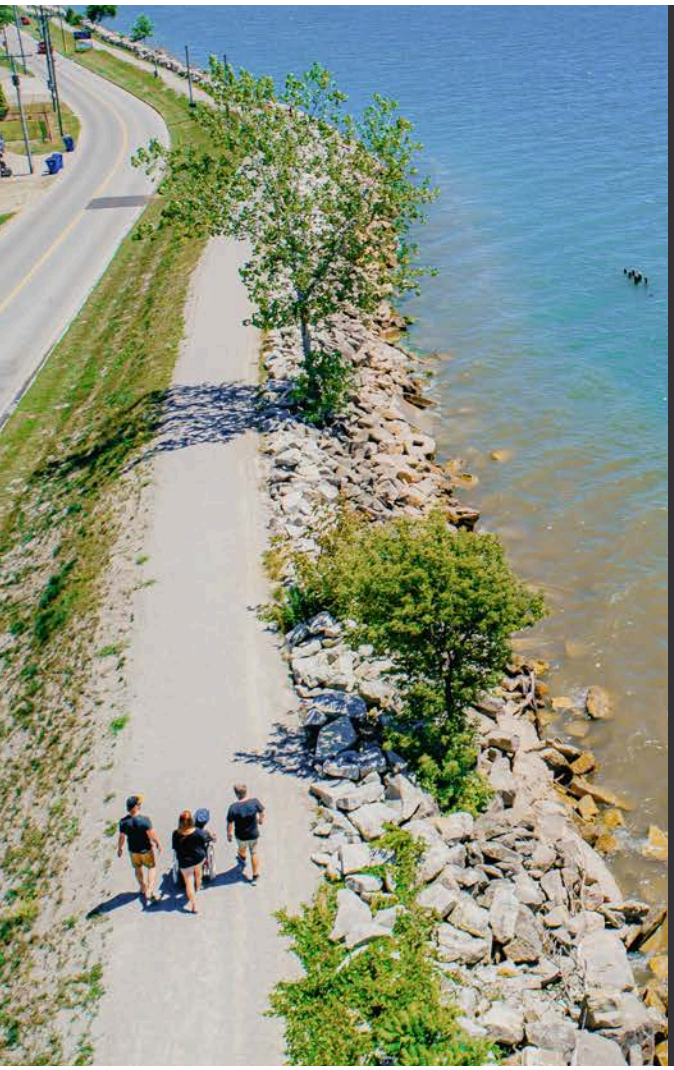
Chatham-Kent

DETAILED ASSET MANAGEMENT PLAN 2024



Trails

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Chatham-Kent Trails Report Card

68 km
trails
maintained

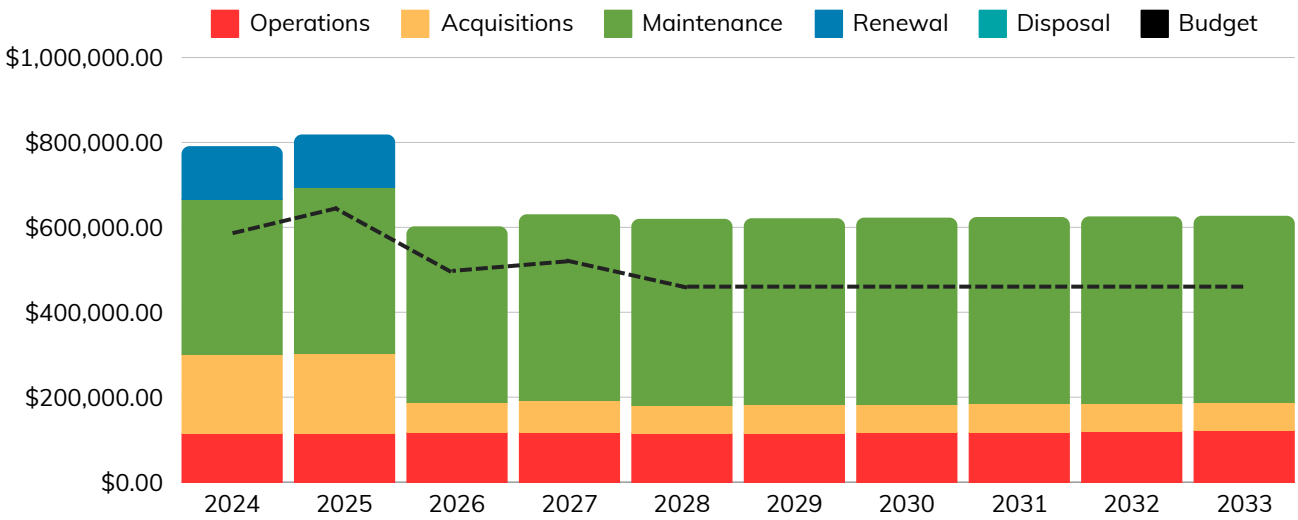
Annual Funding Gap	Asset Renewal Ratio	% of 10-Year Plan Funded
$92,034	100%	86%

Asset Summary

Assets	Items	Replacement
	92 km hard surface trails	$6,460,000
	35 km granular trails	$4,236,000
	4 km grass trails	$252,000

$11M+ Total Replacement Cost

10 Year Life Cycle Forecast



Data Confidence	Low	Medium	High

2.0 INTRODUCTION

2.1 Background / Purpose of Service

The Municipality of Chatham-Kent is dedicated to maintaining and expanding its recreational trails and pathways network, which spans approximately 68 kilometers (km). These trails cater to walkers, runners, cyclists, and bird watchers. Trail development in the region dates back to pre-amalgamation when community-level initiatives drove efforts. Various towns and villages undertook trail construction projects, and numerous grassroots movements contributed significantly. Local trail advocates were instrumental in creating some of the area's most recognized trails, such as the Trillium Trail in Dresden.

In 2003, a centralized committee was established to coordinate the activities of these scattered trail advocates, leading to the formation of the Chatham-Kent Trails Council in 2005 as a not-for-profit organization. The Trails Council collaborates closely with the Municipality, providing guidance for trail development, identifying future priorities, and recommending necessary upgrades or repairs. As a member of the Ontario Trails Council, the Chatham-Kent Trails Council plays a crucial role in promoting the creation, development, preservation, and management of recreational trails in Chatham-Kent.

In recent years, the Municipality has undertaken initiatives to promote healthy, active lifestyles. One such initiative is the trail counter program, which began in late 2021. Initially covering three trails, the program has since expanded to include 22 count sites, providing valuable data on trail usage. From October 2020 to April 2022, the trail counters recorded over 500,000 trail walks and cycling trips, with notable peaks in activity in Chatham, Erieau, and Mitchell's Bay. This data is instrumental in guiding future trail development and ensuring the sustainability and appeal of Chatham-Kent's trail system for all users.

This DAMP communicates the requirements for the sustainable delivery of services through the management of assets, program delivery, compliance with regulatory requirements, and funding required to provide the appropriate levels of service over the planning period.

The DAMP will be read with the Municipality of Chatham-Kent's planning documents. This should include the Strategic Asset Management Policy, along with these other key planning documents:

- Municipality of Chatham-Kent – Strategic Plan 2022-2026
- 2024 - 2027 Multi-Year Budget
- Short-term and long-term financial plans

This is the first DAMP for Chatham-Kent Trails. Future iterations of the plan will see improvements, and as asset management knowledge matures across CK, the breadth and scope of the plans will capture the full cost to deliver the service. The plan is updated annually to ensure data quality improves to enable and support evidence-based decisions. This DAMP will have a ten-year planning horizon at a minimum and will connect fully to the Long-Term Financial Plan (LTFP) by 2027.

The infrastructure assets this DAMP covers include hard surface trails, granular surface trails, and grass trails required to deliver trail services in all communities across CK. For a detailed summary of the assets covered in this DAMP, refer to **Table 2.3.1**.

These assets are used to provide a diverse range of services, including recreational opportunities, active transportation pathways, and nature-centric experiences, contributing to the well-being and connectivity of residents across the Municipality of Chatham-Kent.

The infrastructure assets included in this plan have a total replacement value of approximately **$11,198,000**.

Key stakeholders in preparing and implementing this DAMP are shown in **Table 2.1**.

Community Services pathway, Chatham

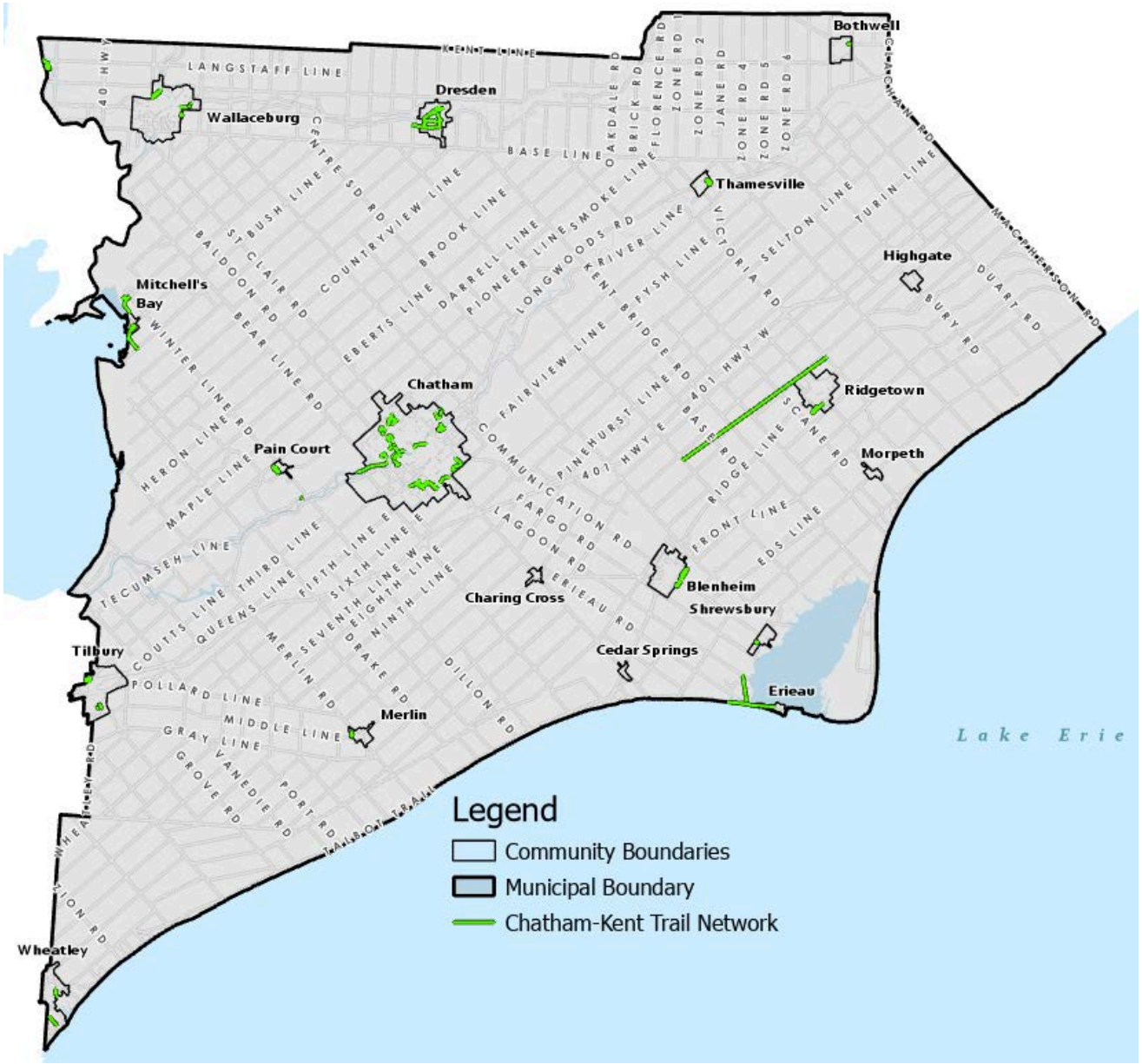
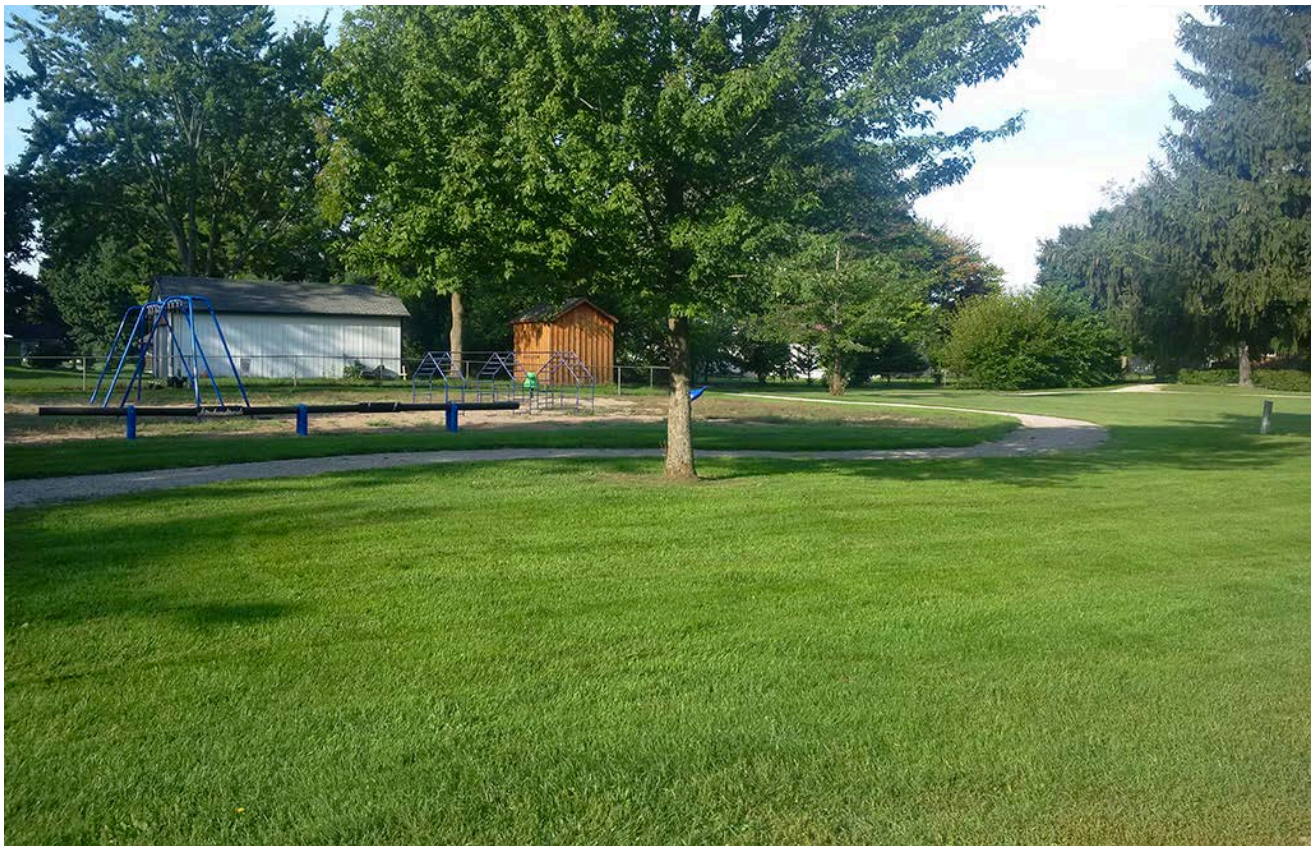

