DILLON CONSULTING

Haldimand County

Solid Waste Management Master Plan

Final Report

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Attention: Allan Forster
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Haldimand County Solid Waste Management Master Plan

Dillon Consulting Limited is pleased to submit the Solid Waste Management Master Plan (Plan) to Haldimand County (County). This Plan is the result of a collaborative process with County staff to document the current state of the County's waste management system, review practices from comparable municipalities and develop a range of options to support long-term service delivery and sustainability objectives.

We appreciate the opportunity to support the County in advancing this important initiative. We value the collaboration to date and look forward to supporting the County as it considers and implements the next steps of the Plan.

Sincerely,

DILLON CONSULTING LIMITED

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Acronyms, Abbreviations, Definitions

AI	Artificial Intelligence
Barrie	City of Barrie
Belleville	City of Belleville
BIA(s)	Business Improvement Area(s)
Brant	County of Brant
Brantford	City of Brantford
C&D	Construction and Demolition
CCBF	Canada Community Building Fund
CCME	Canadian Council of Ministers for the Environment
CMO	Circular Materials Ontario
CO_2	Carbon Dioxide
(the) County	Haldimand County
CRC(s)	Community Recycling Centre(s)
CSW	Commercial Solid Waste
CWMF	Canborough Waste Management Facility
DCA	*Development Charges Act*
DDM Plan	Disaster Debris Management Plan
Dillon	Dillon Consulting Limited
Durham	Regional Municipality of Durham
DYEC	Durham York Energy Centre
ECA(s)	Environmental Compliance Approval(s)

Edmonton	City of Edmonton
EEE	Electrical and Electronic Equipment
ESA	Environmental Site Assessment
FTE	Full-time equivalent
GHG	Greenhouse gas
GMF	Green Municipal Fund
Guelph	City of Guelph
Hamilton	City of Hamilton
HHW	Household Hazardous Waste
HSP	Hazardous and Special Products
HSW	Household Solid Waste
IC&I	Industrial, Commercial and Institutional
IPR	Individual Producer Responsibility
Kawartha Lakes	City of Kawartha Lakes
kg	Kilogram(s)
LYW	Leaf and Yard Waste
MECP	Ministry of Environment, Conservation and Parks
MPAC	Municipal Property Assessment Corporation
Muskoka	District Municipality of Muskoka
N/A	Not Applicable
OLT	Ontario Land Tribunal
O.Reg.	Ontario Regulation
Oxford	Oxford County

P&E	Promotion and Education
PRO	Producer Responsibility Organization
RFP	Request for Proposal
RFQ	Request for Quotation
RFT	Request for Tender
RM	Rural Municipality of Corman Park No. 344
RPRA	Resource Productivity and Recovery Authority
RRCEA	*Resource Recovery and Circular Economy Act*
SCADA	Supervisory Control and Data Acquisition
Simcoe	Simcoe County
Six Nations	Six Nations of the Grand River
St. Thomas	City of St. Thomas
Sudbury	City of Greater Sudbury
SWANA	Solid Waste Association of North America
SWMMP	Solid Waste Management Master Plan
Toronto	City of Toronto
Watson	Watson and Associates Economists Ltd.
WDTA	*Waste Diversion Transition Act*
Wellington	Wellington County
Woodstock	City of Woodstock

Executive Summary

Dillon Consulting Limited (Dillon) was retained by Haldimand County to develop a Solid Waste Management Master Plan (SWMMP), in collaboration with County staff. Dillon also engaged Watson & Associates Economists Ltd. (Watson) as a subconsultant to support the financial modelling and funding strategy. Together, the project team undertook an assessment of the County's waste management system and developed a roadmap for the next decade to support long-term financial, operational and environmental sustainability.

The SWMMP was initiated in response to growing pressures on the County's waste system, including anticipated population growth, evolving provincial regulations and increasing costs for service delivery. As Haldimand County does not own or operate an active landfill and currently relies on contracted services for waste collection, transfer and disposal, there is a heightened need for strategic planning for future service continuity and cost control.

The SWMMP provides a full review of the County's existing programs, infrastructure and service delivery model, identifies opportunities for improvement and outlines a phased strategy for implementation. A comparative scan of peer municipalities was completed to identify best practices and emerging trends relevant to Haldimand's context. Informed by this research, financial analysis and consultation with the County, thirteen recommended actions were developed to modernize the County's waste system.

The recommendations are organized into the following four key focus areas:

1. **Curbside Collection Efficiencies and Service Enhancements**
   This area addresses opportunities to improve collection logistics, reduce waste sent to landfill and align with future regulations. Recommendations include transitioning to a cart-based garbage collection, implementing garbage receptacle limits for farms and Industrial, Commercial and Institutional (IC&I) on collection routes and conducting a study at shared collection points. Together, these actions aim to increase diversion, standardize service expectations and control future collection and disposal costs.

Two additional options, introducing a residential organic waste (green bin) collection program and reducing garbage collection frequency to bi-weekly, have also been developed and analyzed due to their potential to significantly increase waste diversion and support regulatory readiness. However, these options are presented as optional and interdependent, with financial modelling reflecting scenarios both with and without their implementation.

2. **Depot Services and Hazardous and Special Waste (HSP) Management**
   To better serve a growing and geographically dispersed population, the SWMMP recommends developing a new permanent waste depot to improve accessibility, particularly in high-growth areas. It also proposes a mobile HSP depot program as an interim solution, with a view to establish a permanent HSP facility at the Canborough Waste Management Facility by 2030. These recommendations respond to the rising demand for safe and convenient disposal options for special waste streams and address operational gaps in the current system.

3. **Sustainable Solutions for Closed Landfill Sites**
   With 15 closed landfills under its responsibility, Haldimand County faces unique long-term environmental and liability considerations. This focus area explores innovative strategies for managing and repurposing closed sites, including naturalization, leachate management (e.g., willow and poplar tree systems) and landfill mining. It also considers the potential sale of suitable sites to responsible third parties, with appropriate safeguards. These actions are intended to reduce long-term monitoring costs, mitigate environmental risk and explore new community uses for legacy sites.

4. **Supporting Strategies to Strengthen System Resilience**
   Two enabling strategies are proposed to support the successful implementation of system-wide changes. A Promotion and Education Strategy will support residents, businesses and community groups being informed and engaged as new services and policies roll out. A Disaster Debris Management Plan is also recommended to enhance emergency preparedness and response, so that the County is equipped to handle excess waste generated during extreme weather events or other disruptions.

The SWMMP is supported by financial modelling that includes capital and operating forecasts, cost of service analysis, and long-term funding considerations. This helps the County to assess the financial implications of service enhancements and to support

informed decision-making around cost recovery, rate structures and program affordability.

Each recommendation includes consideration of implementation timelines, risk factors, mitigation measures and required Council decisions. A milestone schedule has been developed to guide phased implementation over the 10-year horizon, aligned with future contract procurement cycles and growth projections.

The SWMMP provides a practical and forward-thinking framework to support the County's evolving needs. It reflects a strong commitment to continuous improvement, public accountability and environmental stewardship. As Haldimand County continues to grow, the SWMMP will serve as a blueprint to deliver efficient, sustainable and responsive waste services for the future.

1.0 Introduction

Haldimand County (the County) is situated on the Niagara Peninsula, on the northern shore of Lake Erie and the Grand River. The County is on the ancestral land of many generations of Indigenous nations including the Six Nations of the Grand River (Six Nations) and the Mississaugas of the Credit First Nation. Within its 1,252 square kilometres, the County's population is approximately 50,000 and has approximately 19,000 private dwellings.[1] The County's population centres include Caledonia, Dunnville, Hagersville, Jarvis, Townsend and Cayuga (where the Municipal Administration office is located).

1.1 Background to Solid Waste Management Master Plan

In 2024 the County retained Dillon Consulting Limited (Dillon) and subconsultant Watson & Associates Economists Ltd. (Watson) to deliver a Solid Waste Management Master Plan (SWMMP) that addresses the County's needs with respect to its waste by-laws, transfer station operations, curbside collection, customer service, public outreach, hazardous and special waste (HSP) and closed landfill site management. The SWMMP is required for the County to develop a clear and comprehensive analysis of existing services, including the administration, contracts and programs that are required for services to be delivered. Serving as a strategic framework, the SWMMP will guide sustainable waste management practices that align with local, provincial and federal regulations. It will serve as a blueprint for enhancing the solid waste management practices within the County and lay the foundation for a financially sustainable and resilient waste management system that meets the needs of the growing community.

1.2 Limitations

This study is limited to reviewing the current municipal solid waste management services and operations for the County as of April 2025. For this study, solid waste refers to municipal solid waste generated or produced by residents and IC&I customers that

[1] Statistics Canada's 2021 census

the County may service. This study's scope does not include waste from the following sources:

- Municipal sources such as wastewater treatment plants that produce sewage sludge or biosolids; or
- Liquid waste or hazardous waste, except for municipal hazardous or special waste under the Province of Ontario's *Waste Diversion Transition Act* (WDTA), 2016, Ontario Regulation (O.Reg.) 387/16.

Dillon prepared this report for the sole benefit of the County. The material in the report reflects Dillon's best judgement in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decision based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

1.3 Project Approach

Five tasks were undertaken to develop a SWMMP, Strategic Plan and Schedule of Milestones.

1.3.1 Task 1: Project Management

Task 1 entailed managing the project. As part of this task, a project initiation meeting was held and attended by representatives from the County and Dillon in April 2024. During the meeting, the project scope was confirmed and requests for waste management data and reports were made by Dillon.

1.3.2 Task 2: Review of Historical and Existing Services, and Projections

To inform the state of the County's existing services and current waste management functions, several activities were completed which included the following:

- **Statutory Requirements and Emerging Trends:** Current and upcoming regulations, emerging trends and potential County impacts (**Section 2.0**);
- **Historical and Current State Review:** Identify historical information through a review of available plans, studies and reports relevant to the County, to identify current

waste management functions, and to undertake a cost and performance evaluation (**Section 3.0**); and

- **State Review:** To identify anticipated population and waste tonnages (**Section 4.0**).

1.3.3 Task 3: Review of Comparable Providers

Dillon conducted a jurisdictional review of comparable waste management programs to identify best practices that could inform enhancements to the County's system. The review focused on approaches that may be adaptable to the County's context and operational model. Insights from this analysis were used to develop a series of opportunities for the County's consideration, supporting the integration of proven strategies into its waste management framework (**Section 6.0**).

1.3.4 Task 4: Identification of Opportunities for Refinement and Future Planning

With an understanding of the County's current position and research conducted through the review of comparable providers, a list of implementation actions/opportunities for refinement based on current waste management practices and the identification of future plans to address long-term growth were developed (**Section 7.0**). A public survey was conducted to gather input on residents' current waste disposal practices, awareness and use of municipal facilities and programs, and suggestions for future service improvements. While not originally included in the project scope, the survey was added at the County's request and provided meaningful insights to help inform the final recommendations.

1.3.5 Task 5: Project Deliverables

The SWMMP, Strategic Plan and Schedule of Milestones were presented to the County and finalized following receipt of comments.

2.0 Statutory Requirements and Emerging Trends

There are several statutory requirements at the municipal, provincial and federal level applicable to the County (as of December 2024). The industry is also adapting to changes not only as a result of new legislation, but also as a result of environmental and economic shifts.

2.1 Local By-Laws

The County's by-law number 2501/24 is administered by the General Manager and governs the provision of waste and other materials within the County. This by-law was adopted in 2024, rescinding the County's older waste by-law that dated to 2016, due to the transition of the Blue Box program to Individual Producer Responsibility (IPR). Municipal By-Law Enforcement Officers are authorized to enforce by-law conditions according to stated processes that can range from requiring a violator to work to correct a contravention (i.e., remove inappropriately placed waste) to issuing an order (which involves applying tipping fee charges for the clean up of waste), and/or applying other financial penalties for convictions. It also establishes eligibility and terms of service for curbside waste collection which are consistent with the County's current service standards. However, despite this authority, Municipal By-Law Enforcement Officers do not currently provide enforcement services related to waste management, representing a gap in the County's ability to address non-compliance through existing mechanisms.

The document identifies urban areas (namely Caledonia, Cayuga, Dunnville, Hagersville, Jarvis and Townsend) as well as hamlet areas which are serviced as rural areas that include all villages and hamlets not identified as urban areas. The types of customers identified in the by-law include low density residential properties, duplexes, multi-residential buildings (six units or less) and multi-residential structures, IC&I on collection routes, farm operations and trailer parks.

The most nuanced aspect of the by-law is its allowance for the County to decide whether to provide door-to-door waste collection service on private roads and/or common collection points. As the County collects garbage in bags (as opposed to County-issued bins), residents are responsible for waste handling systems, such as animal-proof containers or enclosures (secured structure, often made of wood or metal

that are typically used on private roads). As well, the state of the roads are the responsibility of private property owners, including snow clearing, salting, potholes and tree removal; the County may suspend service if road conditions are unreasonable.

As well as the by-law, the County has an application form for residents to request curbside collection. The form seeks information such as whether there is a continuous drive-through access and exit, and whether there is sufficient overhead clearance. Since collection operators are generally not permitted to reverse their vehicles on municipal streets, collection points on private roads should be positioned to avoid requiring drivers to perform reversing manoeuvres.

2.2 Provincial Jurisdiction – Ontario

In 2016, the Waste-Free Ontario Act was passed by the Legislative Assembly of Ontario. During that year, it also enacted two Acts: The *Resource Recovery and Circular Economy Act* (RRCEA) and the WDTA. These acts are important to understanding the legislative context for municipal waste management in Ontario, primarily as RRCEA and WDTA authorize the transition of the financial and operational responsibility for waste diversion programs in Ontario from municipalities to product and packaging producers.

Pursuant to the WDTA, the Ministry of Environment, Conservation and Parks (MECP) shifted the authority for oversight of waste diversion programs from Waste Diversion Ontario to the Resource Productivity and Recovery Authority (RPRA). RPRA is responsible for the wind-up of industry funding programs under the former model, registering producers under the RRCEA and developing oversight mechanisms including reporting. Transitioned waste diversion programs include tires, batteries, electrical and electronic equipment and hazardous and special products. The Blue Box program is in its last of three years of being transitioned to the IPR model.

2.2.1 Individual Producer Responsibility

The Blue Box program transition is the most significant program impacted by the provincial transition to IPR, due to the value of investments that municipalities have made and the complexity of removing this program from integrated waste management systems.

Blue Box O.Reg. 391/21, as amended by Blue Box O.Reg. 349/22, is the regulation that details how the transition of responsibility for the municipal Blue Box program to producers across the province will occur. This includes the timeline for transition, which is between July 1, 2023, and December 31, 2025. By January 1, 2026, producers will be responsible for financing and operating a recycling system, termed the "Common Collection System," across the province. The significance of the Blue Box O.Reg. 349/22 for municipalities is that, following the transition, there will be no regulated responsibility for municipalities to provide Blue Box collection, processing or education for eligible sources.

Pursuant to Blue Box O.Reg. 349/22, producers are required to meet material management targets, which outline the quantity of various types of designated Blue Box materials that need to be captured and processed. During the transition years (i.e., July 1, 2023, to December 31, 2025) producers will be responsible to provide the services at the same level as was provided pre-transition to "eligible sources," which are locations identified in the regulation and include residential homes, long-term care homes, schools and in some public spaces. Producers will be required to collect materials that are designated as "eligible materials" in Blue Box O.Reg. 349/22. These include single-use packaging and products such as water bottles, glass jars, aluminum and steel cans and other items commonly included in municipal recycling programs.

The County has already transitioned its Blue Box program, which occurred on January 1, 2024. Since that date, a service provider under contract to the Producer Responsibility Organization (PRO), Circular Materials Ontario (CMO) provides recycling collection services to customers that are eligible under the regulation. The County has continued to provide free drop off services for Blue Box materials at its Canborough Waste Management Facility (CWMF), including services to non-eligible customers such as restaurants and small businesses.

2.2.2 Food and Organic Framework

On April 30, 2018, under the RRCEA, the MECP released the Food and Organic Waste Framework which sets as its vision, "A circular economy that moves towards zero food and organic waste and zero greenhouse gas (GHG) emissions from the waste sector." With the aim to prevent, reduce and rescue food waste in order to reach provincial Climate Change Action Plan targets, the Framework aims to reduce food and organic

waste, recover resources from food and organic waste, support resource recovery infrastructure and promote beneficial uses of recovered organic waste. The Framework contains two components: The Food and Organic Waste Action Plan and The Food and Organic Waste Policy Statement.

The Food and Organic Waste Action Plan sets out opportunities for collaboration among partners and other mechanisms to achieve goals, such as the development of food safety guidelines to support the safe donation of surplus food.

The Food and Organic Waste Policy Statement advises various levels of government, institutions (including hospitals, schools, retailers) and commercial entities (including producers), that the province has an interest in organic waste reduction and recovery. It also sets organic waste reduction and diversion targets and timelines for several sectors and communities. The targets vary depending on the region, population and population density. The Food and Organic Waste Policy Statement prioritizes food waste reduction and recommends that municipalities create food waste reduction promotion and education (P&E) programs. It also advocates for the rescue of surplus food waste through partnerships with food rescue organizations or the use of technology to improve logistics and safety for food redirection. The types of food and organic wastes that should be diverted are included, as is a section to acknowledge the emergence of compostable products and packaging which recognizes the need for industry standards, new recovery technology and P&E. Notably, the Food and Organic Waste Framework suggests that an organics disposal ban is coming; however, it is not specific regarding the timing for this change.

