Chatham-Kent

DETAILED ASSET MANAGEMENT PLAN 2024

Riverview Gardens

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Chatham-Kent Public Health Report Card

320 bed spaces

143 admissions in 2023

53 food services staff

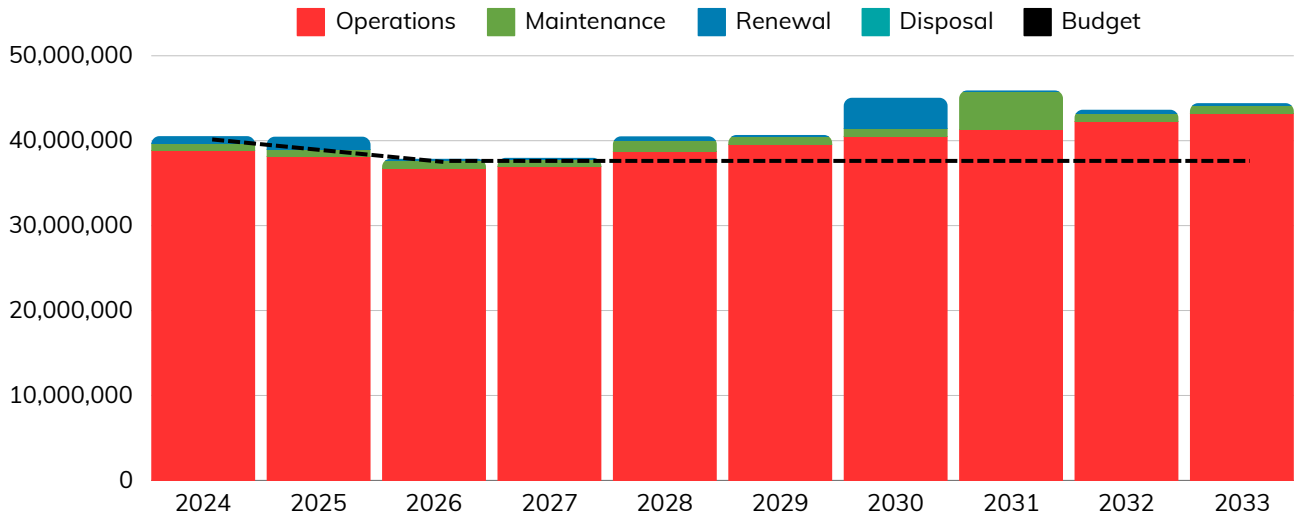
Annual Funding Gap	Asset Renewal Ratio	% of 10-Year Plan Funded
$3.2 Million	87%	92%

Asset Summary

Assets	Items	Replacement
	Facilities	$53,640,000
	Furniture	$2,866,000
	Facility Equipment	$3,621,000
	Medical Equipment	$441,000
	Admin Equipment	$650,000

$61.2M Total Replacement Cost

10 Year Life Cycle Forecast



Data Confidence — Low ▲ Medium — High

2.0 INTRODUCTION

2.1 Background / Purpose of Service

Riverview Gardens (RVG) is a 320-bed municipal Long-Term Care Home that opened in April 2006. This home merged the former County of Kent's Thamesview Lodge, a 230-bed home, with the City of Chatham's Victoria Residence, a 90-bed home. RVG is located on the on the former St. Joseph's Hospital at 519 King St. West in Chatham, Ontario, along the Thames River. It is a six-floor building with the addition of a penthouse where equipment and machinery such as a chiller, HVAC, condensers, compressor and other mechanical equipment are located.

The 1st floor hosts the public and staff areas of the home. The outdoor space includes two parking lots, a beautiful courtyard for residents to visit, and a greenspace with a view of the water. Floors 2 to 6 are the resident floors, consisting of ten home areas with 32 beds each. Each home area includes a nursing Care Centre, medication room, dining room, sunroom, television area, and tub room that support the daily living of the residents.

Riverview Gardens is home to 320 residents. In 2023, there were 143 admissions to the home and 151 discharges. The Therapeutic Recreation Program offers residents various programs, including spiritual centre activities, a pub, a coffee club, musical entertainment, bingos, games, crafts, a library book program, cultural events and movies. There are daily activities on each floor, as well as Great Room events. A monthly newsletter listing activities and events is issued. It is provided to the residents and sent to families through the subscription email notification.

A variety of other programs are offered specific to quality of care, including mandatory programs and services:

- Falls Prevention
- Continence Care
- Skin and Wound Care
- Pain and Palliative
- Resident Assessment Instrument
    - (Minimum Data Set -RAI-MDS)
- Infection Prevention and Control
- Therapeutic Recreation
- Quality Improvement

Riverview Gardens supports families and friends of residents by providing exceptional customer service, keeping families informed, and answering any questions that arise. Volunteers are integral to the Home, offering services such as portering, spending time with residents, and bartending on pub days. A Family Council and a Resident Council are actively involved in the Home.

Riverview Gardens has undoubtedly faced one of the most challenging periods in healthcare during the COVID-19 pandemic. Staff worked long hours (including double shifts) to support the residents. At the height of the pandemic, staff wore mandatory masks, face shields or goggles, gowns, and gloves and feared contracting the virus and bringing it home to their loved ones. Residents faced significant social isolation due to mandatory provincial restrictions, which was incredibly challenging for all involved. These events are essential to remember as Riverview Gardens emerges from the pandemic, rebuilds, works to build resiliency in staff and implements new provincial rules and processes.

Ontario is currently facing significant healthcare worker shortages, making it challenging to recruit and retain employees. The pandemic highlighted pre-existing issues in Long Term Care, prompting the provincial government to introduce the Fixing Long Term Care Act. This Act includes stricter rules and oversight, such as provincial inspections and administrative monetary penalties for non-compliance or repeat incidents. The province has also committed funding to increase staffing levels, targeting 4 hours of care per resident per day by March 2025 and 30 minutes per resident per day of Allied Health Professional support and Infection Prevention and Control (IPAC) support. Riverview Gardens is currently working to meet these targets with the available funding.

Another change in long-term care is that individuals stay in their homes longer than in the past. Increased community support allows individuals to remain in their own homes longer, and those entering long-term care have a higher level of medical acuity, requiring more medical care and support in activities of daily living.

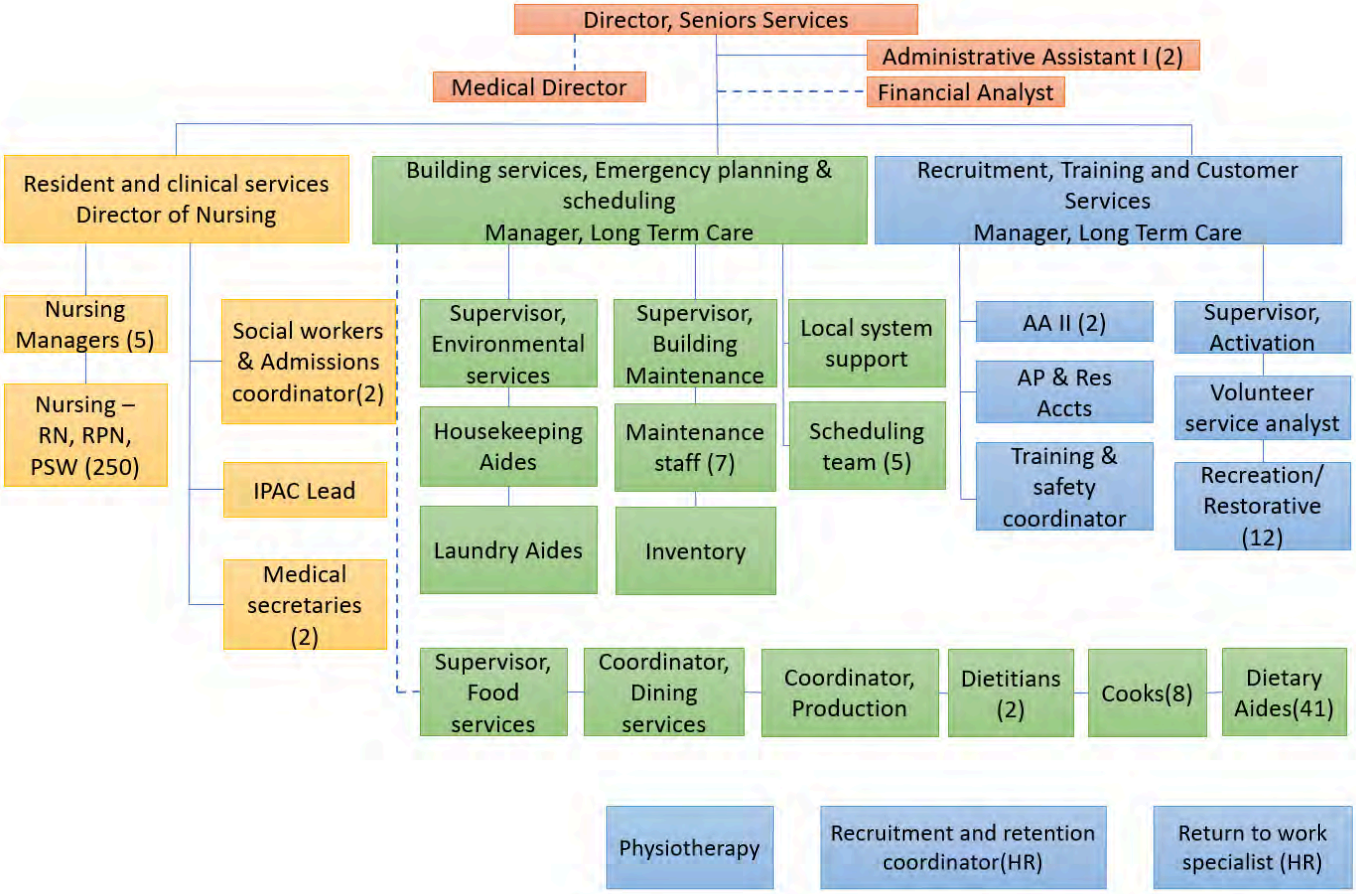
RVG Hallway example

Entrance to RVG

Key Stakeholder	Role in Asset Management Plan
Chatham-Kent Council	• Distribute resources to achieve planning objectives in service provision while effectively mitigating risks. • Back asset management initiatives to enhance understanding and guide decision-making. • Allocate funding to sustain the desired level of service throughout the entire life cycle.
Mayor/CAO	• Advocate for and champion the adoption of asset management principles within the organization. • Guarantee the availability of sufficient resources to foster the development of staff knowledge and skills, facilitating the implementation and ongoing enhancement of asset management practices.
General Manager	• Allocate resources to meet the organization's objectives in providing services while managing risks. • Overall responsibility for Asset Management, provide leadership in influencing decision-making processes related to Asset Management.
Director, Senior Services	• Allocate resources to meet the organization's objectives in providing services while managing risks. • Provide leadership in influencing decision-making processes related to Asset Management.
Staff	• Inform management to changes in asset conditions or known faults and risks • Proactively care for assets to ensure they can achieve their desired ESL
Community	• Engage in facilitated discussions to enable the municipality to comprehend the community's desired level of service.

Table 2.1:Key Stakeholders in the DAMP

RVG organizational structure for service delivery from infrastructure assets is detailed below,



2.2 Asset Hierarchy & Registry

An asset hierarchy provides a framework for structuring data in an information system to assist in data collection, reporting, and decision-making. The hierarchy includes the asset class and components used for asset planning and financial reporting and the service level hierarchy used for service planning and delivery.

An asset registry is a single data source containing an asset data inventory, including attribute information for each asset. This attribute information includes a record of each asset, including condition, age, replacement cost, and asset-specific information (e.g., length, diameter, material, etc.). RVG's asset registry is currently structured as an asset hierarchy, explained below.