Bothwell
Dresden
Wallaceburg
Thamesville
Highgate
Mitchell's Bay
Chatham
Ridgetown
Pain Court
Morpeth
Blenheim
Charing Cross
Shrewsbury
Cedar Springs
Tilbury
Erieau
Merlin
Wheatley
Lake Erie
LANGSTAFF LINE
BASE LINE
COUNTRYVIEW LINE
BROOK LINE
DARRELL LINE
PIONEER LINE
SMOKE LINE
RIVER LINE
VICTORIA RD
SELTON LINE
TURIN LINE
DUART RD
BURY RD
ST CLAIR RD
BALDOON RD
BEAR LINE RD
WINTER LINE RD
HERON LINE RD
MAPLE LINE
TECUMSEH LINE
EBERTS LINE
FAIRVIEW LINE
PINEHURST LINE RD
401 HWY E
401 HWY W
BASE LINE
RIDGE LINE
SCANE RD
FRONT LINE
EDS LINE
COMMUNICATION RD
FARGO RD
LAGOON RD
ERIEAU RD
THIRD LINE
FIFTH LINE E
SIXTH LINE E
SEVENTH LINE W
EIGHTH LINE
NINTH LINE
COUTTS LINE
QUEENS LINE
MERLIN RD
DRAKE RD
DILLON RD
POLLARD LINE
MIDDLE LINE
GRAY LINE
GROVE RD
VANEDIE RD
PORT RD
WHEATLEY RD
ZION RD
OAKDALE RD
BRICK RD
FLORENCE RD
ZONE RD 1
ZONE RD 2
ZONE RD 4
ZONE RD 5
ZONE RD 6
JANE RD
Legend
Community Boundaries
Municipal Boundary
Chatham-Kent Trail Network

Table 2.1: Key Stakeholders in the DAMP

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, Infrastructure and Engineering Services	• 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, Parks, Fleet and Facilities	• Delivering nominated renewal, upgrade projects • Reviews, updates, and plans long-term projects
Manager, Parks, Recreation and Cemeteries	• Manages service delivery and provides expert opinion to inform asset management plan
Manager, Transportation	• Oversees renewal and upgrade projects
Chatham-Kent Trails Council	• Facilitating community engagement • Promoting trail advocacy • Offering valuable insights to enhance the overall user experience

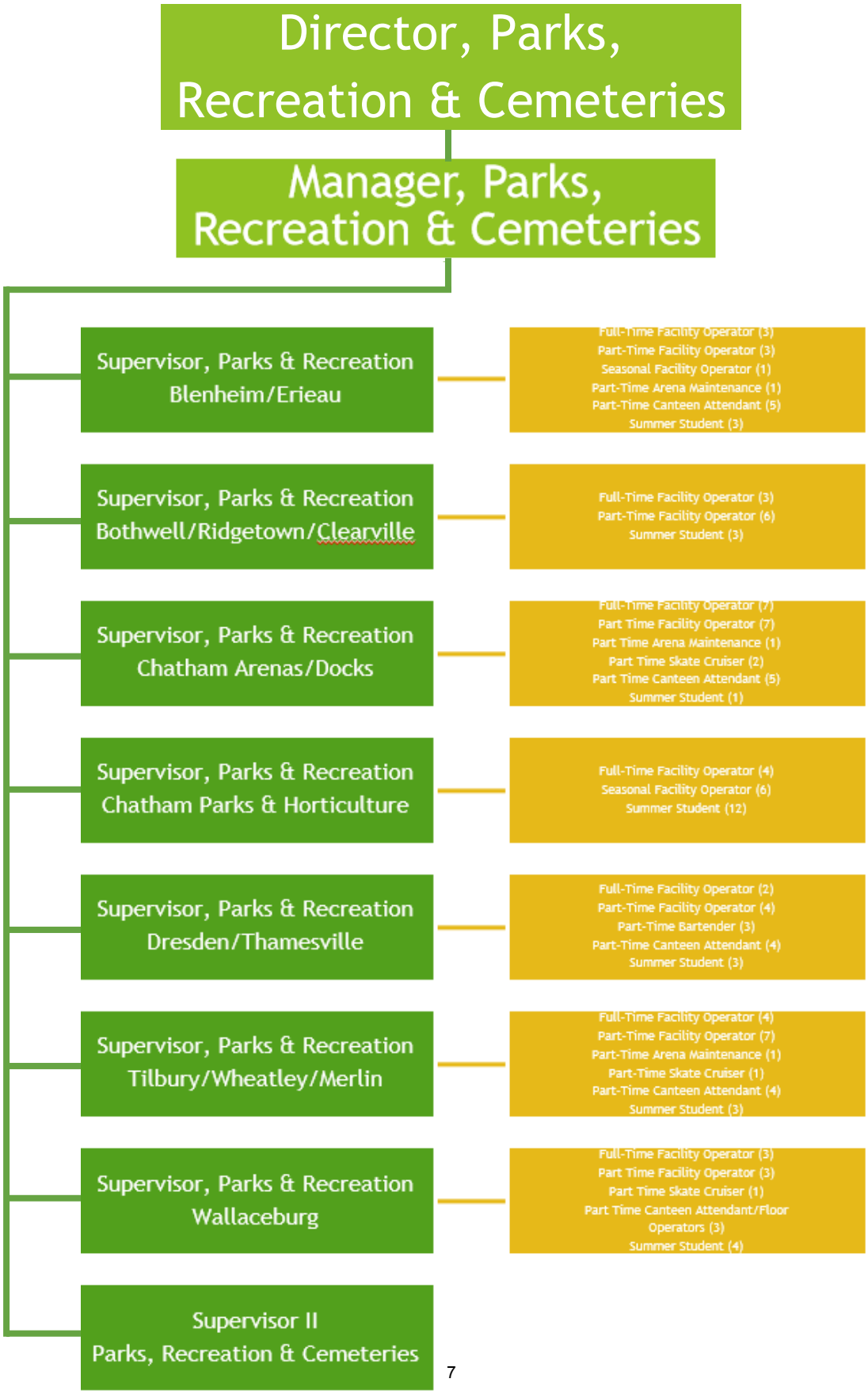
Table 2.1: Key Stakeholders in the DAMP

Key Stakeholder	Role in Asset Management Plan
Asset Management Team	• Establish top-level priorities for the development of asset management and increase awareness of this function among staff and external contractors. • Support the measures outlined in the DAMP aimed at improving asset management and service delivery. • Back the asset management-driven budget and LTFP with a 10-year horizon.
Community	• Engage in facilitated discussions to enable the municipality to comprehend the community's preferred level of service. • Express support for the DAMP, even if it involves reducing service levels and aligning with the community's objective of minimizing taxation.



Optimist Trail, Bothwell

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



Trails are managed by the Parks and Recreation Division, located within the Parks, Facilities and Fleet Department. The Chatham-Kent trails are managed by each of the Parks and Recreation area supervisors, except for Chatham trails, which have historically been managed by one employee within the Parks and Recreation division. CK's engineering division assists with all trail projects that require an engineering technologist for trail design, etc.

2.2 Asset Hierarchy & Registry

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

The service hierarchy is shown in **Table 2.2.1**.

