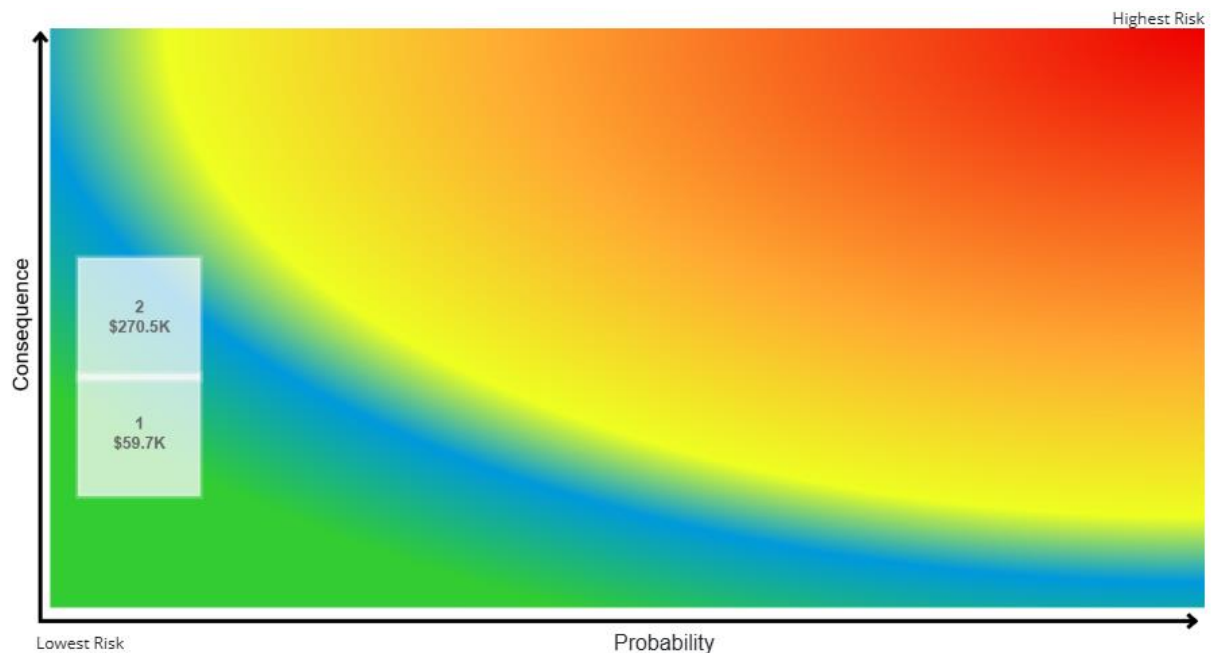
The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

6.4 Risk & Criticality

6.4.1 Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2022 inventory data. See Appendix D for the criteria used to determine the risk rating of each asset.

This is a high-level model developed for the purposes of this AMP and Town staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.



The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the stormwater network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

6.4.2 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:



Lifecycle Management Strategies

The current lifecycle management strategy for storm water network is considered more reactive than proactive. There are no formal condition assessment programs in place for the stormwater network. Without an understanding of the condition of the network, unexpected failures are more likely to occur. The staff is also working towards developing better defined strategies to help to extend the service life of structures with

lower lifecycle costs. These strategies will require sustainable annual funding to minimize the deferral of capital works. Rehabilitation activities and replacement are highly dependent on the road work.

6.5 Levels of Service

The following tables identify the Township's current level of service for the stormwater network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

6.5.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by the stormwater network.

Service Attribute	Qualitative Description	Current LOS (2020)
Scope	Description, which may include map, of the user groups or areas of the Township that are protected from flooding, including the extent of protection provided by the municipal stormwater system	See Appendix C

6.5.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the stormwater network.

Service Attribute	Technical Metric	Current LOS (2020)
Scope	% of properties in municipality resilient to a 100-year storm	TBD ²
	% of the municipal stormwater management system resilient to a 5-year storm	100% ³

² The Township does not currently have data available to determine this technical metric. The rate of properties that are expected to be resilient to a 100-year storm is expected to be low.

³ This is based on the observations of municipal staff.

6.6 Recommendations

Asset Inventory

- The Township's stormwater network inventory remains at a basic level of maturity and staff do not have a high level of confidence in its accuracy or reliability. The development of a comprehensive inventory of the stormwater network should be priority as the inventory currently includes only a single pooled asset for each storm structure.

Condition Assessment Strategies

- The development of a comprehensive inventory should be accompanied by a system-wide assessment of the condition of all assets in the stormwater network through CCTV inspections.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Lifecycle Management Strategies

- Document and review lifecycle management strategies for the stormwater network on a regular basis to achieve the lowest total cost of ownership while maintaining adequate service levels.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

7 Buildings

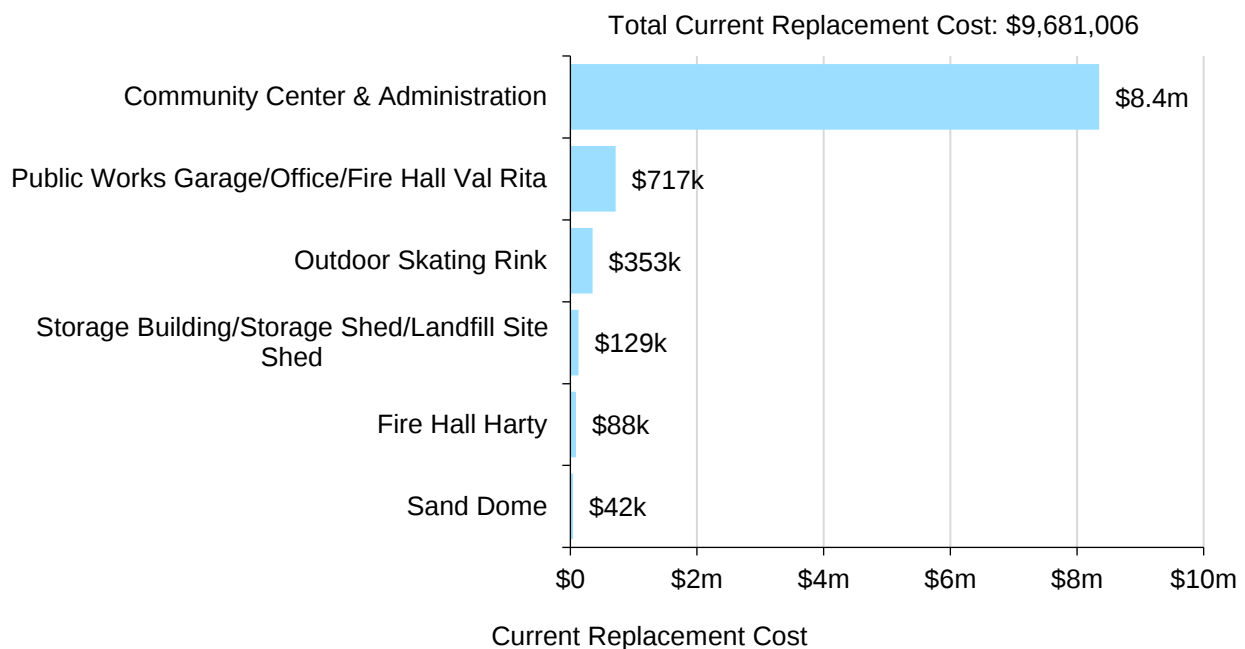
The Township of Val Rita-Harty owns and maintains several facilities and recreation centres that provide key services to the community. The state of the infrastructure for the buildings and facilities is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$9.7 million	Very Good (94%)	Annual Requirement: \$213,000

7.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's buildings and facilities inventory.

Asset Segment	Quantity (Components)	Replacement Cost
Community Center & Administration	1(53)	\$8,352,000
Fire Hall Harty	1	\$88,000
Outdoor Skating Rink	1	\$353,000
Public Works Garage/Office/Fire Hall Val Rita	1(2)	\$717,000
Sand Dome	1	\$42,000
Storage Building/Storage Shed/Landfill Site Shed	3	\$129,000
Total		\$9,681,000



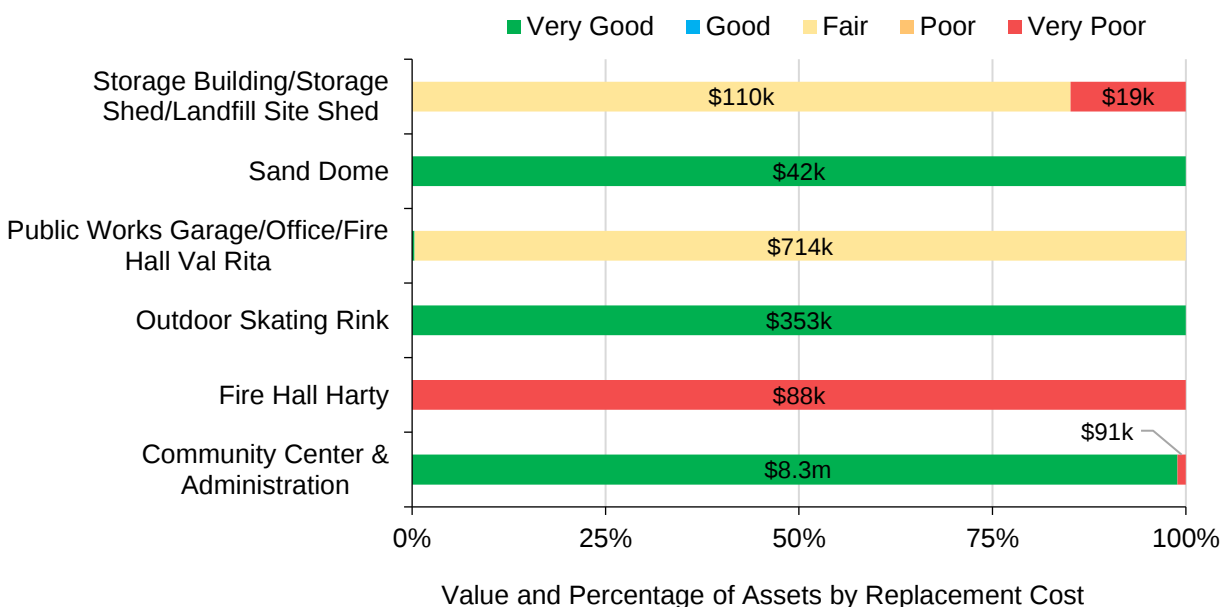
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

7.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

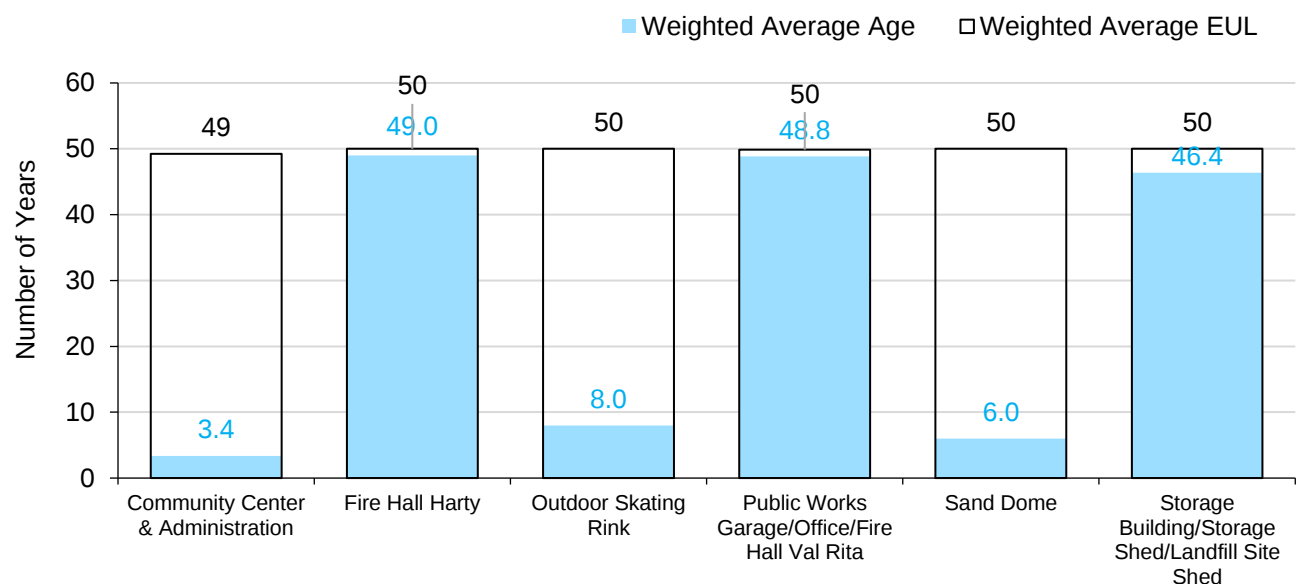
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Community Center & Administration	\$8,261,070	99%	\$91,097	1%	99%
Fire Hall Harty	\$0	0%	\$88,269	100%	0%
Outdoor Skating Rink	\$353,325	100%	\$0	0%	98%
Public Works Garage/Office/Fire Hall Val Rita	\$716,786	100%	\$0	0%	60%
Sand Dome	\$41,504	100%	\$0	0%	99%
Storage Building/Storage Shed/Landfill Site Shed	\$109,748	85%	\$19,207	15%	51%
Total	\$9,482,433	98%	\$198,573	2%	94%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Community Center & Administration	3.4	49
Fire Hall Harty	49.0	50
Outdoor Skating Rink	8.0	50
Public Works Garage/Office/Fire Hall Val Rita	48.8	50
Sand Dome	6.0	50
Storage Building/Storage Shed/Landfill Site Shed	46.4	50



To ensure that the Township's buildings and facilities continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the buildings and facilities.

Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

7.3 Lifecycle Management Strategy

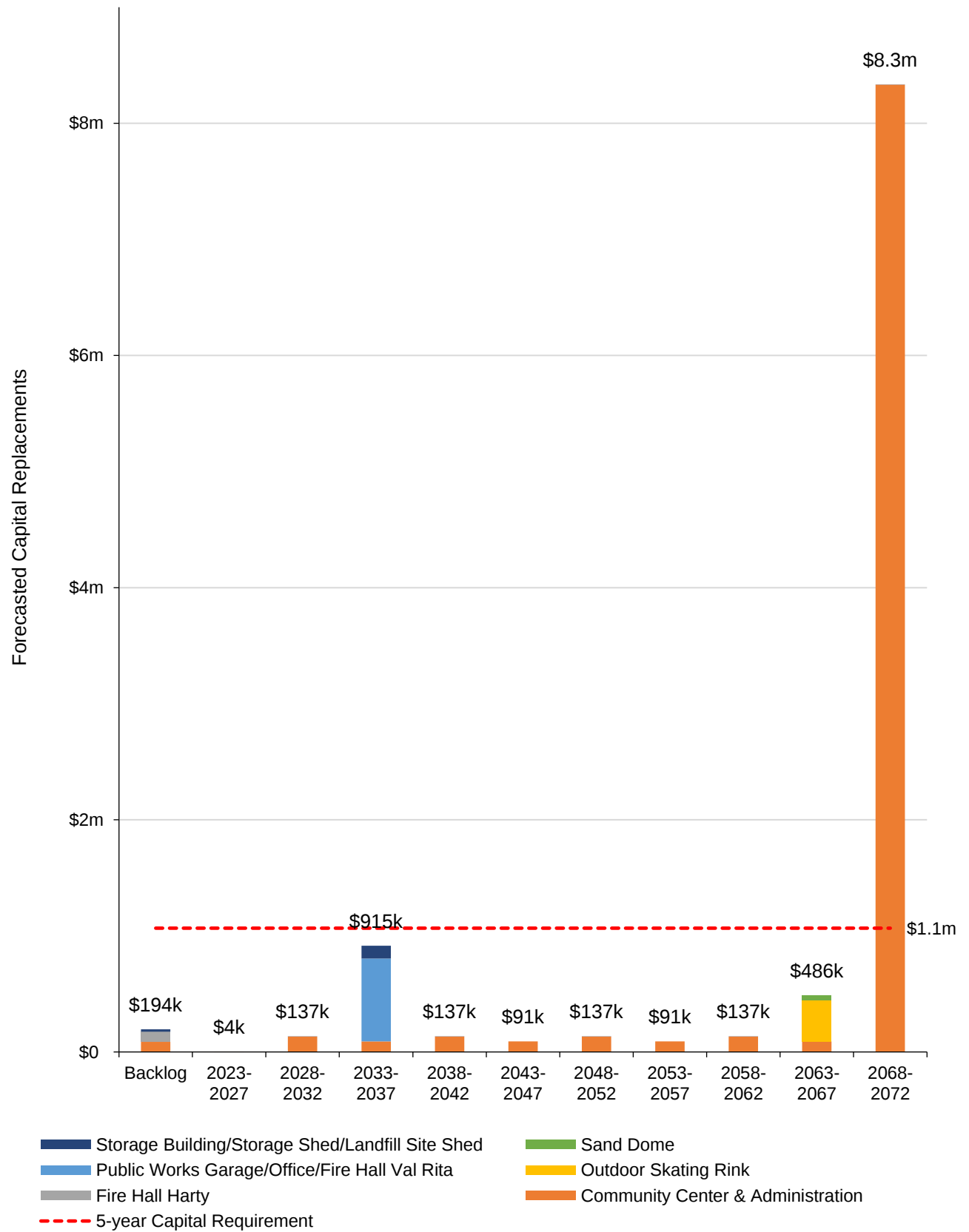
The documentation of lifecycle management strategies, current levels of service, and risk are critical to the development of a comprehensive asset management program. These components of the asset management plan support effective short- and long-term capital planning and contribute to more proactive asset management practices, thus extending the estimated useful life of many assets and providing a higher level of service.

In accordance with O. Reg. 588/17, the Township will continue to gather data and information in order to detail and review the lifecycle management strategies, levels of service, and risk of all non-core asset categories by July 1, 2024.

7.4 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$213,000, which equals to \$1.1 million over a five-year period. Current backlog for Buildings is \$87,000.

The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.



7.5 Recommendations

Asset Inventory

- The Township's asset inventory primarily contains a single record for all facilities. Facilities consist of several separate capital components that have unique estimated useful lives and require asset-specific lifecycle strategies. Staff should work towards a component-based inventory of all facilities to allow for component-based lifecycle planning.

Replacement Costs

- Gather accurate replacement costs and update on a regular basis to ensure the accuracy of capital projections.

Condition Assessment Strategies

- The Township should implement regular condition assessments for all facilities to better inform short- and long-term capital requirements.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Begin measuring current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

8

Land Improvements

The Township of Val Rita-Harty owns a small number of assets that are considered land improvements.

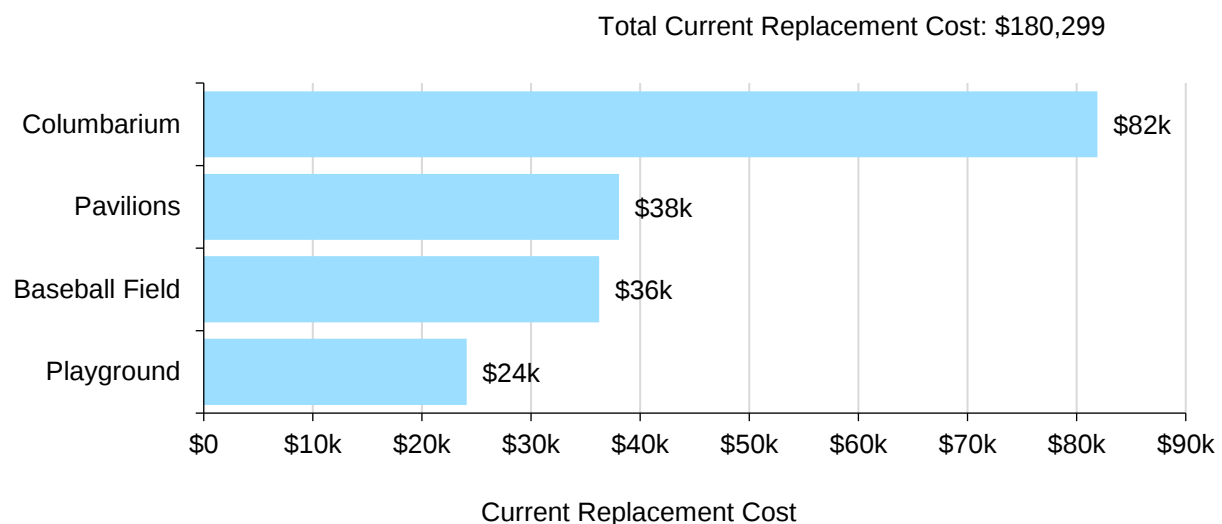
The state of the infrastructure for the land improvements is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$180,000	Fair (59%)	Annual Requirement: \$5,000

8.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's land improvements inventory.

Asset Segment	Quantity	Replacement Cost
Baseball Field	1	\$36,000
Columbarium	3	\$82,000
Pavilions	3	\$38,000
Playground	1	\$24,000
Total		\$180,000



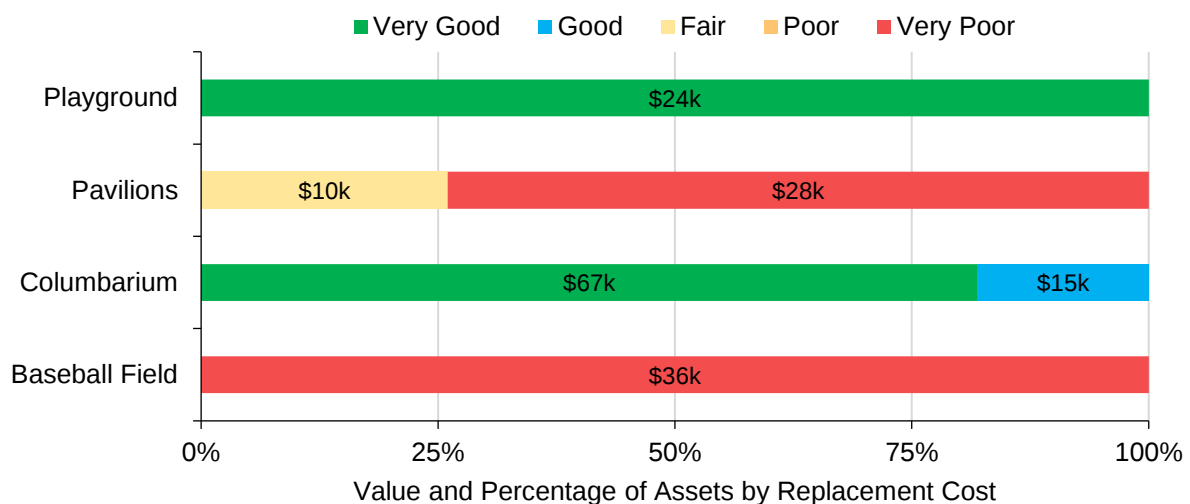
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

8.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

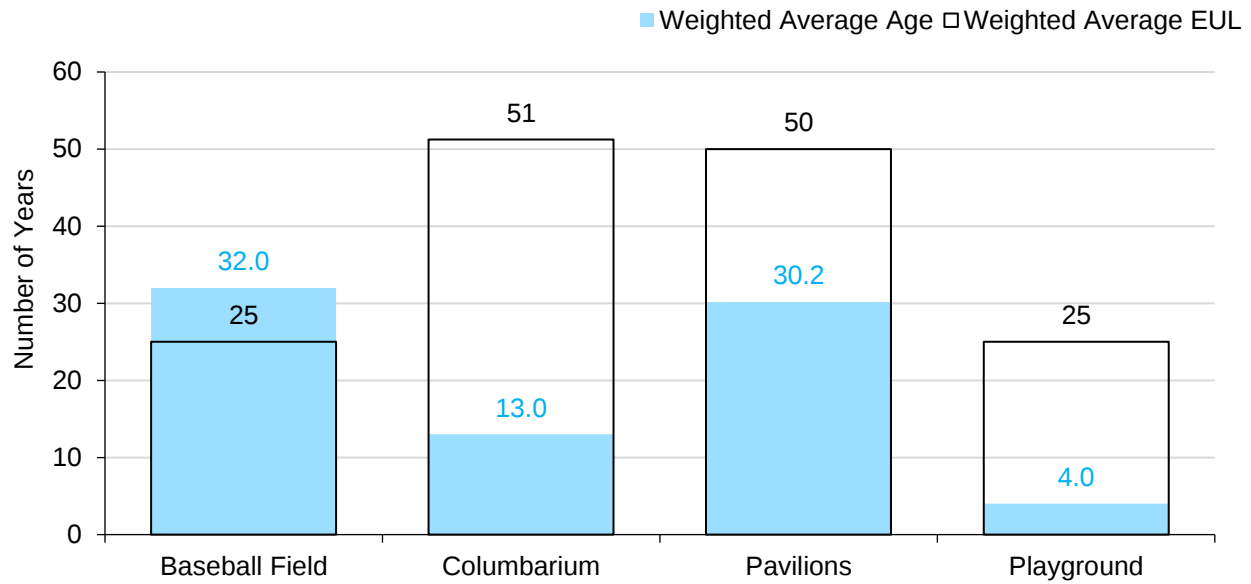
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Baseball Field	\$0	0%	\$36,243	100%	0%
Columbarium	\$81,912	100%	\$0	0%	93%
Pavilions	\$9,902	26%	\$28,149	74%	16%
Playground	\$24,093	100%	\$0	0%	98%
Total	\$115,907	64%	\$64,392	36%	59%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Baseball Field	32.0	25
Columbarium	13.0	51
Pavilions	30.2	50
Playground	4.0	25



To ensure that the Township’s land improvements continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the land improvements.

Each asset’s estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

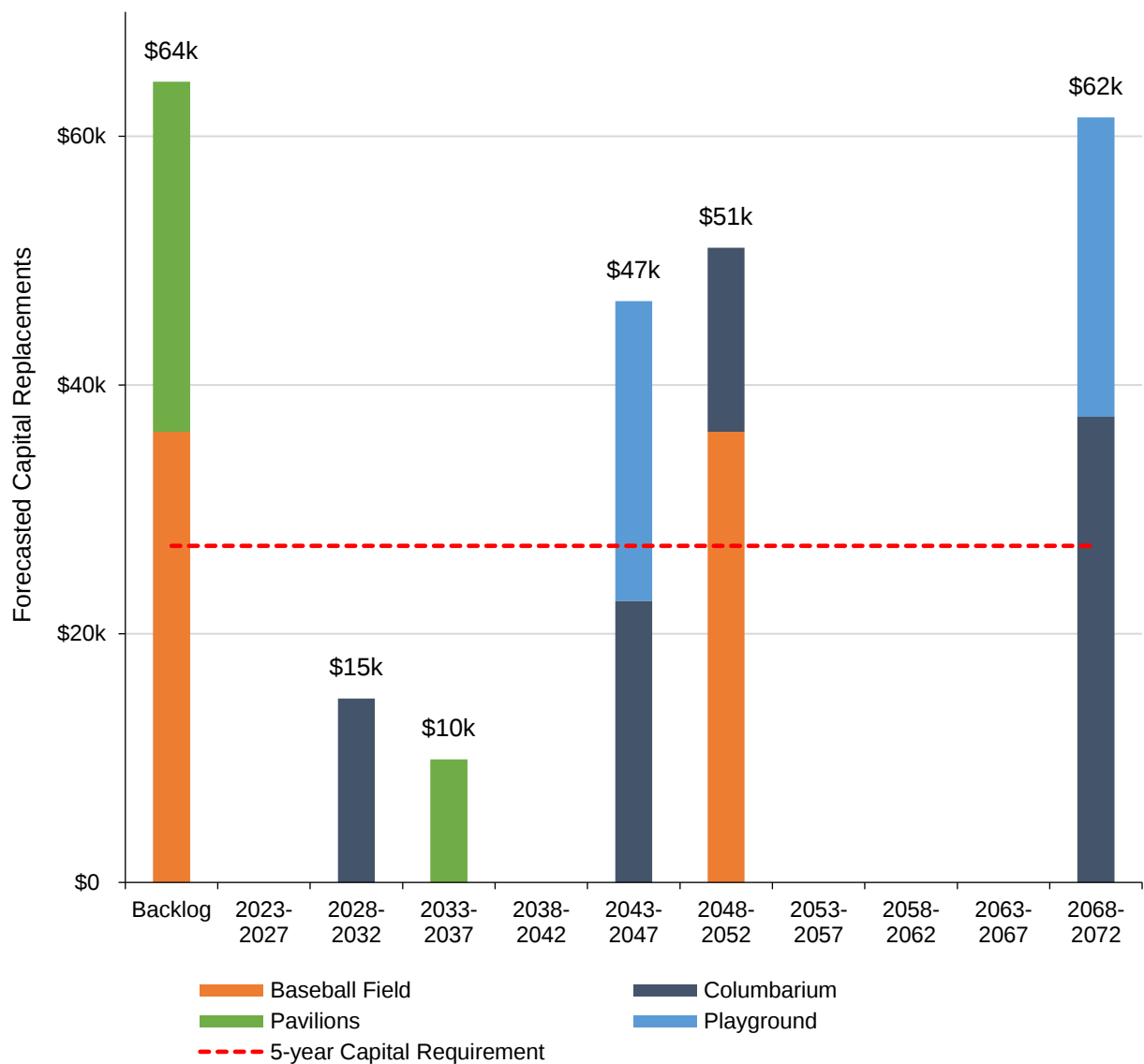
8.3 Lifecycle Management Strategy

The documentation of lifecycle management strategies, current levels of service, and risk are critical to the development of a comprehensive asset management program. These components of the asset management plan support effective short- and long-term capital planning and contribute to more proactive asset management practices, thus extending the estimated useful life of many assets and providing a higher level of service.

In accordance with O. Reg. 588/17, the Township will continue to gather data and information in order to detail and review the lifecycle management strategies, levels of service, and risk of all non-core asset categories by July 1, 2024.

8.4 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$5,000, which equals to \$27,000 over a five-year period. Current backlog for Land Improvements is \$64,000.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

8.5 Recommendations

Replacement Costs

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk assets.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Begin measuring current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

9 Machinery & Equipment

In order to maintain the high quality of public infrastructure and support the delivery of core services, Town staff own and employ various types of machinery and equipment.

Keeping machinery and equipment in an adequate state of repair is important to maintain a high level of service.