Chatham-Kent is working towards establishing a functional asset hierarchy, which means the hierarchy has been established based on what the asset owner needs or wants the asset or system to do. Generally, assets and systems are organized according to their primary function. The service hierarchy is shown in **Table 2.2.1.**

Service Hierarchy	Service Level Objectives
Facility	Provide a safe, clean and enjoyable long-term care environment for residents and clients
Medical Equipment	Ensure sufficient quality and quantity of medical equipment to provide medical care as required
Furniture & Fixtures	Ensure furnishings and the interior facility are kept up to date, clean and functional
Technologies	Provide adequate technology to support residents connections and support operational levels of service

Table 2.2.1: Asset Service Hierarchy

Asset Registry

Table 2.2.2 shows the assets covered by this DAMP. These include all facilities, materials, Vehicles, Communications, Technology and Software, and supplies required for Chatham-Kent to deliver its service to the community.

Table 2.2.2: Service Assets

Asset Category	Description	Age or Average Age	Average Condition	Avg Estimate Service Life Remaining	Current Replacement Value
Facility & Site	320 Room Long Term Care Facility	2006	Good	44 Years	**$53,640,000**
Residential Furniture	Resident Beds, Chairs, Armoire, Desk, Bedside Furniture, Dining Room Furniture, Great Room Furniture	8 Years	Fair	12 Years	**$2,866,000**
Facility Equipment	Kitchens, Garbage Compactor, Laundry, Elevators, Vacuum, Security	13 Years	Good	9 Years	**$3,621,000**
Medical Equipment	Medication Fridges, Physio equipment, vital signs monitors, nursing diagnostic equipment	15 Years	Good	5 Years	**$441,000**
Admin Equipment	Office Furniture, Computer Hardware, Software	9 Years	Fair	6 Years	**$650,000**
				Total	**$61,218,000**

All figure values are shown in 2024 dollar value.

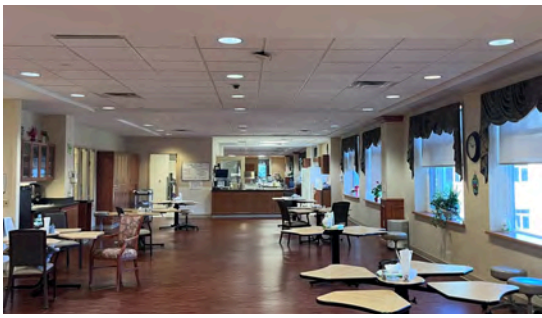
Asset Examples

Commercial Grade Kitchen Equipment

Resident Bathtub

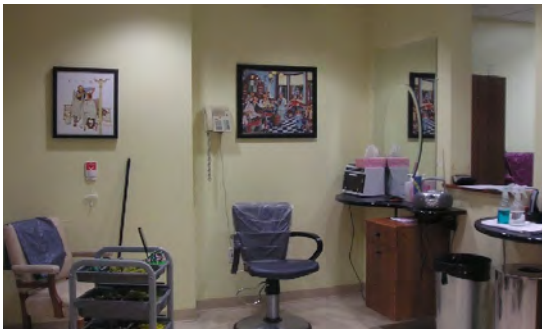
Commercial Grade Laundry Equipment

Neighborhood Dining Hall



Mechanical Room Equipment / Hot Water Tanks

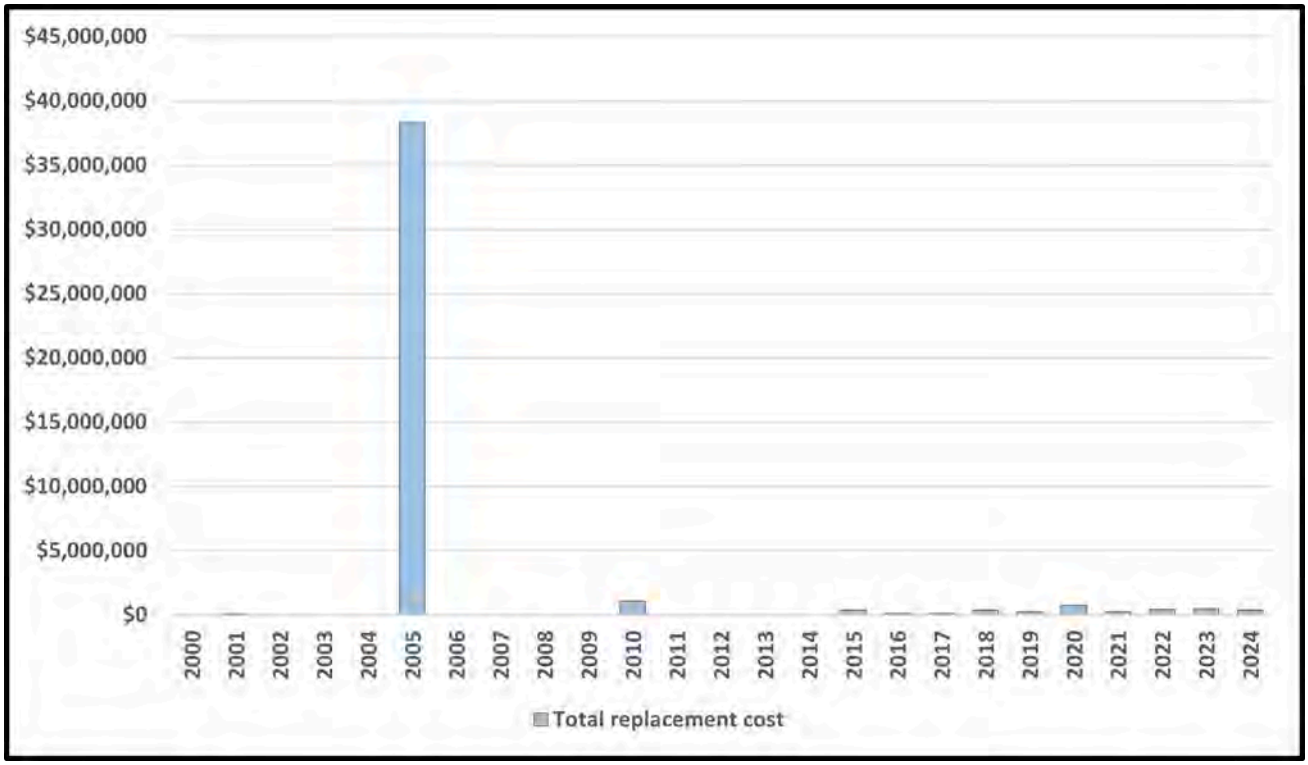
Hair Salon Space



Administrative Service Area

The age of an asset plays a crucial role in asset management, serving as a basis for planning. Assets typically have an estimated service life (ESL) that guides their replacement schedule. Assets with lower costs or criticality may be renewed based on age, serving as an interim measure for condition assessment until more robust methodologies are developed. Age can also be a renewal indicator when there is legislatively mandated age requirements for assets. However, it's essential to recognize that asset condition assessments based solely on age are generally regarded as low-confidence indicators. Age is a mandatory measurement required by O.Reg. 588/17. The age profile of the assets included in this DAMP is shown in **Figure 2.2.3.**

Figure 2.2.3 Assets Age Profile Graph



All figure values are shown in 2024 dollar value.

Most of the costs depicted in the age chart occurred in 2005, coinciding with the completion of RVG at its current location. This facility represents a significant spike in the chart, necessitating a comprehensive understanding of its condition, maintenance requirements, and expected lifespan to determine the most appropriate course of action for its planned renewal.

2.3 Asset Condition

The condition rating communicates the necessary maintenance for an asset to either return to an improved state, remain operational or achieve its expected lifespan. Condition is the leading indicator for maintenance activities.

RVG currently employs standardized methods to monitor the condition of its buildings only. Vehicles undergo mandatory annual inspections, along with ad hoc inspections during maintenance activities. A standardized assessment of building conditions was carried out in 2024 to determine facility condition ratings. RVG will utilize a standardized condition rating system for all critical assets to assist in future planning. At this time, these are the only assets that are currently undergoing condition assessments.

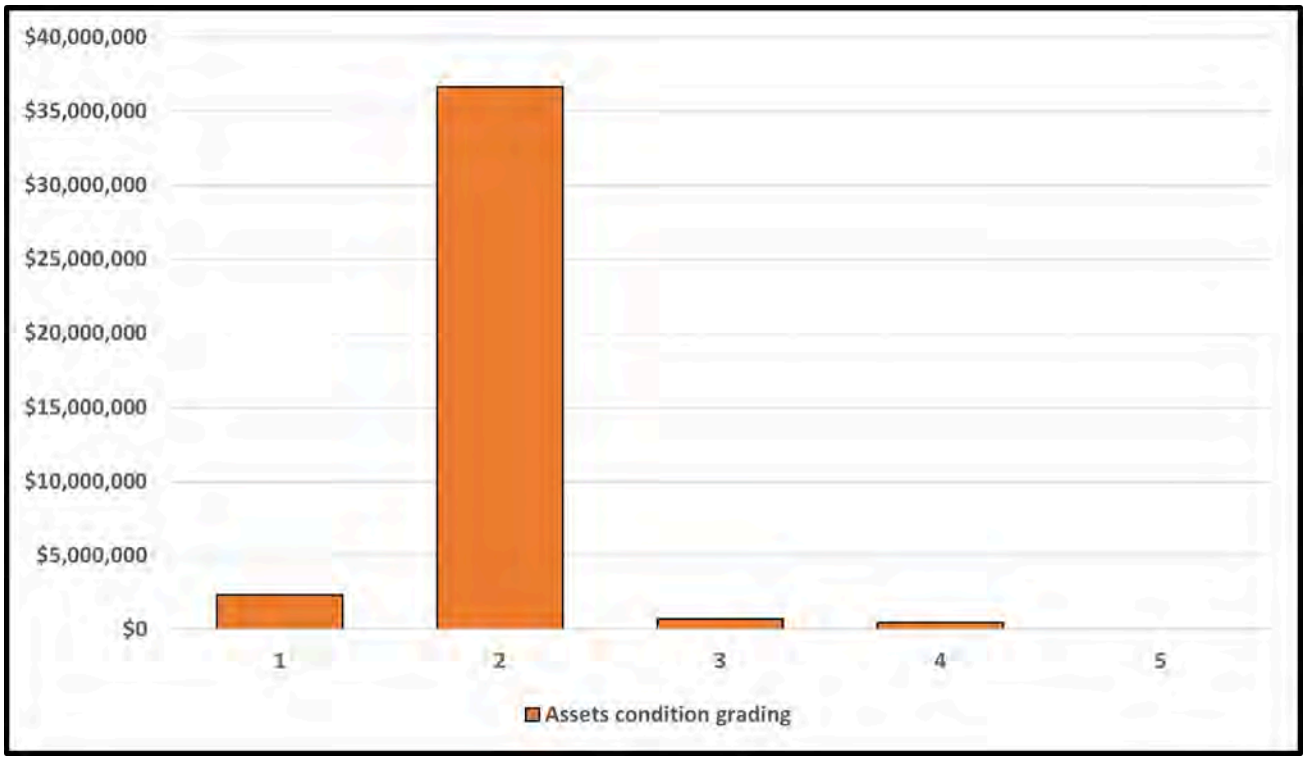
Conditions will be measured using a 1 – 5 grading system in future plan iterations, as detailed in **Table 2.3.1**. A consistent approach must be used in reporting asset performance, enabling adequate decision support. A finer grading system may be used at a more specific level; however, for reporting in the DAMP, results are translated to a 1 – 5 grading scale for ease of communication.

Condition Grading	Description of Condition
1	**Very Good**: free of defects, only planned and/or routine maintenance required
2	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
4	**Poor**: significant defects, higher order cost intervention likely
5	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

Table 2.3.1: Condition Grading System

The condition profile of RVG assets is shown in **Figure 2.3.2.**

Figure 2.3.2: Asset Condition Profile



All figure values are shown in 2024 dollars.

On average, most assets in the RVG registry are deemed to be in good condition. However, this does not imply that all assets are in good condition. Significant assets, in terms of criticality and cost, are rated as fair, poor, or even very poor.

Maintaining RVG assets in good condition is vital for the service, as it heavily depends on their availability and state. For instance, if most maintenance activities were postponed for ten years, the facility's condition rating would deteriorate from good to very poor in less than nine years. In future iterations of the DAMP, RVG will further expand on the condition of assets as the AM knowledge matures.