Table 2.2.1: Asset Service Hierarchy

Service Hierarchy	Service Level Objectives
Hard surface trails	Ensure all trails are safe, accessible, and well-maintained
Granular surface trails	
Grass surface trails	
Trail signage	Ensure all trails well signed and signs are maintained in good condition

MacDonald Park Trail, Wallaceburg

2.3 Asset Registry

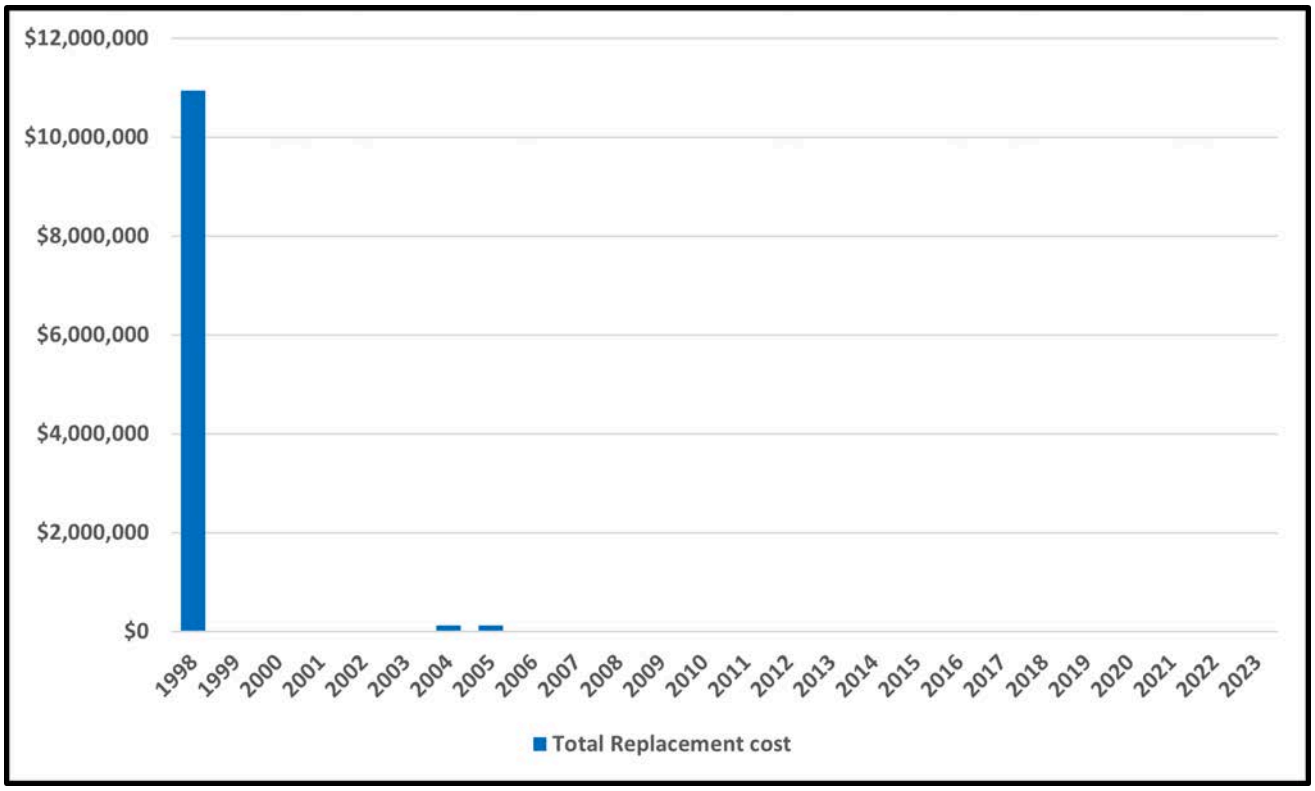
The Chatham-Kent Trails network, spanning a total length of 68 km, exhibits a diverse asset mix that includes 29 km of hard-surface trails ideal for various activities, 56 km catering to cycling enthusiasts, and 37 km seamlessly integrated within or adjacent to nature areas, offering a unique blend of recreational experiences. Additionally, 42 km of the trail network provides an excellent bird-watching environment.

The estimated replacement value of **$11,198,000** underscores these assets' critical role in the community. However, challenges and issues related to maintenance, accessibility, and sustainable management will require strategic planning and resource allocation to ensure the continued success of this valuable trail infrastructure. The age profile of the assets included in this DAMP is shown in **Figure 2.3.1**.

Table 2.3.1: Service Assets

Asset Category	Description	Age or Average Age	Average Condition	Avg Estimate Service life Remaining	Current Replacement Value
Hard surface trails	29 km	25	Unknown	40	$6,460,000
Granular surface trails	35 km	25	Unknown	40	$4,236,000
Grass surface trails	4 km	25	Unknown	40	$252,000
Total	**68 km**				**$11,198,000**

Figure 2.3.1 Assets Age Profile Graph



All figure values are shown in 2024 dollars.

The asset age profile for trails is primarily unknown, so 1998 was used as this is the date of CK's amalgamation. Assets are maintained in an acceptable condition through regular grading and renewal of hard surface, granular, and grass surface trails. This lack of data on asset age presents challenges for asset management.

The peaks of investment in the past have resulted in clusters of assets reaching similar stages of deterioration, potentially leading to future peaks in renewals.

By conducting thorough asset condition assessments and lifecycle analyses, Chatham-Kent can develop long-term asset management strategies that prioritize investments where they are most needed. This approach can help smooth out investment peaks by spreading renewal activities over time and ensuring that critical assets are addressed in a timely manner.

2.4 Asset Condition

The condition is monitored mostly through expert opinion on the subject matter and not through any formalized process.

Condition is measured using a 1 – 5 grading system, as detailed in **Table 2.4.1**. A consistent approach is important in reporting asset performance, enabling effective 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.

Table 2.4.1: Condition Grading System

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

Condition is not currently monitored formally and is not known at this time for trail assets.

2.5 Asset capacity and performance

Assets are generally provided to meet design standards where available. However, there are insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in **Table 2.5.1**.

Table 2.5.1: Known Service Performance Deficiencies

Location	Service Deficiency
CASO Trail	Uneven trail surface: some sections of the CASO trail exhibit uneven surfaces, potentially causing discomfort for users Erosion Issues: Portions of the CASO Trail are prone to erosion, affecting trail stability and requiring erosion control measures
Mud Creek Loop	Inadequate Signage: The Mud Creek Loop lacks clear signage at certain junctions, leading to confusion among trail users
Multiple locations	Poor Lighting: Some trails and pathways experience insufficient lighting in the evening, impacting user safety and security

The above service deficiencies were identified from parks, fleet, and facilities staff.

3.0 LIFECYCLE

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

3.1 Acquisition Plan

The acquisition reflects new assets that did not previously exist or works that will upgrade or improve an existing asset beyond its existing capacity. Acquisitions may result from growth, demand, and social or environmental needs. Assets may also be donated to the Municipality of Chatham-Kent.

3.1.1 Selection criteria

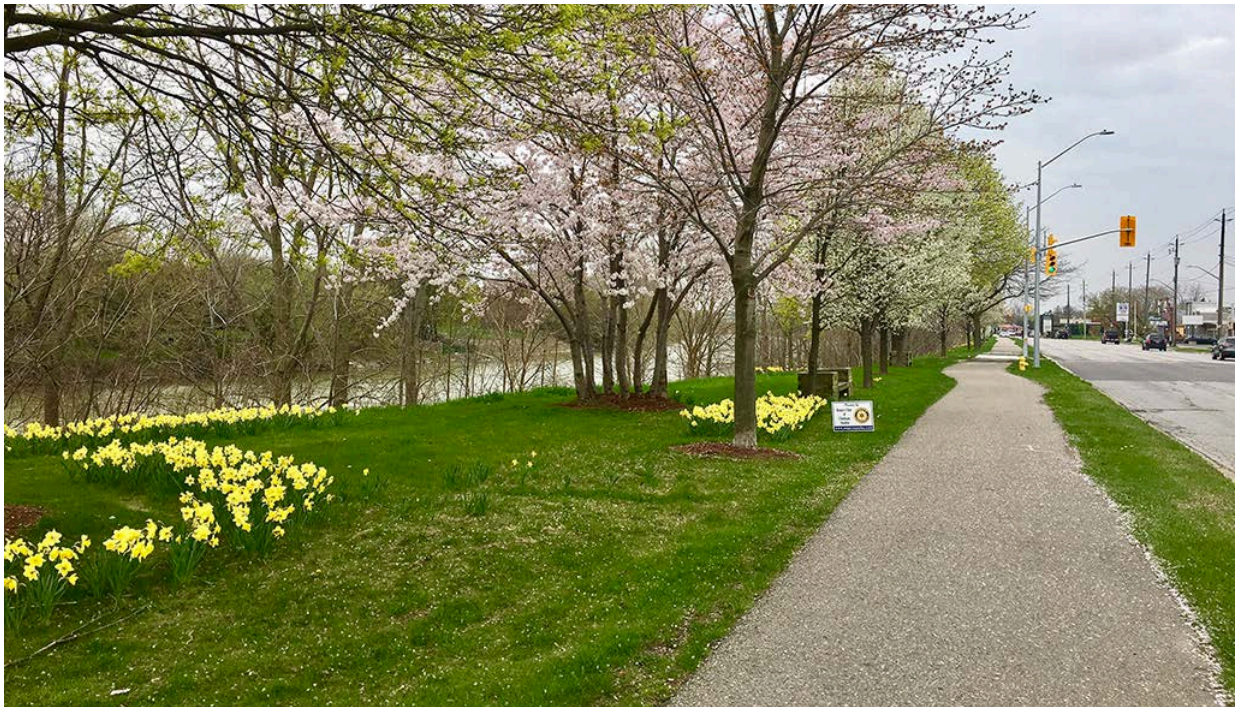
Proposed acquisition of new assets and upgrade of existing assets are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrades and new works should be reviewed to verify that they are essential to Trail's needs. 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
Strategic alignment	20%
Asset condition and lifespan	20%
Cost-benefit analysis	15%
Accessibility and inclusivity	10%
Environmental sustainability	10%
Total	**100%**

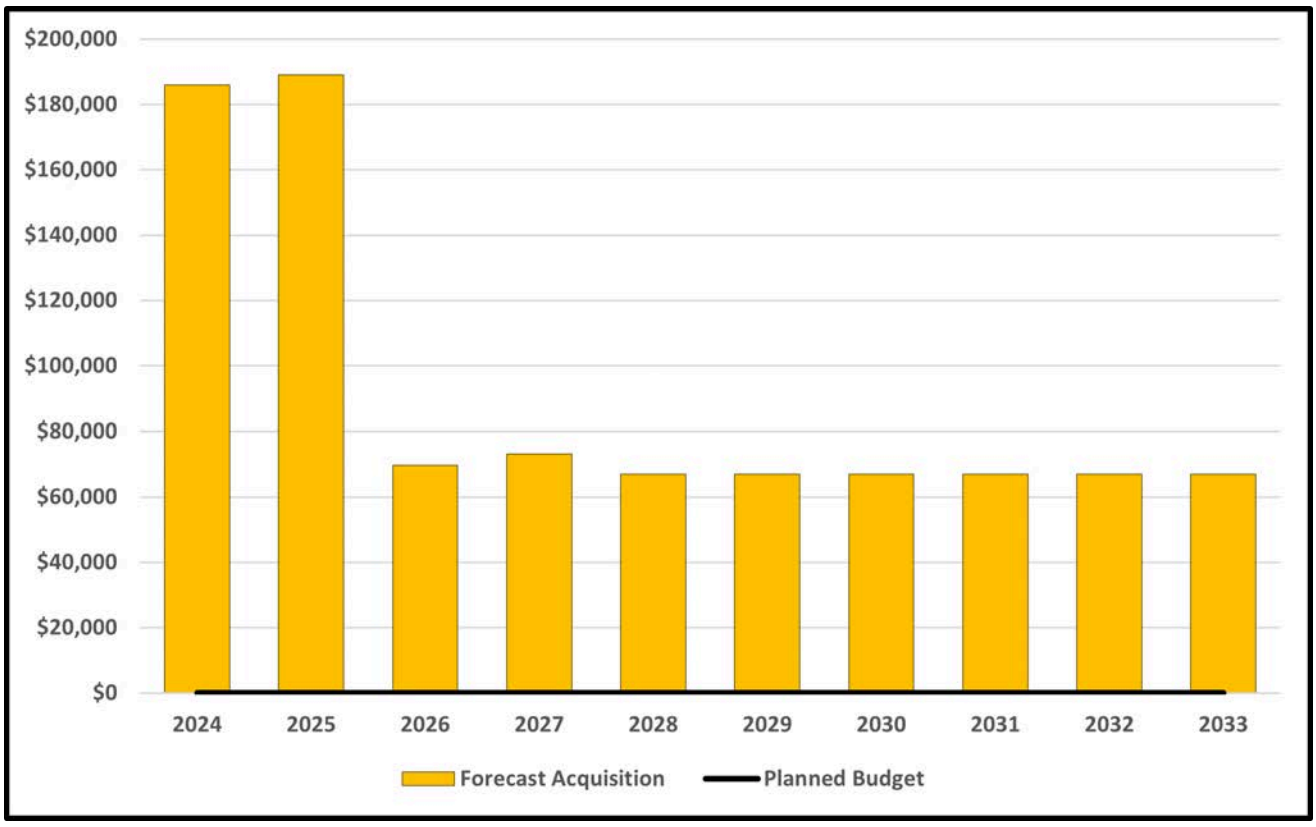
Summary of future asset acquisition costs

Forecast acquisition asset costs are summarized in **Figure 3.1.1** and shown relative to the proposed acquisition budget.