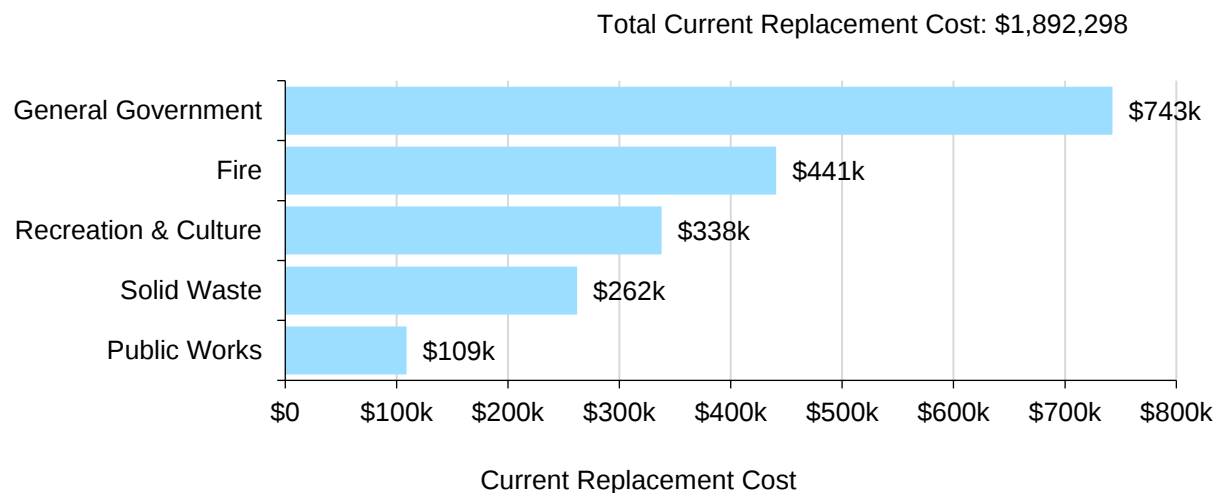
The state of the infrastructure for the machinery and equipment is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$1.9 million	Fair (53%)	Annual Requirement: \$116,000

9.1 Asset Inventory & Costs

The table below includes the quantity, total replacement cost and annual capital requirements of each asset segment in the Township's machinery and equipment inventory.

Asset Segment	Quantity	Replacement Cost
Fire	463	\$441,000
General Government	13	\$743,000
Public Works	36	\$109,000
Recreation & Culture	23	\$338,000
Solid Waste	30	\$262,000
Total	565	\$1,892,000



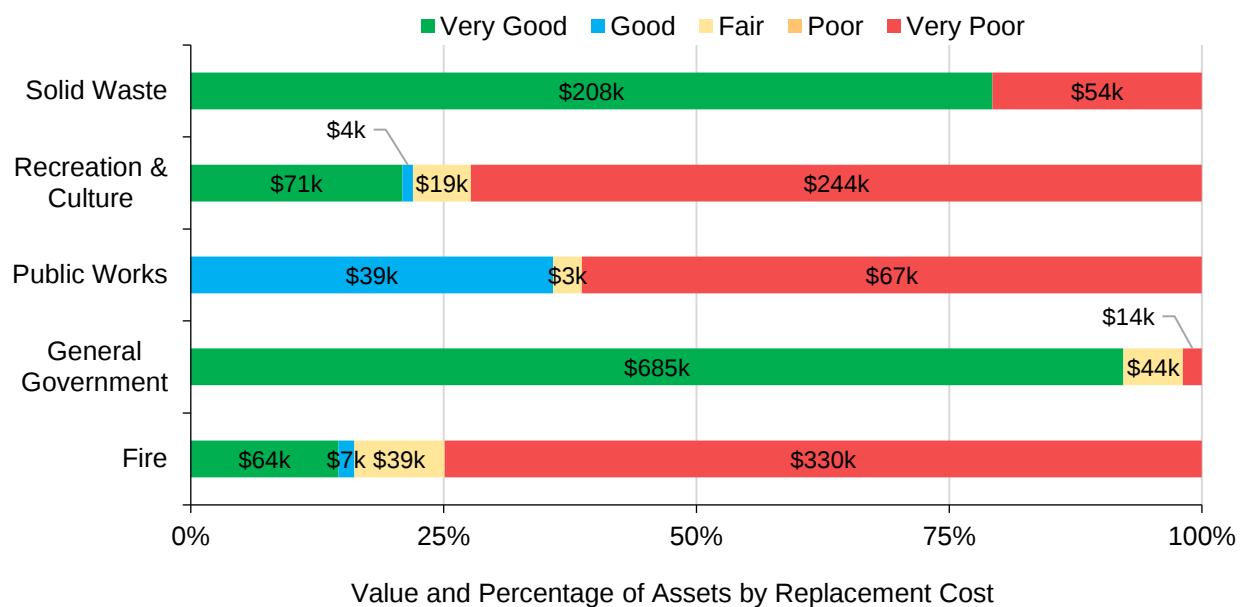
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

9.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

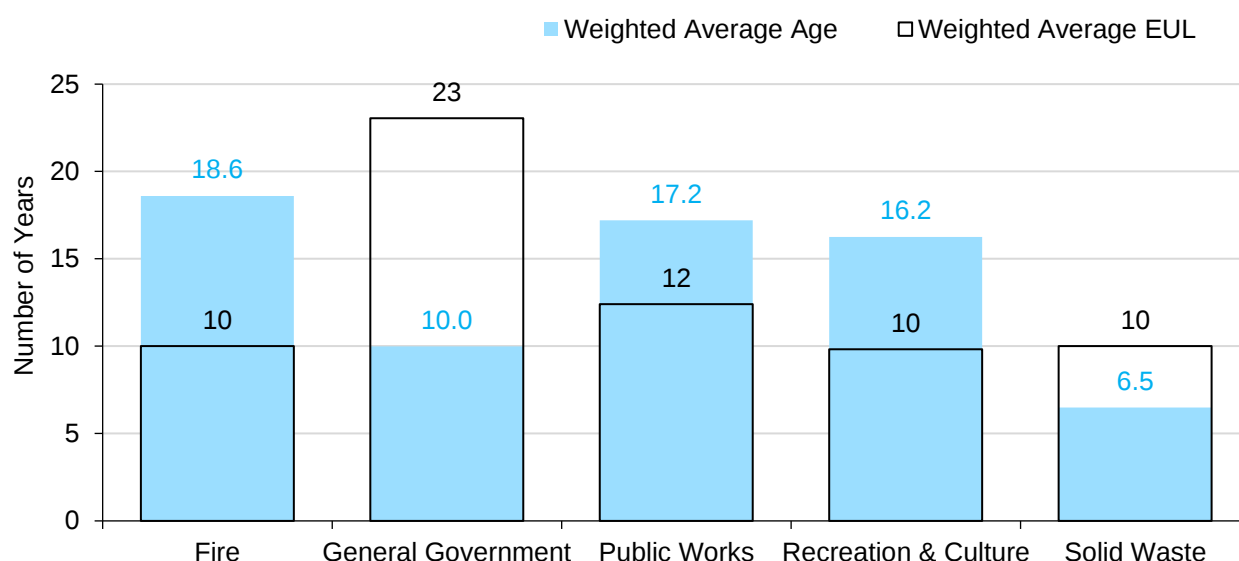
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Fire	\$110,622	25%	\$330,212	75%	19%
General Government	\$728,838	98%	\$13,861	2%	85%
Public Works	\$42,169	39%	\$66,823	61%	26%
Recreation & Culture	\$93,630	28%	\$244,243	72%	22%
Solid Waste	\$207,631	79%	\$54,269	21%	68%
Total	\$1,182,890	63%	\$709,408	37%	53%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Fire	18.6	10
General Government	10.0	23
Public Works	17.2	12
Recreation & Culture	16.2	10
Solid Waste	6.5	10



To ensure that the Township's machinery and equipment continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the machinery and equipment.

Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

9.3 Lifecycle Management Strategy

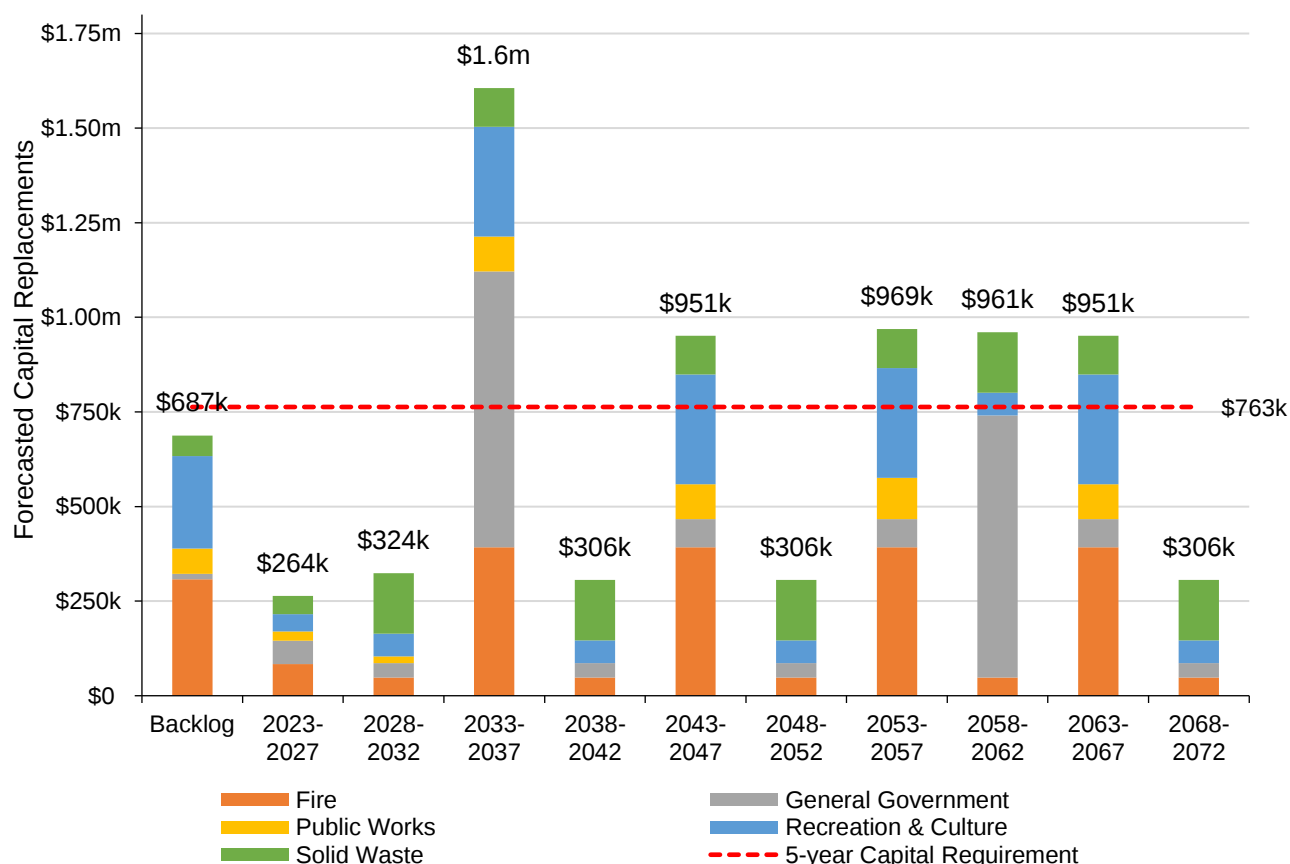
The documentation of lifecycle management strategies, current levels of service, and risk are critical to the development of a comprehensive asset management program. These components of the asset management plan support effective short-

and long-term capital planning and contribute to more proactive asset management practices, thus extending the estimated useful life of many assets and providing a higher level of service.

In accordance with O. Reg. 588/17, the Township will continue to gather data and information in order to detail and review the lifecycle management strategies, levels of service, and risk of all non-core asset categories by July 1, 2024.

9.4 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$153,000, which equals to \$763,000 over a five-year period. Current backlog for Machinery & Equipment is \$687,000.



The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

9.5 Recommendations

Replacement Costs

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk equipment.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Begin measuring current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

10 Vehicles

Vehicles allow staff to efficiently deliver municipal services and personnel.

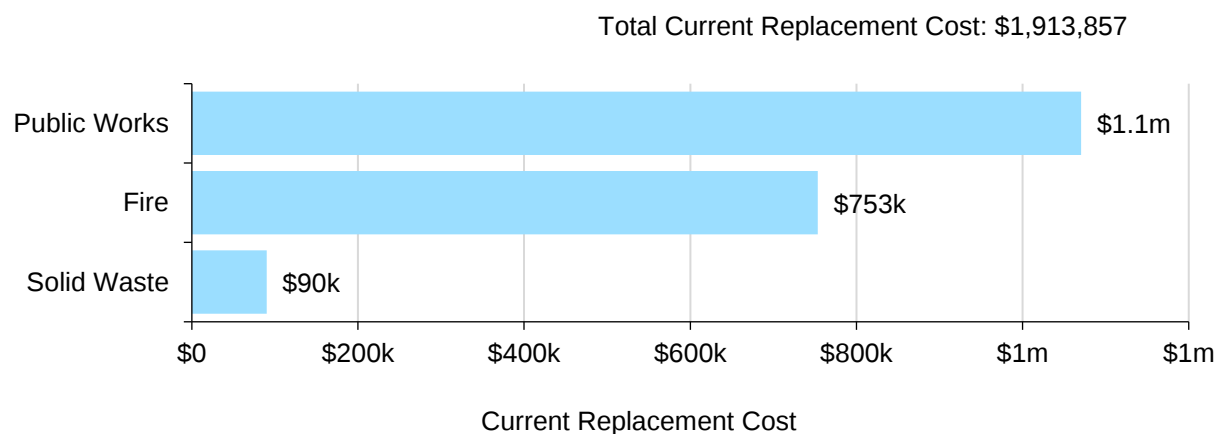
The state of the infrastructure for the vehicles is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$1.9 million	Fair (41%)	Annual Requirement: \$116,000

10.1 Asset Inventory & Costs

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's vehicles.

Asset Segment	Quantity	Replacement Cost
Fire	2	\$753,000
Public Works	11	\$1,070,000
Solid Waste	2	\$90,000
Total		\$1,914,000



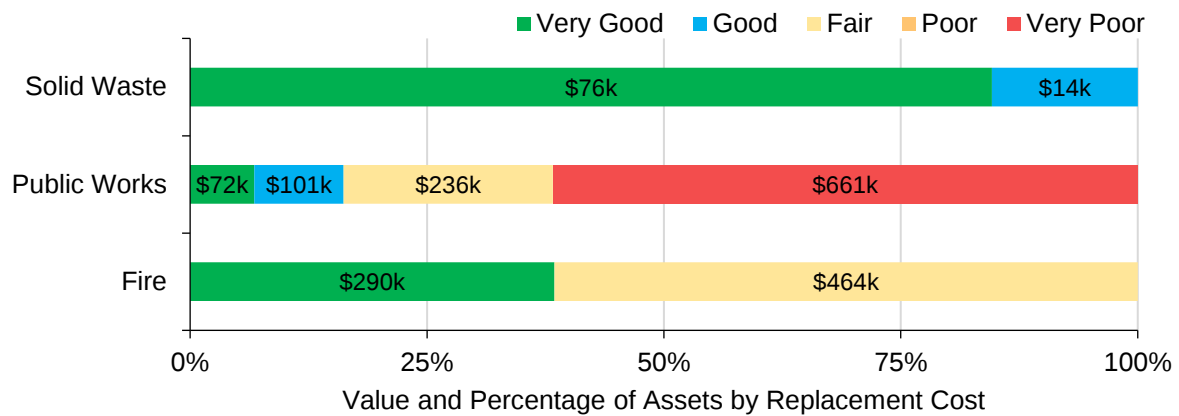
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

10.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

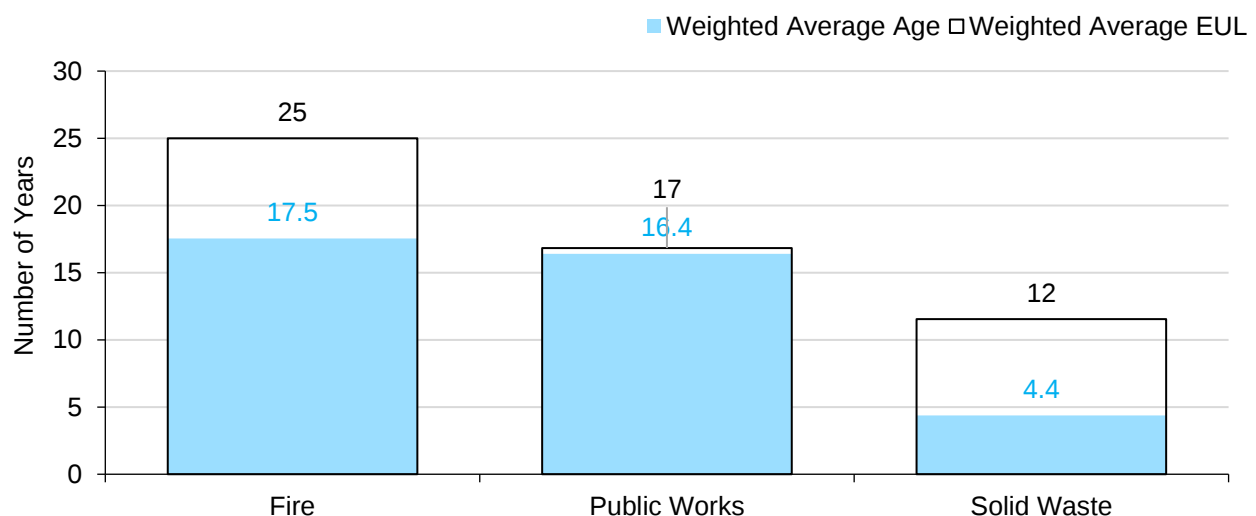
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Fire	\$753,494	100%	\$0	0%	62%
Public Works	\$409,635	38%	\$660,717	62%	22%
Solid Waste	\$90,011	100%	\$0	0%	89%
Total	\$1,253,140	65%	\$660,717	35%	41%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Fire	17.5	25
Public Works	16.4	17
Solid Waste	4.4	12



To ensure that the Township's vehicles continue to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management

strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the vehicles.