The County currently does not have an organic waste collection program. As per the Food and Organic Waste Policy Statement, as a single-tier city that is located within Southern Ontario, which has a population between 20,000 and 50,000 and a population density that is less than 100 people per square kilometre (approximately 41 people per square kilometre), there is the expectation that there is a 50% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025.[2] The Food and Organic Waste Policy Statement defines urban settlement areas as “urban areas within *municipalities* (such as cities, towns, and

[2] https://www.ontario.ca/page/food-and-organic-waste-policy-statement

villages) that are built up areas where development is concentrated and which have a mix of land uses". Based on this definition, this would include, and may not be limited to, Caledonia, Cayuga, Dunnville, Hagersville, Jarvis and Townsend.

2.3 Federal Jurisdiction

While waste management is mainly regulated at the provincial level, the federal government also plays a role in addressing waste, particularly plastic pollution. Canada has joined in making a commitment to this issue on the international stage, as well as through the development of an action plan and a regulation to reduce the use of single-use items.

2.3.1 Canada's Commitment to Plastic Reduction

The Government of Canada has committed to plastics reduction, as is articulated in the Strategy on Zero Plastic Waste, Ocean's Plastic Charter, and the Canada-Wide Action Plan on Zero Plastic. The Ocean Plastic Charter has been adopted by national governments including Canada, France, Germany, Italy and the United Kingdom, with the aim to move towards a more resource-efficient and sustainable approach to plastic management. The Charter brings together leading governments, businesses, and civil society organizations to recognize and reduce marine plastic litter.

The Strategy on Zero Plastic Waste published by the Canadian Council of Ministers of the Environment (CCME) in 2018, outlines the action areas that Canada needs to address to achieve the targets outlined in the Ocean Plastics Charter. The Strategy on Zero Plastic Waste outlines Canada's vision for plastics in a circular economy and the approach has three integrated elements:

- Prevention of plastic waste;
- Collecting all plastics, including through clean up; and
- Recovering value from all plastics using a range of strategies and processes.

The Canada-Wide Action Plan on Zero Plastic Waste builds on the national strategy to reduce plastic waste and pollution and aims to contribute to the Ocean Plastic Charter. In 2019 the Canada-Wide Action Plan on Zero Plastic Waste outlined actions for governments to take in order to recover the value of plastics through reuse, repair, remanufacture, refurbishment and recycling. Through the Canada-Wide Action Plan on

Zero Plastic Waste the federal government is working with provinces and territories to develop producer responsibility programs, invest in technologies and solutions, support community and citizen-led activities, prevent and retrieve lost or discarded fishing gear and accelerate research on the impacts of plastic pollution.

2.3.2 Federal Single-Use Plastics Regulation

On June 20, 2022, the Government of Canada published regulatory prohibitions on single-use plastics. December 20, 2022, marked the beginning of the single-use plastic ban and, to allow for single-use plastics in circulation in the supply chain to be disbursed, the sale of these materials was prohibited one year later (i.e., effective by December 20, 2023). However, on November 16, 2023, the Federal Court declared that adding "plastic manufactured items" to the list of toxic substances in the Canadian Environmental Protection Act, 1999 went against the constitution. On January 25, 2024, the Federal Court of Appeal granted a stay motion while the Government's appeal, filed on December 8, 2023, is ongoing. As of December 20, 2022, federal bans are in place to prohibit the manufacture and import of the following plastics:

- Checkout bags;
- Cutlery;
- Straws and flexible straws (accessibility exceptions apply);
- Foodservice ware;
- Ring carriers; and
- Stir sticks.

The technical definitions of the banned single-use items were based on physical properties that can be tested in a lab. For example, a plastic checkout bag is defined as a single-use plastic checkout bag if:

- It is made of plastic and will break or tear if it is used to carry 10 kilograms (kg) over a distance of 53 metres 100 times; or
- It is made of plastic and will break or tear if washed in a machine in conditions under which cloth bags would normally be washed.

As well as its intended purpose to reduce plastic consumption and litter, it is anticipated that the regulation will also result in an increase in the use of alternative single-use

items such as paper bags and straws, wooden stir sticks, shopping bags marketed as reusable and moulded fibre foodservice ware.

2.4 Emerging Trends

A range of industry trends and governmental policies are emerging throughout Canada at municipal, provincial and federal levels. As the County formulates its waste management strategies, goals and objectives, staff should stay informed about various issues and developments affecting the waste management sector. Key developments include the following:

- The rise in climate change brings risks to the industry, such as an increased likelihood of disruptions due to extreme weather events. Storms can lead to surges in waste volumes (e.g., fallen trees, yard waste and spoiled food from power outages), while heat waves may impact operational schedules and worker safety;
- Advanced technology is becoming more accessible, offering potential improvements in environmental performance, efficiency and job functions. Examples include electric collection vehicles, route optimization software, on-board data collection systems and artificial intelligence (AI) used in recycling sorting facilities;
- Emergency measures increasingly call for adaptive protocols to safeguard employees, including considerations related to extreme weather events, air quality issues and other health risks;
- Supply chain disruptions continue to impact municipal procurement timelines and budgets. These include delays in acquiring or repairing collection vehicles, rising costs for parts and volatility in fossil fuel prices that affect both operations and contractor pricing. In addition, international trade policies, such as tariffs on products such as vehicle parts or equipment, may further constrain access to key supplies and/or increase costs for waste management infrastructure;
- Circular economy initiatives are gaining ground, promoting alternatives to traditional linear waste systems. Municipalities are increasingly considering emissions reductions, landfill gas capture, reuse markets and support for the local economy through procurement from local and diverse suppliers;
- Transition to IPR in Ontario is reshaping how waste systems are structured. This includes a shift in how performance is measured, as producers, not municipalities, are now responsible for diversion outcomes of applicable programs;

- Economic inflation is placing financial pressure on both residents and municipalities, contributing to higher contract costs and fewer responses to procurements. This highlights the need for long-term cost containment strategies and proactive financial planning.
- Construction and demolition (C&D) waste is increasingly being prioritized, with more municipalities exploring strategies for reuse, recycling and recovery. This is particularly relevant in areas prone to flooding, fires and other disasters that generate large volumes of debris and where new development and rebuilding efforts are accelerating.
- Market introduction of alternative packaging and products, such as compostable packaging and replacements for banned single-use plastics is increasing. This raises both opportunities and challenges for processing systems, public education and enforcement.
- Evolving public expectations around transparency, environmental performance and service delivery are prompting more municipalities to invest in digital engagement tools and real-time reporting dashboards.
- Workforce challenges and shifts are emerging in response to the need for new skill sets, training and succession planning, particularly as municipalities modernize equipment, introduce automation to reduce health and safety incidents and respond to labour market shortages.

Staying informed of these emerging trends will enable staff to proactively adapt and refine the County's waste management policies and be responsive to challenges and opportunities in the sector.

3.0 Historical and Current State Review

The County's current waste management system encompasses curbside collection methods, the CWMF, several closed landfills and IPR programs that service diverse customer groups. Staff interviews provided additional insights into challenges and strategic planning efforts amid anticipated population growth and evolving industry costs.

3.1 Waste Management System Overview

The County provides waste management collection services in different collection areas and to different customer groups, including:

- Residents with individual collection points in urban, hamlet and rural areas (including agricultural, suburban, cottage and downtown communities);
- Residents with common collection points (which are located in both cottage areas and downtown areas);
- Residents in multi-residential dwellings where waste is set out in parking lots or on private roads (approximately 20 locations);
- Some private road customers, mainly located in the lakeshore areas and where alternative vehicles are required to access pickup points. Not all customers receive collection in these areas;
- Commercial customers whose businesses are located along residential collection routes; and
- Small or medium sized businesses in Business Improvement Areas (BIAs).

Services include waste collection for garbage, bulky waste, and leaf and yard waste (LYW). The County has transitioned the Blue Box program and no longer provides recycling collection, except for drop-off services at the CWMF. An organics waste diversion program for food and other household organics is not currently offered.

There is one active waste management facility in the County, the CWMF. **Section 3.7** describes its current operations and diversion programs. As well, the County is responsible for the management and perpetual care of 15 closed landfill sites, which are described in **Section 3.10**. As a summary to highlight key findings about the current

waste management system, County staff were interviewed, and the results are summarized in **Section 3.11**.

3.2 SWMMP Update – May 2007

In 2007, the County developed its most recent SWMMP. The 2007 SWMMP anticipated that by 2021, the population would increase between 50,500 and 52,280. Using a per-capita waste generation rate of 0.88 tonnes per person annually, it estimated that by 2017 the County would annually manage between 44,440 and 46,000 tonnes of waste.[3] The 2007 SWMMP did not identify specific diversion targets for the County apart from those that were set out in O.Reg. 101/94 for recycling, backyard composting and LYW collection and composting, and that were applicable to a community with a population between 5,000 and 50,000 in population. The County has complied with the regulation, including reporting through Datacall for Waste Diversion Ontario.

Although five-year updates to the SWMMP were recommended, County staff prioritized attention on compliance requirements and operational enhancements, including system-wide data analysis and performance summaries required for reports to Council and to meet MECP requirements.

Staff have indicated the 2007 SWMMP is less pertinent now given that significant changes have taken place, including regulatory changes, changes to how contracts are structured and changes in the economy more broadly (including cost escalations).

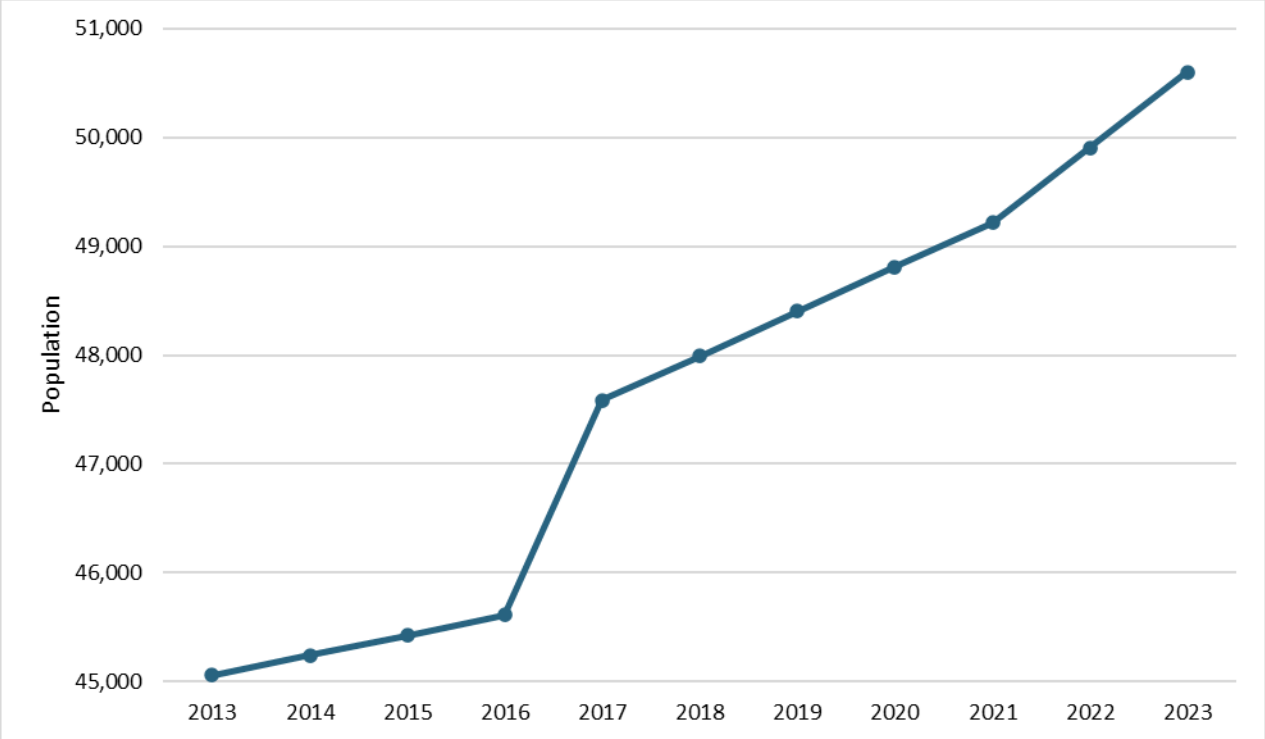
3.3 Population

In 2024, under a separate contract with the County, Watson prepared revised population, household and employment forecasts taking into consideration the forecasts prepared for the Growth Plan, 2020.[4] Three long-term population forecasts were completed for the County (low, medium and high growth). Based on the revised forecasts, the County is anticipated to grow to a population of 82,700 residents by 2051 under the medium growth category; this category was used in the development of the

[3] Haldimand County Solid Waste Management Master Plan Update. May 2007, Provided by Urban & Environmental Management Inc; refer to pages 10-11.
[4] Haldimand County: Population, Household & Employment Forecast Update, August 2024

SWMMP. Growth is to be concentrated in the six urban areas with Caledonia expected to receive 62% of the overall population growth. An estimated 12,900 new households are anticipated in the County by 2051 to accommodate the forecasted growth. Over 90% of the new households are expected to reside in the six urban areas, with over 60% residing in Caledonia. An increase in density of new housing units is expected due to aging of the population and increasing costs for low-density housing which is pushing some households into more affordable higher density housing (refer to **Section 4.1.2**).[5] Using the County's population data for 2011, 2016, 2017 and the census data for 2021, an interpolated population was used to estimate population from 2013 to 2023 (**Figure 1**).

Figure 1: Estimated County Population (2013 to 2023)



[5] Haldimand County: Population, Household & Employment Forecast Update, August 2024

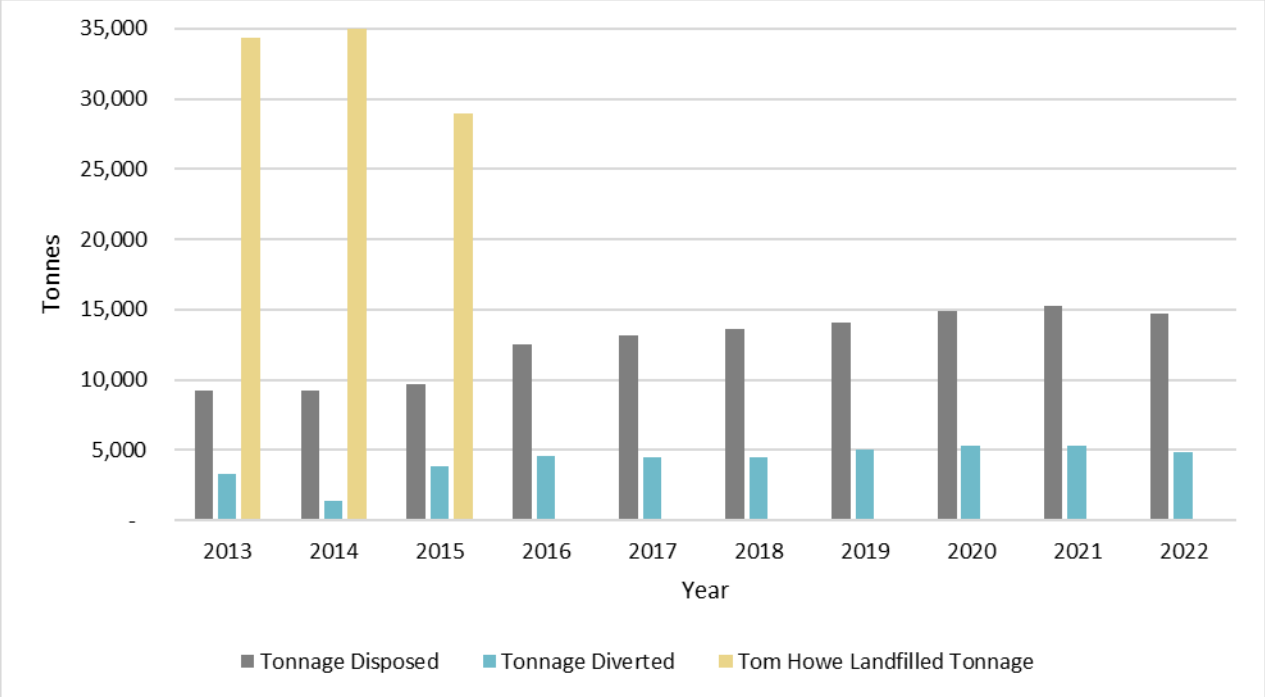
3.4 Waste Quantities

The following highlights historical waste quantities over the past ten years with a more detailed review of the 2023 quantities.

3.4.1 Historical Waste Quantities (2013 to 2022)

In 2013, the CWMF accepted a total of 9,088 tonnes of garbage, 3,195 tonnes of recyclables, 90 tonnes of LYW and 110 tonnes of bulky waste. The quantity of waste between 2013 and 2022 has been increasing since 2016 with exception to 2022, which decreased between 2021 and 2022 (**Figure 2**). The Tom Howe Landfill closed on October 31, 2015; tonnage data from 2013 to 2015 is included to show that overall waste quantities were not consistently increasing during that period, despite what trends at the CWMF alone may suggest. After the Tom Howe Landfill closed the County stopped receiving waste from Norfolk County and Mississaugas of the Credit First Nation entered into a private collection agreement that would sporadically dispose to the CWMF.