Rotary Sunrise Trail, Chatham

Figure 3.1.1: Acquisition (Constructed) Summary

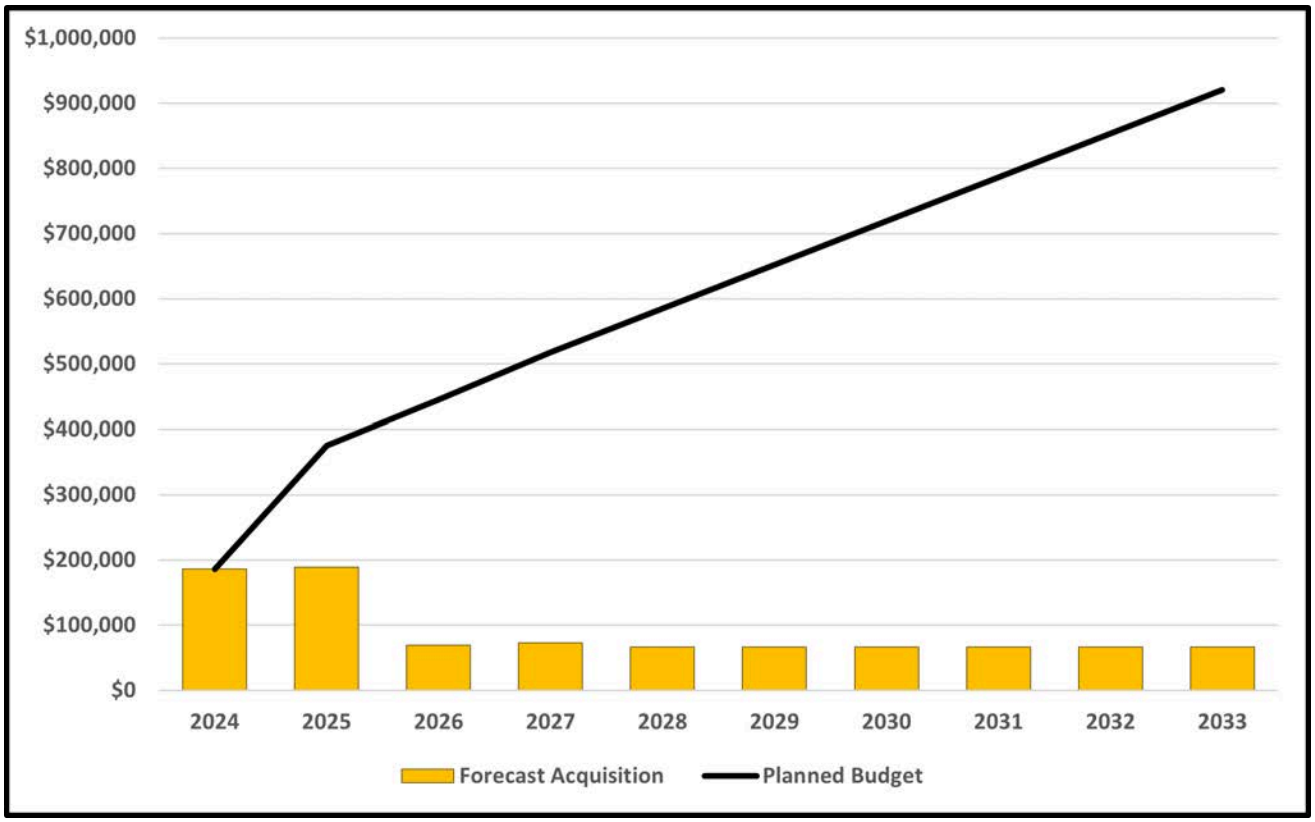


All figure values are shown in 2024 dollars.

Maple City Walkway, Chatham

When an Entity commits to new assets, it must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long-term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed, is shown in **Figure 3.1.2.**

Figure 3.1.2: Acquisition Summary



All figure values are shown in 2024 dollars.

Expenditure on new assets and services in the capital works program will be accommodated in the LTFP, but only to the extent of available funding.

The forecast acquisition costs from 2024-2027 align well with the proposed budget, indicating a sufficient budget allocated for all new acquisitions. Specifically, $125,000 will be spent annually in 2024 and 2025 on new trail connections. An average of $56,0000 a year is spent on new signs, and an average of $11,000 a year is spent on new trail assets such as garbage cans and bike repair stations.

Chatham-Kent must consider the long-term financial implications of adding new assets, ensuring that adequate funding is available for their ongoing operation, maintenance and eventual renewal.

3.2 Operations Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, emptying waste receptacles, and trail inspection.

Typical operational activities performed to provide the Trails service include:

- routine condition inspections for trails and trail assets
- monitoring of environmental factors such as erosion or vegetation encroachment
- regular inspection of bridges and boardwalks
- litter and debris removal
- vegetation management, including trimming and removal of overgrown vegetation

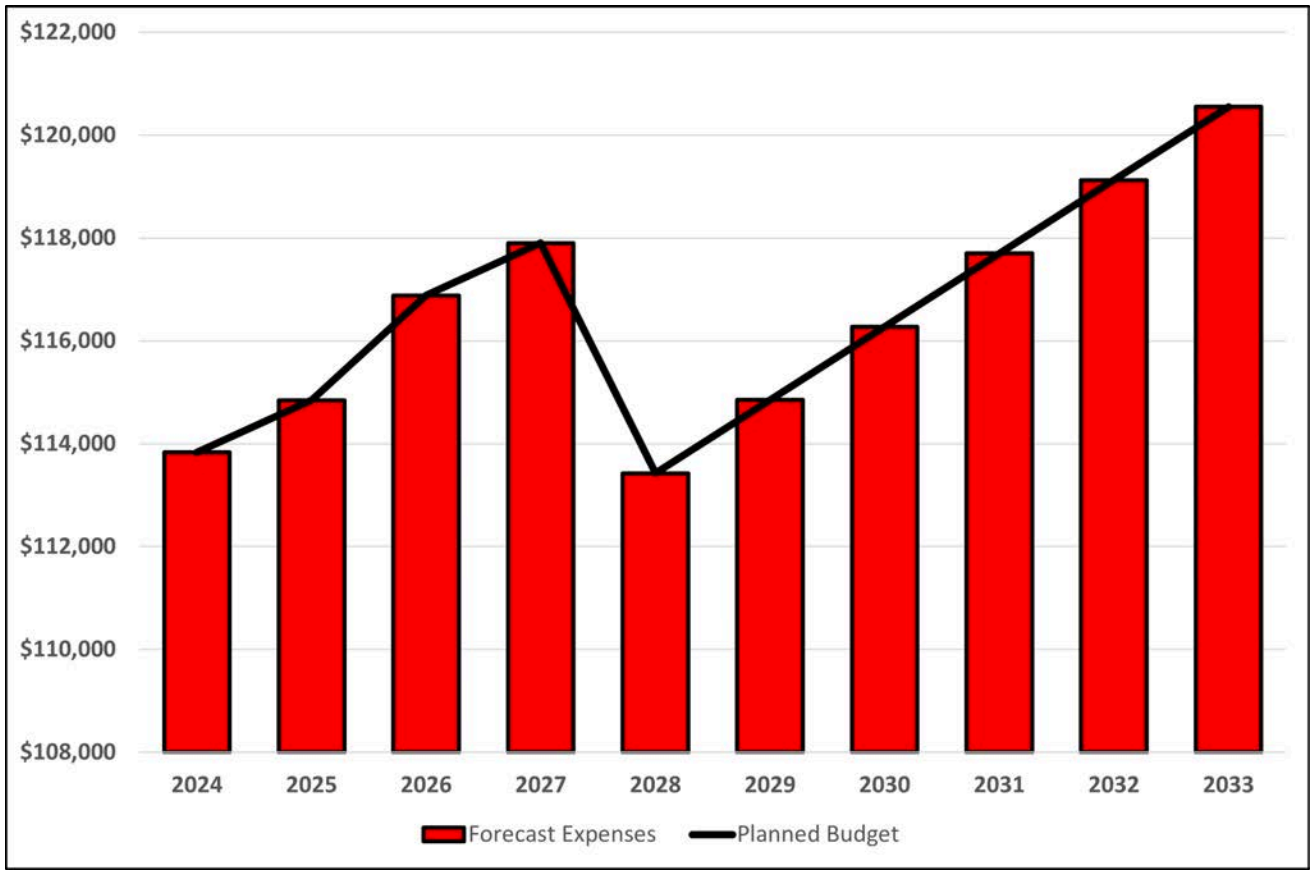
Summary of forecast operations costs

Forecast operations costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations costs are forecast to increase. If assets are disposed of, the forecast operation costs are expected to decrease. **Figure 3.2.1** shows the forecast operations costs relative to the proposed operations planned budget.

These operational activities ensure that Chatham-Kent's trail assets are safe, accessible, attractive, and functional.

Erieau Boulevard Trail, Erieau

Figure 3.2.1: Forecast Operations Costs



All figure values are shown in 2024 dollars.

Table 3.2.1: Operations Budget Trends

Year	Operations Budget
2024	$113,800
2025	$114,800
2026	$116,800
2027	$117,900

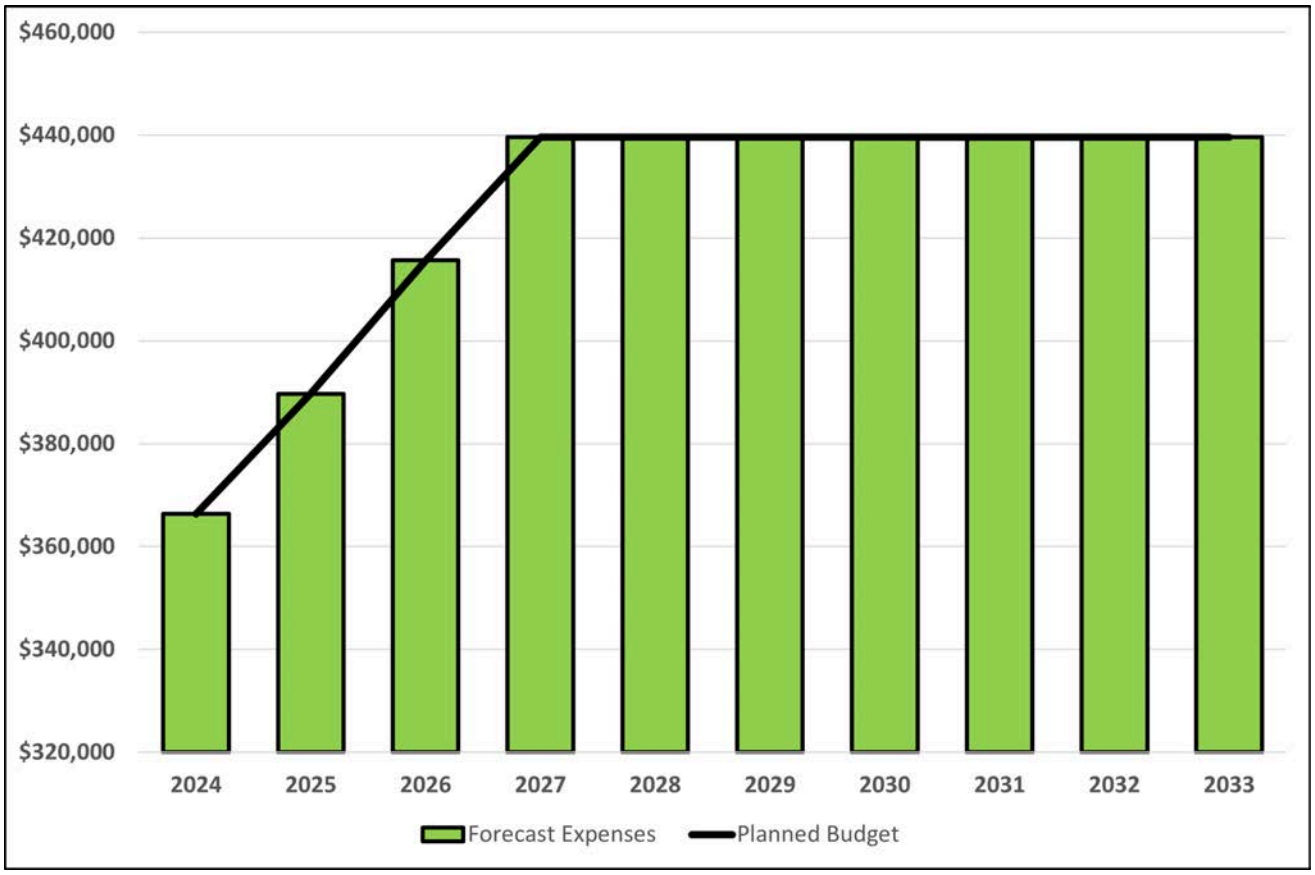
3.3 Maintenance Plan

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 greatly 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 operations to guarantee the reliability of its trail assets and the achievement of the expected service level.