Each asset's estimated useful life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

10.3 Lifecycle Management Strategy

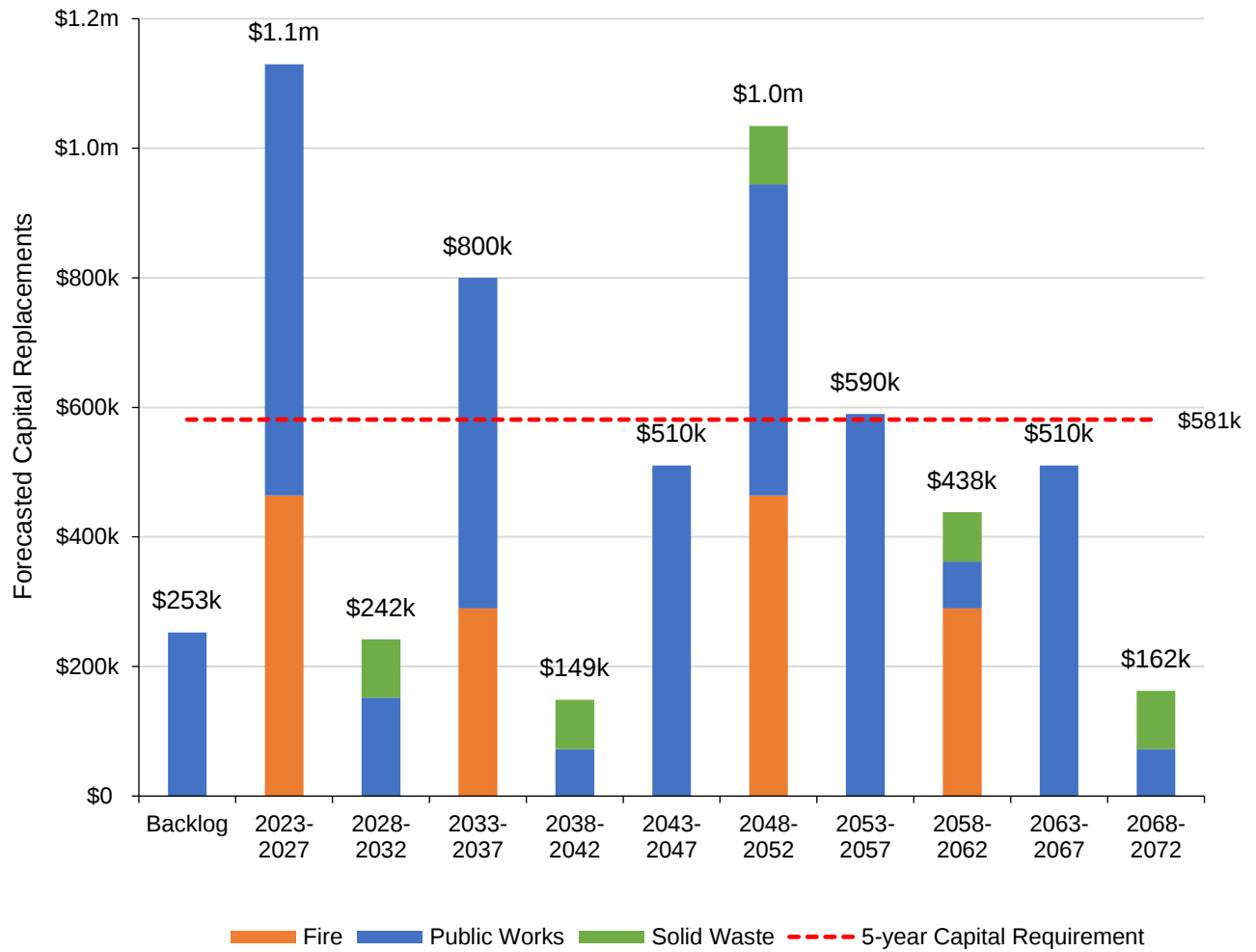
The documentation of lifecycle management strategies, current levels of service, and risk are critical to the development of a comprehensive asset management program. These components of the asset management plan support effective short- and long-term capital planning and contribute to more proactive asset management practices, thus extending the estimated useful life of many assets and providing a higher level of service.

In accordance with O. Reg. 588/17, the Township will continue to gather data and information in order to detail and review the lifecycle management strategies, levels of service, and risk of all non-core asset categories by July 1, 2024.

10.4 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$116,000, which equals to \$581,000 over a five-year period. Current backlog for vehicles is \$253,000.

The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.



10.5 Recommendations

Replacement Costs

- Gather accurate replacement costs and update on a regular basis to ensure the accuracy of capital projections.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk equipment.
- Review assets that have surpassed their estimated useful life to determine if immediate replacement is required or whether these assets are expected to remain in-service. Adjust the service life and/or condition ratings for these assets accordingly.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Begin measuring current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

11 Water Network

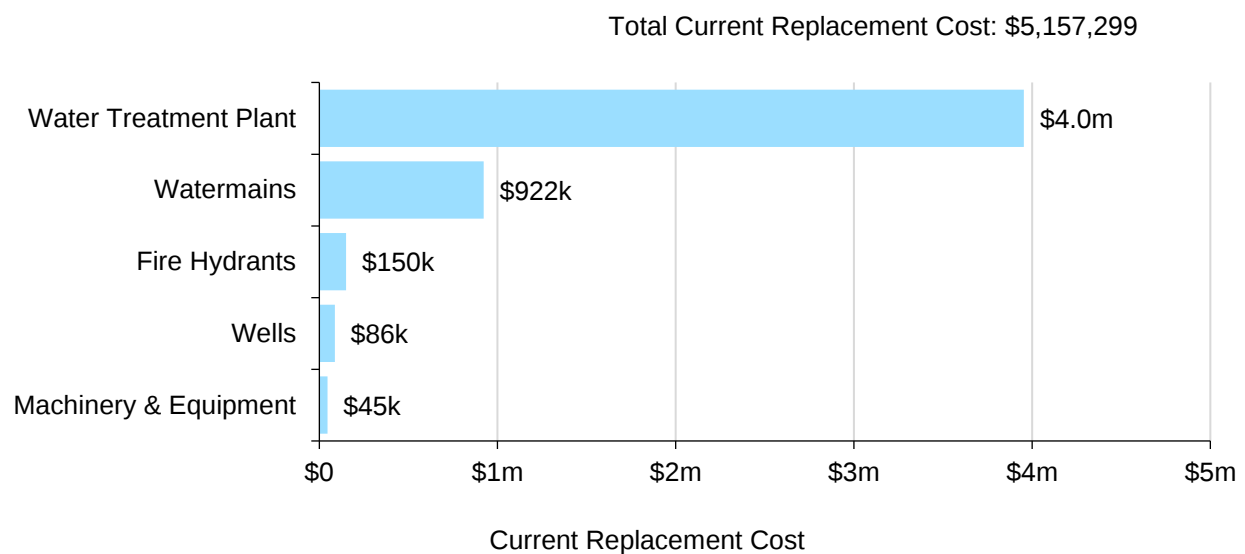
The state of the infrastructure for the water network is summarized in the following table:

Replacement Cost	Condition	Financial Capacity
\$5.2 million	Good (64%)	Annual Requirement: \$103,000

11.1 Asset Inventory & Costs

The table below includes the quantity, replacement cost method, and annual capital requirements of each asset segment in the Township's water network inventory.

Asset Segment	Quantity	Replacement Cost
Hydrants	26	\$150,000
Water Buildings	2	\$45,000
Water Equipment	2	\$3,953,000
Water Services	4,129 m	\$922,000
Water Valves & Meters	2	\$86,000
Total		\$5,157,000



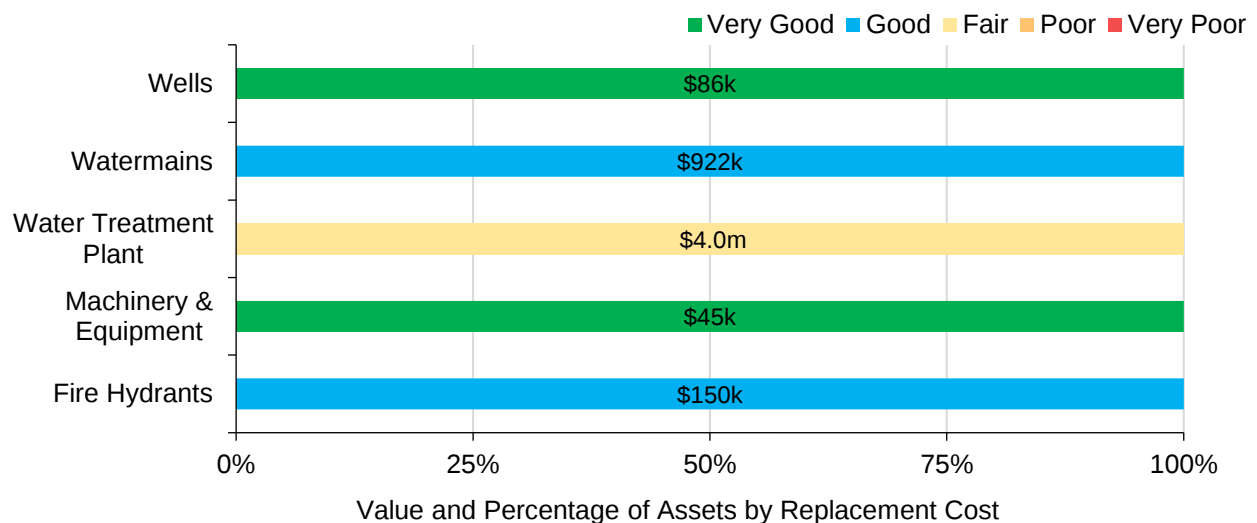
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

11.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

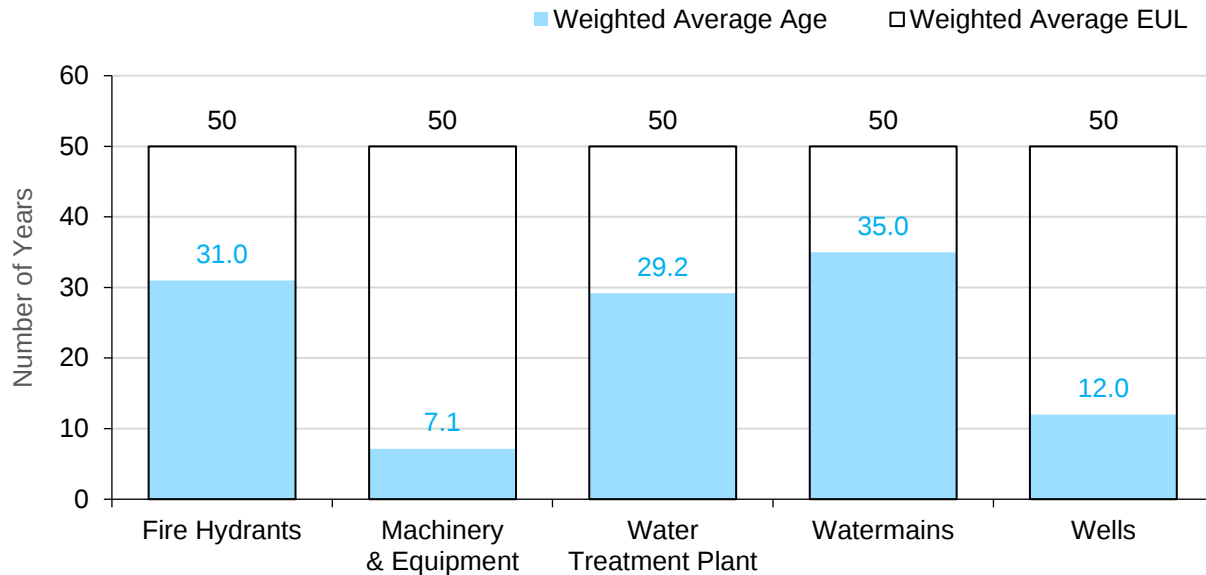
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Hydrants	\$150,176	100%	\$0	0%	77%
Water Buildings	\$45,263	100%	\$0	0%	99%
Water Equipment	\$3,953,045	100%	\$0	0%	60%
Water Services	\$922,339	100%	\$0	0%	77%
Water Valves & Meters	\$86,476	100%	\$0	0%	97%
Total	\$5,157,299	100%	\$0	0%	64%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Hydrants	31.0	50
Water Buildings	7.1	50
Water Equipment	29.2	50
Water Services	35.0	50
Water Valves & Meters	12.0	50



To ensure that the Township's water network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the water network.