2.4 Asset capacity and performance

Assets are generally provided to meet design standards where available. However, more resources are needed to address all known deficiencies. **Table 2.4.1** details locations where deficiencies in service performance are known.

Table 2.4.1: Known Service Performance Deficiencies

Location	Service Deficiency
RVG Facility and Site	Replace the domestic hot water storage tanks
	Parking lot and sidewalk repairs required
	Cooling Towers And Evaporative Coolers require renewals in the near future

The above service deficiencies were identified from the 2024 Building Condition Assessment completed in 2024.

3.0 LIFECYCLE

The lifecycle management plan will detail how RVG plans to operate the assets at the agreed-upon levels of service by managing its lifecycle costs. These costs are categorized by lifecycle phases: acquisition, operations, maintenance, renewal, and disposal. It is budget-based but will evolve into a full lifecycle approach by 2027, where appropriate.

Once RVG acquires an asset, the municipality must fund the remaining lifecycle costs, such as operations, maintenance and likely inevitable renewal. These other lifecycle costs are far more significant than the initial construction or purchase cost and are often multigenerational. Since lifecycle costs are spread across multiple decades, RVG must approach its asset planning with a long-term view to ensure it effectively manages the assets and assists in making informed choices.

3.1 Acquisition Plan

Acquisitions reflect new assets that did not previously exist or works that will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, and social or environmental needs. Any asset donated to RVG is also considered an acquisition.

3.1.1 Selection criteria

Proposed acquisition of new assets and upgrade of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrades and new works should be reviewed to verify that they are essential to RVG's needs. The proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled for future work programs. The priority ranking criteria are detailed in **Table 3.1.1.**

Table 3.1.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Legislative Requirements or Obligations	70%
Increase to Level of Service	20%
Emerging Technology	10%
Total	**100%**

Summary of future asset acquisition costs

At this time, RVG has no major planned acquisitions. At the time of writing this DAMP, no actions have been committed; however, if there are any future acquisitions for RVG, it will be included in the next iteration of the DAMP.

3.2 Operations Plan

Operations encompass critical and routine tasks to support RVG in delivering its service. Everyday operational activities include staff costs, meal preparation, resident personal care, administrative activities, software licensing, insurance, laundry activities, facility utility expenses, obtaining material/catalogue licenses, conducting training sessions, and programming. These tasks and activities are essential for the service's daily operations.

RVG is a service driven by its personnel, and the costs associated with employees constitute a substantial part of the operational investment required to provide long-term care support. services. For RVG to function efficiently and effectively, substantial staffing with a variety of skills is necessary to attain the desired service level. Currently, RVG employs;

- **184 PSW**
- **66 RPN's**
- **17 RN's**
- **10 Activation Staff**
- **108 Facility & Operations Staff - Housekeeping - 34, Laundry - 14, Maintenance 6, Dietary Programming & Meal Services (54)**
- **32 Leadership and Administrative staff**

The staff provides support through day-to-day operational activities to ensure residents are engaged and cared for. RVG staff work 24 hours a day - 7 days a week to ensure residents are provided the following core care services;

- **Health and personal care -** Riverview Gardens receives support from a team of committed physicians, nurses, dieticians, physiotherapists and a mix of registered and non-registered personnel. They aim to guarantee that residents receive timely and appropriate health care to prevent unnecessary hospitalizations and emergency department visits. RVG has RN and RPN nurses on the premises 24 hours a day. The nurses ensure medication is administered, monitor residents' health and provide medical care and advice as needed.
- **Housekeeping and laundry services-** RVG staff launder all bedding, towels, clothing, etc., and provide housekeeping services to ensure the facility is clean, safe, and appealing to the residents. This includes cleaning resident rooms, bathrooms, eating areas, and shared common areas.
- **Bedding and furniture -** RVG ensures that each room is equipped with a bed, chair, armoire, desk, bedside tables etc. The furniture allows residents to rest comfortably.
- **Personal hygiene-** Residents often need high care, and staff are committed to assisting them with all health care and hygiene needs.
- **Meal Service-** Residents are provided with three meals and snack opportunities throughout the day. Meal menus offer choices at every meal and are changed regularly to offer a wide variety of delicious, nutritious meals. Residents can provide feedback through the Resident Food Committee or individual suggestions, and we adjust the menu based on their input and preferences.

- **Spiritual Services -** RVG has a Spiritual Care Coordinator who provides emotional and spiritual counselling to residents and families when needed. Spiritual and religious programs are offered to meet individual resident needs.
- **Social and recreation programs. -** RVG provides social and recreational services seven days a week, including holidays. The activities include leisure, recreation and therapeutic recreation programs designed to meet residents' physical, emotional, spiritual, cognitive and intellectual needs. RVG offers a variety of programs one-on-one, as well as small and large group activities and special events. The goal is to create a meaningful, life-enriching experience for all RVG residents. These activities include
    - **Exercise activities -** Various activities and classes, guided by staff, cater to various abilities. Additionally, there are walking paths and a picturesque garden courtyard designed for accessible wheelchair and walker access, ideal for summer evening strolls or admiring the stunning winter lights.
    - **Movie/Sports** nights in the common room,
    - **Pub Nights-** A licensed bar is available to residents and family members. SMART serve volunteers provide friendly service.

The residential spaces themself are comfortable and provide residents with a homelike environment. Resident living spaces are set on 5 floors with 10 home-like neighborhoods. Each neighborhood has;

- Family Room
- Activity Areas
- Tub/Shower Rooms
- Nursing Centre
- Outdoor Balconies
- Dining Room and Sunroom with a courtyard view

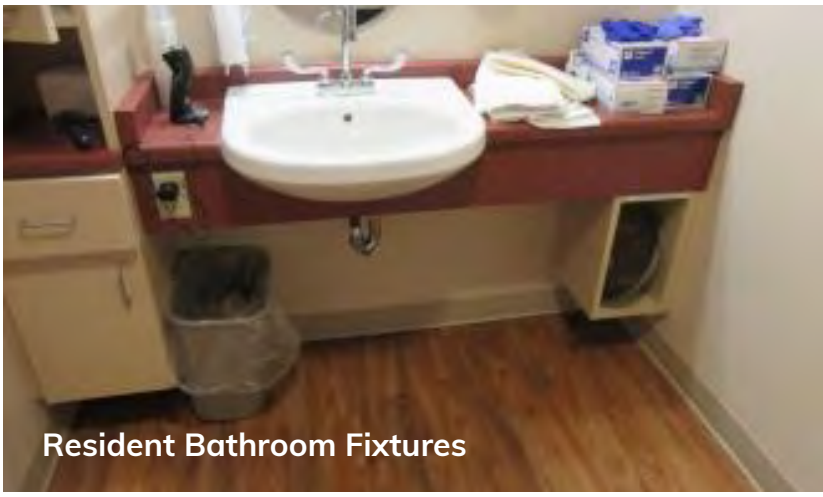
Scenic courtyard and sitting area

Walking paths and water view

Each bedroom includes;

- Electric Beds with overhead lift capabilities
- Clothing wardrobe
- 3 Drawer Side Table
- Chair
- Bathroom
- Glass front wooden memory box at the entrance of each resident's room

Resident Bedroom Furniture



Resident Bathroom Fixtures

Over the 10-year planning period, RVG forecasts it will invest;

- **$318,981,000** in staff wages
- **$13,649,000** for meal/food costs
- **$9,789,000** for facility operating costs (Energy costs, cleaning, inspections, BCA's)
- **$2,489,000** for dietary consultation
- **$5,1489,000** for supplies (Nursing, High Intensity needs residents etc.)
- **$1,479,000** for software support and maintenance fees
- **$478,000** for janitorial supplies

Multiple factors can affect operational costs, including labour Provincial funding levels or changes in priorities, labour negotiations and recruitment costs, Council funding or changes in priorities, rising energy costs, rising food costs, and inflationary impacts. All of these factors will impact the future costs of long-term care services.

A significant portion of operational costs are funded by the provincial government annually; however, it is not practical or logical to assume that the funding envelopes will keep pace with rising costs. Historically, the Provincial government has been slow to react to funding change requirements, and the burden falls on the Municipality to absorb the rising costs.

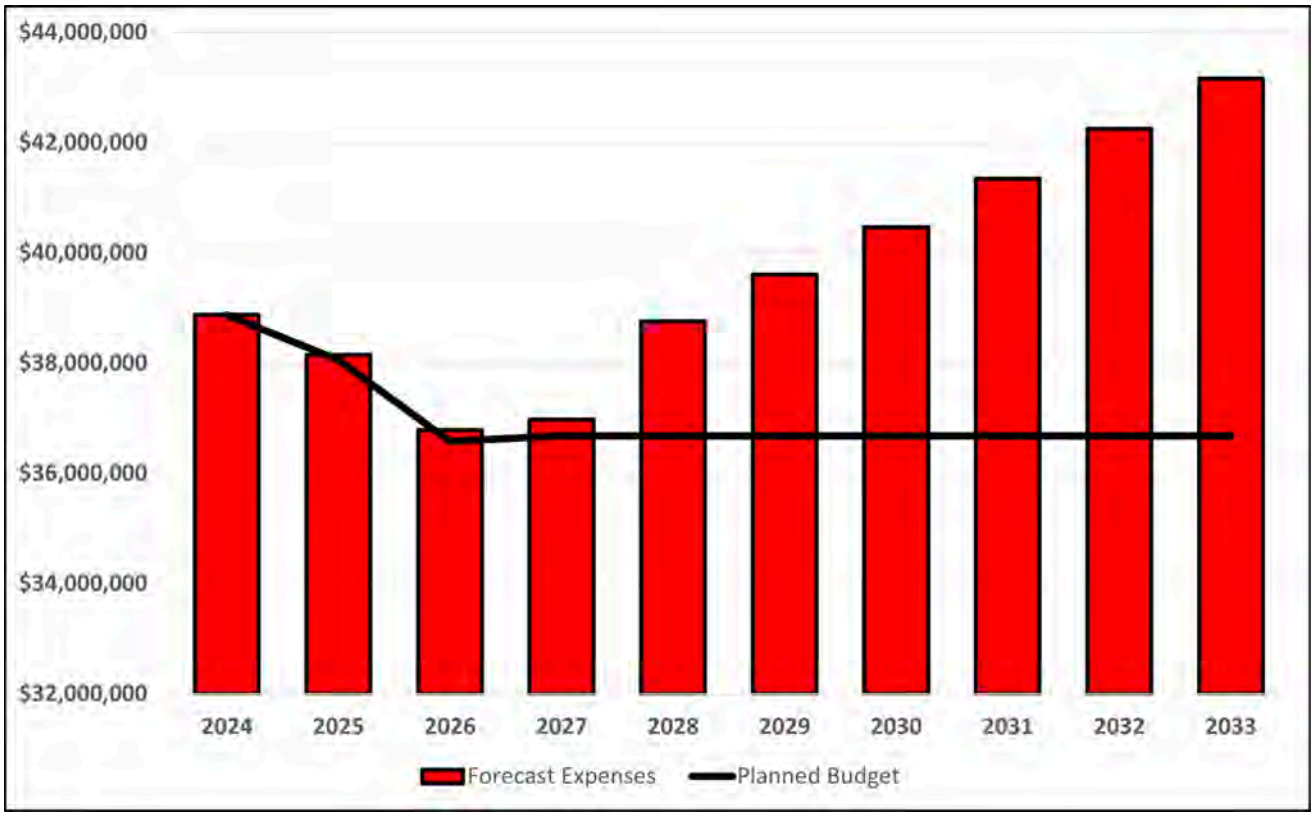
At the time of writing this DAMP, it was impossible to adequately separate some of the costs to detail how much is invested each year for specific programs such as community education, facility inspections, inspections for equipment, insurance costs, etc. Over the next three years, RVG will work with the Asset and Quality Management (AQM) division to separate the operational program with high costs or with regulatory obligations to ensure that they can be included in the operational explanations and connect the costs to specific technical levels of service

Summary of forecast operations costs

Forecast operations costs are expected to vary in relation to the total value of the asset and operational staffing needs. If additional assets or staffing are acquired, the future operations costs are forecast to increase. If assets are disposed of, the forecast operation costs are expected to decrease. Changes in levels of service directed by the council will also affect the operational forecasts.