Planned maintenance reduces the need for higher-cost reactive maintenance, often associated with greater risks to human safety. Trails will strategically plan and adequately finance its maintenance operations to maintain the desired service level.

Figure 3.3.1: Maintenance Summary



All figure values are shown in 2024 dollars.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition. Examples of typical maintenance activities include the following:

- trail surface maintenance, including annual grading and pothole repair
- installation and maintenance of signage and other trail assets
- regular repair of bridges and boardwalks

The trend in maintenance budgets is shown in **Table 3.3.1**.

Table 3.3.1: Maintenance Budget Trends

Year	Maintenance Budget
2024	$366,300
2025	$389,700
2026	$415,700
2027	$439,600

Erie Shore Trail, Erieau

Maintenance budget levels are considered inadequate to meet projected service levels, which may be less than or equal to current service levels. 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 and highlighted in this DAMP, and service risks are considered in the Infrastructure Risk Management Plan.
Staff assess and prioritize reactive maintenance using experience and judgment.

The forecast maintenance costs for Chatham-Kent's trail assets show an upward trend from 2024 to 2027, indicating a growing need for maintenance investment as the assets age and new assets come online.

Starting in 2027, the proposed budget begins to cover the forecasted maintenance costs yearly. This trend indicates a need to reassess the budget allocations to ensure sufficient funding is available to maintain service levels and avoid deferred maintenance.

Deferred maintenance (i.e., works identified for maintenance activities but unable to be completed due to available resources) should be included in the infrastructure risk management plan.

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 to be 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 Trails were last reviewed on **May 1st, 2024.**

Table 3.4.1: Useful Lives of Assets

Asset (Sub) Category	Useful Life
Asphalt trails	15 to 20 years
Concrete trails	20 to 30 years
Gravel trails	30 to 40 years
Natural surface trails	5 to 10 years

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

Crothers Park, Wallaceburg

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 a Trail with one of similar size and capacity)
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. replacing worn or faded signs)

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

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

The ranking criteria used to determine the priority of identified renewal proposals is detailed in **Table 3.4.2.**

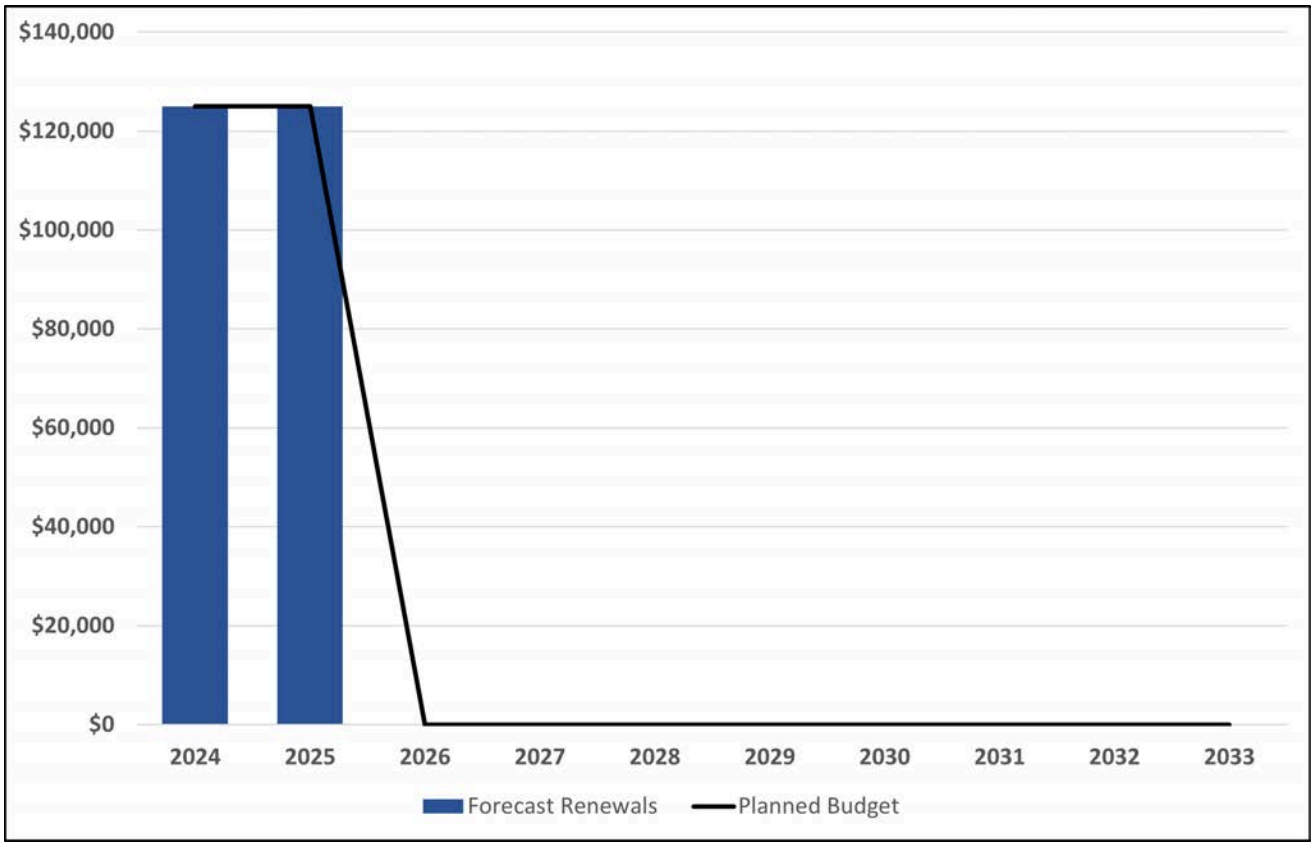
Table 3.4.2: Renewal Priority Ranking Criteria

Criteria	Weighting
Trail condition	25%
Trail usage and demand	30%
Safety and accessibility	20%
Environmental impact	25%
Total	**100%**

3.5 Summary of future renewal costs

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

Figure 3.5.1: Forecast Renewal Costs



All figure values are shown in 2024 dollars.

The current budget only provides renewal allocations in 2024 and 2025. In both years, $125,000 has been allocated for renewing trail connections in Chatham.

McVean / Stranak Park, Dresden

3.6 Disposal Plan

Disposal includes any activity associated with disposing of a decommissioned asset, including sale, demolition or relocation. Assets still need to be identified for disposal within the trial plan. In the future, if there are disposals, this section will outline the costs, timing, and service impacts on the trails DAMP.

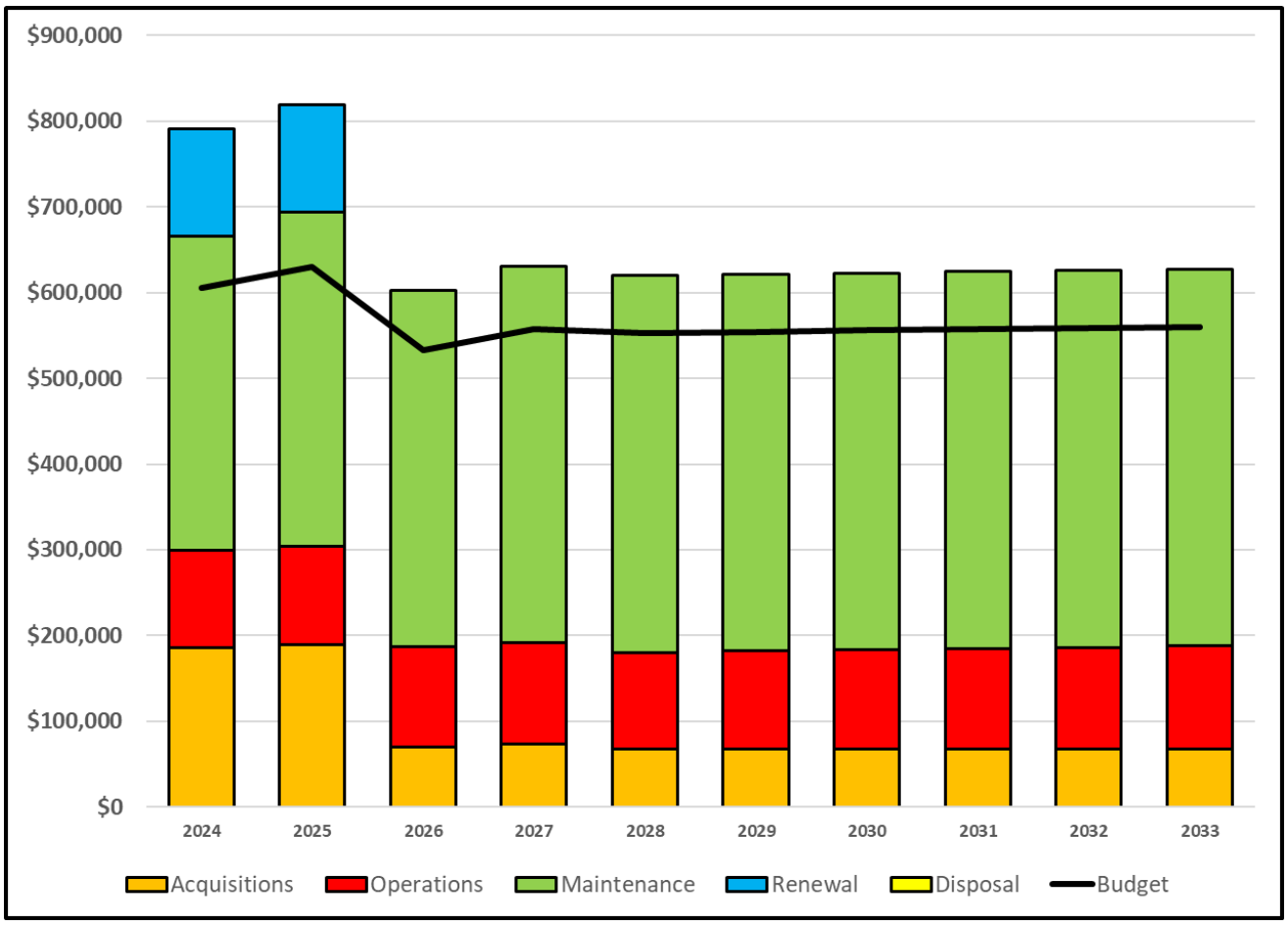
Rotary EcoTrail, Chatham

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 estimate 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