Each asset's Estimated Useful Life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

11.2.1 Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Township's current approach:

- The water treatment plant is operated and maintained by Ontario Clean Water Agency (OCWA)
- Hydrants are inspected on a regular basis and any identified deficiencies are reported for operational purpose
- Staff primarily rely on the historical break records, water quality, age and material types to determine the projected condition of watermains

In this AMP the following rating criteria is used to determine the current condition of water network assets and forecast future capital requirements:

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

11.3 Lifecycle Management Strategy

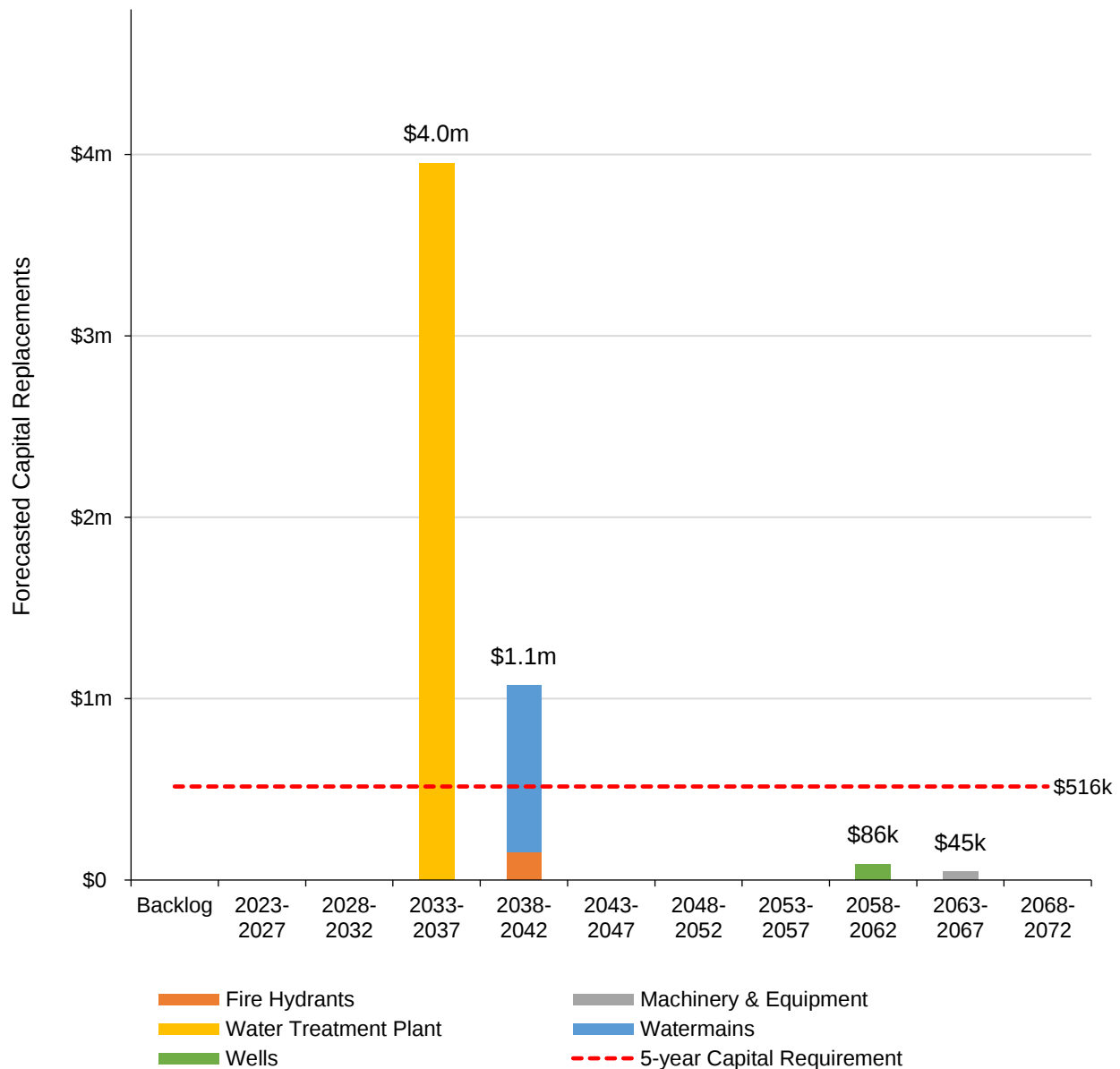
The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

The following table outlines the Township's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Main and hydrant flushing is performed on a yearly basis by internal staff.
	The hydrants are inspected during flushing and any identified deficiencies are reported.
Rehabilitation	Currently no rehabilitation program is in place for watermain.
	Rehabilitation of hydrants and other water assets are determined case by case based on asset condition, funding availability and staff expertise.
Replacement	OCWA reports the identified issues with the water treatment plant in a monthly basis and provides replacement and rehabilitation recommendations on a yearly basis
	Replacement priority of watermain depends on an analysis of the break rates, the impacts of service disruption and the integration opportunities with road network.
	The Township follows OCWA's recommendations for the replacement of the water treatment plant.
	Replacement of other water assets are based on issues identified during regular maintenance activities, condition and the integration opportunities with road network.

11.3.1 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$103,000, which equals to \$516,000 over a five-year period.

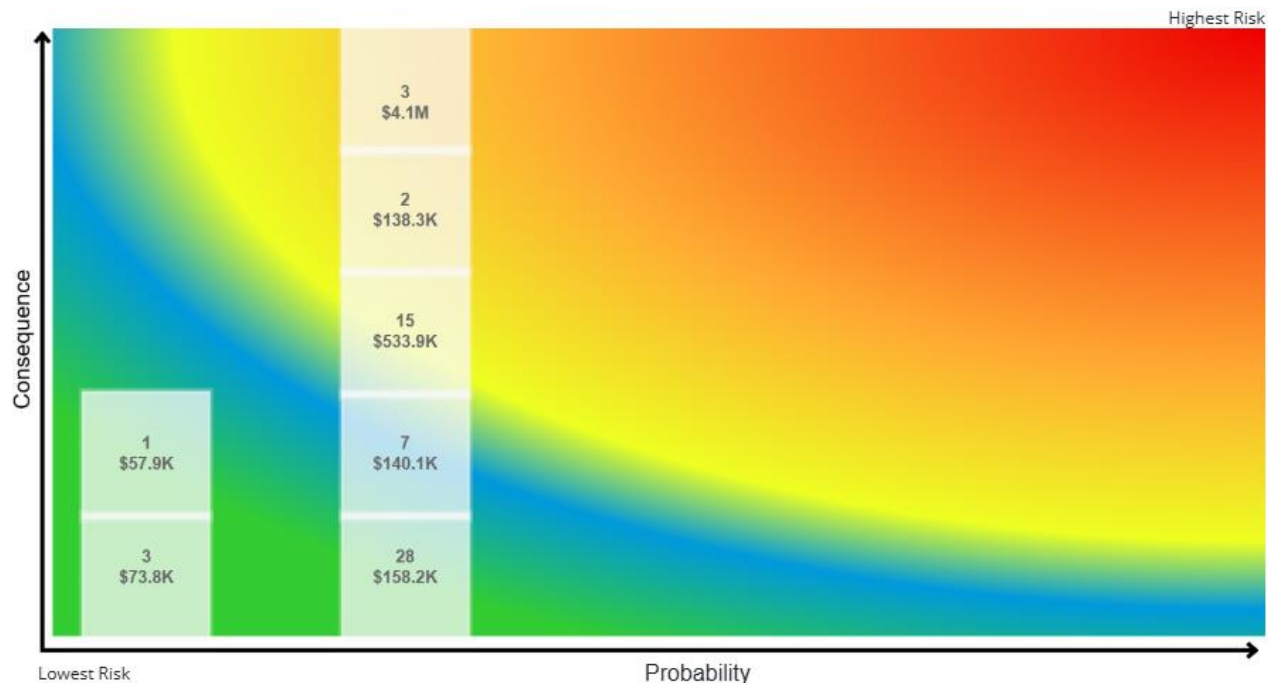


The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

11.4 Risk & Criticality

11.4.1 Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2022 inventory data. See Appendix D for the criteria used to determine the risk rating of each asset.



This is a high-level model developed for the purposes of this AMP and Town staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.

The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the water network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

11.4.2 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

	Assessed Condition Data There is no formal condition assessment currently in place for watermains and hydrants. There is some uncertainty whether this is an effective approach to determine the current condition of water mains. Without an understanding of the condition of the network, unexpected failures are more likely to occur. A formal condition assessment program can identify infrastructure needs, help capital planning, and reduce unplanned service disruption.
	Lifecycle Management Strategies The current lifecycle management strategy for water network is considered reactive. Replacement of watermain is dependent on break records, water quality, age and material type. This poses a risk of service disruption when assets failure occurs. The Township can also consider leak detection technologies to reduce costs related to water loss and excavation to find leak locations.

11.5 Levels of Service

The following tables identify the Township's current level of service for water network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

11.5.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by water network.

Service Attribute	Qualitative Description	Current LOS (2020)
Scope	Description, which may include maps, of the user groups or areas of the Township that are connected to the municipal water system	See Appendix C
	Description, which may include maps, of the user groups or areas of the Township that have fire flow	See Appendix C
Reliability	Description of boil water advisories and service interruptions	N/A

11.5.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the water network.

Service Attribute	Technical Metric	Current LOS (2020)
Scope	% of properties connected to the municipal water system	54%
	% of properties where fire flow is available	100%
Reliability	# 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
	# of connection-days per year where water is not available due to water main breaks compared to the total number of properties connected to the municipal water system	0

11.6 Recommendations

Asset Inventory

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Replacement Costs

- Gather accurate replacement costs and update on a regular basis to ensure the accuracy of capital projections.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk water network assets.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

12 Sanitary Sewer Network

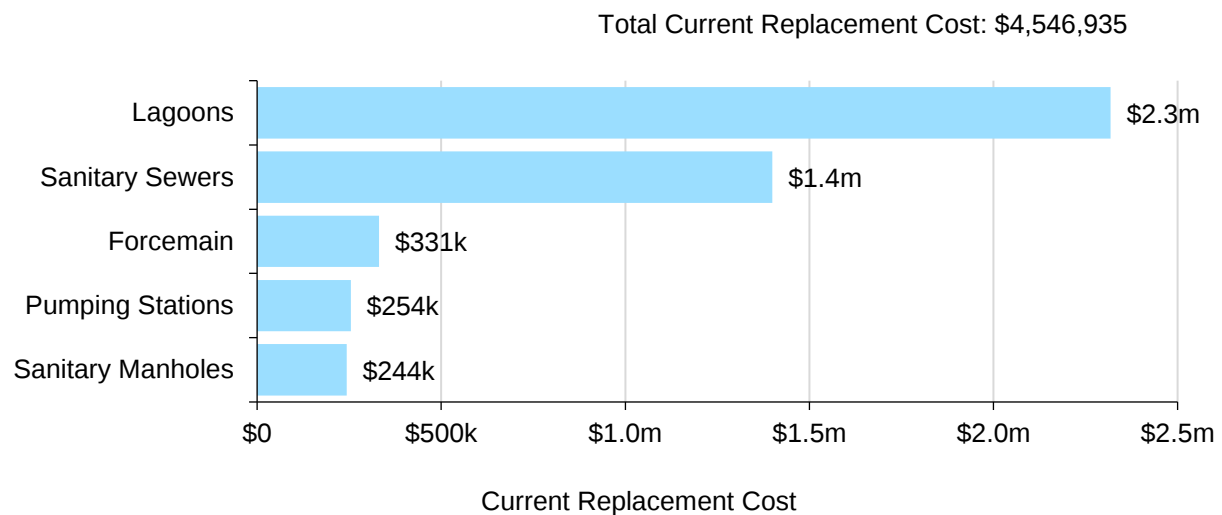
The state of the infrastructure for the sanitary network is summarized in the following table.

Replacement Cost	Condition	Financial Capacity
\$4.5 million	Fair (53%)	Annual Requirement: \$91,000

12.1 Asset Inventory & Costs

The table below includes the quantity, replacement cost method and total replacement cost of each asset segment in the Township's sanitary network inventory.

Asset Segment	Quantity	Replacement Cost
Forcemain	2,000 m	\$331,000
Lagoons	2	\$2,318,000
Pumping Stations	2	\$254,000
Sanitary Manholes	54	\$244,000
Sanitary Sewers	4,340 m	\$1,399,000
Total		\$4,547,000



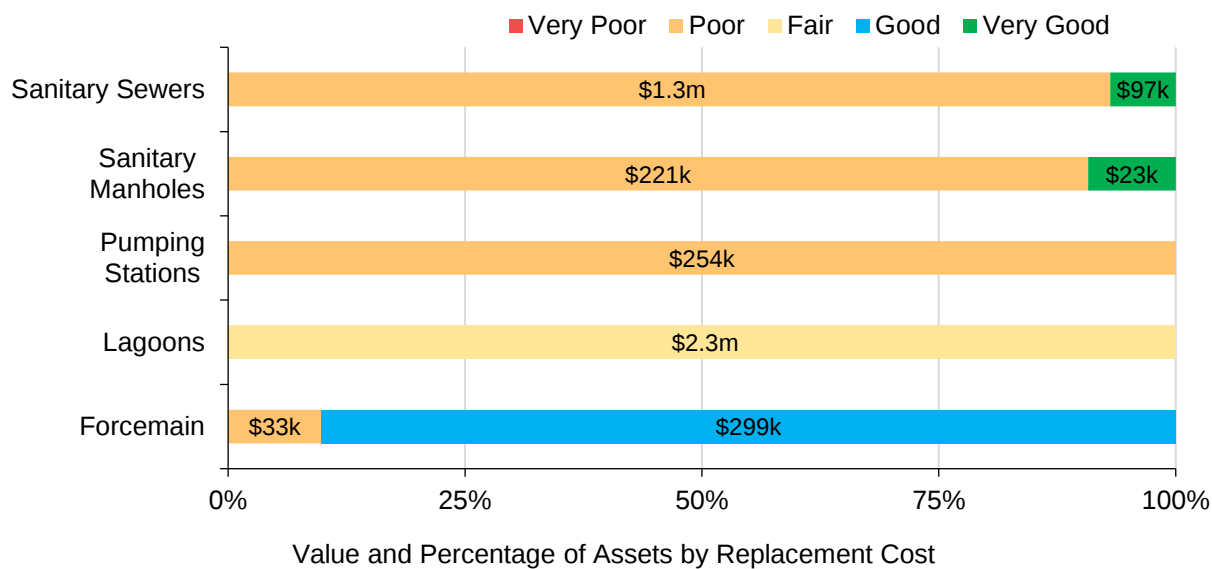
Each asset's replacement cost should be reviewed periodically to determine whether adjustments are needed to more accurately represent realistic capital requirements.

12.2 Asset Condition & Age

The table below identifies the current average condition for each asset segment. The average condition (%) is a weighted value based on replacement cost.

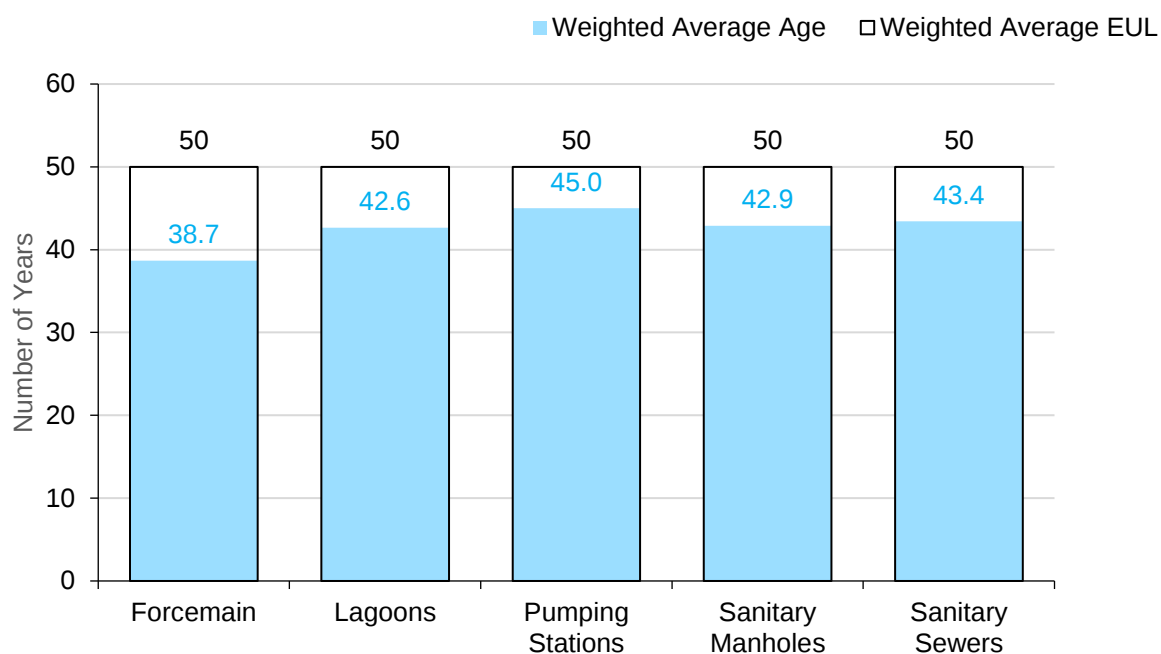
Segment	≥ Fair \$	≥ Fair %	≤ Poor \$	≤ Poor %	Average Condition
Forcemain	\$298,769	90%	\$32,623	10%	60%
Lagoons	\$2,318,030	100%	\$0	0%	60%
Pumping Stations	\$0	0%	\$254,465	100%	39%
Sanitary Manholes	\$22,565	9%	\$221,137	91%	44%
Sanitary Sewers	\$96,946	7%	\$1,302,399	93%	43%
Total	\$2,736,310	60%	\$1,810,625	40%	53%

The graph below visually illustrates the average condition for each asset segment on a very good to very poor range.