Figure 2: CWMF Accepted Waste, 2013 to 2022 (Tonnes)



3.4.2 2023 Waste Quantities

In 2023, the CWMF accepted a total of 14,408 tonnes of garbage, 3,350 tonnes of recycling, 1,595 tonnes of LYW and 176 tonnes of bulky waste from curbside collection programs and facility collection. **Figure 3** shows the percentage breakdown of the material that was accepted at the facility. A breakdown of each waste stream is included in **Table 1**.

Figure 3: CWMF Accepted Waste, 2023 (Tonnes)

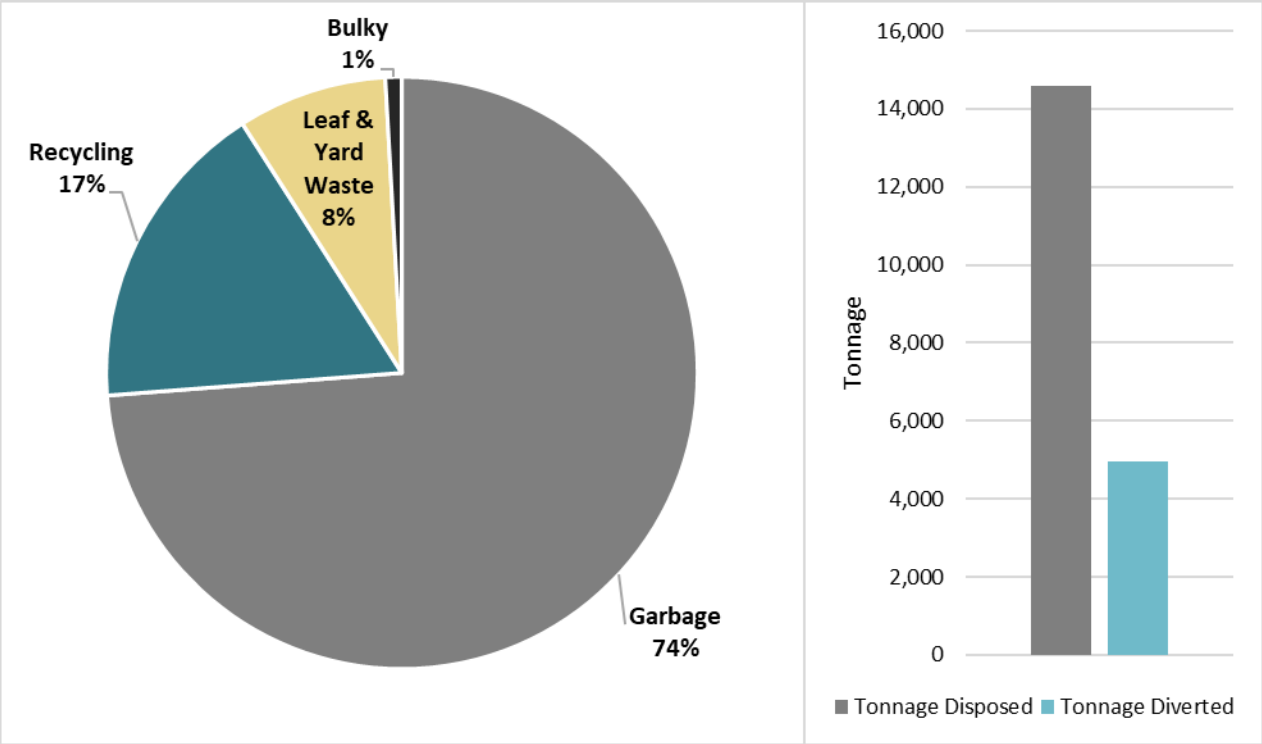


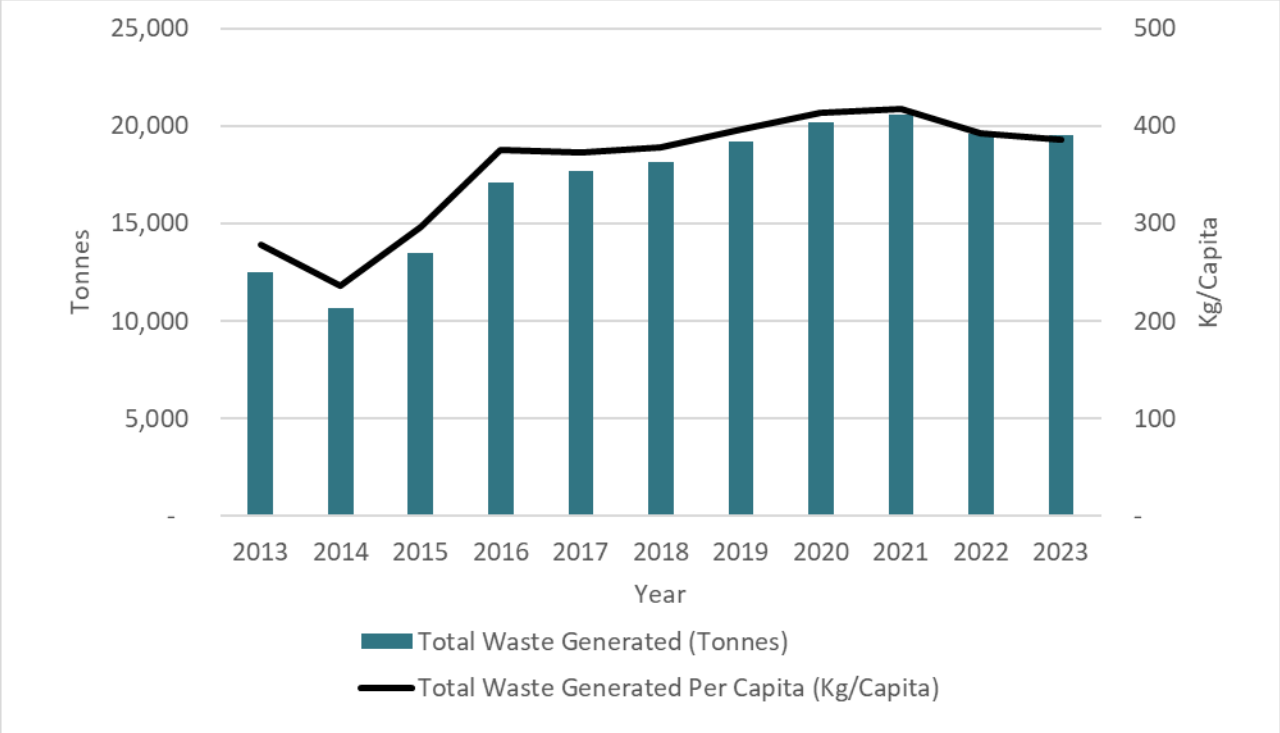
Table 1: CWMF Accepted Waste, 2023 Breakdown (Tonnes)

Waste Type	Material	Weight (Tonnes)	% of Total Managed
Garbage	Commercial Solid Waste	59	0.3%
Garbage	Household Solid Waste	2,760	14.1%
Garbage	Municipal Solid Waste (curbside collection)	11,527	59.0%
Garbage	Special Events, Pow Wow, Bulk Special	19	0.1%
Garbage	New Credit Municipal Solid Waste	43	0.2%
Recycling	Old Corrugated Cardboard	30	0.2%
Recycling	Municipal Recycling	3,203	16.4%
Recycling	Residential Recycling	81	0.4%
Recycling	Commercial Recycling	37	0.2%
LYW	In Yard Waste Collection Program	567	2.9%
LYW	In Yard - Tipping Fees Apply	85	0.4%
LYW	Woodchips from Facilities, Parks, Cemeteries & Forestry Operations	78	0.4%
LYW	Interdepartmental Soil Material	849	4.3%
LYW	Brush Debris	15	0.1%
Bulky	Haldimand Special Cleanup	176	0.9%
	All Waste Total	**19,529**	**100%**

3.5 Waste Generation

The waste generation rate is a calculation of the average quantity of waste generated per capita. Waste generation rates are affected by various factors and can be closely linked with economic conditions. In general, more prosperous populations consume more, creating greater waste generation. Using the County's population data from **Figure 1,** the waste generation rate from 2013 to 2023 is estimated in **Figure 4**. This does not factor in waste landfilled at the Tom Howe landfill or waste collected as part of the curbside collection contract (**Section 3.6.1**).

Figure 4: Waste Generation Rates (kg/capita, 2013 to 2023)



3.6 Curbside Collection

The County contracts out all curbside collection services. Currently, services are contracted to Norfolk Disposal Service Ltd., and includes garbage collection, LYW collection and processing, and bulky waste collection. The contract was executed in 2023 and is a seven-year contract with three additional option years to extend (i.e., may continue up to 2033). Pricing for collection is based on a per-stop payment model, as opposed to a weight-based payment model. Per the contract, the County identifies the number of stops according to the Municipal Property Assessment Corporation (MPAC) plus occupancy permits. For 2021, the estimated number of garbage collection stops in the contract was 21,876 (which was estimated as 12,500 tonnes of garbage).

There are approximately 70 County-approved set out locations from which waste is collected in a common area (referred to as common collection points). Examples of common collection points include parking lots around multi-residential buildings and private roads near cottages.

As a protection to the County, liquidated damages may be applied for collections completed outside of stipulated hours, failure to return for missed collections as directed and other infractions such as failure to pick up litter, material scavenging and discourtesy. A contract stipulation identifies that trucks must be no more than ten years old at any time during the contract.

3.6.1 Garbage

The County accepts garbage from residential and non-residential customers through curbside collection and at the CWMF. For curbside collection, garbage is collected from receptacles with set out limits in place as follows:

- Residential customers (low-density, duplex, multi-residential building: Three garbage receptacles per dwelling unit, per week;
- Eligible IC&I customers (used for one or more purposes): Ten garbage receptacles per week;
- Farm Operation: Ten garbage receptacles per week; and
- Trailer Parks:
  - Non-operational Season – Collected based on current practice in accordance with residential, commercial or farm set out limits listed above; and
  - Operational Season – Collected based on 3 Garbage Receptacles per MPAC assessed individual trailers on the property.

For garbage accepted at the CWMF for customers residing or operating within Haldimand County, Norfolk County or Mississaugas of the Credit First Nation, tip fees as of 2024 are applied as follows:

- $144/tonne; and
- If less than one tonne is dropped off, a $21 minimum fee is applied.

Norfolk Disposal Services Ltd. collects garbage from receptacles in BIAs and may receive additional payment for the clean-up of areas with illegal dumping.

3.6.2 Bulky Collection

Bulky waste includes household items such as furniture (e.g., sofas, desks, chairs, etc.), mattresses and box springs, and rolled and tied bundles of carpet. Residents are informed that bulky items should be of a weight that can be lifted by two people and

that their item should be out for collection by 7 AM on the Monday of the week on which it is scheduled for pick-up (or Tuesday if the Monday is a holiday).[6] Up to six items can be set out at a time per household, twice per year.

To receive bulky item collection, residents are required to call Norfolk Disposal Services Ltd. directly to make an appointment. Norfolk Disposal Services Ltd. is responsible to create a schedule that provides four collection days per month and is responsible for completing the collection within four weeks of the date that it was requested.[7] Bulky collection is provided to residential properties only.

3.6.3 LYW Collection

Urban residents are permitted to place an unlimited quantity of LYW at their curb on applicable collection days in their own open-topped reusable rigid containers, labelled as LYW or in a paper bag. Bundled branches and brush are also accepted. Collection is performed manually and occurs during five weeks within April and May and six weeks within October and November. The County may choose to add collection periods as a result of unpredictable weather events.

Norfolk Disposal Services Ltd. is responsible for the collection of LYW from urban residential properties and for its haulage to their offsite compost facility. Non-commercial LYW can also be dropped off year-round at the CWMF where it can be placed in 40-yard roll off collection bins, free of charge, which is then hauled to a compost facility. Commercial LYW is accepted at the CWMF and subject to tipping fees.

3.7 Canborough Waste Management Facility

The CWMF is located at 499 James Road, Dunnville. The site includes the Canborough Transfer Station (where all collected waste is transferred from collection vehicles to haulage vehicles) and is the only public waste drop-off depot in the County. A closed landfill is also on site and is described in **Section 3.10**.

According to its site Environmental Compliance Approval (ECA) (which applies to transfer operations and the depot), the County can accept no more than 30,000 tonnes

[6] https://www.haldimandcounty.ca/garbage-recycling/waste-collection-programs/#1531149560010-c4cf1f6b-dafa
[7] By-law and collection contract

of garbage annually and can manage the transfer up to 240 tonnes of garbage on the site at any time. For recycling, the annual maximum is 5,500 tonnes and up to 49 tonnes at any time. George Barnes and Sons is under County contract for transfer station operations; however, the scalehouse is operated with County staff, as the scales are also used for the public depot.

The depot is managed in partnership and accepts materials from residents of Haldimand, Norfolk County and Mississaugas of the Credit First Nation. It is open Monday to Friday 8 AM to 4:15 PM, Saturday 9 AM to 1 PM and is closed on Sunday. The depot accepts the following:

- Household and commercial garbage for a tip fee;
- Blue Box recycling (two stream – containers and fibres);
- Appliances with refrigerant removed or $56 per item with refrigerant;
- Metal
- Electronic waste;
- Tires;
- Commercial and residential loads of shingles (tip fee);
- C&D waste;
- Textiles (donated to Diabetes Canada);
- LYW accepted from residents only – commercial pays tipping fee; and
- Reuse Bin (shed-like structure) is monitored by attendant.

3.7.1 Site Visit

A site visit of the CWMF was conducted on July 16, 2024, during which several operation and infrastructural aspects were observed. Staffing at the facility consists of one or two individuals managing drop-off activities (dependent on the day of week) and a dedicated scalehouse operator present during all open hours to manage both inbound and outbound traffic.

The CWMF features a one-way traffic system. The transfer station and scalehouse were both constructed in 2015 and at the time of the site visit were in good condition based on a high-level visual assessment. The transfer station, equipped with a top-load compactor and a loader, accepts commercial and residential waste, including separate recyclables.

The County organizes four county-wide hazardous waste and Electrical and Electronic Equipment (EEE) collection events to prevent hazardous waste from being disposed at the CWMF (see **Section 3.8.2**). The County jointly owns the surrounding greenspace and old landfill area with Norfolk County, which has additional capacity; however, it is not planned to reopen.

3.8 IPR Programs

As described in **Section 2.2**, IPR programs have been introduced in Ontario. The following subsections describe the County's transition to IPR and management of IPR program materials.

3.8.1 Blue Box Recycling

The County transitioned its Blue Box program on January 1, 2024. As a result, the County no longer collects any Blue Box recycling as part of its curbside collection program. In accordance with Ontario's IPR framework (refer to **Section 2.2.1**), Blue Box recycling is collected by Modern Landfill Inc. of Canada which provides the service under agreement to CMO. Modern Landfill Inc. of Canada is also responsible for customer service calls related to the Blue Box program. Blue Box recycling is collected weekly using two boxes (e.g., one for containers and another for paper products) and transferred at a facility in Waterford, Ontario, operated by Norfolk Disposal Services Ltd., under a separate CMO agreement.

As per Ontario's IPR regulations, residents should not experience a service level change as a result of the transition and to-date services have continued to be provided at the same service level as when the County was responsible for providing them. However, prior to the transition, the County collected recycling from eligible IC&I, restaurants, non-profit organizations, daycares and places of worship that were on curbside collection routes. These locations are not eligible for collection under the IPR program and no longer receive curbside collection. To mitigate potential impacts, the County has continued to accept Blue Box recycling at the CWMF free of charge, so that these ineligible customers have a place to drop off their recycling.

While the County experienced a seamless transition in most respects, the distribution of Blue Box containers to residents met an unanticipated challenge. Six months prior to the transition date, the County ceased to provide free replacement Blue Boxes for residents

whose box was lost or broken, due to inventory issues, with the understanding that the new service provider through IPR would assume this responsibility. However, due to an oversight by either CMO or Modern Landfill Inc. of Canada, no replacement Blue Boxes were made available and residents requiring a new Blue Box were recommended to use clear blue bags or purchase a new Blue Box from a retail outlet. As of July 2024, Blue Box replacements have resumed to the regular level of service.

Another challenge is data collection and overall diversion performance monitoring. This challenge is not unique to the County but is shared across many Ontario municipalities as a result of the transition for several reasons including:

- Garbage from both residential and commercial customers is collected together in a single vehicle, making it difficult to determine how much Blue Box material may still be present in the garbage from eligible residential customers. Since commercial customers are not part of the IPR Blue Box program, isolating this data is important for estimating contamination levels and potential program improvements;
- The number of commercial customers along a collection route is so few that assessing whether there has been an increase in the quantity of recycling in the garbage is difficult to measure. Anecdotal feedback from some ineligible customers has indicated that, due to the driving distance to the CWMF, customers are likely to place their Blue Box recyclables in the garbage; and
- Most municipalities tracked diversion percentages as a means to gauge the effectiveness of recycling initiatives where a significant contribution to diversion was from the Blue Box program. With municipalities no longer tracking waste diversion percentages due to the lack of access to recycling tonnage data a shift needs to occur in how program performance is monitored.