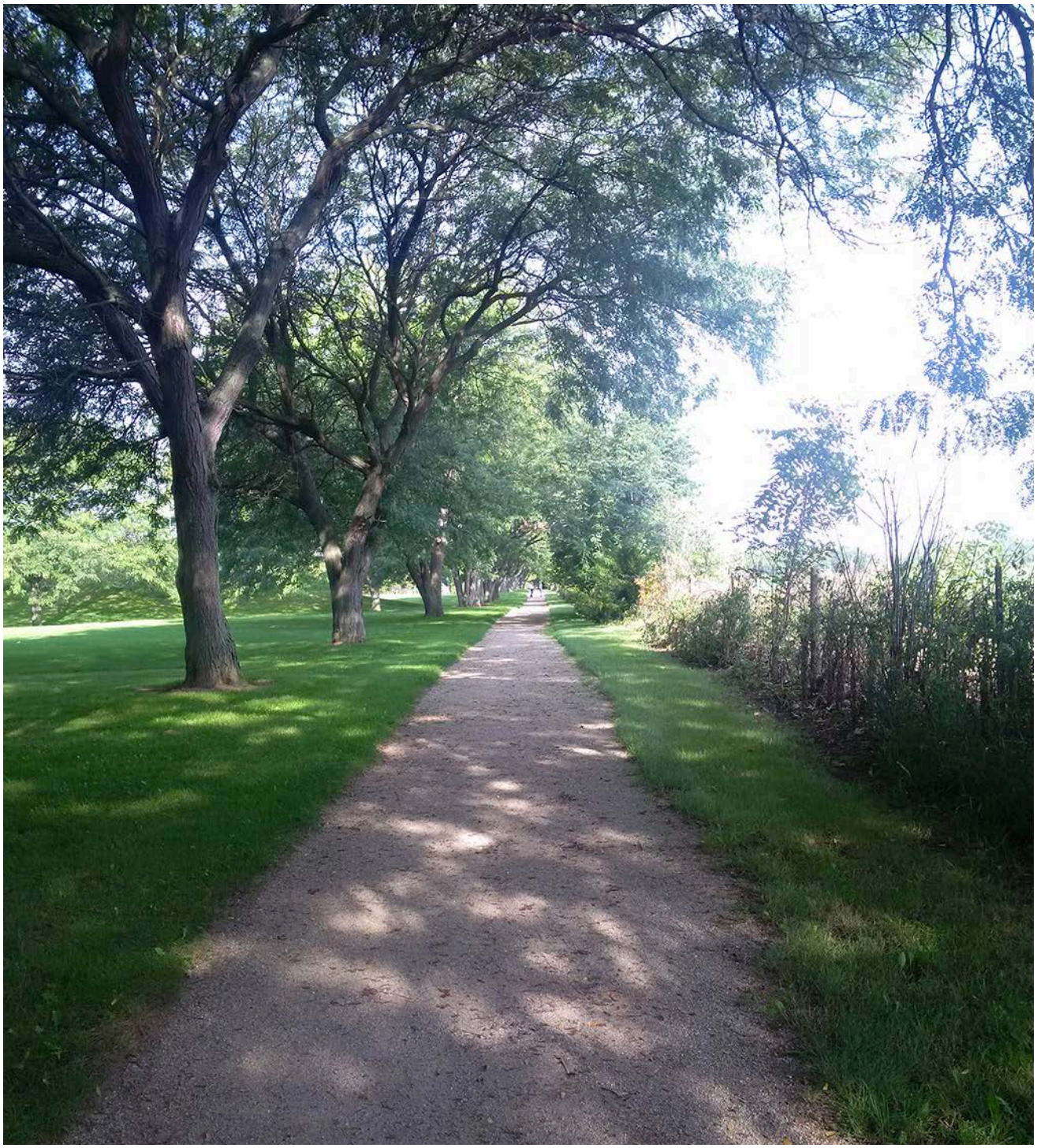
All figure values are shown in 2024 dollars.

The proposed budget for the Trails DAMP has been carefully considered in light of the forecast costs spanning acquisition, renewal, operations, maintenance, and disposal. A detailed analysis reveals potential challenges and opportunities for strategic adjustments.

Upon assessing the proposed budget, Trails acknowledges its careful consideration for each essential category. It is imperative to recognize potential areas where the budget may fall short of meeting the forecasted needs. This assessment ensures transparency in financial planning.

The identified funding shortfall of **$-92,034** per year demands strategic attention. To bridge this gap, Trails will actively explore additional funding sources, optimizing budget allocation, and seeking potential partnerships to ensure the sustained success of the Trails DAMP.

Chatham-Kent's commitment to significant projects, including critical acquisitions, major renewals, and community-focused initiatives, remains unwavering. Chatham-Kent acknowledge that budget constraints may pose challenges and will require a strategy to prioritize and phase projects to align with available funding while balancing the needs of the community.



Neighbourhood Trail, Thamesville

4.0 LEVELS OF SERVICE

Levels of service describe the value that trail assets provide to the community and are typically spoken about in 'measures.' Utilizing service measures allows decision-makers to understand the outcome of investments. It allows 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 allow 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 is compliant with all legislation, from Federal to Provincial or even Chatham-Kent's own bylaws. There are many legislative requirements relating to asset management. Legislative requirements that impact the delivery of the trail service are outlined in **Table 4.1.1**.

Table 4.1.1: Legislative Requirements

Legislation	Requirement
Accessibility for Ontarians with Disabilities Act (AODA)	Ensuring that trails are designed and maintained to meet accessibility standards, providing inclusive access for all users.
Environmental Protection Act	Compliance with environmental regulations to protect ecosystems, water bodies, and wildlife habitats along the trail network.
Municipal Planning Act	Integration of the Trails DAMP with municipal planning strategies and adherence to land use policies for sustainable development.
Occupational Health and Safety Act	Ensuring the safety of trail users and maintenance staff, and compliance with occupational health and safety standards.
Public Health Act	Implementing measures to safeguard public health, such as addressing safety hazards and ensuring sanitary conditions on the trails.

Table 4.1.1: Legislative Requirements

Legislation	Requirement
Conservation Authorities Act	Cooperation with conservation authorities to manage and protect natural resources and address potential impacts on the environment.
Local municipal bylaws and ordinances	Adherence to municipal bylaws governing trail use, signage, noise, and other relevant factors.
Privacy laws such as the Personal Information Protection and Electronic Documents Act (PIPEDA)	Ensuring the protection of individuals' privacy when collecting and managing data related to trail users.
Heritage Conservation Act	Considering and protecting cultural heritage resources along the trail, including archaeological sites or heritage landscapes.
Transportation Act	Compliance with regulations related to trail connectivity, intersection with roadways, and coordination with transportation plans.

Optimist Park Trail, Bothwell

4.2 Customer Research and Expectations

This DAMP is prepared to facilitate consultation prior to adoption of levels of service by Chatham-Kent Council. Future revisions of the DAMP will incorporate customer consultation on service levels and costs of providing the service. This will assist Chatham-Kent Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

We currently have no research on customer expectations. This will be investigated for future updates of the DAMP.

4.3 Customer Values

Service levels are defined in three ways: 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

Table 4.3: Customer Values

Customer Values	Customer Satisfaction Measure	Current Feedback	Expected Trend Based on Planned Budget
Accessibility and Inclusivity	To be determined (TBD) 2025	TBD 2025	Expected improvement with planned budget allocations for inclusive design and amenities
Recreational Opportunities	TBD 2025	TBD 2025	Expected increase in offerings with planned budget for new recreational opportunities
Trail Condition and Quality	TBD 2025	Mixed feedback on trail maintenance	Expected improvement with increased budget for routine maintenance and upgrades

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 the right service?
Capacity/Use - Is the service over or underused… does Chatham-Kent need more or less of these assets?

In **Table 4.4**, under each service measure type (Condition, Function, Capacity/Use), there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

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.

Centennial Park Pathway, Pain Court

Table 4.4: Customer Level of Service Measure

Type of Measure	Level of Service	Performance Measure	Current Performance	Expected Trend Based on Planned Budget
Condition	Trail Surface Quality	Visual inspection and user surveys	Medium	Improvement with increased budget for maintenance and resurfacing
	Confidence levels		Medium	Medium
Function	Trail Connectivity	GIS analysis	Low	Improvement through targeted projects, subject to budget allocations
	Confidence levels		Medium	Medium
Capacity	Trail User Count	Automated counting systems	Low	Expansion projects needed to accommodate increasing demand
	Confidence levels		Medium	Medium

4.5 Technical Levels of Service

Technical Levels of Service—To deliver customer values and impact the achieved Customer Levels of service, operational or technical performance measures are used. 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. widening a trail, replacing a trail with a larger size) or a new service that did not exist previously (e.g. a new trail).

Operation – the regular activities to provide services (e.g. Customer interactions, Service programs, opening hours, cleansing, mowing grass, energy, inspections, 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. general trail maintenance),

Renewal – the activities that return the service capability of an asset up to that which it had initially been provided (e.g. trail reconstruction)

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.

Table 4.5 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.

Wheatley Arboretum Trail, Wheatley

Table 4.5: Technical Levels of Service

Lifecycle Activity	Level of Service Statement	Activity Measure	Current Performance	Recommended Performance
Acquisition	Construct or acquire new trail segments	Km of new trails online	TBD 2025	TBD 2025
		Budget	**$186,056**	**$67,034**
Operation	Regular trail inspections	Frequency of inspections (e.g., monthly)	Annual inspections conducted	Increase to quarterly inspections
		Budget	**$113,831**	**$115,865**
Maintenance	Trail surface repairs	Square metres of trail surface repaired	TBD 2025	TBD 2025
		Budget	**$366,336**	**$402,842**
Renewal	Trail resurfacing	Kilometres of trail resurfaced	TBD 2025	TBD 2025
		Budget	**$125,000**	**$125,000**
Disposal	Decommissioning obsolete trails	Kilometres of obsolete trails decommissioned	TBD 2025	TBD 2025
		Budget	**$0**	**$0**

It is important to monitor service levels regularly, as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged that 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, regulations, demographic changes, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

5.2 Purpose Statement

This DAMP is prepared in accordance with the Municipality of Chatham-Kent's vision, mission, goals, and objectives.

Our vision is Rooted in our values, united in our actions and growing to our potential.

Our mission is: The Corporation of the Municipality of Chatham-Kent is a proud, proactive, progressive team committed to innovation and leadership by providing services that enhance the quality of life in our community.

Chatham-Kent Council has set strategic goals. **Table 5.2** summarizes the relevant goals and objectives and how these are addressed in this DAMP.

Table 5.2: Goals and how these are addressed in this Plan

Goal	Objective	How Goal and Objective are addressed in the DAM plan
Strategic investments to diversify, rationalize assets and level of services	Investigate ways to rationalize assets and level of service through the implementation of the Asset Management Plan using a community wide approach	• The plan systematically assesses trail assets to optimize service levels • Community engagement is emphasized, fostering a holistic, community-wide approach
Explore new and enhance existing recreational opportunities	Expand and improve program and infrastructure delivery	Through strategic planning, the plan aims to enhance existing recreational opportunities, ensuring trails align with evolving community interests and preferences

Goal	Objective	How Goal and Objective are addressed in the DAM plan
Improve sustainable mobility	Integrate a Sustainable Mobility Master Plan	The Trails AMP aligns with this Council strategic goal by prioritizing enhancements to sustainable mobility through the development and maintenance of an interconnected trail network

Northside Park, Tilbury

5.3 Council Strategic Priorities for Trails Service

5.4 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

5.5 Demand Impact and Demand Management Plan

Table 5.5 shows the impact of demand drivers that may affect future service delivery and asset use.

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 5.5 shows opportunities identified for demand management to date. Future revisions of this DAMP will develop further opportunities.

Table 5.5: Demand Managment Plan

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Increasing community interest in outdoor activities and health-conscious lifestyles	High utilization of existing trails, with noticeable rise in user numbers	Anticipated continued growth in trail usage over the next decade	The surge in popularity may lead to heavier wear on trail surfaces, increased maintenance requirements, and potential congestion issues	Implement a proactive maintenance schedule, explore trail expansion possibilities, and consider user education programs to encourage responsible trail use

Demand Driver	Current Position	Projection	Impact on services	Demand Management Plan
Shifting demographics and evolving preferences in recreational activities	Demographic changes influencing the types of trail activities preferred by users	Anticipated shifts in user preferences, possibly towards specific trail features or experiences	Tailoring trail amenities and features to meet changing preferences, potentially requiring modifications or additions	Regularly assess user demographics and preferences through surveys, collaborate with community groups, and adapt trail features accordingly
Growing emphasis on integrated trail networks for commuting and connectivity	Trails primarily used for recreation, with limited integration into broader transportation networks	Increasing demand for trails as commuting routes, connecting residential areas, workplaces, and public transport hubs	Need for enhanced trail connectivity, potential infrastructure upgrades, and increased collaboration with urban planning	Collaborate with planning department, explore grants for connectivity projects, and conduct feasibility studies for trail expansions that enhance community connectivity

5.6 Asset Programs to meet Demand

New assets required to meet demand may be acquired, donated or constructed.

Acquiring new assets will commit the Municipality of Chatham-Kent to ongoing operations, maintenance, and renewal costs for the period for which the service provided from 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.

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
- 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 that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those with a high consequence of failure, causing significant loss or reduction of service. Critical assets have been identified, and their typical failure mode and the impact on service delivery are summarized in **Table 6.1**. Failure modes may include physical failure, collapse, or essential service interruption.