The table below identifies the average age and the estimated useful life for each asset segment and can be visualized in the following chart.

Segment	Weighted Average Age	Weighted Average EUL
Forcemain	38.7	50
Lagoons	42.6	50
Pumping Stations	45.0	50
Sanitary Manholes	42.9	50
Sanitary Sewers	43.4	50



To ensure that the Township's sanitary network continues to provide an acceptable level of service, the Township should monitor the average condition of all assets. If the average condition declines, staff should re-evaluate their lifecycle management strategy to determine what combination of maintenance, rehabilitation and replacement activities is required to increase the overall condition of the sanitary network.

Each asset's Estimated Useful Life should also be reviewed periodically to determine whether adjustments need to be made to better align with the observed length of service life for each asset type.

12.2.1 Current Approach to Condition Assessment

Accurate and reliable condition data allows staff to more confidently determine the remaining service life of assets and identify the most cost-effective approach to managing assets. The following describes the Township's current approach:

- There is no formal condition assessment program in place for the Sanitary Sewer Network currently.
- Smoke testing is performed on as needed basis and last smoke testing is completed in 2020.
- Lagoons and pump stations are operated and maintained by Ontario Clean Water Agency (OCWA)

In this AMP the following rating criteria is used to determine the current condition of sewer network assets and forecast future capital requirements:

Condition	Rating
Very Good	80-100
Good	60-80
Fair	40-60
Poor	20-40
Very Poor	0-20

12.3 Lifecycle Management Strategy

The condition or performance of most assets will deteriorate over time. To ensure that municipal assets are performing as expected and meeting the needs of customers, it is important to establish a lifecycle management strategy to proactively manage asset deterioration.

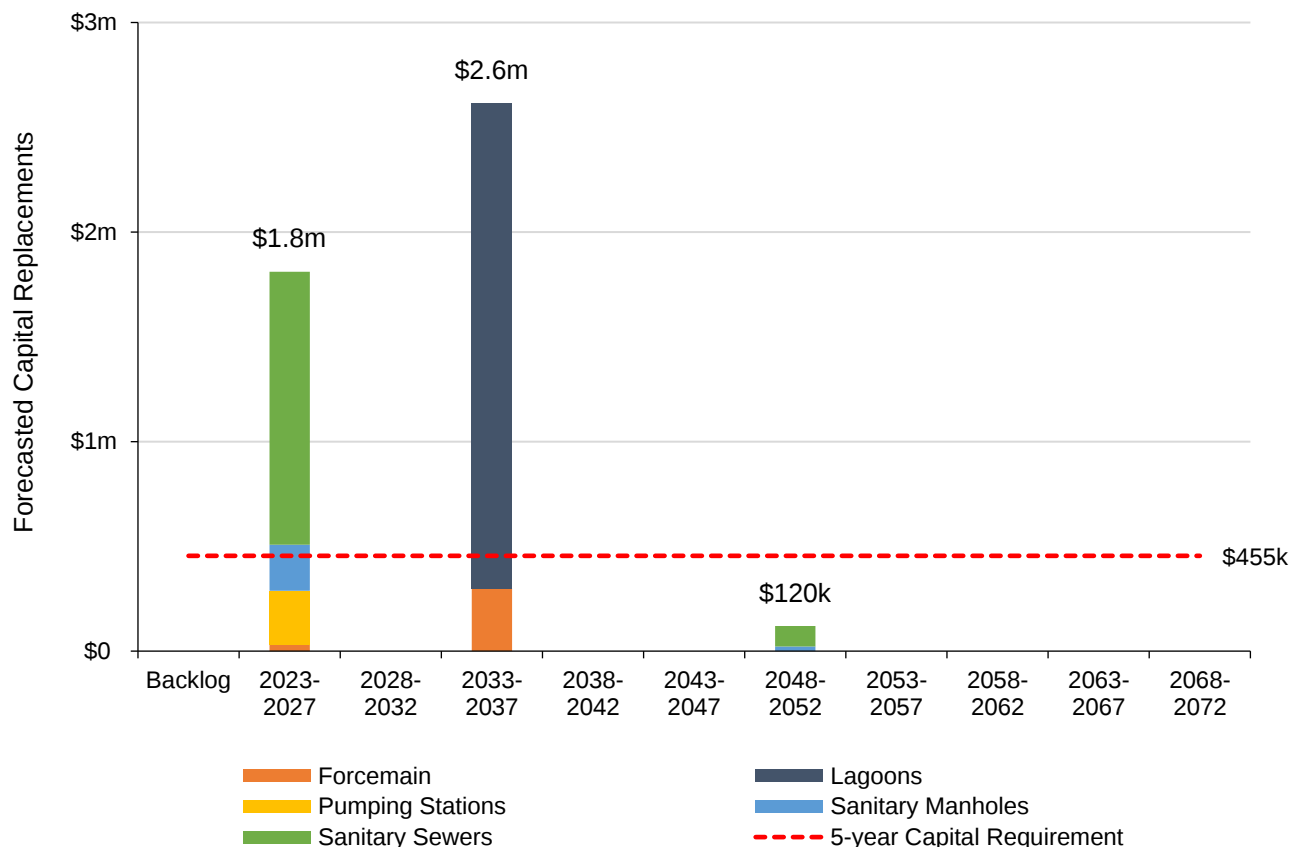
The following table outlines the Township 's current lifecycle management strategy.

Activity Type	Description of Current Strategy
Maintenance	Sewer main flushing is performed on a 5-year basis by internal staff.
	Smoke testing may be employed to identify potential leaks.
	OCWA operates and maintains the lagoons and pump stations.

Activity Type	Description of Current Strategy
Rehabilitation / Replacement	OCWA reports the identified issues and provides replacement and rehabilitation recommendations on a regular basis
	In the absence of mid-lifecycle rehabilitative events, most mains are simply maintained with the goal of full replacement once it reaches its end-of-life.
	Replacement priorities depends on an analysis of the condition, staff expertise, and the integration opportunities with road network and other infrastructure.

12.3.1 Forecasted Capital Requirements

The following graph forecasts long-term capital requirements. The annual capital requirement represents the average amount per year that the Township should allocate towards funding rehabilitation and replacement needs. The following graph identifies capital requirements until 2072. This projection is used as it ensures that every asset has gone through one full iteration of replacement. The forecasted requirements are aggregated into 5-year bins and the trend line represents the average 5-year capital requirements. The Annual Capital Requirement is \$91,000, which equals to \$455,000 over a five-year period.

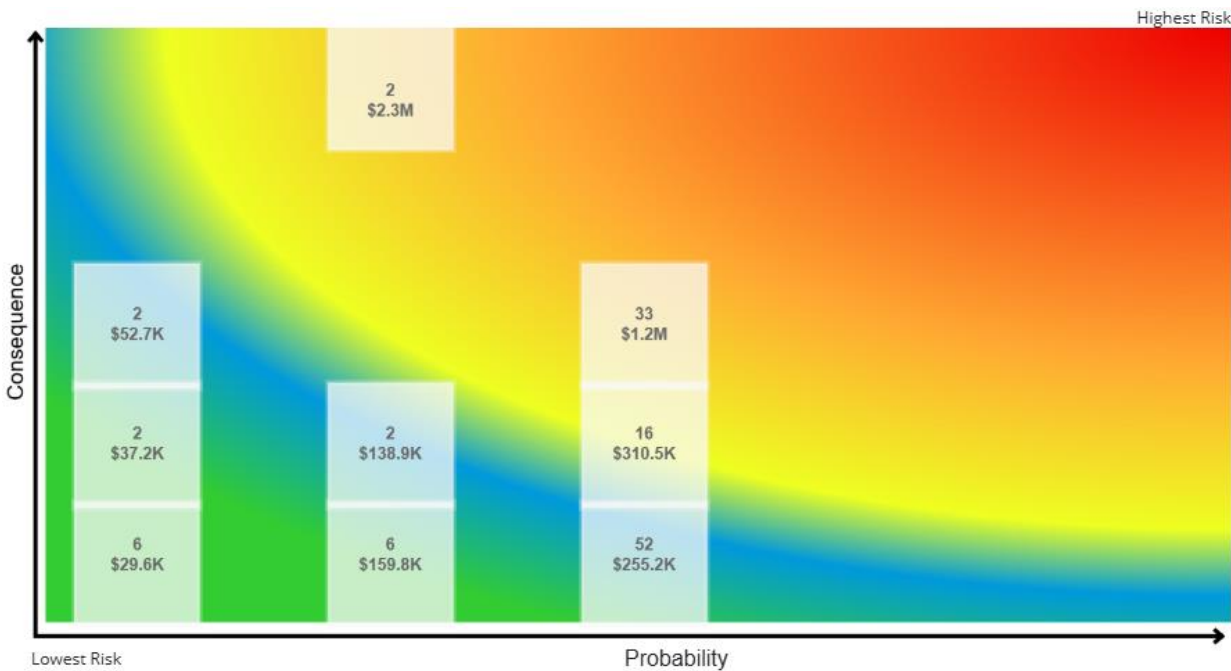


The projected cost of lifecycle activities that will need to be undertaken over the next 10 years to maintain the current level of service can be found in Appendix B.

12.4 Risk & Criticality

12.4.1 Risk Matrix

The following risk matrix provides a visual representation of the relationship between the probability of failure and the consequence of failure for the assets within this asset category based on 2022 inventory data. See Appendix D for the criteria used to determine the risk rating of each asset.



This is a high-level model developed for the purposes of this AMP and Town staff should review and adjust the risk model to reflect an evolving understanding of both the probability and consequences of asset failure.

The asset-specific attributes that municipal staff utilize to define and prioritize the criticality of the sanitary network are documented below:

Probability of Failure (POF)	Consequence of Failure (COF)
Condition	Replacement Cost (Financial)
	Pipe Type (Financial)

The identification of critical assets allows the Township to determine appropriate risk mitigation strategies and treatment options. Risk mitigation may include asset-specific lifecycle strategies, condition assessment strategies, or simply the need to collect better asset data.

12.4.2 Risks to Current Asset Management Strategies

The following section summarizes key trends, challenges, and risks to service delivery that the Township is currently facing:

Lifecycle Management Strategies



The current lifecycle management strategy for sanitary network is considered reactive. The sanitary assets are replaced when they reach their end of life. This poses a risk of service disruption when asset failure occurs. An enhanced proactive strategy can be helpful to extend the service life of structures with lower funding requirement.

Assessed Condition Data



There is no formal condition assessment currently in place for the sanitary network. Without an understanding of the condition of the network, unexpected failures are more likely to occur. A formal condition assessment program can identify infrastructure needs, help capital planning, and reduce unplanned service disruption.

12.5 Levels of Service

The following tables identify the Township's current level of service for sanitary network. These metrics include the technical and community level of service metrics that are required as part of O. Reg. 588/17 as well as any additional performance measures that the Township has selected for this AMP.

12.5.1 Community Levels of Service

The following table outlines the qualitative descriptions that determine the community levels of service provided by sanitary network.

Service Attribute	Qualitative Description	Current LOS (2020)
Scope	Description, which may include maps, of the user groups or areas of the Township that are connected to the municipal wastewater system	See Appendix C
	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	The Township does not own any combined sewers
Reliability	Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches	The Township does not own any combined sewers
	Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes	Minor inflow and infiltration issues are identified in the current sanitary system of the Township, the water can infiltrate through cracks in the joints and through manholes.
	Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to stormwater infiltration	The newly installed sewer pipes are designed to be watertight to minimize infiltration.
	Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system	All wastewater treatment is managed by Ontario Clean Water Agency : No waste water treatment plant. (2x lagoon cells)

12.5.2 Technical Levels of Service

The following table outlines the quantitative metrics that determine the technical level of service provided by the sanitary network.

Service Attribute	Technical Metric	Current LOS (2020)
Scope	% of properties connected to the municipal wastewater system	54%
	# 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	N/A
Reliability	# of connection-days per year having wastewater backups compared to the total number of properties connected to the municipal wastewater system	0
	# of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system	0

12.6 Recommendations

Asset Inventory

- All replacement costs used in this AMP were based on the inflation of historical costs. These costs should be evaluated to determine their accuracy and reliability. Replacement costs should be updated according to the best available information on the cost to replace the asset in today's value.

Condition Assessment Strategies

- Identify condition assessment strategies for high value and high-risk water network assets.

Risk Management Strategies

- Implement risk-based decision-making as part of asset management planning and budgeting processes. This should include the regular review of high-risk assets to determine appropriate risk mitigation strategies.
- Review risk models on a regular basis and adjust according to an evolving understanding of the probability and consequences of asset failure.

Lifecycle Management Strategies

- A trenchless re-lining strategy is expected to extend the service life of sanitary mains at a lower total cost of ownership and should be implemented to extend the life of infrastructure at the lowest total cost of ownership.
- Evaluate the efficacy of the Township's lifecycle management strategies at regular intervals to determine the impact cost, condition and risk.

Levels of Service

- Continue to measure current levels of service in accordance with the metrics that the Township has established in this AMP. Additional metrics can be established as they are determined to provide meaningful and reliable inputs into asset management planning.
- Work towards identifying proposed levels of service as per O. Reg. 588/17 and identify the strategies that are required to close any gaps between current and proposed levels of service.

13 Impacts of Growth

Key Insights

- Understanding the key drivers of growth and demand will allow the Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure
- Moderate decline in population and minor employment growth is expected
- The costs of growth should be considered in long-term funding strategies that are designed to maintain the current level of service

13.1 Description of Growth Assumptions

The demand for infrastructure and services will change over time based on a combination of internal and external factors. Understanding the key drivers of growth and demand will allow the Township to more effectively plan for new infrastructure, and the upgrade or disposal of existing infrastructure. Increases or decreases in demand can affect what assets are needed and what level of service meets the needs of the community.

13.1.1 Val Rita-Harty Official Plan (May 2005)

The Township of Val Rita-Harty's Official Plan is intended to guide both the public and private sectors' decision-making in the use of land and the development. The document planning horizon spans 20 years, concluding in 2016.

The Official Plan for the Township of Val Rita-Harty was prepared in December 2000 and approved on May 3, 2005. The Official Plan is based on the findings in a planning study for the Township and the information supplied by responding government departments and ministries.

The official plan reflects the goals of maintaining its rural character, promoting sustainable management of natural resources, diversifying its economic base, encouraging community improvement, maintaining the Township's financial well-being, as well as protecting natural resources and public health.

The Township aims to provide full public piped services for servicing development within the Township. The capacity of water supply and sewage treatment needs to be confirmed before approving the new development. New water supply and sewerage collection pipes may be added for the projected growth.