3.8.2 Hazardous and Special Products & Electrical and Electronic Equipment

HSP and EEE is collected during four special events per year. The operating hours for the events are 9 AM to 1 PM and the locations in 2023 included the following:

- Cayuga Secondary School;
- McKinnon Park Secondary School;
- Dunnville Roads Yard; and
- Hagersville Secondary School.

The events accept materials included in the HSP regulation (i.e., paint products, automotive-type fluids, pressurized containers, etc.) as well as batteries and medications. Electronics accepted include computers, monitors, home office equipment, televisions, video equipment and cell phones. Small electronics are also accepted at the Walpole yard and Jarvis Library during regular library hours. In addition, a private-sector service provider, JLM Metal Recycling & Auto Parts accepts electronic waste from residents and has a location in Hagersville. The CWMF also accepts EEE all year for free.

For HSP, the County has agreements with PROs including Automotive Materials Stewardship Inc., Thermostat Recovery Program, Environmental 360 Solutions, Product Care and Ryse Solutions Ontario Inc. for the removal and processing of these materials. For EEE, the County has an agreement with Electronic Products Recycling Association to manage the collected materials.

As HSP is not included in the ECA for the CWMF, the County only accepts it at the event days and does not accept it at the depot. In 2023, 66 tonnes of HSP and 27 tonnes of EEE were collected during the four event days.

3.8.3 Batteries

As well as accepting batteries during the four special event days, the following sites currently accept old batteries during their normal operating hours:

- Caledonia Arena – 100 Haddington Street, Caledonia;
- Caledonia Library – 100 Haddington Street, Caledonia;
- Cayuga Administration Office – 53 Thorburn Street South, Cayuga;
- Cayuga Fire Hall – 11 Thorburn Street South, Cayuga;
- Cayuga Library – 19 Talbot Street West, Cayuga;
- Cayuga Memorial Arena - 55 Thorburn Street South, Cayuga;
- Dunnville Library – 317 Chestnut Street, Dunnville;
- Dunnville Memorial Arena – 275 Ramsey Drive, Dunnville;
- Hagersville Library – 13 Alma Street North, Hagersville;
- Hagersville Memorial Arena – 36 Sherring Street North, Hagersville;
- Jarvis Library – 2 Monson Street, Jarvis; and
- Selkirk Library – 34 Main Street West, Selkirk.

Once collected, batteries are received and processed by PROs. Until July 1, 2024, Call2Recycle Canada Inc. and Photech Environmental Solutions (recommended hauler by Call2Recycle Canada Inc.) were responsible for battery collection and processing. Recently, the County entered into a new contract with Environmental 360 Solutions for this service. In 2023, the batteries sent to PROs totalled 3,259 kg.

3.8.4 Tires

Tires on or off rim and free of mud are accepted at the CWMF free of charge. Once collected at the CWMF, the tires are picked up by a service provider and processed by the PRO (eTracks). Pursuant to Ontario's Tire Regulation, O.Reg. 225/18, municipalities are not required to report the quantity of tires collected but may collect this information for their own information or as part of an agreement with a PRO. In 2023, tires sent for processing totalled 62 tonnes.

Across the County, there are 20 other locations, including retail locations such as Canadian Tire Corporation and NAPA AUTOPRO, that receive tires on behalf of tire producers, who are responsible for meeting the targets set under the regulation. There are also retail locations that accept batteries.

3.9 Other Diversion Programs

At the CWMF, the County collects two diversion streams that are not regulated as part of Ontario's IPR framework. This includes asphalt shingles and other C&D materials. Asphalt shingles are collected in a roll-off bin that is picked up by Walker Industries. In 2023, the County received approximately 103 tonnes.

Drywall and concrete are accepted together in the same roll-off bin as C&D materials. These are removed from the site by Countrywide Recycling Inc., where it is processed in the City of Hamilton (Hamilton). In 2023, the County processed approximately 401 tonnes of C&D waste.

Bulky plastics and mattresses are not currently diverted due to a lack of end markets and IPR programs. Currently, they are accepted as garbage for a tip fee. In the future, additional programs to address these materials may be considered.

3.10 Closed Landfills

Within the County there are 15 closed landfills of various sizes and ages and no active landfills. The County remains responsible for perpetual care and maintenance of its closed landfills, which are inspected annually as per MECP requirements. Inspections include:

- Clean-up activities such as removal of fallen trees, branches or cosmetic landscaping, culvert inspection and maintenance, and removal of litter, debris or illegal dumping (e.g., residents' tires);
- Inspection and maintenance of signage at all sites and fencing, where fencing exists: Sherbrooke, Oneida, Walpole, Rainham, Tom Howe, Canborough, Peebles and Seneca;
- Inspection and maintenance of landfill cap (surface erosion);
- Management of access routes and identification of Health and Safety hazards, such as access through thick vegetation to sites for inspection and passageways to allow for test drilling;
- Attending to monitoring wells, including checking tags and locks; and
- Considering potential sale, other uses of surplus land and encroachment by neighbours.

Consultation with the MECP regarding future repurposing options for closed landfill sites has been discussed as records are not available on the historic quantities of waste disposed and selling the site would reduce work for staff to monitor and potential generate one-time revenue,[8] pending no potential for environmental risk.

Enhanced monitoring is required at five of the closed sites: Seneca, Sherbrooke, Oneida, Canborough and Tom Howe.[9] The Tom Howe and Canborough sites require significant leachate management and administration. Total contract costs associated with the administration, management and hauling of the leachate hauling contract were

[8] Executive Summary Closed Site Inspections 2023 (Internal Document)
[9] https://pub-haldimandcounty.escribemeetings.com/filestream.ashx?DocumentId=20688 Last retrieved August 12, 2024

approximately $450,000 annually as of 2020.[10] Further information is provided in the following subsections regarding these two sites.

3.10.1 Canborough Closed Landfill

Closed in September 1992 as a landfill, the Canborough site continues to operate as it was repurposed as a transfer station. It is currently the only transfer station in the County. The site is located at 499 James Road, Dunnville Ontario. There is no landfill gas collection system at this site. Perpetual care is required for leachate monitoring and maintenance. Under the conditions of ECA A110202, waste generated within the Regional Municipality of Haldimand-Norfolk and the Mississauga's of the Credit First Nation may be disposed at the site.

3.10.2 Tom Howe Closed Landfill

The Tom Howe closed landfill is located at 611 Concession 15 Walpole, Hagersville. The site was closed on October 31, 2015, resulting in all of the County's municipal solid waste being landfilled outside of County boundaries.

At the Tom Howe site, perpetual care is required for ground water, surface water and leachate monitoring and maintenance. The County currently operates a landfill gas collection and flaring facility at the site, as is required by Section 9 of the *Environmental Protection Act*, R.S.O. 1990 as amended and the flare operates 24 hours a day, 365 days a year to control landfill gas emissions.[11]

3.11 Staff Interviews

Between June 24 and July 8, 2024, Dillon interviewed five County staff to gather information regarding the current waste management system and important topics that staff consider while performing their duties. The interviews were conducted virtually and were each approximately one hour in length. The staff interviewed included:

- Supervisor of Environmental Operations;

[10] https://pub-haldimandcounty.escribemeetings.com/filestream.ashx?DocumentId=20688Last retrieved August 12, 2024
[11] https://www.haldimandcounty.ca/wp-content/uploads/2023/03/Tom-Howe-Flare-ESDM-2021-09-03-Executive-Summary.pdf

- Two Solid Waste Operations Technologists;
- Foreperson at the Canborough Transfer Station; and
- Administrative Assistant to the Manager of Environmental Operations.

The discussions included objectives and drivers for the SWMMP. Interviewees also clarified details regarding the solid waste management system, including contracts in place, staff roles, and day-to-day operations and challenges addressed by staff. Further information about the County and the impact of provincial legislation were discussed to provide context. The interviews demonstrated a shared knowledge and understanding on key issues across the County's team.

The information provided in the interviews has been used to supplement Dillon's review of background documents and to identify the following key themes which are discussed in following subsections:

- Updated SWMMP need;
- Anticipated population growth;
- Common collection sites and private roads;
- Closed landfills;
- Increasing industry costs and presence of local service providers;
- Decision to implement organics; and
- Enhanced P&E.

3.111 Updated SWMMP Need

The interviews reflected that staff work closely together and have a high level of awareness of current policy and regulatory issues, history of the County's waste management sites and operations, and potential risks that could impact operations and service delivery. The County's staffing complement works in an integrated way and has a level of competence that enables them to support one another effectively in their work functions. Interviewees observed that as a small group, they have necessarily prioritized day-to-day operations and compliance reporting, rather than long-term planning. The former SWMMP is outdated; additional planning time and effort is now required.

3.112 Anticipated Population Growth

Housing developments are underway in Caledonia and staff expect that trend toward suburban style community growth will continue. Population expansion has a few implications for waste management. A larger population will generate more waste. The suburban style growth may result in changes to the community's expected service level and the type of services required/desired. For instance, organic waste diversion has become common in urban and suburban settings and the County has received comments from residents expecting to divert their organics. With people moving to the County from areas that had organics collection there is more pressure to implement an organics collection program.

3.113 Common Collection Sites and Private Roads

Section 3.6 outlines the range of customer types served under the County's collection program, including BIAs, common collection points, properties on private roads and locations with seasonal residents. The current collection contract applies charges per common collection point, which includes a fixed number of stops within that area. This is a per-pickup-location model, meaning the County pays for service regardless of the quantity of waste set out.

Staff expressed interest in better understanding their customers, disposal and diversion habits, and noted that the current collection system does not allow the County to know how much waste is coming in from each customer (i.e., whether customers are typically reaching the receptacle limit). In addition, it is not currently possible to know who is contributing larger or smaller quantities at the common collection points and what portion is being left by businesses at some of the sites (i.e., BIAs). It is also possible that locations are legacy addresses that have been collected historically but are no longer occupied or where access was deemed acceptable in prior years but that is too difficult to collect from (according to the current collection service provider and/or the County Staff expressed interest in more information on the number of residences that are occupied seasonally to enable more understanding of their waste generation and data. Further information on the quantities collected and from whom waste is generated would support staff in appropriately and fairly applying policies, fees and charges. To obtain this data, the County could implement a combination of tagged or barcoded receptacles at common collection points, require set-out reporting from collection

contractors, and conduct periodic waste audits and occupancy surveys to link waste generation patterns to specific customer types and locations.

3.114 Closed Landfills

The County is responsible for the perpetual care of many closed landfills. Due to this, staff are required to perform monitoring activities and report to the MECP. For some smaller and older sites, the County has little information regarding the history of the site and accessing the sites can involve trekking through remote areas. It was identified that further testing, research and consultation with the MECP and interested parties regarding environmental risk potential has the potential to alleviate the County of their current responsibilities and associated risks with monitoring and maintaining. This includes liability risks as well as risks associated with activities that may happen on the sites (e.g., hunting), and property encroachment (e.g., people using the land as their own).

Due to the County's responsibility for perpetual care of closed sites, leachate treatment is required for the Tom Howe and Canborough sites and is a significant part of the County's budget (noting that costs are shared with Norfolk County due to the prior municipal jurisdictional responsibilities/perpetual care agreement). The cost of hauling leachate is increasing as a result of increases in the volume of leachate generated from closed landfills, which is presumed to be the result of an increase in rainfall. The County manages leachate through wastewater treatment. A portion of leachate is hauled to the Hagersville Wastewater Treatment Plant (approximately 44% of Tom Howe landfill's leachate) and the remaining 56% of Tom Howe's leachate is hauled to the Simcoe Wastewater Treatment Plant. Leachate from the Canborough site is hauled to the Dunnville Wastewater Treatment Plant.

Due to the escalating costs, the County assessed long-term leachate management options. This work included a review of best practices and analysis of the County's available options for leachate from the two landfill sites. The study provided costs for a pre-treatment system, and force main that would pump the leachate to the wastewater treatment plant. However, due to high capital costs and the need for further agreements with local communities where the force main would be constructed, the status quo options (i.e., trucking leachate from both sites) was preferred.

Staff are continuously exploring alternative approaches to leachate management.

3.115 Increasing Industry Costs and Presence of Local Service Providers

Another significant trend that has impacted waste management is inflation. While cost escalation was previously evident through higher-than-normal responses to Requests for Proposals (RFPs) and Requests for Tenders (RFTs), particularly for waste collection and HSP services, inflationary pressures have since moderated. However, past increases continue to influence current contract pricing and budgeting considerations. This discussion is important at the Council level and Council has expressed interest in identifying options to reduce costs while maintaining services.

The County's key contracts, Norfolk Disposal Services Ltd. for curbside collection and George Barnes & Sons for depot operations, illustrate that there are service providers available locally with whom the County has a long history of doing business. As inflation continues to impact the industry, it is important that the County consider the availability of service providers and consider their needs of adequate time to appropriately develop responses to RFPs and RFTs.

3.116 Decision to Implement Organics

As described in **Section 2.2.2** the Food and Organic Waste Policy Statement is interpreted to indicate that the County is not required to implement an organics waste collection program. Staff indicated that they met with the MECP to discuss their recommendation and determined that their low population density means that their efforts should be focused on LYW and food waste avoidance instead of an organics program.

Due to the County's demographics and economic circumstances of today, edible food waste has not been identified by staff as a key issue impacting the community; however, it was identified that a campaign to encourage residents to reduce edible food waste at home would be possible.

Currently, the County currently subsidizes backyard composters; however, there has not been significant uptake. Staff also recently piloted a project using in-home composting units (FoodCycler) in the administration building to better understand whether it is a viable option; however, staff have currently identified that it is likely cost prohibitive.

Staff advised that recent audit data indicates 36% of the garbage stream is organic waste.[12] While sending organic waste to landfill has a negative impact to greenhouse gas emissions, the County's waste composition is reasonably consistent with what should be expected from the residential waste stream based on the County's current programs. Staff identified that the main driver for implementing a household organics program is pressure from residents that are familiar with organics programs in other (denser) jurisdictions.

Should the County consider implementing an organic waste collection program, a detailed cost analysis will be required. Additionally, the availability and capacity of source-separated organics processing facilities must be assessed. As part of its evaluation, the County may also wish to review Norfolk County's FoodCycler pilot as an alternative or complementary approach to traditional organics programs to determine if It could be financially feasible.

Interviewees indicated that for an organic waste program to be effective, resident adoption would be very important and aligning its implementation with other policy changes could support the County's efforts. For example, when Niagara Region introduced its organic waste program, it introduced bi-weekly garbage collection at the same time, which incentivized residents to divert organics as it would be collected more frequently than their garbage would.

3.117 Enhanced P&E

In accordance with its agreement with CMO, the County uses the Recycle Coach app as a P&E tool, and regularly updates its website, which is a key communication platform. Staff expressed that improving its engagement with the local community would support its efforts, such as using the County's social media pages for advertisements and education. Better understanding how to monitor complaints and identify common concerns were also expressed as ways that the County would like to continually improve its performance.

[12] 2-Season Curbside Garbage (Black Bag) Residential Waste Audit Summary Report – July and October 2024, AET Group Inc.

4.0 Future State

As the intent of this SWMMP is to guide sustainable waste management practices over the coming years, this section anticipates population growth and its impact to the quantity of waste that is expected to be managed by the County over the next 10 years.

4.1 Population Forecasts

Planning for the County's future waste management needs requires a clear understanding of anticipated population and employment growth. These projections help define the scale and scope of future services, infrastructure requirements and potential operational pressures on the waste system. The following subsections outline the methodology used to develop these forecasts and present the projected growth over the next 10 years.