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
CASO Trail	Surface Deterioration	Deterioration of the trail surface can lead to safety concerns, discomfort for users, and a decline in overall satisfaction
Mud Creek Loop	Flooding or Erosion	Flooding or erosion along Mud Creek can disrupt access, create safety hazards, and potentially lead to trail closures
CASO Trail	Vegetation Overgrowth	Overgrown vegetation can obstruct the path, reducing accessibility and compromising user safety

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

Memorial Park, Tilbury

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 the selection of 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, development of a risk rating, evaluation of the risk and 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** 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.

Table 6.2: Risks and Treatment Plans

Asset Providing the Service	What can Happen	Risk Rating	Existing controls	Treatment Cost
Trail Network	Erosion due to proximity to waterways	High	Regular maintenance	Moderate
Trail Network	Slip and fall accidents on icy winter trails	High	Regular maintenace	Moderate
Trail Network	Spread of invasive species, like Phragmites	High	TBD 2025	Moderate

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions Trails need to understand our capacity to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service.

We do not currently measure our resilience in service delivery. This will be included in future iterations of the DAMP.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this DAMP are based on the objective of achieving the optimum benefits from the available resources.

6.4.1 What Cannot Be Done

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

- **Trail Extension and Connectivity Project**: Limited funding hinders the extension of the trail network and the establishment of connectivity to adjacent communities, limiting the expansion of recreational opportunities.
- **Native Plant Restoration Initiative**: A comprehensive program aimed at native plant restoration along trails may require significant ongoing maintenance and operational efforts, which might exceed available resources.
- **Specialized Trail Maintenance Equipment Purchase**: Investing in specialized equipment for trail maintenance, though beneficial for long-term efficiency, may be deferred due to budget constraints, affecting the speed and quality of maintenance activities.
- **Community Engagement Events and Programs**: While community engagement is vital, resource constraints may impact the ability to organize and sustain regular events or programs to involve the community in trail-related activities.

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:

- Trail Deterioration: The inability to perform regular maintenance and renewal work may lead to trail deterioration, which results in uneven surfaces, increased hazards, and reduced overall trail quality.
- Limited Accessibility: Deferred acquisition projects or accessibility upgrades may limit the development of inclusive trail features, affecting the accessibility of specific trail segments for individuals with mobility challenges.
- Environmental Impact: The postponement of disposal initiatives, such as removing decommissioned assets, may result in a delayed response to environmental concerns, affecting the overall ecological health and aesthetics of the trail areas.
- Incomplete Connectivity: Limited funding for acquisition projects may hinder the establishment of new trail segments, limiting the overall connectivity of the trail network and preventing users from experiencing a comprehensive trail system.

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:

- Increased Infrastructure Failure Risk: The inability to perform timely maintenance and renewal activities may elevate the risk of infrastructure failure, leading to potential safety hazards, service disruptions, and increased repair costs when issues are eventually addressed.
- Legal and Compliance Risks: Deferred projects related to regulatory compliance or legal obligations may expose the entity to legal risks and non-compliance penalties, which can impact the organization's reputation and financial standing.
- Community Dissatisfaction and Trust Erosion: Postponing community-focused projects or engagement initiatives may result in dissatisfaction among users and stakeholders, leading to declining community trust and potential challenges in garnering support for future endeavours.
- Environmental Impact and Ecological Risks: Delaying disposal initiatives or environmental restoration projects may contribute to ecological risks, such as habitat degradation or pollution, affecting the overall environmental health of the trail areas.

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 the context of the asset management planning process, 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 Trails responds to and manages those impacts.

At a minimum, Trails will consider how to manage its existing assets, given the potential climate change impacts on the region. The impacts 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

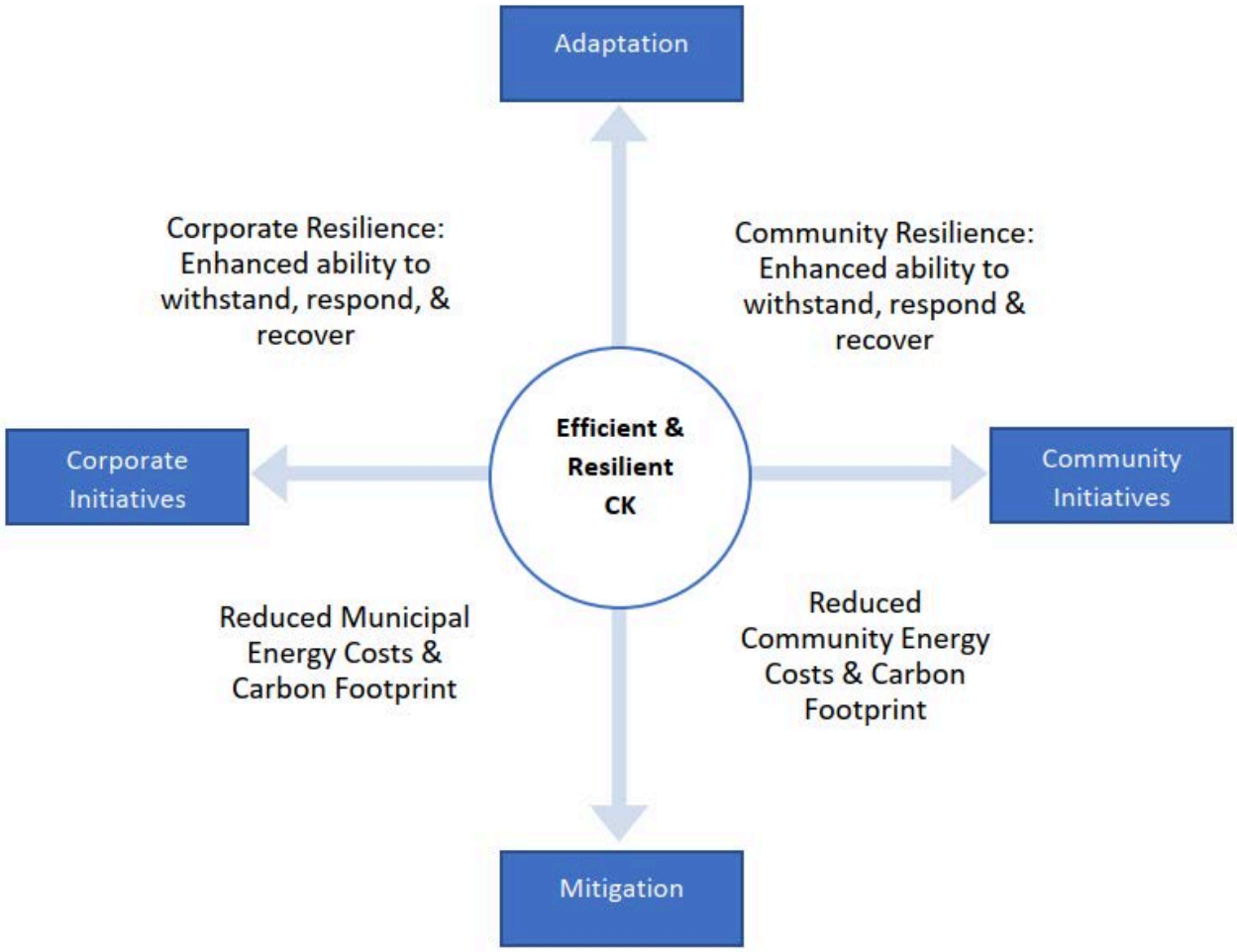
In the Asset Management Planning process, climate change can be considered a future demand and a risk.

How climate change impacts assets will vary depending on the location and the type of services provided, as will how CK responds 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
- Record-breaking water levels within river systems and the Great Lakes in 2019 and early 2020, which caused major 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, and 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 resiliency to climate change (known as climate adaptation).

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



Based on the Climate Atlas of Canada, historical climate patterns show that CK's climate has become hotter, wetter and wilder over the last 6 decades. This trend is expected to continue in the future.

Hotter: Average annual temperatures have risen by 0.5°C and are expected to rise 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 increase 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 are becoming more severe and more costly.”(Statistics Canada, 2024)

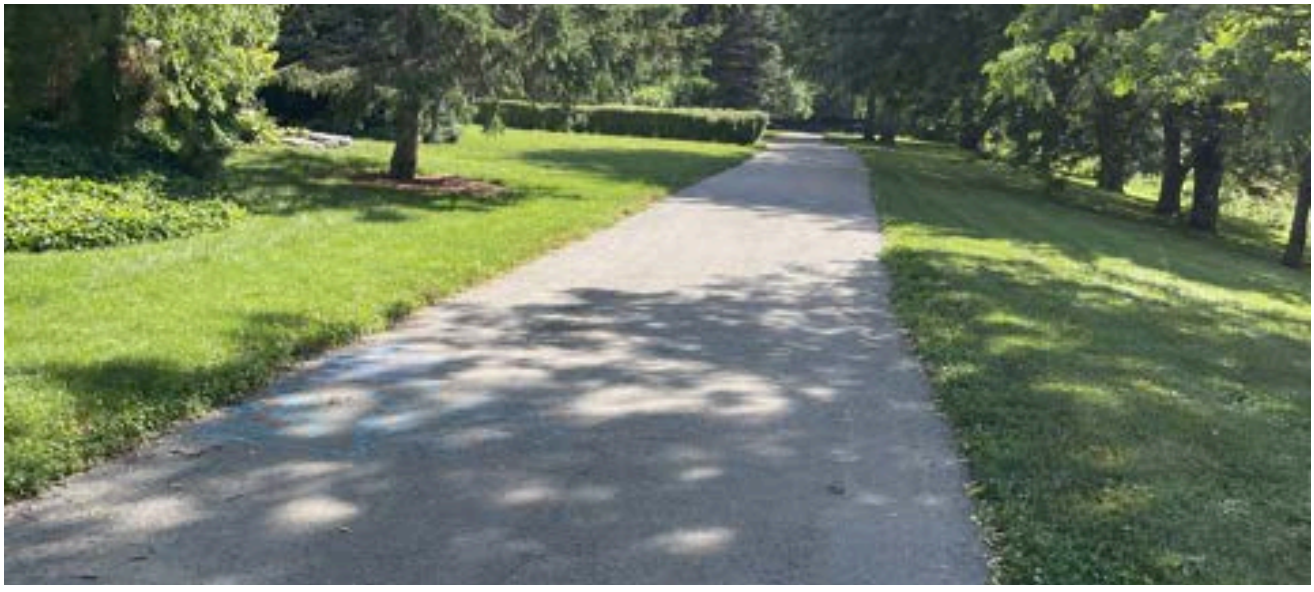
Risks and opportunities identified to date are shown in Table 7.0.1.

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

Climate Impact (Assets level or Service level)	Current Position (Today)	Projected Position (in 10 years)	Potential Impact on Assets & Services	Climate Management Plan
Anticipated rise in the frequency and intensity of extreme weather events, including storms and heavy rainfall	TBD 2025	More frequent and severe weather events, leading to increased flood risks along trails	Higher risk of trail erosion, damage to trail infrastructure (e.g., bridges), and potential disruptions to trail services during extreme weather events	Implement proactive maintenance, conduct vulnerability assessments to identify high-risk areas, and invest in resilient trail design and construction techniques to withstand extreme weather conditions
Projected increase in temperature extremes and occurrence of heatwaves	TBD 2025	More frequent and prolonged periods of high temperatures during the summer	Increased risk of heat-related damage to trail surfaces, vegetation stress, and potential health risks to trail users	Develop heat-resistant trail surfaces, implement vegetation management strategies to enhance resilience, and conduct public awareness campaigns on heat safety for trail users

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

Climate Impact (Assets level or Service level)	Current Position (Today)	Projected Position (in 10 years)	Potential Impact on Assets & Services	Climate Management Plan
Changes in precipitation patterns, potentially leading to altered rainfall distribution	TBD 2025	Shifts in precipitation, potentially resulting in periods of drought or intense rainfall	Increased risk of soil erosion during heavy rainfall, potential water scarcity during droughts, and challenges in maintaining trail surfaces	Implement sustainable water management practices, including water conservation during periods of abundance and storage solutions during droughts. Conduct regular trail condition assessments and adjust maintenance strategies based on changing precipitation patterns.



Mud Creek Loop, Chatham

Additionally, the way in which Chatham-Kent constructs new 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 impacts of climate change
- Services can be sustained
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 7.0.2 summarizes some asset climate change resilience opportunities.