The official plan provides a projection of population increase to 1,066 persons by 2016 which primarily in the form of infilling and minor expansions within the existing serviced areas. However, this does not match with the population data presented in the Census data. The following table outlines population, private dwellings, and employment changes to the Township between 2011 and 2021 from Statistics Canada.

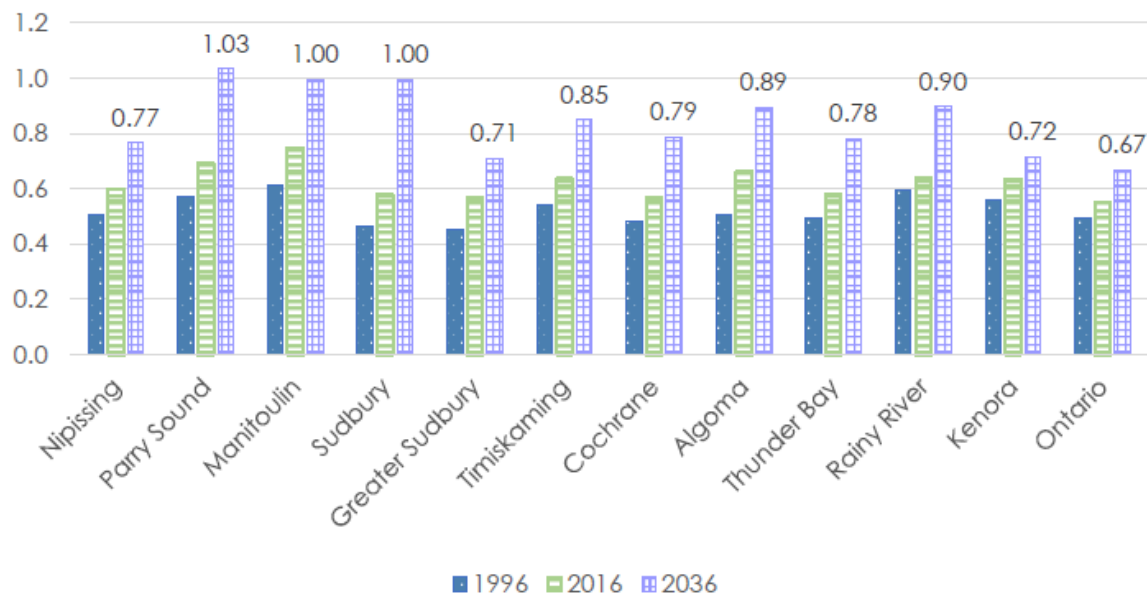
Year	Population	Private Dwellings	Employment
2011	817	368	N/A
2016	762	357	350
2021	757	382	355

13.1.2 Regional Growth

In 2021 the Come North Conference Report was produced by FedNor and Government of Canada. The document describes short, medium, and long-term objectives for all communities in Northern Ontario as it relates to population growth.

According to the report all 11 Census Districts in Northern Ontario (Nipissing, Parry Sound, Manitoulin, Sudbury, Greater Sudbury, Timiskaming, Cochrane, Algoma, Thunder Bay, Rainy River, Kenora) are currently experiencing the following trends: population decline, population aging, or labour shortages. The report highlights a risk of these communities becoming economically unsustainable unless population retention and attraction numbers improve. The risk is the result of the dependency ratio increasing. The dependency ratio is the ratio of people unable to support themselves without assistance; people between the ages of 0 and 14 and 64 and older.

The goal is to achieve a dependency ratio of 0.5. In 1996, every Census District was at or near the goal but by 2016, none were below and more than half had a ratio in excess of 0.6. The following graph displays the dependency ratio for each Census District in 1996 and 2016 along with a projected ratio for the year 2036.



The Township of Val Rita-Harty is found in the Cochrane District, which is expected to reach a dependency ratio of 0.79 by 2036.

The population overall in the Cochrane District is declining at a moderate rate. The following graph from the 2019 Cochrane District Report by the Northern Policy Institute, displays the population and employment trends from 1986 to 2016.



The region has experienced interprovincial and intraprovincial out-migration during the period. Net interprovincial out-migration equaled 2,405 while net intraprovincial out-migration equaled 10,173 between 2001 and 2017.

The following table, found in the same report, shows population projections in Cochrane District for the years 2017 to 2041.

Year	Ages 0-19	Ages 20-64	Ages 65+	Total
2017	17,832	48,018	14,080	79,930
2021	17,163	45,475	15,951	78,589
2030	16,015	39,080	20,374	75,469
2036	15,260	37,319	20,962	73,541
2041	14,894	36,535	20,669	72,098

The most recent census data from 2021 shows a population decline beyond the projected level, reaching 77,963. According to the census data, the population decline is seen across all ages and is not restricted to dependent age groups. Given the decline trends of population and employment, Cochrane District and the communities within the region, are likely to experience continuous population decline.

13.2 Impact of Growth on Lifecycle Activities

By July 1, 2025, the Township's asset management plan must include a discussion of how the assumptions regarding future changes in population and economic activity informed the preparation of the lifecycle management and financial strategy.

Planning for forecasted senior population growth may require the expansion of

existing accessible infrastructure and services. As growth-related assets are constructed or acquired, they should be integrated into the Township's AMP. In addition, the Ontario government is funding seven economic development projects in Cochrane. These projects aim to create jobs opportunities, expand business operations, support critical infrastructure and improving quality of life in Cochrane. The Township will need to review the lifecycle costs of growth-related infrastructure. These costs should be considered in long-term funding strategies that are designed to, at a minimum, maintain the current level of service.

14 Appendices

Key Insights

- Appendix A includes a one-page report card with an overview of key data from each asset category
- Appendix B identifies projected 10-year capital requirements for each asset category
- Appendix C includes several maps that have been used to visualize the current level of service
- Appendix D identifies the criteria used to calculate risk for each asset category
- Appendix E provides additional guidance on the development of a condition assessment program

Appendix A: Infrastructure Report Card

Asset Category	Replacement Cost (millions)	Asset Condition	Average Annual Requirement
Road Network	\$57.7	Very Poor	\$956,000
Bridges & Culverts	\$1.6	Fair	\$45,000
Stormwater Network	\$0.3	Very Good	\$7,000
Buildings & Facilities	\$9.7	Very Good	\$213,000
Land Improvements	\$0.2	Fair	\$5,000
Machinery & Equipment	\$1.9	Fair	\$153,000
Vehicles	\$1.9	Fair	\$116,000
Water Network	\$5.2	Good	\$103,000
Sanitary Network	\$4.5	Fair	\$91,000
Overall	\$83.0	Poor	\$1,689,000

Appendix B: 10-Year Capital Requirements

The following tables identify the capital cost requirements for each of the next 10 years in order to meet projected capital requirements and maintain the current level of service.

Road Network											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Gravel Roads	\$0	\$0	\$0	\$0	\$0	\$0	\$655k	\$0	\$0	\$0	\$0
Paved Roads	\$0	\$3.5m	\$2.3m	\$0	\$1.8m	\$0	\$0	\$0	\$2.5m	\$1.0m	\$0
Road Signs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Street Lights	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$3.5m	\$2.3m	\$0	\$1.8m	\$0	\$655k	\$0	\$2.5m	\$1.0m	\$0

Bridges & Culverts											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Bridges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Culverts	\$202k	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202k
	\$202k	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$202k

Storm Water Network											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Catch basins	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Manholes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Storm mains	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Land Improvements											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Baseball Field	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Columbarium	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15k	\$0	\$0	\$0
Pavilions	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Playground	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15k	\$0	\$0	\$0

Machinery & Equipment											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Fire	\$22k	\$0	\$39k	\$7k	\$16k	\$14k	\$20k	\$5k	\$10k	\$0	\$22k
General Government	\$0	\$15k	\$29k	\$11k	\$6k	\$14k	\$0	\$12k	\$12k	\$0	\$0
Public Works	\$0	\$0	\$3k	\$22k	\$0	\$0	\$17k	\$0	\$0	\$0	\$0
Recreation & Culture	\$0	\$19k	\$0	\$12k	\$15k	\$4k	\$25k	\$14k	\$17k	\$0	\$0
Solid Waste	\$0	\$0	\$0	\$0	\$48k	\$111k	\$48k	\$0	\$0	\$0	\$0
	\$22k	\$35k	\$71k	\$51k	\$85k	\$143k	\$110k	\$32k	\$38k	\$0	\$22k

Vehicles											
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Fire Vehicles	\$0	\$0	\$0	\$0	\$464k	\$0	\$0	\$0	\$0	\$0	\$0
Large Trucks	\$0	\$408k	\$236k	\$0	\$22k	\$0	\$65k	\$79k	\$0	\$0	\$8k
Small Trucks	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76k	\$14k	\$0	\$0
	\$0	\$408k	\$236k	\$0	\$486k	\$0	\$65k	\$156k	\$14k	\$0	\$8k

Water Network

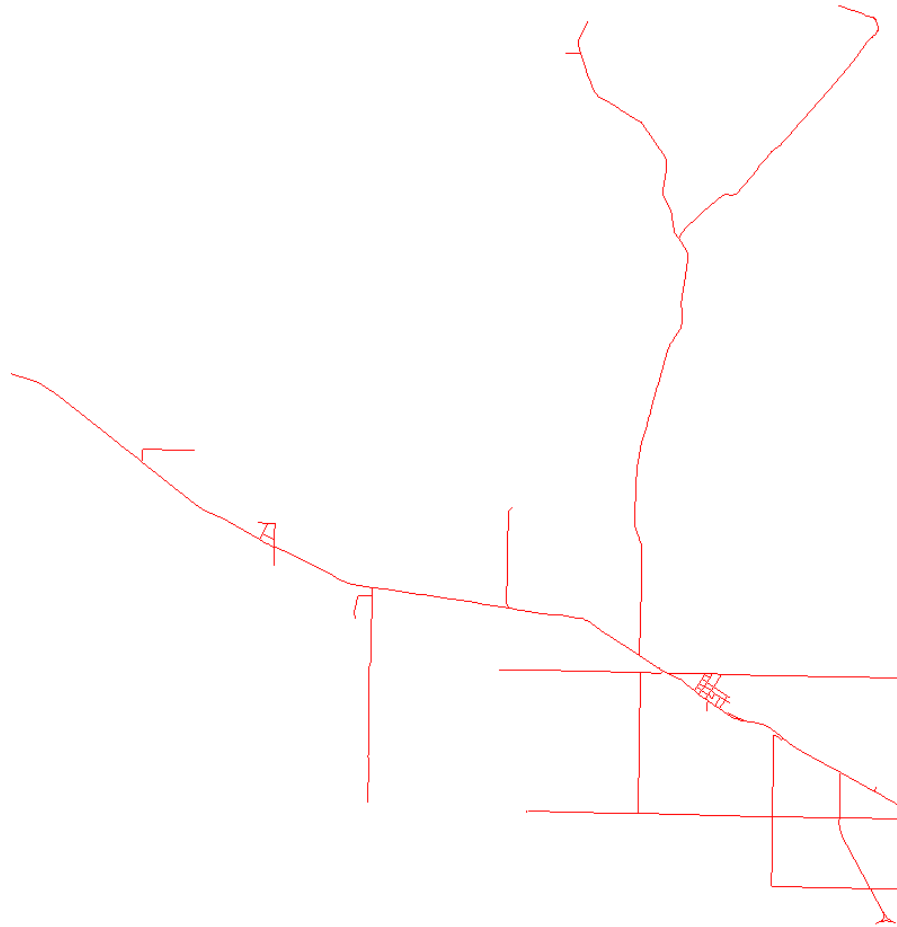
Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Fire Hydrants	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Machinery & Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Treatment Plant	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Watermains	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wells	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Sanitary Sewer Network

Asset Segment	Backlog	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Forcemain	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Lagoons	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Pumping Stations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Manholes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sanitary Sewers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