4.1.1 Methodology and Approach

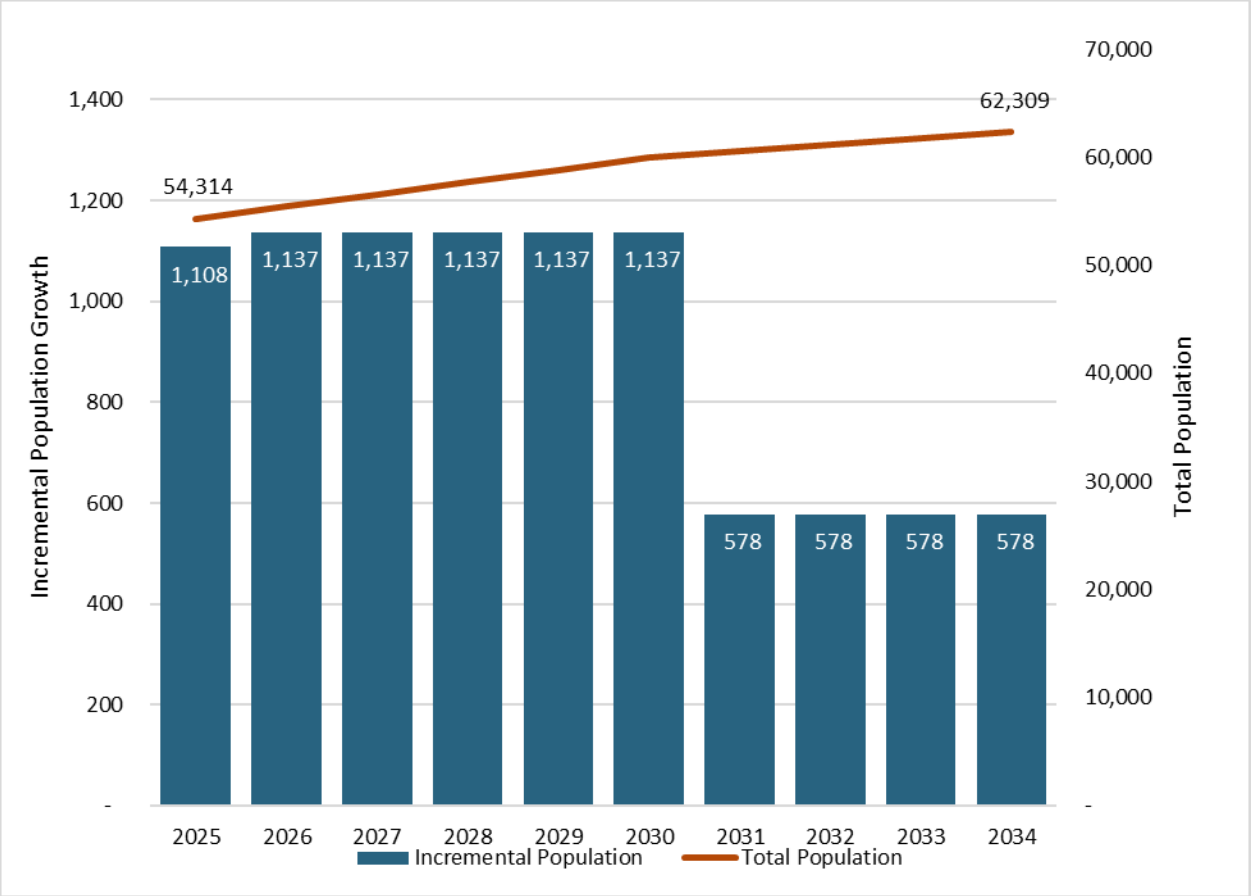
A growth forecast was prepared to estimate the future tonnage, so that the County would better understand demands on the waste management system (**Section 4.2**). This forecast is a necessary part of the SWMMP as it identifies the scale of operations and infrastructure required, which is important when considering the County's resource needs.

Watson is currently undertaking a Development Charges Background Study with the County. As part of the study, a growth forecast was prepared to estimate the population and unit growth for residential development, and the employment and gross floor area growth for non-residential development, (i.e., the IC&I sector). Therefore, the growth forecast utilized for this SWMMP is based on the development charges growth forecast.

4.1.2 Anticipated Population Growth

Figure 5 provides the anticipated population growth over the County's 10-year forecast period based on the data from the County's 2024 Population, Household & Employment Forecast Update.[13]

Figure 5: Forecasted Population Growth (2025 to 2034)



Based on **Figure 5**, the total County-wide population is forecasted to reach approximately 62,300 people by 2034. Growth in the County is forecasted to remain above the levels experienced before 2020 but gradually decline over the forecast period. The County is expected to experience growth of over 1,100 people per year until 2031, when it is projected to reduce to growth of approximately 580 people per year.

[13] Haldimand County: Population, Household & Employment Forecast Update, August 2024e

This is in part due to the County's large number of units registered or approved as of 2024.

Table 2 provides a breakdown of the population by urban areas and remaining areas along with the population density for 2021 and 2025 which is derived from the August 2024 Haldimand County: Population, Household & Employment Forecast Update.

Table 2: Population and Density Forecast by Urban Area and Remaining Rural Area, 2021 to 2051

*Adapted from Haldimand County: Population, Household & Employment Forecast Update, August 2024

Location	2021 Population	2021 Density	2051 Population	2051 Density	Area (square kilometre)[14]
Caledonia	11,754	1,280	31,340	3,414	9.18
Cayuga	1,848	868	3,420	1,606	2.13
Dunnville	6,772	1,234	8,770	1,612	5.44
Hagersville	3,276	1,040	8,920	2,832	3.15
Jarvis	2,555	4,563	3,230	5,678	0.56
Townsend	1,345	4,804	1,610	5,750	0.28
Remaining Rural	23,622	19	25,420	21	1,229.71
Total County	**51,172**	**41**	**82,710**	**66**	**1,250.45**

4.2 Waste Generation Forecasts

Understanding future waste generation is critical to planning sustainable, efficient services and infrastructure. This section outlines the methodology used to project waste quantities over the 10-year planning horizon and presents the resulting forecast, which will inform decisions related to service levels, facility needs and tipping fee evaluations.

[14] https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E

4.2.1 Methodology and Approach

A tonnage forecast was prepared based on the County's historical tonnage information. Tonnage was forecasted from 2024 to 2034 on a per capita basis, utilizing the population forecast (**Section 4.1**), waste quantities managed at CWMF (**Section 3.4**) and curbside waste quantity estimates (**Section 3.6**). The tonnage forecast evaluates all handled solid waste materials including public drop off materials, LYW, soil material, diversion centre material, tires, bikes, freon appliances, metal, HSP, storm debris and material, recycling, Niagara Material Recovery Facility material, leachate and process water and Twin Creeks materials (garbage).

The forecast is based on average historical tonnage data provided by the County. The historical information was analyzed and reviewed with staff and it was determined that the most accurate data set was from 2019 to 2023 for each material type. These quantities formed the basis for generating an annual per capita amount.

The anticipated tonnage forecast will be used in a review of tipping fees.

4.2.2 Waste Generation Forecast

The forecasted 2025 tonnage is anticipated to be approximately 51,500 handled tonnes. The major difference in the collected tonnes between 2023 actuals and 2025 estimates is the elimination of eligible source curbside Blue Box collection. The County transitioned its Blue Box program in January 2024 but has continued to provide free drop off services for Blue Box materials at its CWMF, including services to non-eligible customers. For 2026 and beyond, no tonnage is included in the forecast for Blue Box materials. The tonnage forecast is included in **Appendix A**.

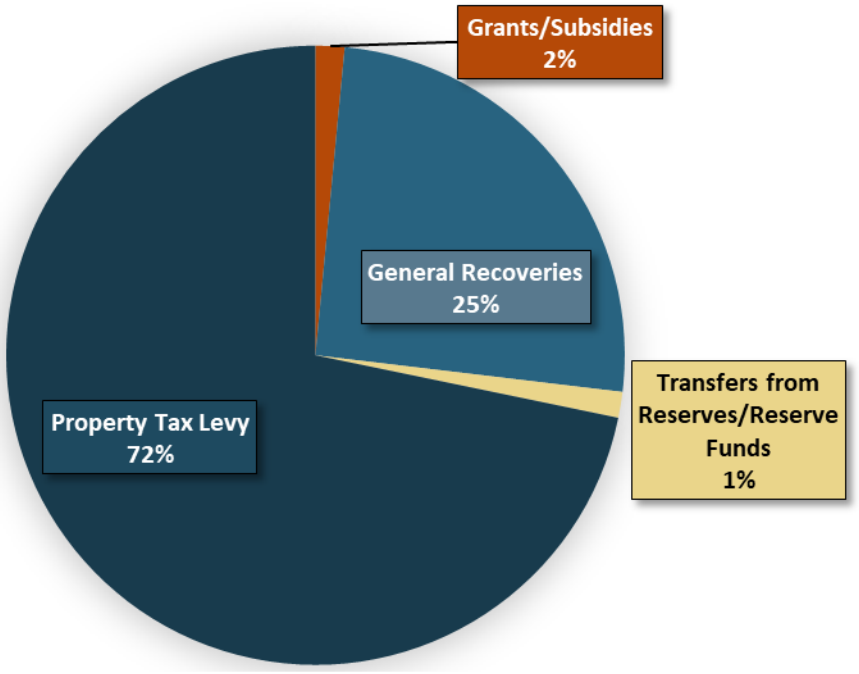
5.0 Cost Evaluation

The County currently funds its solid waste services through a combination of user fees, property taxes, grants and subsidies and transfers from reserves/reserve funds. User fees (e.g., tipping fees) seek to recover the costs of specific activities and property taxes are utilized to fund the remaining expenditures.

5.1 Current Funding Approach

Currently, the total amount of net expenditures for solid waste funded by property taxes (approximately $6.71 million) comprises approximately 7% of the property tax levy in the County.[15] The current funding approach relies on property taxes as the largest source of revenue. Property taxes fund approximately 72% of all expenditures (**Figure 6**).

Figure 6: 2024 Operating Budget Solid Waste System Funding



[15] Excludes education property taxes.

Approximately 25% ($2.37 million) of revenues are General Recoveries. These fees relate to recoveries for tipping fees, recoveries from Norfolk County for leachate processing and other recoveries related to EEE, brush chips and other diversion initiatives. Grants and subsidies provide for approximately 2% ($0.14 million) to the overall revenue (e.g., CMO funding, HSP funding, etc.). Contributions from Reserve Funds provide approximately 1% ($0.12 million) of all revenues.

The County's current funding model approach has both benefits and drawbacks.

Benefits of Current Funding Approach:

- Property tax revenue is a stable/ consistent revenue source; and
- No additional administration is required to issue bills and receive tax revenue.

Drawbacks of Current Funding Approach:

- Property tax revenue is limited based on Council approved tax rate increases;
- As the funding envelope is restricted by Council approved rates, the current approach may not fully consider lifecycle costs for facilities and vehicles;
- Does not utilize solid waste-specific reserves/reserve funds to pay for major capital expenditures (i.e., utilizes general capital reserves); and
- Limited incentive to increase waste diversion activities as the cost to each individual user of the system is generally not impacted by how much waste they create.

The current approach is the most common approach to funding for municipalities across Ontario. Subsequent sections provide a comparative to other municipal approaches.

5.2 Solid Waste Services Funding Approach – Best Practices

A review of cost recovery practices was undertaken for Ontario jurisdictions (which includes several single-tier jurisdictions, similar to the County). Most solid waste systems in Ontario are funded primarily through property taxes, with offsetting revenues from the sale of materials, public drop-off fees, tipping fees and other general user fees. The City of Toronto (Toronto) was reviewed given it has implemented a full utility rate-based system for solid waste services, similar to water and wastewater services. Other municipalities were reviewed given their proximity to the County, similar population sizes and waste management practices.

The list of Ontario comparators surveyed for best practices includes Brant County and the cities of Toronto, Hamilton and Brantford.

5.2.1 City of Toronto

Beginning in 2008, Toronto implemented a volume-based rate structure to fund a service objective of 70% waste diversion. The rate revenue generated from this approach is utilized for garbage, recycling, organics, yard waste, litter prevention, landfill management and other diversion-related programs. These fees are part of Toronto's utility bill (along with water charges). In addition to user rate revenues, Toronto receives funding from various user fees and material sales proceeds. No fee recovery from property taxes is required.

Residential

The user rate is based on the size of the garbage cart selected by each household. For residential properties, the 2024 fees range from $295 per year for a 75 Litre cart to $565 per year for a 360 Litre cart. Additional garbage bags may be set out, with the purchase of bag tags for $6.14 each. Toronto forecasts 3% rate increases annually for sufficient reserve balances.

Apartments, Condos and Co-operative Housing

Toronto offers a rebate program for multi-residential units to encourage diversion and customers to opt-into the City collection system rather than private sector collection. After the rebate is applied, customers pay a small annual amount plus any excess waste over the base volume, thus encouraging diversion. When Toronto first switched to a utility rate system, it experienced a decline in city collection participation for multi-residential buildings due to difficulty understanding the fee structure and inadequate incentives for diversion. Since this discovery, Toronto has changed the multi-residential fee structure to a linear cost model effective July 1, 2010. When the new fee structure was first introduced, the rebate was equal to the base rate per year to encourage customers to choose Toronto collection services over private sector services and to encourage diversion as customers were effectively only paying for excess volume of

waste over the base volume. The rebate is funded through the Toronto approved budget for non-program rebates.[16]

Fees are based on the overall volume of garbage, with different rates applicable for compacted versus un-compacted garbage. The fee includes collection of recycling, organics, LYW and HSP. Any amount over the base rate is considered excess and the building will be charged an excess fee per cubic yard. **Table 3** provides the 2024 fees.

Table 3: City of Toronto Multi-Residential Fees 2024

*Any excess volumes collected beyond 1.917 cubic yards per unit per year (un-compacted) or 0.959 cubic yards per unit per year (compacted) are charged at the excess rate per cubic yard.

Waste Type	Volume (cubic yards)	Base Rate (per unit/year)	Rebate (per unit/year)	Net Rate (per unit/year)	Excess/cubic yards*
Un-compacted	1.917	$242.46	$185.00	$57.46	$16.83
Compacted	0.959	$242.46	$185.00	$57.46	$33.66

Non-Residential

Select businesses including small commercial (i.e., retail, green grocer's and restaurants) and other non-residential customers such as charities, institutions, religious organizations, school boards and City divisions, agencies and corporations may receive curbside collection. The following provides an overview of the fee structure:

- Collection frequency is determined by Toronto;
- All fees for garbage cart subscription service and premium organics service must be prepaid three months in advance;
- There is no fee for recycling and once-a-week organics collection. These are included as part of the collection services;
- Commercial customers who receive curbside collection must purchase 95-gallon garbage carts and blue carts (recycling) and 35 or 26-gallon green carts (organics); and

[16] https://www.toronto.ca/legdocs/mmis/2010/pw/bgrd/backgroundfile-31085.pdf

- Two weeks' notice is required to cancel service.

2024 annual fees for curbside cart collection are $603 bi-weekly or $1,206 weekly. Premium organics collection fees are $479 for two times per week, $1,795 for five times per week or $2,393 for six times per week.

5.2.2 All Other Comparators

In review of all other comparator municipalities, funding approaches are generally similar. Each municipality funds its solid waste services through a variety of user fees, reserves, grants and subsidies, sales of materials and property taxes. **Table 4** provides information on revenue sources accessed by select Ontario municipalities. Similar to the County, property taxes and user fees comprise most of the funding. Population and household information was obtained using the 2021 Statistics Canada Census.

Table 4: Review of Revenue Sources by Municipality

* Note: "user fees" relate to various charges (e.g., drop-off fees, bulk items, etc.) whereas "user pay" or "user rate" refers to a rate-based charge for collection.

Municipality	Comments
Haldimand County	**Tier:** Single **Population:** 49,216 **Households:** 20,710 The County utilizes a hybrid system to fund its solid waste expenditures with a combination of user fees (tipping fees), property tax, grants and subsidies, and other recoveries. The County does not have bag tags available for purchase - any garbage in excess of the three-receptacle maximum should be brought to the CWMF. The total cost of the system in 2024 was approximately $9.35 million or $190 per capita. Of this amount, 72% (approximately $6.71 million) was funded from property tax, which represents approximately 7% of the County's property tax levy. The remainder of the solid waste budget was funded through general recoveries (25%, or approximately $2.37 million), grants and subsidies (2%, or approximately $0.14 million), and transfers from reserves/reserve funds (1%, or approximately $0.13 million). Note, the County's current collection contract was entered into post COVID-19.

Municipality	Comments
City of Hamilton (Hamilton)	**Tier:** Single **Population:** 569,353 **Households:** 233,564 Hamilton uses a hybrid system to fund its solid waste expenditures with a combination of user fees, grants and subsidies and property taxes. Hamilton also provides 12 trash tags (garbage bag tags) to each household and allows households to request 14 additional tags per year at no cost. The total cost of Hamilton's solid waste system is approximately $72.09 million or $127 per capita. Of this amount, 77% (approximately $55.49 million) of the funding comes from property taxes. This amount is approximately 5% of Hamilton's total property tax levy. The remainder of the solid waste budget is funded through user fees (12%, or approximately $8.55 million) and grants and subsidies (11%, or approximately $8.04 million). Note, Hamilton's current collection contract was entered into in 2020 during COVID-19.
City of Brantford (Brantford)	**Tier:** Single **Population:** 104,688 **Households:** 43,269 Brantford uses a hybrid system to fund its solid waste expenditures with a combination of user fees, landfill gas utilization (the sale of electricity from the conversion of landfill methane into energy), and property taxes. Brantford has a five-container limit for garbage and does not have bag tags available for purchase. The total cost of Brantford's solid waste system is approximately $6.54 million in 2024 or $63 per capita. Of this amount, approximately 62% ($4.03 million) was funded from property taxes. This amount represents approximately 2% of Brantford's total property tax levy. The remaining expenditures are funded through landfill site operations (i.e., tipping fees) (approximately 35%, or $2.32 million), and landfill gas utilization (approximately 3%, or $0.19 million). Note, Brantford's current collection contract was entered into in 2020 during COVID-19.