Figure 3.2.1 shows the forecast operations costs relative to the proposed operations Planned Budget. The significant reduction in operating costs from 2024-25 is due to the operating Budget, includes the final two years of a debt repayment. The final two years of the debt payments total **$4.79 million** ($**3.2 million** in 2024 and **$1.6 million** in 2025). Those payments are no longer required to be included in the Budget after 2025.

Figure 3.2.1: Operations Summary



All figure values are shown in 2024 dollars.

To maintain the projected service levels over the ten-year planning horizon, the operational budget requires an increase. This adjustment is necessary to accommodate the anticipated 2% annual inflation beyond 2027, mirroring the reality of escalating costs. A primary concern is the inflation-related rise in food and energy prices, which significantly strains the annual budgets. These persistent challenges for RVG must be addressed in subsequent versions of the DAMP to ensure the defined service level is met and to clearly convey the ramifications of an inadequate budget once the 2025 service levels are set.

Year	Planned Operations Budget
2024	$38,876,000
2025	$38,050,000
2026	$36,583,000
2027	$36,682,000

Table 3.2.2: Operations Planned Budget Trends

Operational budget levels are considered inadequate to meet the projected level of service. Where operational budget allocations are such that they will result in a lesser level of service, some of the service consequences and service risks have been identified. The DAMP highlights service risks, and the Infrastructure Risk Management Plan considers service risks. Staff evaluate and prioritize operational necessities based on their expertise and subject matter opinion. Subsequent versions of the DAMP will explore and elaborate on the operational repercussions and the effects of these deficiencies on service levels

3.3 Maintenance Plan

Maintenance should be viewed as the ongoing management of deterioration. The goal of planned maintenance is to proactively apply the appropriate interventions to assets, ensuring they achieve their intended useful life. Maintenance doesn't substantially prolong the life of an asset; it is the actions necessary to enable assets to meet their expected lifespan by restoring them to a preferred 'improved' condition.

Proactive maintenance planning dramatically diminishes the need for reactive maintenance, which carries a greater risk to human safety and incurs higher financial costs. It is crucial for Chatham-Kent to strategically plan and adequately fund its maintenance activities to guarantee the reliability of RVG assets and the achievement of the expected service level.

Examples of typical maintenance activities include general maintenance on the facility, Kitchen equipment repairs (fridges, stoves, hood systems, sinks, dishwashers), HVAC component replacement, Medical Monitor repairs, electric bed repairs, window replacements, along with the appropriate staffing and material resources required to perform these activities. Planned maintenance dramatically reduces the need for reactive maintenance, which is often associated with greater risks to human safety and increased financial costs. RVG will strategically plan and adequately finance its maintenance activities to maintain the desired service level.

Summary of forecast maintenance costs

Forecast maintenance costs are expected to vary depending on the total value of the asset stock. If additional assets are acquired, future maintenance costs are forecast to increase. If assets are disposed of, forecast maintenance costs are expected to decrease. At this time the only committed and funded maintenance projects for 2024 are outlined below.

2024 Maintenance Projects - Total investment - $330,000

- **$75,000** - Elevator upgrade to meet TSSA standard changes
- **$80,000** - Replace cooling tower which is a critical component of the air conditioning
- **$40,000 -** Exterior lighting upgrade for security and safety
- **$75,000** - HVAC Pump Replacement
- **$60,000** - Hot Water Tank Replacement

Currently RVG implementing a LED lighting retrofit that will replace worn and costly fixtures with a much more energy and cost-efficient model. Once completed, they will reduce energy costs by $90,000 annually or $900,000 over the life of the 10-year plan. The project will also reduce Maintenace costs by $161,000 over the life of the plan. In total, the retrofit is expected to reduce total lifecycle costs by **$1,061,000** over the life of the plan.

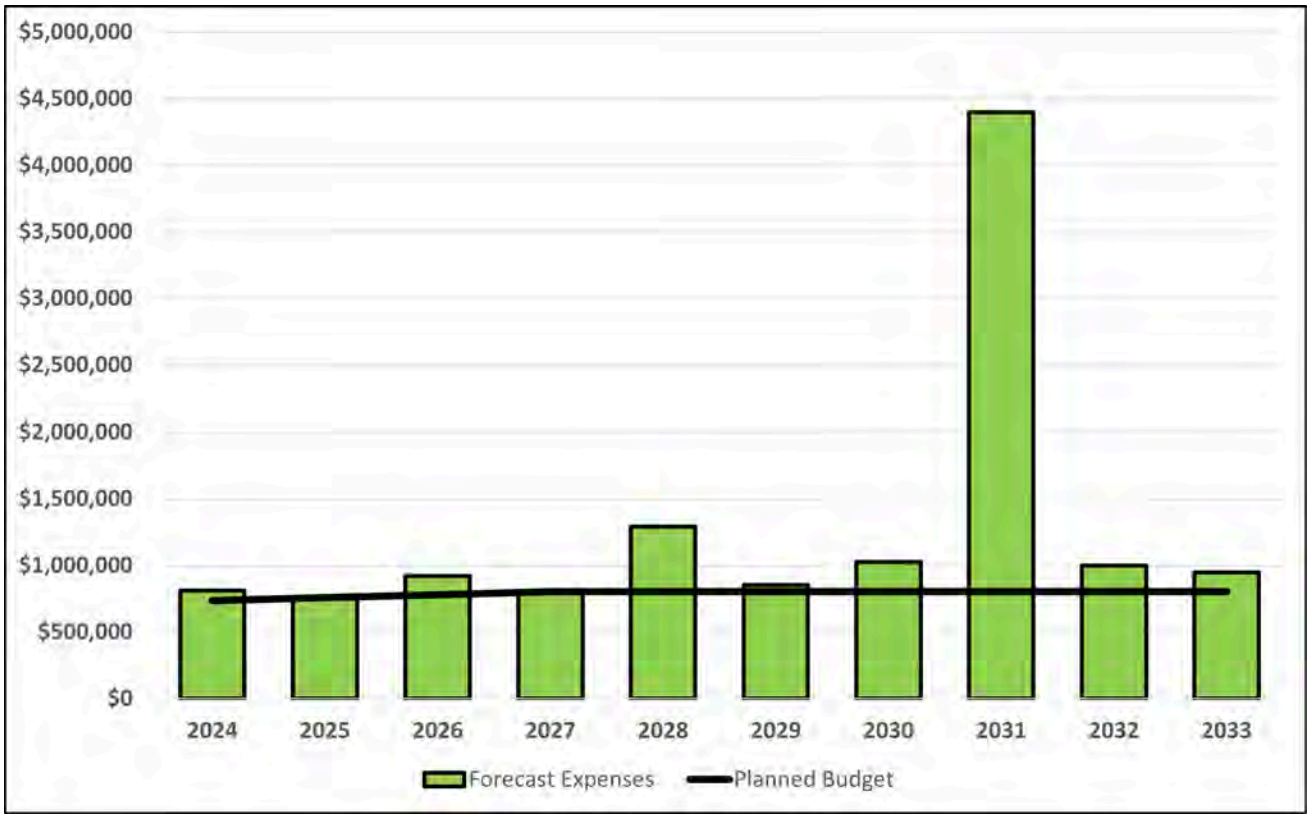
RVG underwent a high-level building condition assessment in 2024 to help identify some of the maintenance costs that would need to be addressed within the next ten years. The outline work below is forecasted as a need for the purpose of the DAMP; however, in the future, this will be determined through a partnership of RVG and the Facilities department to ensure the list is complete, accurate and agreed upon for the necessary work.

Over the 10-year planning horizon, the BCA has highlighted the following maintenance needs at RVG.

- **$5,000,000 for Mechanical repairs/replacements (water heaters, backflow preventions, fans, heat pumps, water softener, chillers, boiler)**
- **$1,617,000 for roofing repairs**
- **$348,000 for repairs/replacements of walls, exterior windows, and doors)**
- **$375,000 for electrical work (Security system, branch wiring, electrical service)**
- **$241,000 for parking lot and sidewalk repairs and replacements**

Figure 3.3.1 shows the forecast maintenance costs relative to the proposed maintenance Planned Budget.

Figure 3.3.1: Maintenance Summary



All figure values are shown in 2024 dollars.

Maintenance budget levels are considered inadequate to meet projected service levels. Generally, RVG's maintenance allocation is 20 % less than it should be on average. However, a large maintenance need was identified in the 8th year of the plan. A nearly $4.5 million spike in maintenance needs was identified for 2031, which requires consideration for reserve allocations and budget plans in the future. This peak in maintenance costs will be considered accordingly before the next 4-year budget (2028 - 2032).

Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified. The DAMP highlights service risks, and the Infrastructure Risk Management Plan considers service risks. Staff assess and prioritize reactive maintenance using experience and judgment.

RVG elevator out of service in 2024 - Maintenance issues such as these impact resident care, staff response time, operational activities.

In future iterations of the DAMP (2025—Ongoing), RVG will implement lifecycle models to guide maintenance activities and report the associated costs for those assets. This will offer enhanced clarity on expenditures, informing future acquisitions, budgeting, reserve allocations, and reporting obligations. The trend in maintenance budgets is shown in **Table 3.3.2.**

Year	Planned Maintenance Budget
2024	$735,000
2025	$757,000
2026	$780,000
2027	$804,000

Table 3.3.2: Maintenance Budget Trends

3.4 Renewal Plan

Renewal is major capital work that does not significantly alter the original service provided by the asset but restores, rehabilitates, replaces, or renews an existing asset to its original service potential. Work beyond restoring an asset to its original service potential is considered an acquisition, resulting in additional future maintenance costs.

Assets requiring renewal are identified from the asset register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year). **Table 3.4.1** shows the typical useful lives of assets used to develop projected asset renewal forecasts. Asset useful lives related to RVG were last reviewed on **May 1st, 2024**.

Table 3.4.1: Useful Lives of Assets

Asset (Sub) Category	Useful Life
Facility	60 Years
Software	15 years
Residential Furniture	20 years
Computer Hardware Staff Residents	 5 years 7 years
Medical Equipment	15 - 20 Years
Kitchen Equipment	8 - 15 Years
Laundry Equipment	10 - 15 Years
Facility/Maintenance Equipment	10 - 25 Years

The estimates for renewals in this DAMP were based on the asset register method.

3.4.2 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing the resident bed with a similar bed) or
- Ensure the infrastructure is of sufficient quality to meet the service requirements (e.g., the condition of kitchen equipment).

RVG will prioritize renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use, and the subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs and
- It can potentially reduce life cycle costs by replacing it with a modern equivalent asset that would provide a comparable service.

The ranking criteria used to determine the priority of identified renewal proposals is detailed in **Table 3.4.3**.

Criteria	Weighting
Legislative Requirements	40%
Critical Asset Condition	30%
Lifecycle Cost Savings	15%
Council Strategic Priorities	15%
Total	100%

Table 3.4.3: Renewal Priority Ranking Criteria

3.5 Summary of future renewal costs

Over the next 10-year planning window, the RVG is forecasted to invest approximately **$7,850,000** to renew its assets, and currently, it only has $**6,820,000** budgeted to perform those renewals. This will include the following:

- **$4,500,000** to renew significant components of the facility (Domestic water booster packages, domestic hot water storage tanks, plumbing fixtures, HVAC, Structural, Emergency Backups, Cooling Towers, Air Handling units, sanitary equipment, Sprinklers)
- **$1,124,000** to renew operational equipment (Fridges, Stoves, Physio Equipment, Lifts, Bathtubs, Tools, Medical & Diagnostic equipment)
- **$779,000** to renew Technology, IT hardware, workstations and equipment
- **$307,000** to renew residential linens
- **$154,000** for furniture renewals

Assets maintained beyond their expected useful life are marked as backlog items on the graph, which may increase operational and maintenance costs if their service is extended. This ESL plan is based on legislative requirements or industry best practices. Lifecycle models will be developed to confirm these assets' optimal ESL and evaluate their current lifespans.