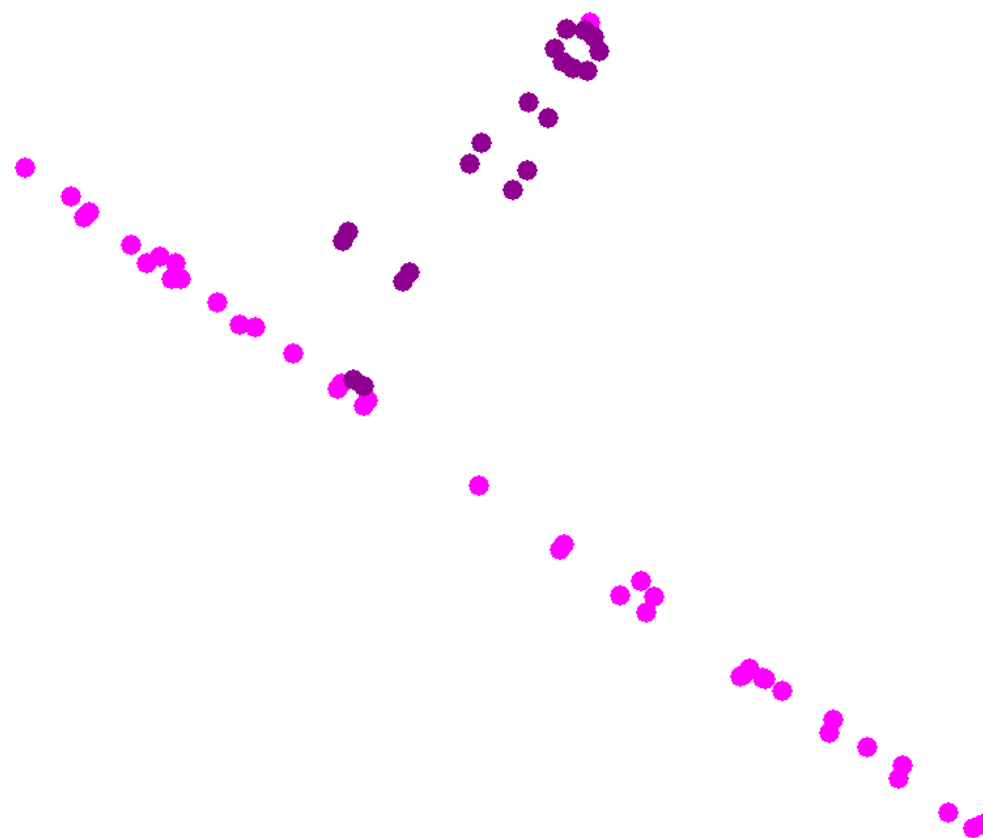
Appendix C: Level of Service Maps

Road Network Map



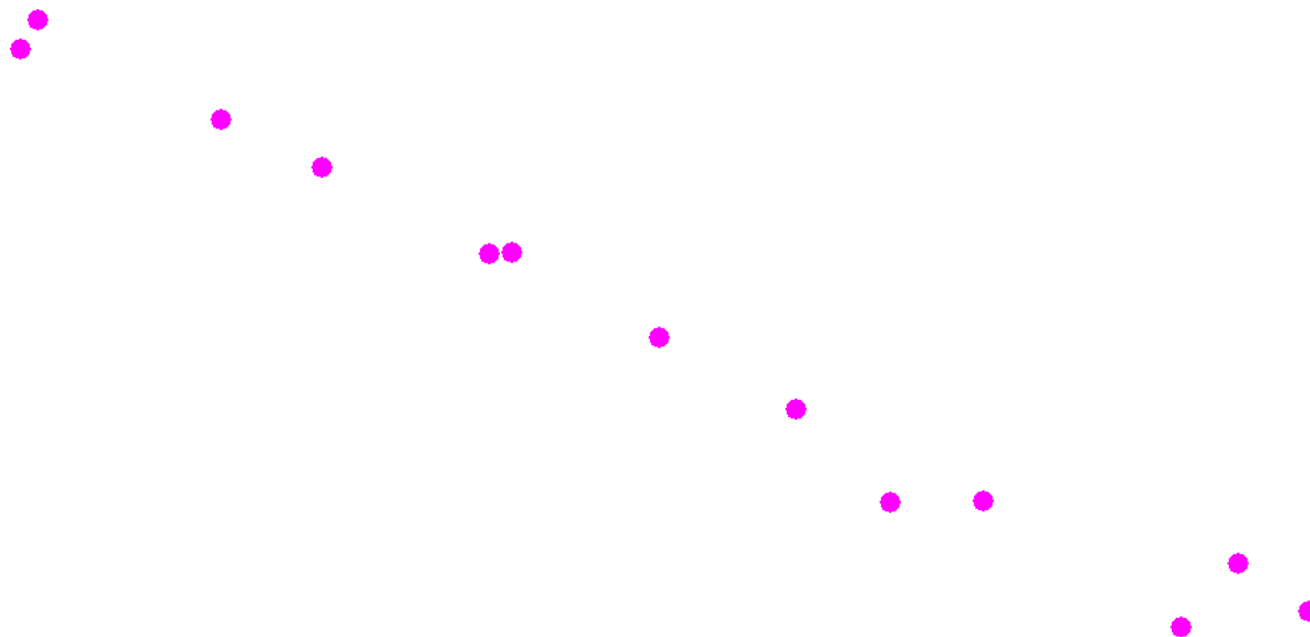
1 : 145,825

Stormwater Network Map – Val Rita



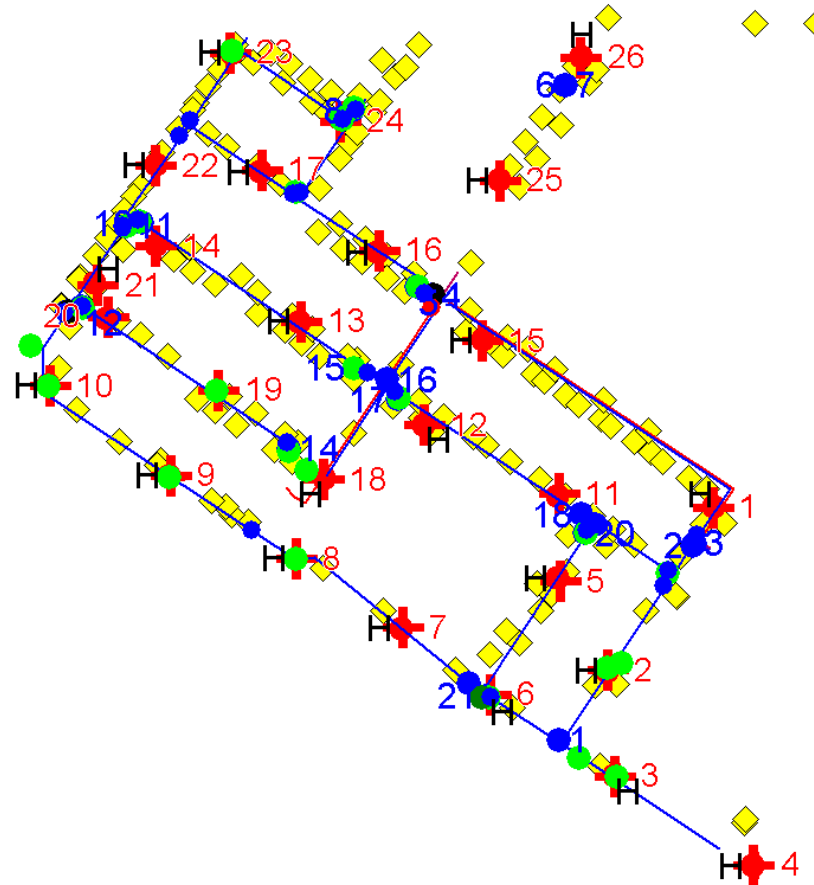
1 : 5,788

Stormwater Network Map – Harty



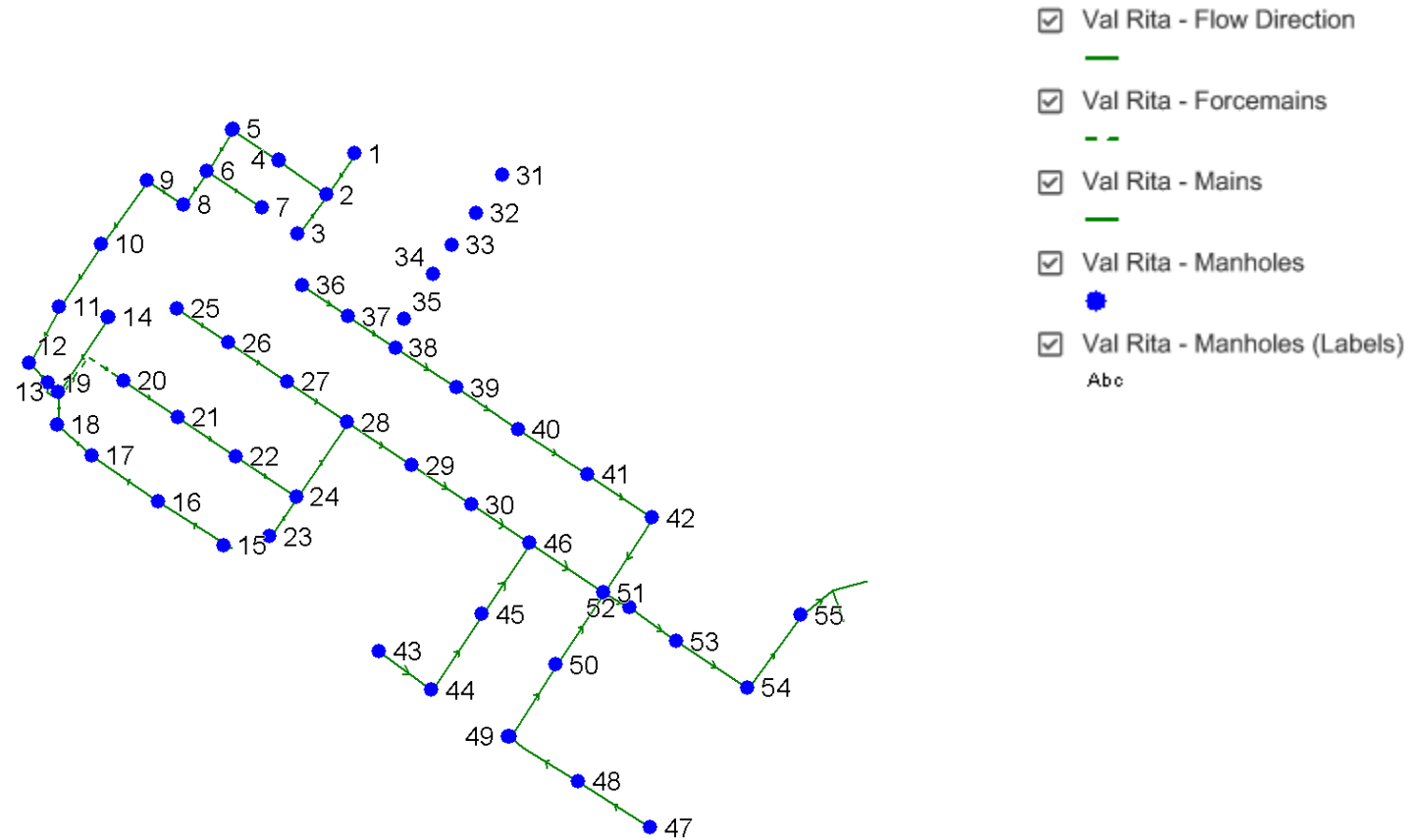
Water Network Map –Val Rita

- ☒ Curb Stops (GPS'd 2017)
 - ◆
- ☒ Hydrants
 - +
- ☒ Hydrants (GPS'd 2017)
 - +
- ☒ Hydrants (GPS'd 2017) - Labels
 - Abc
- ☒ Mains
 - 200mm
 - 150mm
 - 75mm
 - 50mm
- ☒ Valves - Condition
 - Excellent
 - Good
 - Poor
 - Needs Repair
 - Needs Replacing
 - N/A
- ☒ Valves - Hydrants
 -
- ☒ Valves - Hydrants (Labels)
 - Abc
- ☒ Valves - Main
 -
- ☒ Valves - Main (Labels)
 - Abc
- ☒ Valves (from As-Built)
 - 150mm
 - 50mm



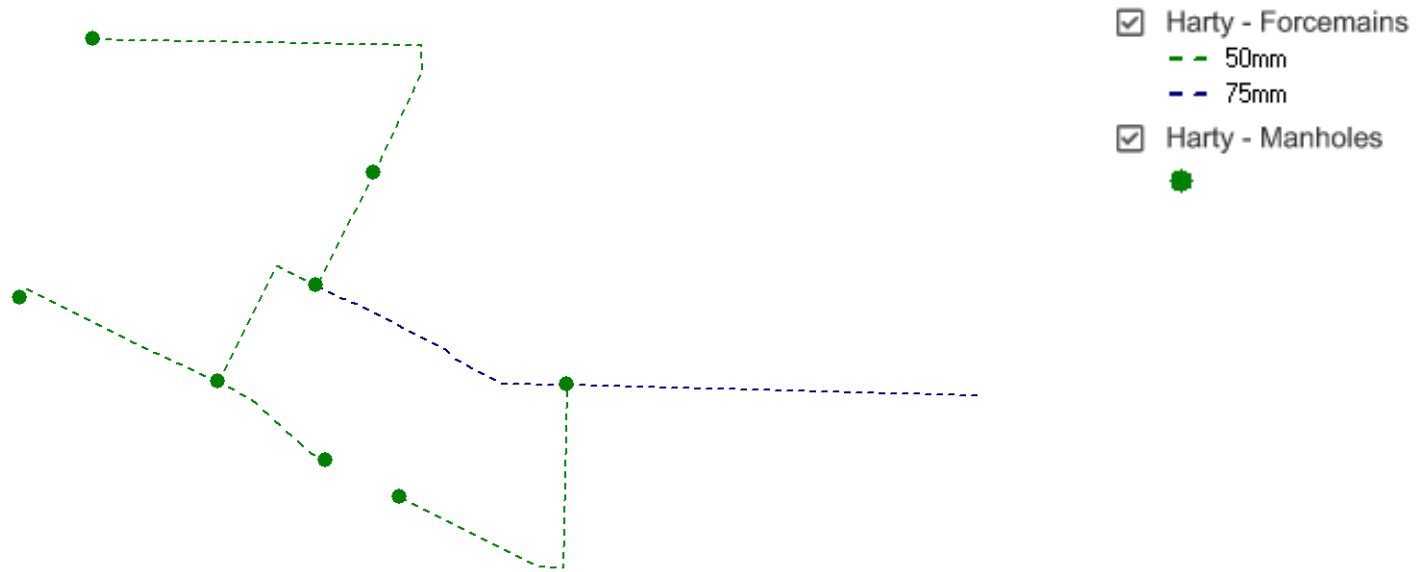
1 : 7,249

Sanitary Network – Val Rita



1 : 6,632

Sanitary Network – Harty



1:4,771

Appendix D: Risk Rating Criteria

Probability of Failure

Asset Category	Risk Criteria	Criteria Weighting	Value/Range	Probability of Failure Score
Road Network	Condition	100%	80-100	1
Bridges & Culverts			60-79	2
Storm Water Network			40-59	3
Sanitary Sewer Network			20-39	4
Water Network			0-19	5

Consequence of Failure

Asset Category	Risk Classification	Risk Criteria	Value/Range	Consequence of Failure Score
Road Network (Roads)	Financial (80%)	Replacement Cost (100%)	0-\$100,000	1
			\$100,000-\$250,000	2
			\$250,000-\$500,000	3
			\$500,000-\$1,000,000	4
			\$1,000,000+	5
	Social (20%)	Surface Material (100%)	Gravel Roads	3
			Paved Roads	4
Bridges & Culverts Others Stormwater Network	Financial (100%)	Replacement Cost (100%)	\$0-\$50,000	1
			\$50,000-\$150,000	2
			\$150,000-\$250,000	3
			\$250,000-\$500,000	4
			\$500,000+	5
Water Network (Mains)	Financial (100%)	Replacement Cost (100%)	\$0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
Sanitary Sewer Network (Sewer Mains)	Financial (100%)	Replacement Cost (80%)	\$0-\$10,000	1
			\$10,000-\$25,000	2
			\$25,000-\$50,000	3
			\$50,000-\$100,000	4
			\$100,000+	5
		Pipe Types (20%)	Gravity Sewer	3
			Forcemains	4

Appendix E: Condition Assessment Guidelines

The foundation of good asset management practice is accurate and reliable data on the current condition of infrastructure. Assessing the condition of an asset at a single point in time allows staff to have a better understanding of the probability of asset failure due to deteriorating condition.

Condition data is vital to the development of data-driven asset management strategies. Without accurate and reliable asset data, there may be little confidence in asset management decision-making which can lead to premature asset failure, service disruption and suboptimal investment strategies. To prevent these outcomes, the Township's condition assessment strategy should outline several key considerations, including:

- The role of asset condition data in decision-making
- Guidelines for the collection of asset condition data
- A schedule for how regularly asset condition data should be collected

Role of Asset Condition Data

The goal of collecting asset condition data is to ensure that data is available to inform maintenance and renewal programs required to meet the desired level of service. Accurate and reliable condition data allows municipal staff to determine the remaining service life of assets, and identify the most cost-effective approach to deterioration, whether it involves extending the life of the asset through remedial efforts or determining that replacement is required to avoid asset failure.

In addition to the optimization of lifecycle management strategies, asset condition data also impacts the Township's risk management and financial strategies. Assessed condition is a key variable in the determination of an asset's probability of failure. With a strong understanding of the probability of failure across the entire asset portfolio, the Township can develop strategies to mitigate both the probability and consequences of asset failure and service disruption. Furthermore, with condition-based determinations of future capital expenditures, the Township can develop long-term financial strategies with higher accuracy and reliability.

Guidelines for Condition Assessment

Whether completed by external consultants or internal staff, condition assessments should be completed in a structured and repeatable fashion, according to consistent and objective assessment criteria. Without proper guidelines for the completion of

condition assessments there can be little confidence in the validity of condition data and asset management strategies based on this data.

Condition assessments must include a quantitative or qualitative assessment of the current condition of the asset, collected according to specified condition rating criteria, in a format that can be used for asset management decision-making. As a result, it is important that staff adequately define the condition rating criteria that should be used and the assets that require a discrete condition rating. When engaging with external consultants to complete condition assessments, it is critical that these details are communicated as part of the contractual terms of the project. There are many options available to the Township to complete condition assessments. In some cases, external consultants may need to be engaged to complete detailed technical assessments of infrastructure. In other cases, internal staff may have sufficient expertise or training to complete condition assessments.

Developing a Condition Assessment Schedule

Condition assessments and general data collection can be both time-consuming and resource-intensive. It is not necessarily an effective strategy to collect assessed condition data across the entire asset inventory. Instead, the Township should prioritize the collection of assessed condition data based on the anticipated value of this data in decision-making. The International Infrastructure Management Manual (IIMM) identifies four key criteria to consider when making this determination:

1. **Relevance:** every data item must have a direct influence on the output that is required
2. **Appropriateness:** the volume of data and the frequency of updating should align with the stage in the assets life and the service being provided
3. **Reliability:** the data should be sufficiently accurate, have sufficient spatial coverage and be appropriately complete and current
4. **Affordability:** the data should be affordable to collect and maintain