Municipality	Comments
County of Brant (Brant)	**Tier:** Single **Population:** 39,474 **Households:** 14,330 Brant uses a hybrid system to fund its solid waste expenditures with a combination of tipping fees, property taxes, sale of materials, grants and subsidies, and recoveries from hazardous waste. Brant does not have bag tags available for purchase. Solid waste expenditures in 2024 totalled approximately $3.96 million or $100 per capita. Of this amount, approximately 81% ($3.21 million) is funded through property taxes. This amount accounts for approximately 4% of the total property tax levy collected by Brant. Sale of materials, recovery of hazardous waste, and bulk waste user fees accounted for approximately 2% ($60,500) of the total solid waste budget. The remaining expenditures were funded through tipping fees (approximately 9%, or $372,685) and provincial grants (approximately 8%, or $320,631). Note, Brant's current collection contract was entered into pre-COVID-19.
Toronto	**Tier:** Single **Population:** 2,794,356 **Households:** 1,253,238 Full user pay system, including revenues from grants, subsidies, other user fees and reserves. Details provided in **Section 5.2.1.**

5.2.3 Summary

Table 5 provides a summary of funding sources used by the jurisdiction comparators. All jurisdictions, except for Toronto, fund solid waste services predominantly through property taxes and various user fees. Toronto has moved to a fully funded user pay system.

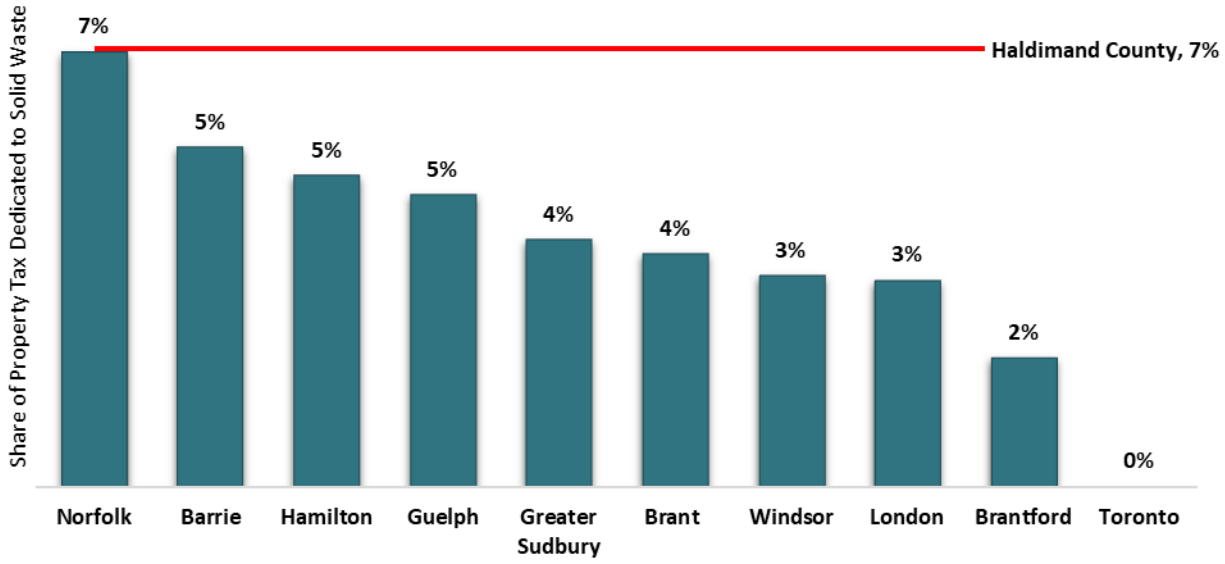
Table 5: Summary of Solid Waste Funding Sources by Municipality in Ontario

* N/A = Not Applicable

Municipality	Property Taxes	User Fees	Grants/ Subsidies	Sale of Materials	Other Sources
County	Yes	Yes	Yes	Yes	N/A
Hamilton	Yes	Yes	Yes	Yes	N/A
Brantford	Yes	Yes	Yes	Yes	N/A
Brant	Yes	Yes	Yes	Yes	N/A
Toronto	No	Yes	Yes	Yes	Full user pay

As most comparators finance their solid waste budgets from property taxes and user fees, a comparison of the share of the municipal property tax bill related to solid waste is provided in **Figure 7**. The County's share of approximately 7% is shown on the horizontal line. When compared to other nearby single-tier jurisdictions evaluated (Hamilton 5%, Brant 4%, Brantford 2%) the share of the tax bill related to solid waste is the largest. Further analysis was conducted on additional single-tier municipalities which led to the same conclusion of the County's share of the tax bill related to solid waste being the largest of the comparators. Jurisdictions' percentage shares of property tax bills related to solid waste vary due to differences in services provided, population size and density, geographical size, distance to markets, etc. The County's share of the municipal property tax bill related to solid waste services may be the highest of the comparators due to a number of factors including differences in services provided, population size and density, geographical size, distance to markets, etc. Additionally, all comparators excluding Windsor and Norfolk County own their own landfills and therefore collect additional revenues that the County does not. Another possibility is that each compared municipality provides varying levels of service for other tax related services, which would reduce their share of the tax bill related to solid waste (e.g., if a municipality provides high levels of parks and recreation services, this will reduce the overall percentage of the tax bill related to solid waste and increase the percentage related to parks and recreation).

Figure 7: Share of Municipal Property Tax Bills related to Solid Waste, by Jurisdiction



5.3 Overview of Funding Options

The County's solid waste system is currently funded through a combination of user fees, minor revenue sources, and property taxes, which cover the remaining net costs. As part of this review, several funding options to recover these net costs have been evaluated. These include the following:

- Property taxes (current funding approach);
- User rates; and
- Partial user rate and property taxes.

The following subsections provide a summary of each funding approach.

5.3.1 Property Taxes (Current Funding Approach)

After the County recovers revenues from user fees, reserves, etc. the remaining cost of the solid waste service is collected through property taxes. The current funding approach was highlighted in **Section 5.1**. The amount funded by property taxes equates to approximately 7% of the County's total property tax levy.

5.3.2 User Rates

Rather than recovering the net expenditures from property taxes, the County may consider imposing a user rate on properties that receive waste management services. A user rate may be calculated in a few ways, including:

- On a per customer basis (i.e., a per household flat rate);
- Based on the total tonnes collected (i.e., a rate for the total garbage, LYW, bulky items etc.);
- Based on the tonnes of garbage only;
- A separate rate for garbage and waste diversion streams; or
- Based on the size of waste cart requested where carts are used; etc.

Utilizing the current net expenditures to be funded, the user rate could be calculated to recover approximately $6.71 million. Currently, the County provides waste management services to over 22,500 stops (2021 contract estimate of 21,876 inflated by annually by 1% to account for growth to 2024) and manages over 48,100 tonnes of material (excluding Blue Box material) per year (2023 tonnage). Utilizing these high-level numbers, a user rate may be estimated at approximately $298 per stop, annually or $139 per tonne. In 2024, for an average home (valued at $248,640), the average annual property tax bill related to solid waste services would be approximately $290.

Should the County consider utilizing this approach, a fulsome analysis should be undertaken to determine the appropriate rate structure which considers the evaluation criteria set out in **Section 5.4**.

5.3.3 Partial User Rate and Property Taxes

The partial funding approach is a combination of the previous two mentioned approaches whereby the net expenditures to be recovered would be collected partially through property taxes and partially through a user rate.

5.4 Evaluation of Funding Options

The following provides an evaluation of each funding approach against criteria to support the County to reach its goals and targets. The previously noted three funding options are evaluated based on the following considerations summarized in **Table 6**.

Table 6: Considerations in Selecting Funding Approach

Area of Consideration	Considerations in Selecting Funding Approach
Waste Diversion and other Metrics	How does the funding approach/policy encourage waste diversion? Does the policy assist the County in reaching their waste diversion targets or other metrics?
Revenue Stability	Does the funding approach/policy allow for stability of revenues through an analysis of fixed versus variable revenues? Should County staff place a high priority on revenue stability, a greater share of the costs should be recovered through the fixed component of the charges?
Capital Improvements	Does the funding approach/policy provide the County with the financial reserves (or debt financing ability) to undertake large capital improvements?
Fairness of Calculation	It is important to consider that all parties should pay their fair share. Does the funding approach/policy provide for a fair approach to the calculation?
Economic Development and Affordability	It is important to balance revenue generation with affordability. Does the funding approach/policy reflect the cost of the services provided; however, is not so large that residents of the County will be negatively impacted?
Administrative Efforts	Does the funding approach/policy require significant administrative efforts to initially set up and then operate?

5.4.1 Property Taxes (Current Funding Approach)

The current funding model for the County's waste management system is primarily based on property taxes. The following outlines how this model performs against key evaluation criteria:

Waste Diversion: The property tax funding approach does not encourage additional waste diversion behaviours from the County's residents. Residents are charged the same amount, regardless of the amount of waste they produce and dispose. This approach would not assist the County in increasing waste diversion participation, without additional or increased user fees on landfill activities.

Revenue Stability: The property tax funding approach is the most predictable and stable source of revenue of the three funding options. The County is guaranteed to collect revenues from taxes every year due to the funding approach being a fixed stream of revenues.

Capital Improvements: The property tax funding approach may provide the County with the financial reserves required to undertake large capital improvements; however, due to competing priorities, savings for future capital expenditures may be limited. Deferral of capital projects may be requested throughout the budget process to assist in keeping overall County tax increases low.

Fairness of Calculation: The property tax funding approach is the least equitable approach of the three options. As noted previously, residents are charged the same amount no matter the volume of waste produced. Some residents may be more conscious of the volume of waste they produce, while others may not.

Economic Development and Affordability: The property tax funding approach reflects the cost of waste diversion services provided by the County; however, given the different behaviours of all residents, it may not be affordable for all. Additionally, annual tax rate increases are unfavourable and potentially unaffordable for the County's residents.

Administrative Efforts: The property tax funding approach requires the least amount of administrative effort. During the time of annual budget determination, the administrative efforts are heightened under this approach due to the competitive nature of the budget and council's priorities. However, the billing efforts required are minimal given funds are collected through the property tax bill.

5.4.2 User Rate Funding

An alternative approach involves recovering costs through user rates, where charges are based on service usage or waste volumes. This section examines the potential implications of a full user rate model.

Waste Diversion: The user rate funding approach may encourage waste diversion for the County's residents, depending on the rate structure. If the rate structure provides a variable rate based on the amount of waste diverted as residents would be incentivized to participate in diversion programs. This behaviour may assist the County in increasing waste diversion participation.

Revenue Stability: The user rate funding approach is a less predictable source of revenue than the property tax approach if the rate imposed varies with the amount of waste collected. Residents would have greater control over their rate bill based on the volume of waste they produce. Initially the County may need to examine the behaviour of other municipalities' residents after introducing this approach, then monitor revenues to create a financial plan based on residents' behaviours related to waste diversion. Once implemented, the County may create a rate stability reserve fund to maintain cashflow when actual revenue is less than anticipated.

Capital Improvements: The user rate funding approach may provide the County with the financial reserves to undertake large capital improvements as this rate would be calculated separate from taxes. Similar to water and wastewater user rates, a financial plan may be created to incorporate anticipated capital improvements. Any unexpected capital improvement projects may need to be financed with debt.

Fairness of Calculation: The user rate funding approach may be more equitable than the property tax funding approach as it provides the County flexibility to impose the rate in a number of ways. The rate may be structured such that properties not receiving County services do not pay for collection and disposal or it may be structured to include a fixed and variable component. Residents would have more control to choose how much waste they divert and how much they pay in user rates.

Economic Development and Affordability: The user rate funding approach may provide greater affordability. Depending on the volume of waste residents create, they have the control to make their rate affordable for their income and lifestyle. The user rate

funding approach also allows for rate structures and adjustments to the calculations that may allow the County to incentivize certain types of development and disincentivize others based on the overall goals of the County.

Administrative Efforts: The user rate funding approach requires significant administrative effort. The initial setup of the user rate will necessitate additional staffing for the following activities:

- Billing setup;
- Household cart size determination (if applicable);
- Coordination of cart drop-offs (if applicable); and
- Customer service.

During the annual budget determination, the administrative efforts are reduced compared to the property tax funding approach. This is due to the rates being based on actual needed projects and estimated costs, leading to a more predictable and straightforward budgeting process. Municipalities that have implemented a user-rate system highlight this advantage over a property tax funded system.

5.4.3 Partial User Rate and Property Taxes

A blended approach, using both property taxes and user rates, may offer a balanced funding solution. The analysis explores how this hybrid model could support the County's financial, operational and policy goals.

Waste Diversion: The partial funding approach may encourage waste diversion in residents depending on the structure. For example, if waste diversion programs were paid with property taxes and waste activities were recovered through a user rate, residents may be incentivized to reduce what they pay through user rates by diverting more waste. This approach may assist the County in reaching their future waste diversion targets. Additionally, it recognizes that waste diversion activities benefit the County as a whole and all waste diversion costs would be paid for by all properties in the County.

Revenue Stability: The partial funding approach would provide a slightly more stable and predictable method of revenue collection as compared to the full user rate approach. If the County chose a user rate that was variable based on tonnages, the

property tax component would provide a fixed source of revenue, whereas the user rate component would vary. Similar to the user rate approach, the County would need to forecast anticipated revenues and monitor/update the financial plan overtime. Additionally, if the user rate is perceived as too high, commercial and high-density residential customers may choose private collection services, which would decrease revenues for the County.

Capital Improvements: The partial funding approach may provide the County with the financial reserves required to save for and undertake large capital improvement projects. The reserve funds may be funded through the collection of user rates to limit the impact on taxes.

Fairness of Calculation: The partial funding approach may be a moderately equitable funding approach, if the County chose to recover the costs of garbage from user rates. Only those that benefit from the collection and disposal of garbage would pay a user rate. If waste diversion was collected through property taxes, this portion of the costs would be paid by all properties, recognizing the benefit to the County as a whole.

Economic Development and Affordability: The partial user rate and property tax funding approach reflects the cost of waste services for selected activities. This approach may allow the customer the opportunity to maintain control over a portion of their annual bill to help make their rate affordable for their income and lifestyle.

Administrative Efforts: The additional administrative efforts required under the partial funding approach would vary depending on the user rate implemented. If a user rate would be implemented, additional effort in setting up a billing system may be required.

5.4.4 Summary of Funding Options

Table 7 provides a summary of the three different funding approaches evaluated based on various considerations for the County and its residents.

Table 7: Summary of Funding Options

Consideration	Current Funding Approach - Property Taxes	User Rates	Partial User Rate and Property Taxes
Does the funding option encourage waste diversion?	May not be encouraged	May be encouraged (dependant on the rate structure)	May be encouraged (dependant on the rate structure)
Does the funding option provide the County a stable source of revenue?	Predictable and stable	Least predictable and least stable	Moderately predictable and moderately stable
Does the funding source enable the County to undertake capital improvements?	Minimal desire to increase taxes for large improvements.	Yes, through financial forecasting; however, any unexpected capital improvement projects may need debt funding.	Yes, through financial forecasting; however, any unexpected capital improvement projects may need debt funding.
Does the funding source enable the County to develop a calculation methodology that considers fairness?	Least	Most	Moderate

Consideration	Current Funding Approach - Property Taxes	User Rates	Partial User Rate and Property Taxes
Does the funding sources contribute to economic development and affordability?	Generally affordable under current amount funded; however, should significant expenditures be anticipated, increases in taxes required may be unaffordable.	An additional user rate may be unaffordable without a matching reduction in taxes.	An additional user rate may be unaffordable without a matching reduction in taxes.
Does the funding source require effort to administer?	Least	Most	Moderate

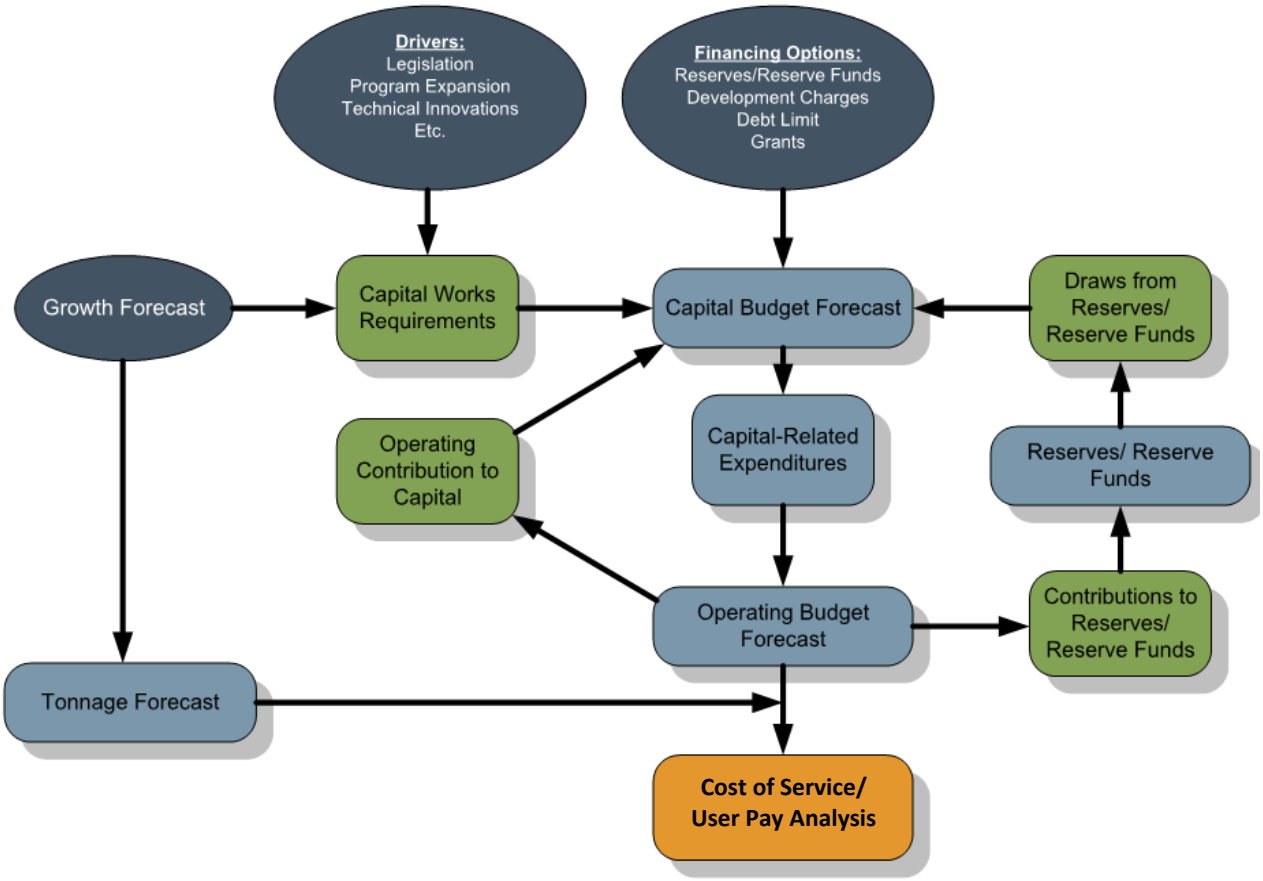
5.5 Funding Model Evaluation

An evaluation of funding approaches was undertaken to help the County assess the sustainability, fairness and effectiveness of its current and potential future financial model for solid waste services. The objective of this evaluation was to identify funding mechanisms that support long-term service delivery, confirm equitable cost recovery across user groups and align with the County's waste management goals.