Forecast renewal costs are projected to increase if the asset stock increases. **Figure 3.5.1** shows the forecast costs associated with renewals relative to the proposed renewal budget.

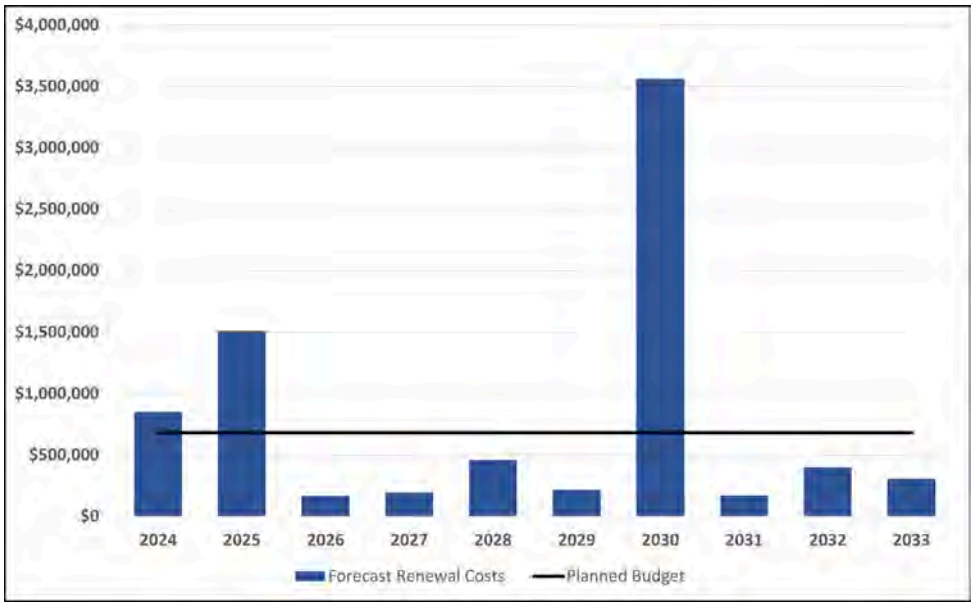


Figure 3.5.1: Forecast Renewal Costs

At this time, there needs to be more budget allocated for the spike of renewals in 2025 and 2030, which will require RVG to either defer renewals or borrow from future reserve contributions. The significant 'peaks' of renewal needs across the ten-year plan compared to the planned budget create years where the gap would require borrowing against the reserve while in other years, the excess would be contributed to the reserve for future years to utilize. While this will allow RVG to manage most of the planned renewals, there still exists an annual gap in funding for renewals of $103,000 annually over the entire life of the plan.

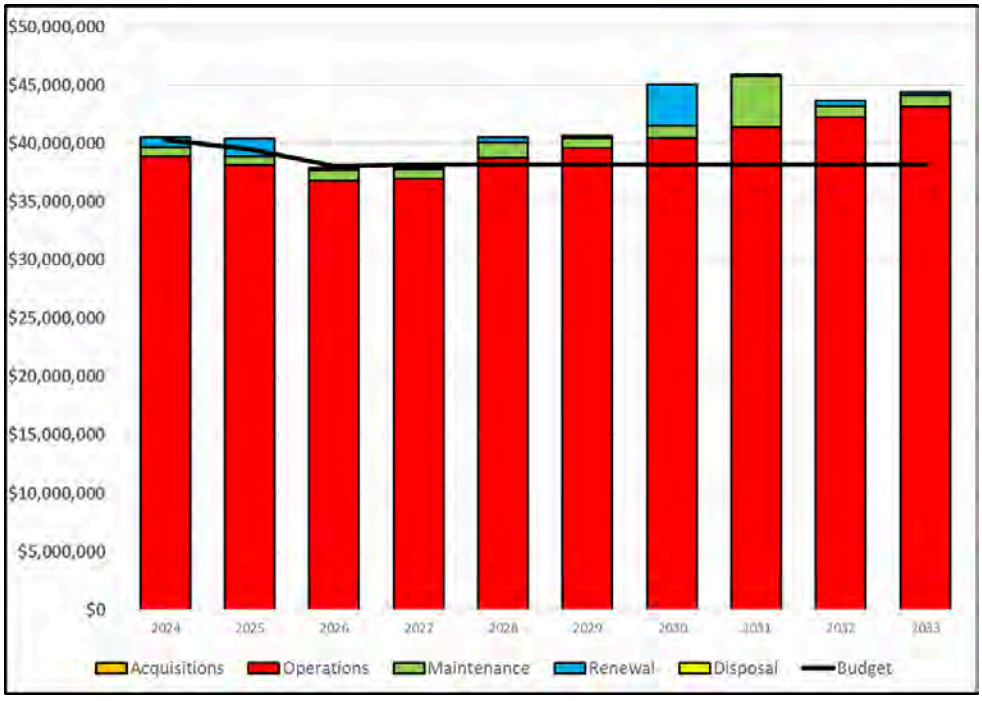
3.6 Disposal Plan

There are no planned disposals at this time. Future iterations of the DAMP will investigate and include any planned disposals.

3.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in **Figure 3.7.1.** These projections include forecast acquisition, operation, maintenance, renewal, and disposal costs. These forecast costs are shown relative to the proposed budget.
The bars in the graphs represent the forecast costs needed to minimize the life cycle costs associated with the service provision. The proposed budget line indicates the estimated amount of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving the balance between costs, levels of service and risk to achieve the best value outcome.

Figure 3.7.1: Lifecycle Summary



All figure values are shown in 2024 dollars.

During most of the 10-year planning period, there are insufficient funds to complete all the forecasted lifecycle activities. There are sufficient funds to operate for most of the planning horizon; however, operational impacts will begin to impact service levels starting in 2029, while impacts due to underfunding of Maintenace will begin impacting service levels in 2031. More funds are needed for each lifecycle activity that requires funding. Deferring renewal costs may even further exacerbate the operational shortfalls, as deferrals often lead to higher planned and reactive maintenance costs and even operational cost increases. Renewals also include material collections that could impact the risk and demand for RVG. Lifecycle models will help to inform the lifecycle projections and will be completed between 2024 and 2027.

4.0 LEVELS OF SERVICE

Levels of service describe RVG's value to the community and are typically spoken about in 'measures.' Utilizing service measures allows decision-makers to understand the outcome of investments, allowing those making choices to clearly understand how a dollar more or less will impact Chatham Kent's ability to deliver its services. These measures also enable Chatham Kent to communicate with the public about the cost of the services they receive today and will be able to afford in the future.

Service levels are defined in four ways: legislative compliance, customer values, customer levels of service and technical levels of service.

4.1 Legislative Requirements

Meeting legislative requirements should be the minimum level of service Chatham-Kent provides. These requirements often drive many lifecycle costs and staff tasks to ensure that Chatham-Kent complies with all legislation, from Federal to Provincial or Chatham-Kent's bylaws. There are many legislative requirements relating to asset management. Legislative requirements that impact the delivery of RVG’s service are outlined in **Table 4.1.1**.

Legislation or Regulation	Requirement
Fixing Long-Term Care Act, 2021, S.O. 2021, c. 39, Sched. 1 (includes O. Reg. 246/22: General	Requirements related to the operations of long-term care homes, including residents' rights, care and services, quality, admission of residents, councils, operation of homes, funding, licensing, municipal homes and First Nations homes, compliance and enforcement, transitional and administration.
Occupational Health and Safety Act	This act guides operational activities, processes, inspections and improvements across the lifecycle of RVG assets including items such as upgrades to facilities
Ministry of Long-Term Care, Ministry of Health, Ontario	Overseeing long-term care in Ontario is crucial to ensure that residents receive the quality of care and life they need and deserve, both presently and in the future. Responsibilities include supporting the construction of new homes and the modernization of existing ones, establishing the legislation, regulations, and policies that all homes must adhere to, creating programs to attract and retain staff, and conducting inspections to ensure compliance with standards. The ministry administers the following legislation: Fixing Long-Term Care Act, 2021, Ontario Regulation 246/22, Connecting Care Act, 2019, and Health Protection and Promotion Act, s.78
Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11 (AODA)	Identify barriers and remove them in order to provide customer service that is more accessible to people who have disabilities. Develop and put in place policies, consider a person's disability when communicating with them, allow assistive devices, allow service animals, welcome support persons, inform customers when accessible services are temporarily unavailable, invite feedback. Train staff. Document policies and training.
O. Reg. 493/17: Food Premises	Applies to all food premises and provides regulations related to operation and maintenance, cleaning and sanitizing, sanitary facilities, food handling and commodities

Table 4.1.1: Legislative Requirements

4.2 Customer Research and Expectations

This DAMP is prepared to facilitate consultation before RVG adopts its levels of service. Future revisions of the DAMP will incorporate customer consultation on service levels and costs required to provide Long-Term Care. This will assist the Council and stakeholders in matching the necessary level of service, service risks and consequences with the customer's ability and willingness to pay for the service.

4.3 Customer Value

Service levels are defined in 4 ways: legislative compliance, customer values, customer levels of service and technical levels of service. **Customer Values indicate:**

- what aspects of the service are essential to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Resident facilities are safe, inviting and available.	% of residents surveyed who are satisfied with the environments safety and cleanliness	TBD in 2025	TBD in 2025
Staff are friendly, knowledgeable, and available	Customer Survey 2025	TBD in 2025	TBD in 2025
Adequate and comprehensive care is available to all residents	Customer Survey 2025	TBD in 2025	TBD in 2025
Sufficient staff to meet the needs of residents	% of residents surveyed who are satisfied with staffing levels	TBD in 2025	TBD in 2025
Communicating open and freely with staff to ensure care and service needs are met	% of residents and family who are satisfied with their communication with staff	TBD in 2025	TBD in 2025

Table 4.3.1: Customer Values

Currently, RVG is investigating its customer values and Feeback for future iterations of the DAMP.

4.4 Customer Levels of Service

The Customer Levels of Service are considered in terms of:
Condition: How good is the service ... what is the condition or quality of the service?
Function: Is it suitable for its intended purpose .... Is it exemplary service?
Capacity/Use: Is the service over or underused... does RVG need more or less of these assets?

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	**Deliver a welcoming and comfortable environment**	% of survey participants who believe RVG spaces are in good condition, safe and comfortable	TBD in 2025	TBD in 2025
Function	**Provide extensive, efficient and supportive long term care for residents**	% of survey participants who believe RVG is meeting their overall needs	TBD in 2025	TBD in 2025
Capacity	**Ensure Long Term services are sufficient, accessible, and readily available.**	% of survey participants who are satisfied with the availability of space for RVG.	TBD in 2025	TBD in 2025

Table 4.4.1: Customer Level of Service Measure

Further investigation is necessary to ensure that customer service levels are regularly measured, allowing RVG to consider various options to meet the community's evolving needs and expectations. The goal is to consistently engage in developing baseline community measurements and to continue the process of creating trend analysis data that will guide future decisions.

4.5 Technical Levels of Service

Technical Levels of Service – These represent lifecycle performance measures that gauge how RVG intends to attain desired customer outcomes, showcasing effective performance, compliance, and management. These metrics will illustrate the alignment of RVG service delivery with customer values and act as potential levers to affect and influence Customer Levels of Service. RVG will track specific lifecycle activities to evidence service performance in meeting the desired service level and to shape customer perceptions of the services received from the assets.

These are measures of fact related to the service delivery outcome (e.g., the number of occasions when service is unavailable or the proportion of replacement value by condition %'s) to provide a balance compared to the customer perception, which may be more subjective.

Delivering customer values and impacting the achieved Customer Levels of Service are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance. Technical service measures are linked to the activities and annual budgets covering:

Acquisition – the activities to provide a higher level of service (e.g. Increasing # of Facilities) or a new service that did not exist previously (e.g. new technology).

Operation – the regular activities to provide services (e.g. total staff hours, cleaning, inspections, training, service programs, energy costs, etc.

Maintenance – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. fixing medical equipment, Facility repairs, parking lot repairs),

Renewal – the activities that return an asset's service capability up to what it had originally provided (e.g., replacing accessible beds, computer replacement, facility replacement.)