Table 7.0.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change Impact these assets?	Build Resilience in New Works
Introduction of sustainable trail surfaces, such as permeable materials or those resilient to temperature extremes	Improved durability and resistance to weather-related damage, addressing challenges posed by increased temperature extremes and weather events	• Incorporate sustainable and climate-resistant trail surfaces in all new trail construction projects. • Conduct research to identify materials suitable for local climate conditions and implement best practices for trail resilience.
Integration of green infrastructure elements, such as vegetated swales and rain gardens, alongside trail networks	Enhanced water management, reduction in soil erosion, and improved biodiversity, mitigating the impact of altered precipitation patterns and extreme weather events.	• Include green infrastructure components in new trail development projects. • Collaborate with environmental experts to design features that complement the local ecosystem and contribute to climate resilience.

New Asset Description	Climate Change Impact these assets?	Build Resilience in New Works
Implementation of community education and engagement programs focusing on climate change resilience	Increased awareness and preparedness among the community, fostering a proactive approach to climate-related challenges	Develop and launch educational programs the inform trail users about climate change impacts and encourage responsible trail use. Incorporate climate resilience discussions into community events and outreach initiatives.

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.

Larry O'Rourke Park, Chatham

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 Long-Term Financial Plan, and the Detailed Asset Management Plans to ensure that all of the trail network needs are addressed. At the same time, the municipality establishes a definitive financial strategy with measurable goals and targets.

Effective asset and financial management will enable Trails 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 is transparently fulfilling its stewardship accountabilities. Long Term financial planning (LTFP) is critical for the Trails to ensure that network lifecycle activities, such as renewals, operations, maintenance, and acquisitions, can happen at the optimal time.

Reporting on service and financial performance to stakeholders guarantees that the Municipality is transparently fulfilling its stewardship responsibilities. Long-term financial planning (LTFP) is essential for Trails 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:

- **Asset Renewal Funding Ratio (ARFR)** - proposed renewal budget for the next 10 years / proposed renewal outlays for the next 10 years shown in the DAMP, and
- **Lifecycle Funding Ratio (LFR)** - proposed lifecycle budget for the next 10 years / proposed lifecycle outlays for the next 10 years shown in the DAMP.

Asset Renewal Funding Ratio (ARFR) - 100%

The ARFR is an important indicator and illustrates that over the next 10 years, EMS has **100%** of the funds required for the optimal renewal of assets. This calculation is complicated due to the provincial cost-sharing element, as stated previously in the DAMP.

The ARFR assesses whether the Trailsd manages asset renewals optimally and cost-effectively, considering timing, financial limitations, the acceptable risk level for Chatham-Kent, and the agreed-upon service levels. Ideally, the target renewal funding ratio should range between **90% and 110%** throughout the planning period.

A high indicator result generally indicates that service levels are achievable; however, if the expenditures are below this level, then the desired level of service is not achievable. The following year, the DAMP will be rewritten to acknowledge the financial realities of the available budget and how those realities reduce the current level of service set by the council.

10-year Lifecycle Funding Ratio (LFR) – 10-year financial planning period - 86%

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 10 years. This provides input into 10-year financial and funding plans aimed at sustainably providing the required services. 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 10-year Lifecycle Financial Ratio evaluates the Planned Budget against the Lifecycle Forecast to ensure optimal asset operation, maintenance, and renewal, aiming to deliver a consistent level of service over the 10-year planning period. As with the Asset Renewal Funding Ratio (ARFR), the ideal range for this ratio is between **90%** and **110%.** A ratio below this range suggests that the funding for assets is insufficient to fulfill the organization's risk management and service levels commitments.

The forecast operations, maintenance and renewal costs over the 10-year planning period is $658,472 on average per year. The proposed (budget) operations, maintenance and renewal funding is $566,438 on average per year, giving a 10-year funding shortfall or ‘Gap” of $92,034 per year. This indicates that 86% 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, 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
- I**nfluence level of service** - managing expectations or influencing demand drivers

These options and others will allow EMS to ensure the gap is managed appropriately and ensure the level of service outcomes the customers desire. 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 Long-Term Financial Plan.

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.

Glen Mickle Trail, Wallaceburg

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

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the DAMP and ideally over the 10-year life of the Long-Term Financial Plan (LTFP).

Table 8.2.1 shows the forecast costs (outlays) required for consideration in the 10-year long-term financial plan. 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 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 the methods and strategies to manage that gap over time to achieve sustainable services and intergenerational equity.

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. Forecast costs are shown in 2024 dollars.

Tecumseh Park, Chatham

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

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2024	$186,056	$113,831	$366,336	$125,000	$0
2025	$189,108	$114,848	$389,740	$125,000	$0
2026	$69,705	$116,883	$415,689	$0	$0
2027	$73,267	$117,901	$439,603	$0	$0
2028	$67,034	$113,427	$439,603	$0	$0
2029	$67,034	$113,427	$439,603	$0	$0
2030	$67,034	$116,276	$439,603	$0	$0
2031	$67,034	$117,700	$439,603	$0	$0
2032	$67,034	$119,125	$439,603	$0	$0
2033	$67,034	$120,549	$439,603	$0	$0
Total	**$920,340**	**$1,163,967**	**$4,248,986**	**$250,000**	**$0**

8.3 Funding Strategy

The proposed funding for assets is outlined in the Entity's budget and LTFP.
The financial strategy of the Entity determines how funding will be provided, whereas the DAMP communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

8.4 Valuation Forecasts

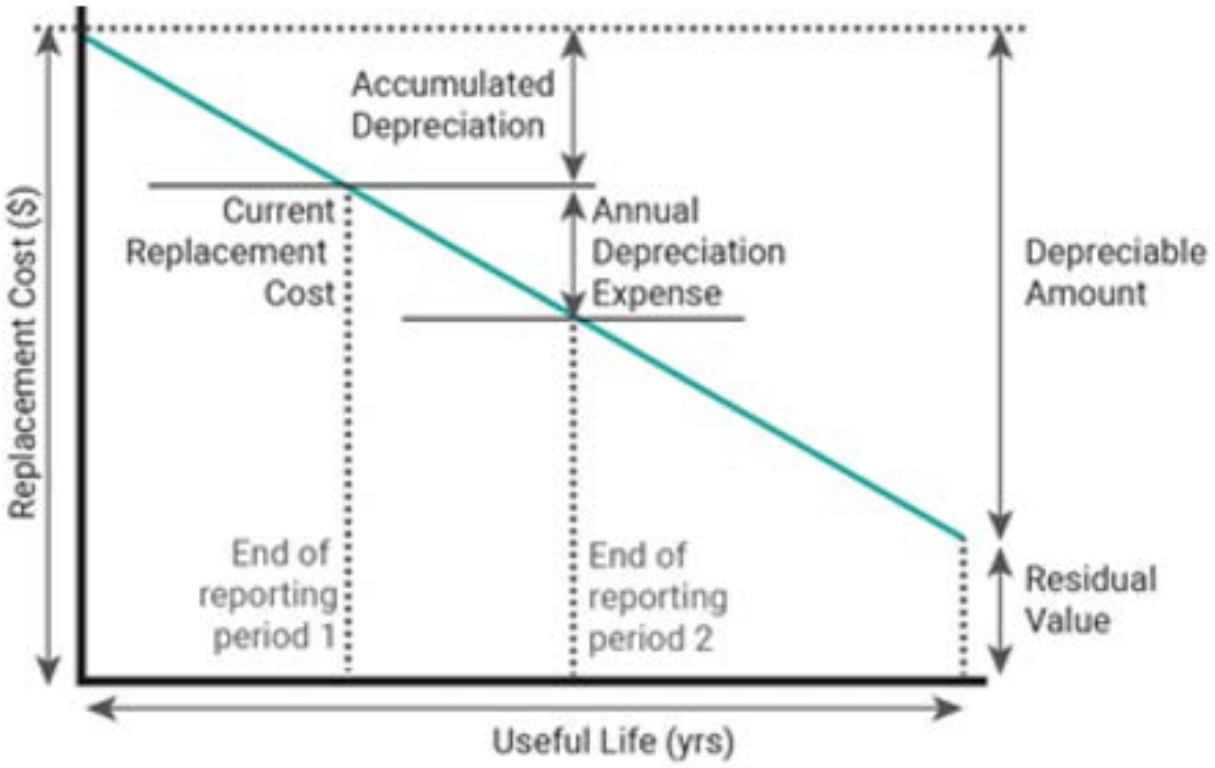
Asset values are forecasted to increase as additional assets such as the new paramedic station were added to the asset registry. If disposals occur, then they will reduce costs to the budget. Additional assets will generally add to the maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

8.4.1 Asset valuations

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.

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 are shown below.



The assets are valued utilizing the estimated Current Replacement Cost Market Prices Index:

Replacement Cost (Gross) - $11,198,000
Depreciable Amount - $11,198,000
Current Replacement Cost - $3,838,000
Annual Depreciation Expense - $286,200

8.5 Key Assumptions Made in Financial Forecasts

In compiling this DAMP, it was necessary to make some assumptions. This section details the key assumptions made in the development of this DAMP and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this DAMP are:

- Usage Growth Assumption: Trail usage is expected to grow steadily over the planning period, driven by community engagement initiatives and increased awareness of the trail network.
- Funding Stability: Funding sources for trail management remain stable, with no significant changes in grants, community contributions, or municipal budgets that could affect the planned budget for the Trails Asset Management Plan.
- Environmental Stewardship: The Municipality of Chatham-Kent continues to commit to environmental stewardship, incorporating sustainable practices in trail development and maintenance.
- Assumptions were made regarding the existing and planned budget for maintenance and renewal, using professional judgment.
- Omission of 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.

8.6 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this DAMP 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 in accordance with **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, 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. 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 DAMP

Data	Confidence Assessment	Comment
Demand drivers	Low	Population is growing and is expected to continue
Growth projections	Medium	Demographics trending analysis would improve data quality
Acquisition forecast	Medium	Will Monitor Annually
Operation forecast	Medium	Data available on the existing operation expenditures used to set future budget
Maintenance forecast	Medium	Data available on the existing maintenance expenditures used to set future budget
Renewal forecast - Asset value	Low	Requires alignment with reserve contributions and ESL improvement items
Asset useful lives	Low-Medium	Most align with purchasing practices but should be improved and vetted annually
Condition modeling	Low	This requires improvement and is identified in continuous Improvement plans
Disposal forecast	Medium	None anticipated

The estimated confidence level and reliability of data used in this DAMP is considered **Low - Medium**.

9.0 PLAN IMPROVEMENT AND MONITORING

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
- BCA data
- 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
- CA Data
- Fleet Vehicle Data
- Inspection Logs
- Subject Matter Expert Knowledge and Anecdotal Information

9.3 Continuous Improvement Plan

Chatham-Kent must recognize 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 CK's ability to make evidence-based and informed decisions. These improvements span from improved lifecycle activities, financial planning, and plans to improve the assets physically.

The Improvement Plan, **Table 9.3.1**, highlights improvements 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 of these tasks have not been 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	Regular condition assessments	Manager, Transportation	60 hours FTE	Annually
2	Data validation and enhancement	AQM staff, Manager, Transportation	40 hours FTE	2025
3	Stakeholder engagement strategy	AQM staff, Manager, Transportation	20 hours FTE	2025
4	Review asset registry to improve Provincial Asset Retirement Obligation reporting	Finance, Manager, Transportation, AQM staff	20 hours FTE	2025-27
5	Risk mitigation plan	AQM staff, Manager, Transportation	40 hours FTE	2026

The improvements detailed above are intended to ensure that Trails can achieve sustainable service over time. Some of the initiatives are required to meet legislative requirements, and other initiatives improve service or data quality and, while not legislative, are intended to find financial efficiencies or are required for other operational improvements.

Upon council approval, certain improvements can be accomplished within staffing capacity and should be included as work plan items for Trails. 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 1 year and will be updated annually. This plan will receive a complete revision and update in 2027 to enable the Chatham Kent Trails service to be prepared for the 2028 4-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 long-term financial plan
- 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 Plant	Mike Smith	Jeff Hagan, Manager, Transportation	Chatham-Kent Council

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