5.5.1 Model Overview

To inform this evaluation, a financial model was developed that integrates capital and operating forecasts, reserve fund policies and anticipated service level changes. The model allows for the simulation of various funding approaches to assess their impact on revenue stability, administrative effort, user equity and alignment with diversion objectives. **Figure 8** provides an overview of the model calculation process.

Figure 8: Solid Waste Financial Model Calculation Process



At a high-level, the model utilizes the County's capital and operating budget forecasts, along with existing reserve and reserve fund policies to estimate the Cost of service for Solid Waste Services. The costs are analyzed and allocated to each waste stream. Each of the main components of the financial analysis are further described in the following subsections.

5.6 Capital Forecast Review and Analysis

The County currently prepares a 10-year capital forecast for solid waste services. This capital forecast formed the basis for the capital needs in the financial model. The estimated capital forecast is provided in **Table 8** based on the 2024 to 2034 Proposed Capital Forecast and schedule of assets. Costs are provided in inflated dollars, with an assumed 2.5% inflation rate.

Table 8: Summary of Estimated Forecast of Capital Costs (Inflated Costs)

Description	Budget 2024	Total 2025 to 2034	Years Undertaken
Waste Management Facility Repairs	$37,400	$248,000	2024 to 2034
General Maintenance - Canborough Perpetual	$10,900	$133,000	2024 to 2034
General Maintenance - Tom Howe Perpetual	$10,900	$133,000	2024 to 2034
Pneumatic Pumps	$0	$314,000	2025 to 2034
General Maintenance - Perpetual Sites	$5,600	$69,000	2024 to 2034
Closed Landfills – Environmental Site Assessment (ESA) Phase 1&2 and Land Survey	$89,600	$0	2024
424008 Tipping Floor Repairs/Resurfacing	$0	$259,000	2026 to 2027
424009 Fiberglass Glazing Replacement	$0	$35,000	2028
424010 Security Camera Replacement	$0	$61,000	2028
Flare Control Hardware	$0	$8,000	2031
Servers [Supervisory Control and Data Acquisition (SCADA)]	$0	$19,000	2026 and 2031
Software (SCADA)	$0	$41,000	2026 and 2031
Desktops (SCADA)	0	$6,000	2026 and 2031
Landfill Gas Flare Shell/Insulation Replacement	$0	$42,000	2033
Connectivity Equipment (SCADA)	$0	$5,000	2027 and 2032

Description	Budget 2024	Total 2025 to 2034	Years Undertaken
Leachate manhole covers and extensions	$0	$121,000	2025
Storm water pond maintenance	$0	$29,000	2029
Leachate pump replacement	$0	$155,000	2025 and 2029
425007 Stormwater management pond maintenance	$0	$31,000	2032
212502 - Tom Howe - Willow Plantation Study	$0	$39,000	2026 and 2027
222501 - Tom Howe - Perimeter gas probes	$0	$36,000	2025
412517 - CWMF - Compactor repairs	$0	$21,000	2025 and 2030
992500 - SWMMP Update	$0	$25,000	2032
Provision for Waste Diversion Services	$45,000	$191,000	2024 to 2028
Total	**$199,400**	**$2,021,000**	N/A

5.7 Lifecycle Costing

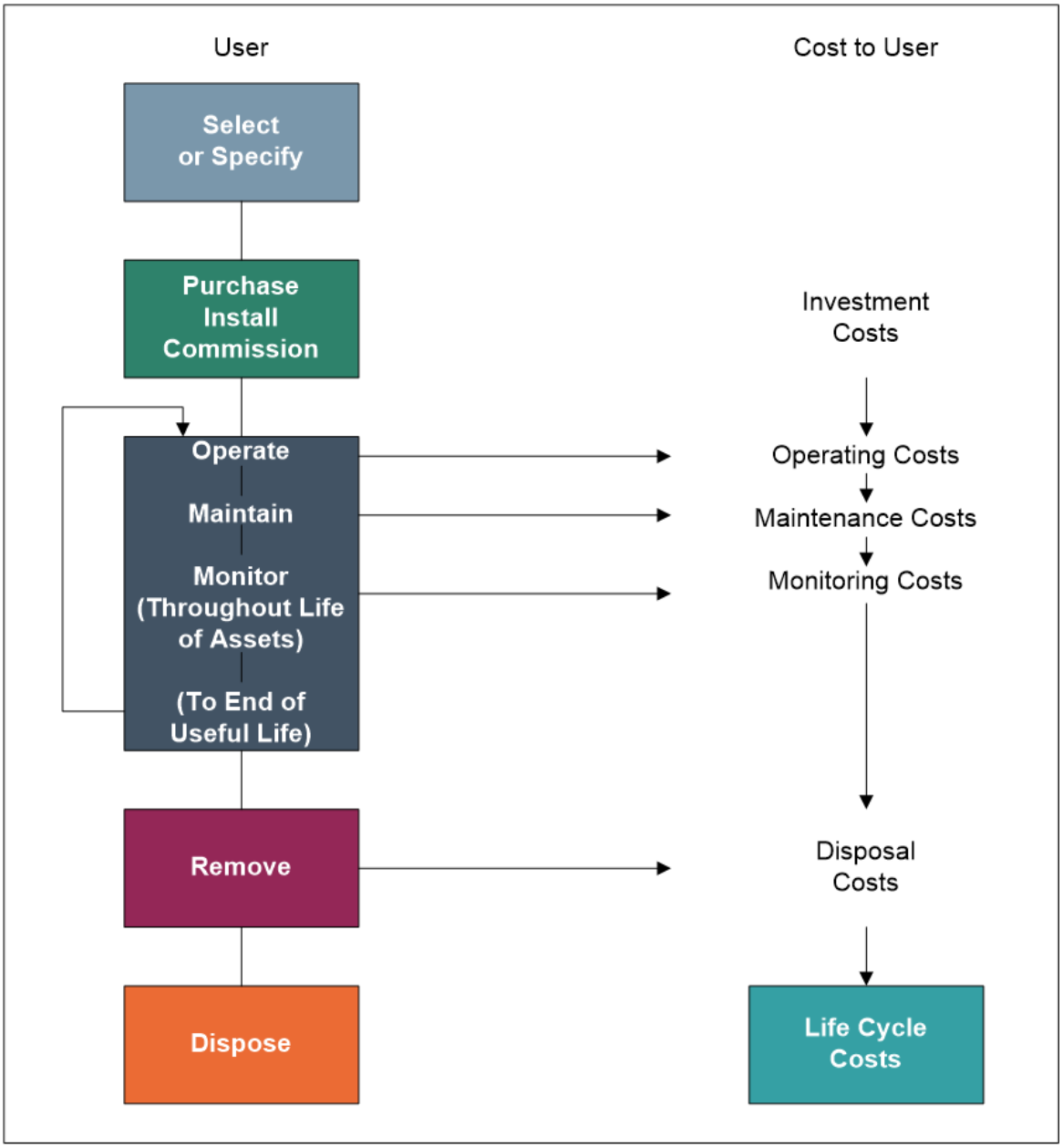
This section introduces the concept of lifecycle costing as an essential tool for understanding the long-term financial requirements associated with managing the County's solid waste infrastructure. The lifecycle stages of an asset, financing considerations, common costing methods and the potential impacts on the County's budget over time are considered.

5.7.1 Overview of Lifecycle Costing

Lifecycle costs are all the costs which are incurred during the lifecycle of a physical asset, from the time of acquisition to the time it is taken out of service for disposal or redeployment. The stages which the asset goes through in its lifecycle are specification,

design, manufacture (or build), install, commission, operate, maintain and disposal. **Figure 9** depicts these stages in a schematic form.

Figure 9: Lifecycle Costing



For many years, lifecycle costing has been used in the field of maintenance engineering and to evaluate the advantages of using alternative materials in construction or production design. The method has gained wider acceptance and use in the areas of industrial decision-making and the management of physical assets.

With respect to asset lifecycle replacement requirements for solid waste, the County does not currently include capital lifecycle replacement savings in the solid waste budget.[17] However, the County tracks the solid waste asset's useful lives and replacement costs (discussed in the subsequent section). This information was used to forecast savings for future capital replacements and is incorporated into the financial analysis and model.

5.7.2 Financing Costs

Financing asset costs over their entire lifecycle, from acquisition through to replacement, requires a range of tools and approaches tailored to municipal service delivery. In a municipal context, services are provided to benefit tax/rate payers. Acquisition of assets is normally timed in relation to direct needs within the community. At times, economies of scale or technical efficiencies will lead to designing an asset to accommodate future growth within the County. Over the past few decades, new financing techniques such as development charges have been employed to recover costs for new development based on the underlying principle of having tax/rate payers who benefit directly from the service paying for that service. Operating costs which reflect the cost of the service for that year are charged directly to all existing tax/rate payers who have received the benefit. Operating costs are normally charged through the tax base or user rates.

Capital expenditures are funded through either property taxes, rates and fees, development charges, grants, external partners, or own revenue sources.

New construction related to growth could produce development charges (for waste diversion services) to fund a significant portion of projects, where new assets are being acquired to allow growth within the County to continue. As well, debentures could be used to fund such works, with the debt charge carrying costs recovered from taxpayers in the future.

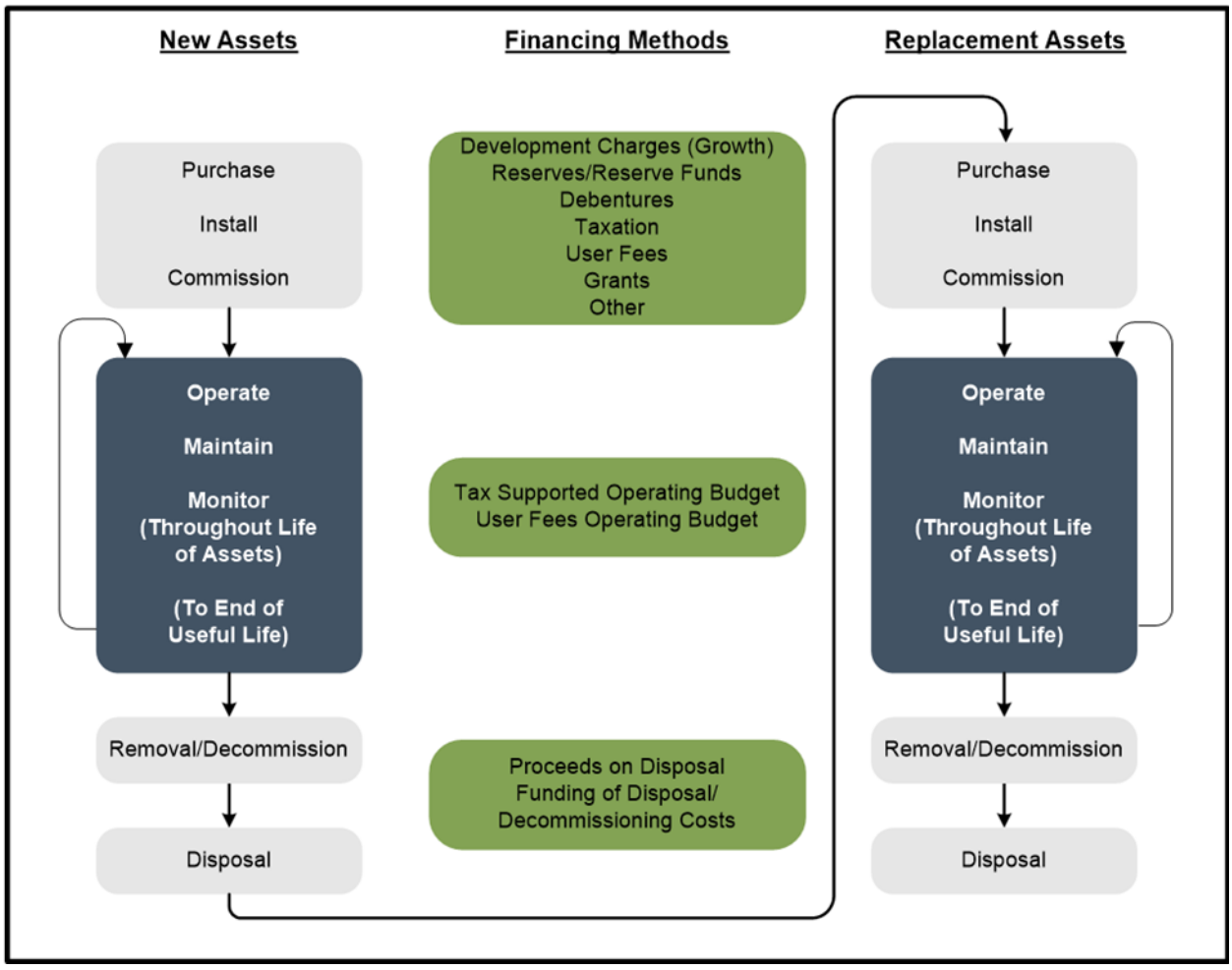
Capital construction to replace existing infrastructure, however, is largely not growth-related and will therefore not yield development charges or developer contributions to

[17] Note, the County includes a capital infrastructure levy on property taxes to recover lifecycle costs across the entire municipal budget. Lifecycle costs may be included in the general capital reserve.

assist in financing these works. Hence, a municipality will be dependent upon other funding sources to fund these works.

Figure 10 highlights the costs of an asset from its initial conception through to replacement and then continues to follow the associated costs through to the next replacement.

Figure 10: Financing Lifecycle Costs



As referred to earlier, growth-related financing methods such as development charges (for waste diversion services) could be utilized to finance the growth-related component of the new asset. These revenues are collected (indirectly) from the new homeowner who benefits directly from the installation of this asset. A capital project may also benefit existing tax/rate payers and other financing methods may be used to finance the non-growth-related component of this project, such as reserves which have been

collected from past tax/rate payers, operating budget contributions which are collected from existing tax/rate payers and debentures, which will be carried by future tax/rate payers. Ongoing costs for monitoring, operating, and maintaining the asset will be charged annually to the existing tax/rate payer.

When the asset requires replacement, the sources of financing will be limited to reserves, debentures, and contributions from the operating budget. A framework to decide the appropriate source of financing may consider the following questions:

- Should the cost of replacement to be assessed against the tax/rate payer?
- Who benefits from the replacement of the asset?
- Should the past tax/rate payer pay for this cost, or should future rate payers assume this cost?

If the position is taken that the past user has used up the asset and that they should pay for the cost of replacement, then a charge should be assessed annually throughout the life of the asset. This would enable the municipality to have funds available to replace it when the time comes.

In contrast, if the position is taken that the future tax/rate payer should assume this cost, then debentures and, possibly, a contribution from the operating budget should be used to fund this work.