Service and asset managers plan, implement, and control technical service levels to influence service outcomes. **Table 4.5.1** shows the activities expected to be provided under the current 10-year Planned Budget allocation and the Forecast activity requirements being recommended in this DAMP.

Table 4.5.1: Technical Levels of Service

Lifecycle Activity	Level of Service Statement	Activity Measure	Current Performance	Recommended Performance (10 Years)
Acquisitions	Ensure new assets are appropriate and fit for the future	# of new acquisitions required	TBD in 2025	TBD in 2025
Operations	RVG is legislatively compliant - (Review and then Conduct MLTC test of Emergency Codes as per the FLTCA)	Complete annual review of Emergency Cods and Tes as per FLTCA	100% Compliant (2023)	100% Compliant
Operations	RVG is legislatively compliant (AODA Compliance)	Annual inspection to improve accessibility	100% of Inspections completed	100% of Inspections completed
Maintenance	Ensure building is maintained in good condition	% of Planned Maintenance projects completed as scheduled (2023)	100%	TBD each year
Renewal	Ensure RVG has sufficicnet equipment in good condition to operate at the planned level of service	% of assets beyond useful life	TBD in 2025	TBD in 2025

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

5.0 FUTURE DEMAND

5.1 Demand Drivers

Drivers affecting demand include population change, customer health emergencies, regulations, demographic changes, seasonal factors, vehicle ownership rates, consumer expectations, technological changes, economic factors, environmental awareness, etc.

5.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and asset use have been identified and documented. **Table 5.4.1** shows the impact of demand drivers that may affect future service delivery and asset use.

Demand for new services will be managed by managing and upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks, and managing failures. **Table 5.4.1** shows opportunities identified for demand management to date. Future revisions of this DAMP will develop further opportunities.

5.3 Council Strategic Priorities for RVG

Future iterations of the DAMP will detail the Council's strategic priorities and how they will impact service levels. The priorities will be operationalized through the DAMP and its continuous improvement initiatives.

5.4 Demand Impact and Demand Management Plan

Demand for new services will be managed by managing existing assets, upgrading existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures. **Table 5.4.1** shows the impact of demand drivers that may affect future service delivery and asset use.

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Occupancy levels-need to maintain 97% occupancy	Currently Riverview Gardens has 3 discharges per week (average in 2023) up from prior years' average of 2 discharges per week.	Increased number of residents with higher needs requiring complex care, and living at Riverview Gardens fewer years. Higher needs/ more complexities; Anticipate the number of discharges per week to increase	• Increased staff time to do admissions to maintain bed occupancy. • Increased staff time to prepare rooms for new admissions. • Increased staff time and knowledge for higher number of residents with complex needs.	• 2nd social worker added to support increase. • Increased staff required to complete admissions, and prepare rooms. • Increased staff to support increased complex needs.
Increased expectations from Ministries	Fixing Long Term Care Act launched. Administrative monetary penalties introduced Ministry increasing inspections.	TBD 2025	• Increased demand on staff time to analyze and develop plans for the increased expectations • increased staff required for the increase in work.	• More administration and management staff needed for the increased work associated with increased expectations

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Technology. Upgrades. Finding right technology and the speed of change	2023 RVG IT Strategic Plan developed with 45 recommended technology upgrades made.	Increased technology requirements and reliance that may increase the technology needs in the Home.	• Staff time and resources to source upgrade determine appropriate products • Change Management process • Staff training . • Funds to do upgrades.	• Business Solutions Analyst being hired on a 3-year contract to move the strategic plan forward. • May require staff beyond the 3 years to maintain technology lifecycle and upgrades. • Increased resources to do change management for upgrades including communications and training.
Shortage of Health Care Workers	Have vacancies that are challenging to fill. There are an insufficient number of healthcare workers in Ontario to meet demand. Increased requirement	The Province has launched initiatives to attract people to the health care industry. In 10 years, anticipate these positions will be easier to fill, however, in the shorter term this this pressure remains.	• Extra work effort to fill shifts. • Overtime costs increased to fill vacancies. • Increased staff time on recruitment and retention efforts.	• Have a Recruitment and Retention Coordinator to focus on these initiatives. • Create new rotations for PSW and RPNS • Relief lines added to fill planned absences.

5.5 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Acquiring new assets, such as new equipment, would commit RVG to ongoing operations, maintenance, and renewal costs for the period for which the service provided by the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance, and renewal costs for inclusion in the LTFP in the finance section of the report.

Additionally, future versions of the DAMP will incorporate methods to gauge demand, including public meetings, staff interactions, legislative changes, legal obligations, and council strategic goals.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: **‘’Coordinated activities to direct and control with regard to risk.”**

Chatham Kent is developing and implementing a formalized risk assessment process to identify service delivery risks and mitigate risks to tolerable levels. The assessment will identify risks that will result in:

- loss or reduction of the level of service,
- personal injury,
- environmental impacts,
- a ‘financial shock’,
- reputational impacts or
- other consequences.

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. It will also include developing a risk rating, evaluating the risks, and developing a risk treatment plan for those risks deemed unacceptable.

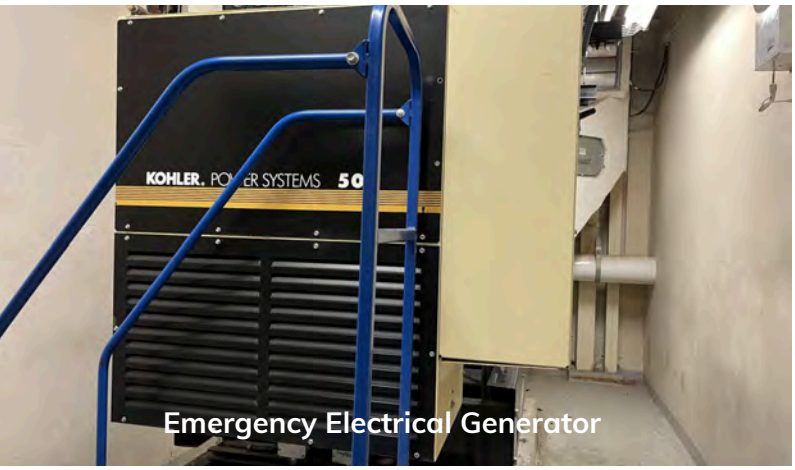
6.1 Critical Assets

Critical assets are defined as those with a high consequence of failure, causing significant loss or service reduction. Critical assets have been identified, and their typical failure mode and the impact on service delivery are summarized in **Table 6.1.1.** Failure modes may include physical failure, collapse, or essential service interruption.

Critical Asset(s)	Failure Mode	Impact
Facilities	Major maintenance unable to be done due to funding shortfalls, Unknown maintenance issue, weather related maintenance/damage	Reduced operating hours, increased costs due to reactive maintenance, damage to reputation
Medical Equipment	Component Failure, Accident, Warranty Issue, Software issue, Beyond useful life	Reduced operating hours, increased costs due to reactive maintenance, damage to reputation
Furniture & Fixutres	Component Failure, Accident, Warranty Issue, Software issue, Beyond useful life	Furniture such as beds are essential to residents, increased complaints, increased reputational damage
Kitchen Equipment	Component Failure, Accident, Warranty Issue, Software issue, Beyond useful life	Reduce capabilities of serving meals, impact nutritional goals, impact ability to create diet specific meals.
Emergency Back-Up Generator	Major maintenance unable to be done due to funding shortfalls, Unknown maintenance issue, Component Failure, Vandalism, weather related maintenance/damage	Increased risk to human safety, increased possibility of medical impact to residents

Table 6.1.1 Critical Assets

By identifying critical assets and failure modes, RVG can ensure that investigative activities, condition inspection programs, maintenance and capital expenditure plans are targeted at essential assets.



Emergency Electrical Generator


Diesel Storage Tank

6.2 Risk Assessment

The risk management process used by Chatham-Kent is an analysis and problem-solving technique designed to provide a logical process for selecting treatment plans and management actions to protect the community against unacceptable risks.
The process is based on the fundamentals of **International Standard ISO 31000:2018.**
The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, the development of a risk rating, the evaluation of the risk and the development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock,' reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the infrastructure risk management plan. **Table 6.2.1** shows initial asset registry risk assessment completed for the DAMP. Future iterations of the risk assessment will include residual risk and treatment costs of implementing the selected treatment plan. It is essential that these critical risks and expenses are reported to management and the council.

Risk to Providing the Service	What can Happen	Risk Rating	Existing controls	Treatment Cost
Facilities	HVAC systems break down, roof leaking, vandalism etc.	Medium	Building Condition Assessment as well as planned facilities inspections, reactive repairs by facilities	TBD in 2025
Internet or Technology	Disruption from cyber-attacks, external source or infiltration from virus	Very High	Education on Internet safety & Phishing protocols, Various software to analyze and mitigate threats, procactive monitoring by staff	TBD in 2025
Security Concerns	Possible altercations with visitors can create an unwelcoming or unhealthy environment for staff and customers	Low	Education and training for staff, de- escalation techniques, calling police, sufficient staffing	TBD in 2025
Decreased Funding	Decreased funding by Province due to changing priorities and lack of available funds	High	Ensure budgets are transparent and managed responsibly, advocate through municipal budget process and customer engagement	TBD in 2025
Unable to Attract of qualified staff	High Demand across Ontario of health care workers creates significant challenges in filling vacant roles	High	Recruitment and Retention Coordinator to look for innovative ways to recruit. Riverview Gardens branding through social media.	TBD in 2025

Table 6.2.1: Risks and Treatment Plans

Risk to Providing the Service	What can Happen	Risk Rating	Existing controls	Treatment Cost
Facilities Aging Asset	Breakdowns, leaks, disrepair of items, Risk of system failures. Potential end of life items	Very High	Annual review of equipment and furniture to lifecycle; repairing breakdowns; Preventative maintenance	TBD in 2025
Staff Loss	Staff leave for higher pay or due to significant stress and overload of work.	Medium	Retention efforts including RVG 360, and mentorship program.	TBD in 2025
Ministry of Long Term Care orders and financial penalties	Insufficient staffing levels to maintain compliance with new ministry orders, RVG may incur penalties and fines, reputational damage	High	Continued review of protocols. Audits. Policy review cross referencing with the Fixing Long Term Care Act.	TBD in 2025

Table 6.2.1: Risks and Treatment Plans

This is not an exhaustive list of all risks associated with RVG. As the DAMPs develop over time, this area will be expanded to demonstrate how much the existing controls mitigate the risk and at what cost. This will inform future budget and risk management choices.

6.3 Infrastructure Resilience Approach

The resilience of RVG's critical infrastructure is vital to customer service. To adapt to changing conditions, Chatham-Kent needs to understand its capacity to 'withstand a given level of stress or demand' and respond to possible disruptions to ensure continuity of service: resilience recovery planning, financial capacity, climate change risk assessment, and crisis leadership. RVG does not currently measure resilience in service delivery in alignment with the AM process. This will be included in future iterations of the DAMP as further investigations are completed.

6.4 Service and Risk Trade-Offs

The adoption of this DAMP is guided by the goal of maximizing benefits from existing resources. Given that resources are not unlimited, some risks will inevitably remain unmitigated. RVG will continue to review its risk registry and recognize the necessary trade-offs to maintain an acceptable level of risk tolerance.

If forecast work (operations, maintenance, renewal, acquisition or disposal) cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- As the condition of buildings continues to deteriorate, it will result in a lower level of service or increased response times and possible closures
- Increased maintenance costs for aging RVG facilities
- Unable to expand service in line with population growth

6.4.1 What cannot be done

Some activities and projects cannot be undertaken within the next ten years. These include:

- Increase the levels of operation, maintenance and renewal activities beyond currently approved increases.
- Ensure there are sufficient staffing resources to meet new Ministry obligations and orders.
- Ensure that all future renewals outside the planning period can be completed, as the plan's scope is limited to a 10-year planning horizon.
- Renewing equipment in alignment with the desired ESL
- Improve the current levels of service without increased funding
- Allocate total maintenance costs within the DAMP that are part of the operational contract
- Ensure there are sufficient reserves to complete all projected renewals

6.4.2 Service trade-off

If forecast work (operations, maintenance, renewal, acquisition or disposal) cannot be undertaken due to available resources, then this will result in service consequences for users. These service consequences include:

- The condition of RVG assets will continue to deteriorate, resulting in a lower level of service.
- Lack of maintenance and renewal may compromise intergenerational equity.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- As the condition of assets deteriorates, they may become unsafe.
- If RVG assets do not meet current standards, the Authority could be at risk of litigation should an incident occur.
- We must prioritize maintenance and renewal works on components with very high safety risks and defer work on low- to medium safety risks.

These actions and expenditures are considered and included in the forecast costs and, where developed, the Risk Management Plan.

7.0 Climate Change Adaptation

Climate change will significantly impact assets and the services they provide. In asset management planning, climate change can be considered both a future demand and a risk. How climate change impacts assets will vary depending on the location and the type of services provided, as will how RVG responds to and manages those impacts.

At a minimum, RVG will consider how to manage its existing assets, given the potential climate change impacts on the region. The effects of climate change may significantly impact the assets CK manages and the services it provides. This can include;

- Impacting Asset Lifecycle Costs
- Affect the level of service that can be provided
- Increase demand for services
- Impact Risks involved with delivering services

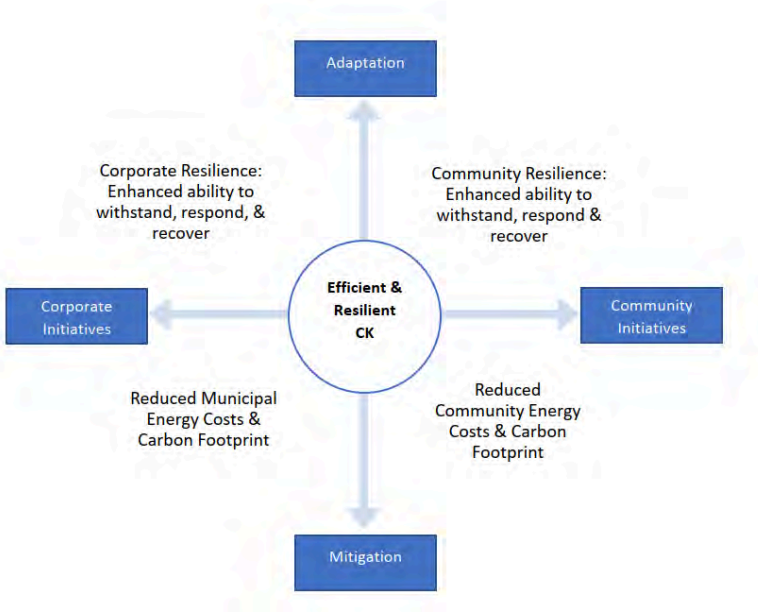
In the Asset Management Planning process, climate change can be considered to be both a future demand and a risk.

The impacts of climate change on assets will vary depending on the location and the type of services provided, as well as the way in which RVG responds to and manages those impacts. There have been many weather and climate-related impacts on the CK community, including the following:

- Extended summer heat waves in 2017 and 2018;
- Severe rain storms of 2018 (and related flooding);
- Unseasonably wet spring and fall of 2019, which impacted crop production; and
- Record-breaking water levels within river systems and the Great Lakes in 2019 and early 2020 caused significant erosion and flooding issues in the community.

Recognizing these continuing climate change impacts, the Council declared a climate emergency in Chatham-Kent on July 15, 2019. It directed municipal staff to develop a climate change action plan (CCAP) to reduce CK's contribution to climate change (known as climate mitigation) and to enhance the community's resilience to climate change (known as climate adaptation).

The Municipality of Chatham-Kent is completing its CCAP, which will be presented to the Council and the public by the end of 2024. The CCAP actions presented in the CCAP report document will inform the Climate Section of the DAMPs in 2025. The CCAP actions will also be presented within the departments responsible for their completion.



Based on the Climate Atlas of Canada, historical climate patterns show that CCK's climate has become hotter, wetter, and wilder over the last six decades. This trend is expected to continue.

Hotter: Average annual temperatures have risen by 0.5°C and are expected to increase between 3.5°c and 5.8°c by the 2080s.

Wetter: Average annual precipitation has increased by 49.8mm (1.96in) and is expected to grow between 78mm and 127mm (5in) by the 2080s.

Wilder: Rainstorms have increased in frequency and severity, and seasonal precipitation patterns have changed, and this is expected to continue.

" From 1983 to 2008, insurers spent on average $400 million yearly on catastrophic claims; since 2009, the yearly average has risen to almost $2 billion. These" once in 100 years" events are happening more frequently and becoming more severe and costly" Statistics Canada, 2024)

Risks and opportunities identified to date are shown in **Table 7.0.1**

Table 7.0.1 Managing the Impact of Climate Change on Assets and Services

Climate Impact (Assets level or Service level)	Projected Position (in 10 years)	Potential Impact on Assets & Services	Climate Management Plan
Annual Precipitation (mm) increase	+45mm annually	Increased Risk of Leaks or Flooding (Riverview Gardens is situated along the Thames River. Increased average rainfall increases the risk of flooding.)	Preform BCA and inspections regularly to anticipate and proactively address maintenance issues related to climate impacts Ensure Evacuation Policy is Up to Date Complete Test of Evacuation Plan
Annual Very Hot Days, (+30 degrees Celsius), increase	+20 days, annually	Dryer, Hotter and longer summers may affect the health and safety of residents	Maintain Heat Policy and ensure staff are trained on it. Ensure HVAC and Cooling Units are kept in good condition Ensure Inspections for A/C units are completed by mid April each yea Have coolers for ice water available for Heat Days. Limiting Time Outdoors on very hot days
Annual Very Hot Days, (+30 degrees Celsius), increase	+20 days, annually	Increased energy/cooling costs, more individuals seeking possible medical situations, increased renewal times for HVAC units	Inspect and maintain HVAC units to a good condition, Look for energy savings to offset potential increase in costs. (ie LED lightbulbs; energy efficient appliances as replace)

Additionally, how RVG constructs new assets or when it renews assets should recognize that there is an opportunity to build resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the effects of climate change;
- Services can be sustained, and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

The impact of climate change on assets is a new and complex discussion, and further opportunities will be developed in future revisions of this DAMP. **Table 7.0.2** summarizes some asset climate change resilience opportunities.

New Asset Description	Climate Change Impact these assets?	Build Resilience in New Works
Facilities	Reduction of Energy costs,	Design and build to ensure facilities are resilient to climate change and are energy efficient to reduce whole life costs
Vehicles	Reduction of Energy costs,	Purchase vehicles that are climate resilient and energy efficient to reduce whole life costs
Facilities	Reduction of Energy costs,	Design and build to ensure facilities are resilient to climate change and are energy efficient to reduce whole life costs
Vehicles	Reduction of Energy costs,	Purchase vehicles that are climate resilient and energy efficient to reduce whole life costs

Table 7.0.2 Building Asset Resilience to Climate Change

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this DAMP.

RVG Roof with pooling water

RVG Facility (East Side)

8.0 FINANCIAL SUMMARY

8.1 Financial Sustainability and Projections

This section outlines the financial requirements derived from the data in the preceding sections of this DAMP. The financial forecasts will be refined through ongoing discussions about the desired service levels and as Asset Management expertise within Chatham-Kent matures. It is crucial to align the budgeting process, the LTFP, and the DAMPs to address all RVG's needs. At the same time, the Municipality establishes a definitive financial strategy with measurable goals and targets.

Effective asset and financial management will enable RVG to ensure its services provide the appropriate level of service for the community to achieve its goals and objectives. Reporting to stakeholders on service and financial performance ensures the Municipality fulfills its stewardship accountabilities transparently. RVG's LTFP is critical to ensure that the network lifecycle activities, such as renewals, operations, maintenance, and acquisitions, can happen optimally.

Reporting on service and financial performance to stakeholders guarantees that the Municipality is transparently fulfilling its stewardship responsibilities. LTFP is essential for RVG to ensure that the asset network lifecycle activities, including renewals, operations, maintenance, and acquisitions, occur at the optimal times.

8.1.1 Sustainability of service delivery

Two key indicators of sustainable service delivery are considered in the DAMP for this service area. The two indicators are the following:

- **Asset Renewal Funding Ratio** (proposed renewal budget for the next ten years / proposed renewal outlays for the next ten years shown in the DAMP) and
- **Lifecycle Funding Ratio** (proposed lifecycle budget for the following ten years / proposed lifecycle outlays for the next ten years shown in the DAMP).

Asset Renewal Funding Ratio (ARFR)

Asset Renewal Funding Ratio **87%**

The Asset Renewal Funding Ratio (ARFR) is an important indicator that illustrates that over the next ten years, Chatham-Kent expects to have **87%** of the funds required for optimal asset renewal.

Lower ARFR typically occurs due to;

- Chronic underinvestment,
- A lack of permanent infrastructure funding from senior levels of government,
- A freeze on funding allocations from senior levels of government,
- Large spikes of growth throughout the years or amalgamations.

The ARFR is considered a stewardship measure that indicates whether Chatham-Kent is achieving intergenerational equity. Correcting this funding ratio so that it can meet its financial target over time is essential to ensuring RVG is considered sustainable.

If assets are not renewed at the appropriate timing, it will inevitably require difficult trade-off choices that could include:

- A reduction of the level of service and availability of assets;
- Increased complaints and reduced customer satisfaction;
- Increased reactive maintenance and renewal costs; and,
- Damage to RVG's reputation and risk of fines or legal costs

The shortage of renewal resources will be tackled in upcoming DAMPs to ensure alignment with the LTFP. This approach will enable staff to devise options and strategies for addressing the challenges of long-term renewal rates. Chatham-Kent plans to reassess its renewal allocations after verifying and consolidating the entire inventory.

Lifecycle Funding Ratio(LFR)- 10-year financial planning period

The current **10-year Lifecycle Financial Ratio is 92%**

This DAMP identifies the forecast operations, maintenance, and renewal costs required to provide an agreed-upon and affordable level of service to the community over ten years. This includes input into 10-year financial and funding plans to deliver the required services sustainably. This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The total forecast operations, maintenance, and renewal costs over the 10-year planning period are **$417,039,000** or **$41,704,000** on average per year. The proposed (budget) operations, maintenance, and renewal funding is $38,500,000 on average per year, giving a 10-year funding shortfall or 'Gap' of **$3,204,000** per year.

This indicates that **92%** of the forecast costs needed to provide the services documented in this DAMP are accommodated in the proposed budget.

Funding an annual funding shortfall or funding 'gap' cannot be addressed immediately. The overall gap in funding for each of Chatham-Kents' services will require vetting, planning, and resources to begin incorporating gap management into future budgets. This gap will need to be managed over time to reduce it in a sustainable manner and limit financial shock to customers.

Options for managing the gap include;

- **Financing strategies** – increased funding, grant opportunities, envelope funding for specific lifecycle activities, and long-term debt utilization.
- **Adjustments to lifecycle activities** – increase/decrease maintenance or operations, increase/decrease frequency of renewals, extend estimated service life, limit acquisitions or dispose of underutilized assets; and,
- **Influence level of service** - managing expectations or influencing demand drivers.

These options and others will allow RVG to manage the gap appropriately and ensure the level of service outcomes the community desires. Providing sustainable services from infrastructure requires managing service levels, risks, forecast outlays, and financing to eventually achieve a financial indicator of **90-110%** for the first years of the DAMP and ideally over the 10-year life of the LTFP.

8.2 Forecast Costs (outlays) for the long-term financial plan

A gap between the forecast outlays and the amounts allocated in the financial plan indicates that further work is required to review service levels in the DAMP and/or financial projections in the LTFP. The initial DAMP only attempts to quantify the financial gap for the service. Future plans will focus on how to manage that gap over time to achieve sustainable services and intergenerational equity.

The Current Gap for 10-year planning period is $**32 million** or **$3.2 million** annually.

Chatham-Kent will manage any ‘gap’ by developing this DAMP, which will provide guidance on future service levels and resources required to provide these services in consultation with the community. **Table 8.2.1** shows the forecast costs (outlays) required for consideration in the 10-year LTFP. Providing services in a financially sustainable manner requires balancing the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the LTFP.

Table 8.2.1: Forecast Costs (outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024	-	$38,876,384	$809,787	$852,568	-
2025	-	$38,150,272	$757,445	$1,512,996	-
2026	-	$36,782,656	$920,075	$166,668	-
2027	-	$36,981,900	$803,666	$196,100	-
2028	-	$38,761,484	$1,292,375	$460,475	-
2029	-	$39,605,516	$851,389	$216,450	-
2030	-	$40,467,564	$1,025,424	$3,562,246	-
2031	-	$41,348,072	$4,399,482	$170,100	-
2032	-	$42,247,504	$998,562	$399,875	-
2033	-	$43,166,328	$947,665	$ 308,000	-
Total	**-**	**$396,387,680**	**$12,805,870**	**$7,845,478**	**-**

Forecast costs are shown in 2024-dollar values.

8.3 Funding Strategy

The proposed asset funding is detailed in Chatham-Kent's multi-year budget and LTFP. These operational and capital budgets outline the provision of funds incorporated into the DAMP. The DAMP details the expenditure timeline and associated service and risk implications. Subsequent versions of the DAMP will offer service delivery choices and alternatives to optimize the use of limited financial resources.

RVG contributes annually to reserves to assist in long-term costs for the renewal of facilitates, equipment, IT hardware etc. There are insufficient funds in the reserves to accommodate all forecast costs detailed within this plan. Future iterations will focus on the sustainability of RVG's services and determine how much is required to be contributed to the reserves over time to ensure that there is sufficient funds available for future needs.

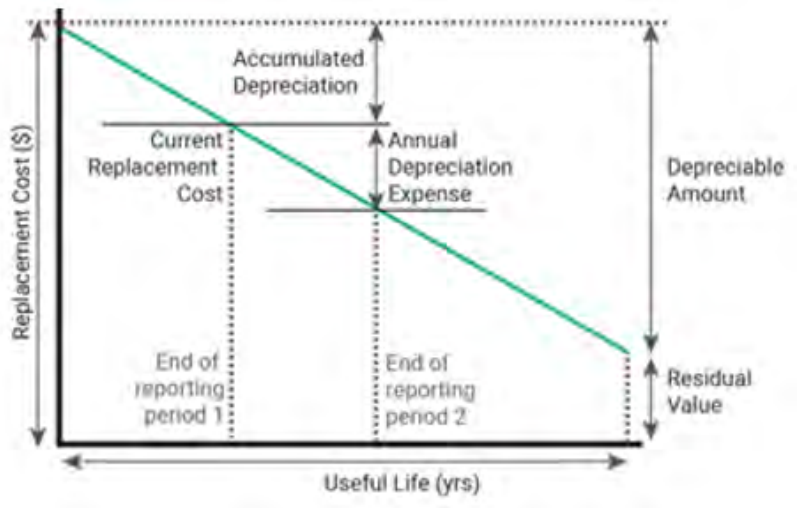
RVG receives significant from the Ministry of Health funding from the Provincial government to assist with operational and facility related costs. The MOH provides approximately **$24 million** annually to RVG. Provincial funding generally does not scale appropriately to the needs of RVG and is unlikely to change in any significant way that would impact RFG's financial sustainability**.** RVG also collects direct revenue from its residents for room expense that are predetermined and CK council provides the balance of the funds required to deliver the Long-Term Care service.

8.4 Valuation Forecasts

Asset values are forecast to increase as additional assets are added to the service. As projections improve and are validated with market pricing, net valuations will likely increase significantly over the 10-year planning horizon. Additional assets will increase operations and maintenance costs in the longer term and future renewal costs.

8.4.1 Asset valuations

Any asset disposals would decrease operations and maintenance needs in the longer term and remove the high-cost renewal obligations. At this time, it is not possible to separate the disposal costs from the renewal or maintenance costs; however, this will be improved for the next iteration of the plan. The best available estimate of the value of assets included in this DAMP is shown below.



The assets are valued utilizing Current Replacement Cost (Market Prices Index)

Replacement Cost (Gross)	**$61,218,000**
Depreciable Amount	**$61,218,000**
Current Replacement Cost	**$22,751,000**
Annual Depreciation Expense	**$1,411,000**

8.5 Key Assumptions Made in Financial Forecasts

Some assumptions were necessary to compile this DAMP. This section details the key assumptions made in its development and should provide readers with an understanding of the confidence level in the data behind the financial forecasts.
Key assumptions made in this DAMP are:

- Assumptions were made regarding the existing and planned budget for maintenance and renewal, using professional judgement.
- Omission of select disposal assets during this budget period; small projects will have a minor impact on disposal projections
- Budgets have been allocated based on the best available data on assets
- A 2% annual inflationary amount has been applied to the operational and maintenance forecast to reflect the projections that costs will increase over time
- Replacement costs are based on current market pricing and are determined to be a like-for-like replacement
- There may be additional assets not included in the forecasts or planned budget due to the timing of the plan creation and resource constraints in delivering the initial plan.
- Maintenance forecasts are based on the current budget allocated and require further refinement to align the costs with technical levels of service.
- Operational forecasts are based on current budget allocations and encompass known anticipated needs.

Northwest View of RVG

8.6 Forecast Reliability and Confidence

This DAMP's forecast costs, proposed budgets, and valuation projections are based on the best available data. Current and accurate information is critical for effective asset and financial management. Data confidence is classified on an A-E scale under **Table 8.6.1**.

Table 8.6.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations and analysis is documented properly but has minor shortcomings; for example, some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. The dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

The estimated confidence level for and reliability of data used in this DAMP is shown in **Table 8.6.2.**

Table 8.6.2: Data Confidence Assessment for Data used in DAM plan

Data	Confidence Assessment	Comment
Demand drivers	Medium	Continue to work on clarifying demand drivers and measuring impacts
Growth projections	Medium	Must standardize growth projections and determine the impacts to current level of service
Acquisition forecast	Medium	Possible growth in the future creates uncertainty and will be reviewed annually to improve quality
Operation forecast	Medium	Will improve once growth is established and continuous improvement items are completed
Maintenance forecast	Low	Requires further analysis of costs to ensure allocation for maintenance is correct
Renewal forecast - Asset value	Medium	Requires alignment with reserve contributions and ESL. Market price information to be updated annually.
Asset useful lives	Low	Most align TCA practices instead of RVG Specific. Must be improved and vetted annually
Condition modeling	Low	Requires investigation and resources to align assets to the 5-point condition scale required for system alignment across the municipality
Disposal forecast	Medium	This requires further discussion to document current process and administration of Disposals

The estimated confidence level and reliability of data used in this DAMP are considered **low-medium**.

9.0 PLAN IMPROVEMENT AND MONITORING

Status of Asset Management Practices
ISO 55000 Refers to this as the Asset Management System

9.1 Accounting and financial data source

This DAMP utilizes accounting and financial data. The source of the data is:

- Chatham-Kent 2024 - 2027 Multi-Year Budget (Capital & Operating)
- Internal Market Price Valuations
- Provincial Funding Formula's
- AM Software Multi-Year Forecasting Models
- Council Reports
- Financial Exports from various systems
- Fleet procurement documents

9.2 Asset management data sources

This DAMP also utilizes asset management data. The sources of the data are;

- Asset Registers
- Insurance Data
- Tangible Capital Asset Data
- Building Condition Assessment Data
- Fleet Vehicle Data
- Provincial Reporting Data
- Inspection Logs
- Subject Matter Expert Knowledge and Anecdotal Information

9.3 Continuous Improvement Plan

It is essential that Chatham-Kent recognizes areas within the DAMP and within its planning processes that require future improvements to ensure effective asset management and informed decision-making. The tasks listed below are essential to improving the DAMP and the municipality's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, financial planning, and plans to enhance the assets physically.

The Improvement Plan, **Table 9.3.1**, highlights proposed improvement items requiring further discussion and analysis to determine feasibility, resource requirements and alignment to current work plans. Future iterations of this DAMP will provide updates on these improvement plans. The costs and resources to complete each task have yet to be included in the lifecycle models to data, and resource requirements would need to be reviewed for internal resource-driven projects. The improvement plan generated from this DAMP is shown in **Table 9.3.1**.

Task	Task	Responsibility	Resources Required	Timeline
1	**Enhanced data collection throughout Riverview Gardens' departments to support decisions and monitor compliance.**	RVG	Existing Staff Time, Training, Supervision	Q4 2025 - Ongoing
3	**Review recommendations from IT Strategic Plan and develop budget requests**	RVG, ITT, Finance	Staff Time 40 Hours	2024 - 2027
4	**Review employee rotations in all departments to ensure fairness, consistency and predictability.**	RVG	60 Hours Internal Staff Time	Q4 2027
5	**Develop 4 hours/day per resident model as per legislative compliance**	RVG, HR, Finance, A&QM	60 Hours	Q3 2025
6	**Assess Furniture and Equipment for Condition and to confirm ESL**	RVG, A&QM, Facilities	80 Hours FTE	2024 - 2027
7	**Complete lifecycle models for all major assets**	RVG, AQ&M	15 FTE Hours (within existing capacity)	2024 - 2027

Table 9.3.1: Continuous Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
8	**Update asset registry for all CKPS assets to include Mandatory AM Information**	RVG, AQ&M	40 FTE Hours	Ongoing
9	**Define Level of Service for 2025 DAMP**	RVG, AQ&M	15 Hours FTE	Q2 2025
10	**Annual update of Technical LOS**	RVG, AQ&M	4 Hours FTE	Q1 2025 - Ongoing
11	**Review reserve contributions for renewals to ensure sustainability**	RVG, Finance, AQ&M	8 Hours FTE	Annual
12	**Complete Annual Quality Improvement Plan using information from resident surveys and Long-Term Care**	RVG, AQ&M	40 Hours FTE	Annual
13	**Update Evacuation Policy**	RVG	40 Hours FTE Time	2026
14	**Complete Test of Evacuation Plan**	RVG	20 Hours FTE	2027
15	**Develop Condition Ratings methodology for Critical assets**	RVG, AQ&M	8 Hours FTE	2024 - 2027
16	**Define Level of Service for 2025 DAMP**	RVG, AQ&M	10 Hours FTE	Ongoing
17	**Develop Condition Ratings methodology for Critical assets**	RVG, AQ&M	8 Hours FTE	2024 - 2027
18	**Update DAMP Annually**	RVG, AQ&M	40 Hours	2025 - Ongoing

Table 9.3.1: Continuous Improvement Plan

The detailed improvements are intended to ensure that RVG can achieve sustainable service over time. Some initiatives are required to meet legislative requirements, and others improve service or data quality. While not legislative, some initiatives are intended to find financial efficiencies or are required for other operational improvements.

Upon council approval, specific improvements can be accomplished within staffing capacity and should be included as work plan items for the service. Other initiatives necessitate resources beyond those allocated in the current budget. Should resources be inadequate for the identified items, the strategy is to postpone them. Annually, the DAMP will be revised to align Continuous Improvement items with the opportunities and constraints of the budgetary provisions.

9.4 Monitoring and Review Procedures

This DAMP will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs, and proposed budgets resulting from budget decisions.

The DAMP will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the LTFP or will be incorporated into the LTFP once completed. The DAMP has a maximum life of one year and will be updated annually. This plan will be completely revised and updated in 2027 to prepare RVG for the 2028 four-year budget process.

9.5 Performance Measures

The effectiveness of this DAMP can be measured in the following ways:

- The degree to which the required forecast costs identified in this DAMP are incorporated into the LTFP
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the ‘global’ work program trends provided by the DAMP
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans
- The Asset Renewal Funding Ratio achieves the Organizational target (this target is often 90 – 100%)

Document Control

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	August 2024	1st Detailed Asset Management Plan	Sean Hilderley	Director, Senior Services	Council

For more information, email
To view all the asset management plans, visit
www.chatham-kent.ca/assetplans