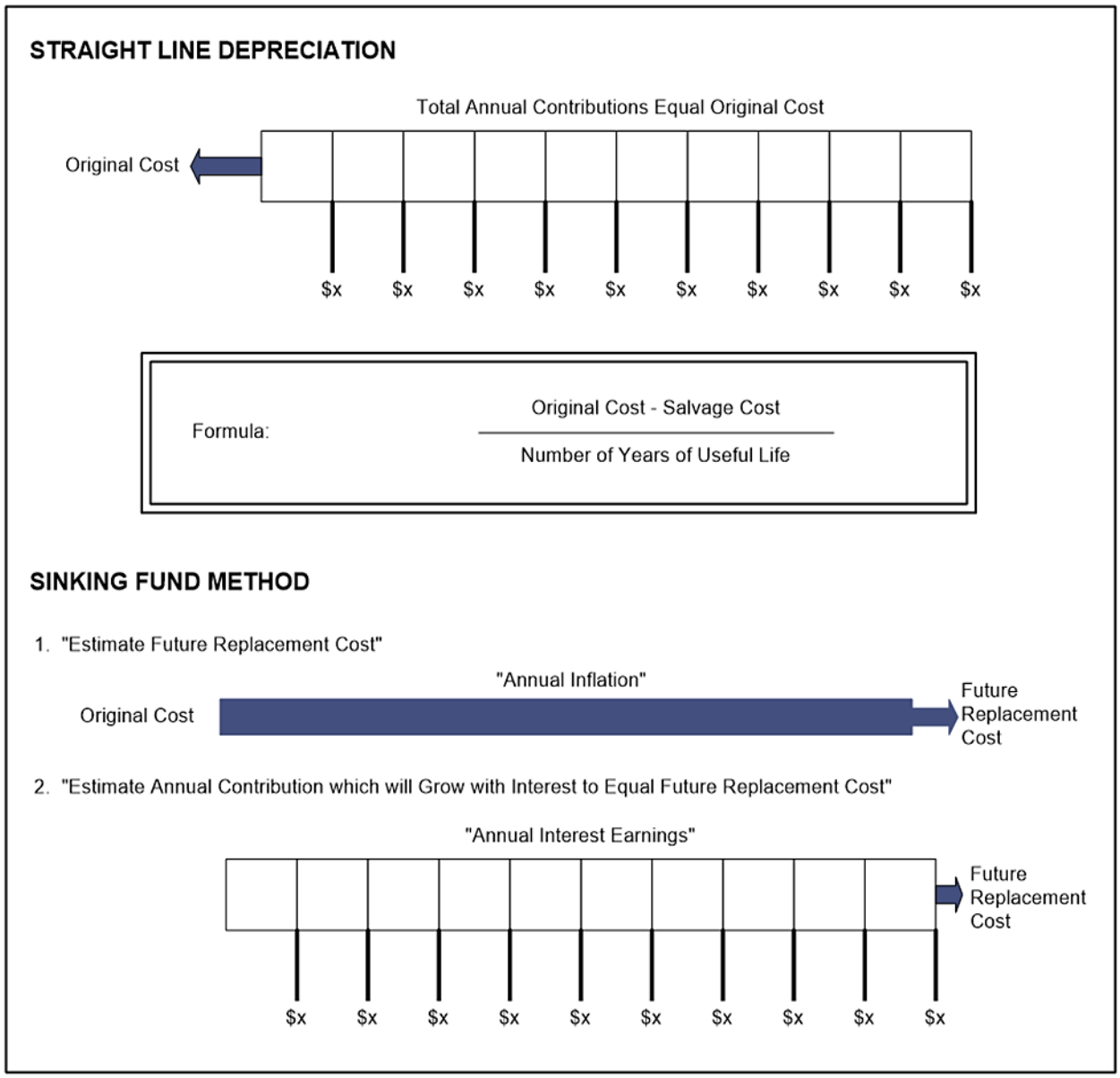
Charging for the cost of using up an asset is the fundamental concept behind depreciation methods utilized as a best practice. This concept allows for expending the asset as it is used up in the production process. The tracking of these costs' forms part of the product's selling price and, hence, end-users are charged for the asset's depreciation. The same concept can be applied in a municipal setting to charge existing users for the asset's use and set those funds aside in a reserve to finance the cost of replacing the asset in the future.

5.7.3 Costing Methods

There are two fundamental methods of calculating the cost of the usage of an asset and for the provision of the revenue required when the time comes to retire and replace it. The first method is the Depreciation Method. This method recognizes the reduction in the value of the asset through wear and tear and aging. There are two commonly used

forms of depreciation, the straight-line method and the declining balance method (**Figure 11**).

Figure 11: Lifecycle Costing Methods



The straight-line method is calculated by taking the original cost of the asset, subtracting its estimated salvage value (estimated value of the asset at the time it is disposed of) and dividing this by the estimated number of years of useful life. The declining balance method is calculated by utilizing a fixed percentage rate and this rate is applied annually to the undepreciated balance of the asset value. The second method of lifecycle costing

is the sinking fund method. This method first estimates the future value of the asset at the time of replacement. This is completed by inflating the original cost of the asset at an assumed annual inflation rate. A calculation is then performed to determine annual contributions (equal or otherwise) which, when invested, will grow with interest to equal the future replacement cost.

5.7.4 Impacts on Budgets

Detailed asset management solid waste inventory information was provided by the County. The asset inventory includes the following main items:

- Canborough Diversion Center;
- Weigh Scales;
- Leachate Meter Station;
- Leachate Holding Tanks;
- Perimeter Leachate Collection System;
- Waste Compactor;
- Monitoring Wells;
- Cells;
- Gas Analyzer System;
- Pneumatic Pumps;
- Pumping Stations;
- Network Equipment;
- Alarm Systems;
- SCADA system components;
- Road Works; and
- Fencing and Gates.

In total, these assets have a replacement value of approximately $27 million. Utilizing the straight-line depreciation method and based on the estimated useful life of each asset, the annual lifecycle replacement costs are approximately $3.25 million. The County does not currently save for capital lifecycle replacements in the solid waste budget. For the cost of service review, these costs were added to the solid waste budget beginning in 2025 so that the full cost of service was identified.

5.8 Capital Cost Financing Options

Historically, municipalities have had limited powers to raise revenues for capital expenses, other than through taxation. However, over the past decade, legislative reforms have been introduced. Some of these have expanded municipal powers (e.g., Bill 26 introduced in 1996 to provide for expanded powers for imposing fees and charges), while others are restrictive (e.g., Bill 98 in 1997 and Bill 23 in 2022 provided amendments to the *Development Charges Act*). The methods of capital cost recovery available to municipalities are provided as follows:

- Development Charges Act (DCA), 1997;
- Municipal Act, 2001;
- Fees and Charges;
- Grant Funding (including Canada Community Building Fund);
- Own Revenues (Existing Reserves/Reserve Funds funded by taxes and/or user fees); and
- Debt Financing (borrowing to fund capital projects).

5.8.1 Development Charges Act, 1997

Development charges are a revenue tool used by municipalities to recover the capital costs associated with new development and redevelopment. These costs are in addition to what a developer/builder normally constructs as part of their subdivision (i.e., local services). Empowered by the DCA, municipalities may pass by-laws to impose charges to recover the capital costs associated with development and redevelopment.

In late 2015, the Province approved amendments to the DCA. Prior to these changes, all waste management services were not eligible for inclusion in the development charges calculations. Subsequent to the changes, waste diversion services became eligible for inclusion.

The County currently imposes development charges via by-law 2042-19. A provision for capital works was included in the County's background study for waste diversion services. This cost of service model has included this provision and identified development charges as the funding source.

5.8.2 Municipal Act, 2001

The Province of Ontario enacted the *Municipal Act, 2001,* which came into force on January 1, 2003. Part XII of the *Municipal Act* and O.Reg. 584/06 govern a municipality's ability to impose fees and charges. In contrast to the previous *Municipal Act, 1990,* this Act provides municipalities with broadly defined powers and does not differentiate between fees for operating and capital purposes.

Part XII of the *Municipal Act* provides municipalities with broad powers to impose fees and charges via passage of a by-law. These powers, as presented in section 391(1), include imposing fees or charges for:

- Services or activities provided or done by or on behalf of it;
- Costs payable by it for services or activities provided or done by or on behalf of any other municipality or local board; and
- The use of its property including property under its control.

Restrictions are provided to confirm that the form of the charge is not akin to a poll tax (i.e., a uniform tax based on the number of individuals). Any charges not paid under this authority may be added to the tax roll and collected in a like manner. The fees and charges imposed under this part are not appealable to the Ontario Land Tribunal (OLT).

It is anticipated that the powers to recover capital costs under the previous *Municipal Act* will continue within the new Statutes and Regulations, as indicated by section 9(2) and section 452 of the current *Municipal Act*.

5.8.3 Grant Funding

Currently, the County has forecasted the receipt of HSP funding ($35,000 RPRA funding) in their capital forecast and federal gas tax funding (Canada Community-Building Funding) discussed in the next subsection. Other low interest loans and grant funding is available through organizations such as the Federation of Canadian Municipalities through the Green Municipal Fund for waste-to-energy and net-zero projects.[18]

[18] https://greenmunicipalfund.ca/funding?keywords=&sector%5B%5D=4#views-exposed-form-funding-opportunity-listing-page-block-1

Canada Community-Building Fund

The Canada Community-Building Fund (CCBF), previously referred to as the Federal Gas Tax, is a permanent source of funding provided up front, twice-a-year, to Provinces and Territories, who flow this funding to their municipalities to support local infrastructure priorities. Municipalities can pool, bank and borrow against this funding, providing significant financial flexibility. Every year, the Federal Gas Tax provides over $2 billion and supports approximately 2,500 projects in communities across Canada. Each municipality selects how best to direct the funds with the flexibility provided to make strategic investments across 18 different project categories, which includes solid waste management and diversion.

The County's budget identifies that the Closed Landfills –ESA Phase 1&2 and Land Survey is to be funded through this fund in 2024. Additionally, the Tipping Floor Repairs/Resurfacing, Fibreglass Glazing Replacement and Security Camera Replacement costs in 2026, 2027 and 2028 are to be funded from this fund.

5.8.4 Existing Reserves/Reserve Funds

This County does not currently have a separate reserve fund for Solid Waste Services capital and/or operating costs. The County previously had a waste management reserve which was closed in 2019 and combined into a general County-wide reserve. Capital costs are funded from the following County-wide reserves and reserve funds:

- Capital Replacement Reserve - General; and
- Capital Replacement Reserve – Infrastructure Technology.

With respect to development charges, a separate development charge reserve fund has been established for growth-related costs for waste diversion. This reserve fund has a 2024 opening balance of $321,398.

Finally, the County maintains a Norfolk Recoveries account. The County and Norfolk County have a cost sharing agreement for the Tom Howe and Canborough closed landfill sites for operating, asset and leachate processing costs in which Haldimand directly bills Norfolk for their portion (Haldimand is responsible for approximately 44% of costs, and Norfolk is responsible for 56% of costs). The County funds these capital projects through this account.

5.8.5 Debenture Financing

Although it is not a direct method of minimizing the overall cost to the taxpayer and ratepayer, debentures are used by municipalities to assist in cash flowing large capital expenditures.

The Ministry of Municipal Affairs regulates the level of debt incurred by Ontario municipalities, through its powers established under the *Municipal Act*, *2001*. O.Reg. 403/02 provides the current rules respecting municipal debt and financial obligations. Through the rules established under these regulations, a municipality's debt capacity is capped at a level where no more than 25% of the municipality's own purpose revenue may be allotted for servicing the debt (i.e. debt charges). The County's 2024 Annual Repayment is estimated at approximately $23.36 million.[19]

The financial model does not anticipate the need for any future debt over the forecast period to 2034 related to solid waste to fund the anticipated capital program.

5.8.6 Recommended Capital Financing Approach

Of the various funding alternatives provided in this section, **Table 9** summarizes the capital funding sources identified over the 2024 to 2034 period.

Table 9: Capital Funding Summary 2024 to 2034 (Inflated Costs)

Funding Summary	Total Capital Funding 2024 to 2034
Provincial/Federal Grants	$444,600
Development Charges Reserve Fund	$236,000
Norfolk Recoveries	$624,761
Capital Replacement Reserve - Information Technology	$17,727
Capital Replacement Reserve - General	$897,312
Total	**$2,220,400**

[19] https://efis.fma.csc.gov.on.ca/fir/index.php/en/arl/year-2024/

5.9 Operating Expenditures and Revenue Analysis

To evaluate the County's long-term financial sustainability in managing solid waste services, both operating expenditures and revenues have been forecast to 2034. The projections are based on the approved 2024 operating budget and adjusted for expected inflationary increases, policy directions and service needs identified through this study. The following subsections provide an overview of the anticipated expenditures required to operate the solid waste system and the revenues expected to offset these costs. This financial profile supports a full cost of service analysis and informs funding decisions moving forward.

5.9.1 Solid Waste Operating Expenditures

In this analysis, the forecast solid waste budget figures (2025 to 2034) are based on the County's 2024 operating budget. The costs for each component of the operating budget have been reviewed with staff to establish forecast adjustments, including inflationary adjustments. All of the operating expenditures have been assumed to increase at a rate of 2.0% annually.

A summary of the operating expenditures for 2024 to 2034 is provided in **Table 10**, based on the approved 2024 budget and forecasted to 2034.

Table 10: Solid Waste Operating Expenditures 2024 to 2034 (Inflated Costs)

Operating Expenditures	Total Expenditures 2024 to 2034
Solid Waste Administration	$18,095,300
Solid Waste Collection	$42,580,980
Solid Waste Disposal Sites	$50,957,990
Solid Waste Reduction	$8,993,840
Total Operating Expenditures	**$120,628,110**

The detailed operating budget from 2024 to 2034 is provided in **Appendix B**.

5.9.2 Solid Waste Operating Revenues

With respect to operating revenues, solid waste service revenues come from a number of sources, including:

- Norfolk County recoveries for leachate processing at closed sites;
- Tipping fees;
- General recoveries related to LYW (wood chip sales) and other diversion;
- Grants and subsidies (including funds associated with producer responsibility, including CMO Blue Box funding for P&E and depot operations, EEE, and HSP from PROs); and
- Property taxes.

A summary of the operating expenditures for 2024 to 2034 is provided in **Table 11**, based on the approved 2024 budget and forecasted to 2034.

Table 11: Solid Waste Operating Revenues 2024-2034 (Inflated Costs)

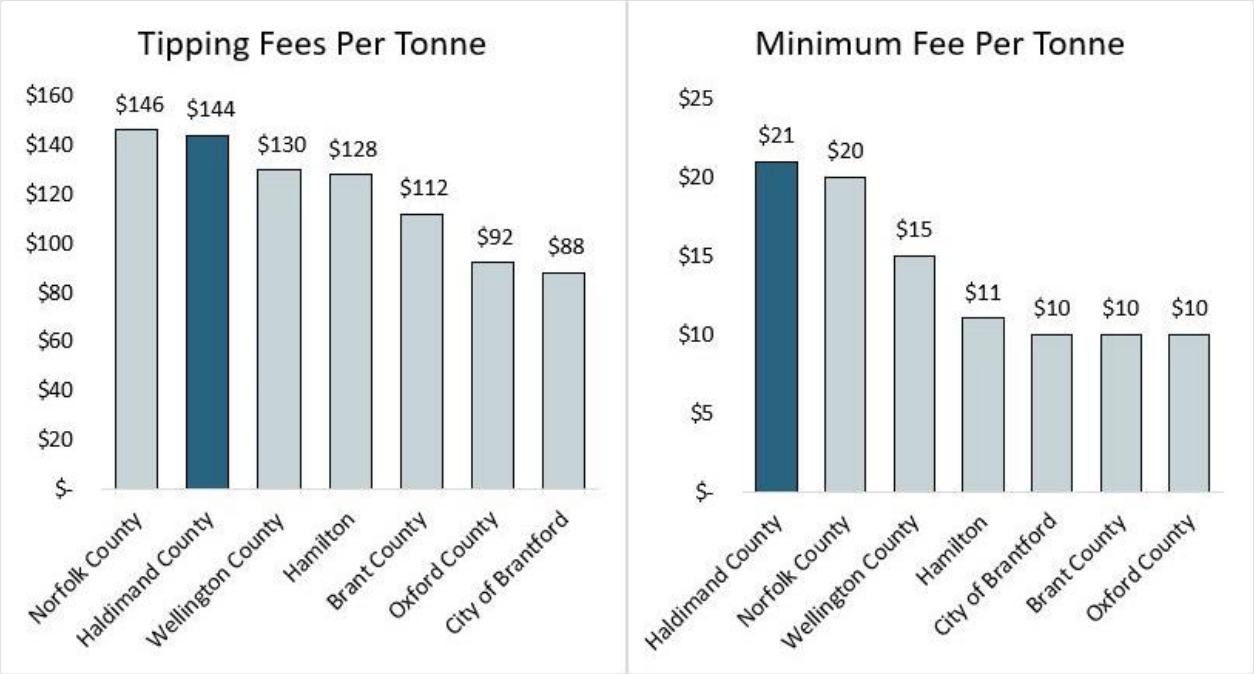
Revenues	Total Expenditures 2024 to 2034
Solid Waste Administration	$12,811,450
Solid Waste Disposal Sites	$15,715,680
Solid Waste Reduction	$982,797
Transfers from Reserves/Reserve Funds	$125,820
Total Expenditures	**$29,635,747**

The detailed operating budget from 2024 to 2034 is provided in **Appendix B**.

5.10 Tipping Fee Review

As part of the cost of service analysis, the County requested a review of solid waste tipping fees in comparator jurisdictions. The County accepts various types of waste to be dropped off at the CWMF for a tipping fee. The County's 2024 per tonne tipping fee was $144 and $148 in 2025 (3% increase). The County also required a 2024 minimum fee per tonne of $21 and $22 in 2025. A comparison of 2024 municipal solid waste tipping fees and minimum fees are provided in **Figure 12**. The County's 2024 tipping fee of $144 and minimum fee of $21 are highlighted. When compared to other nearby single-tier jurisdictions evaluated, the County's tipping fees are near the highest, $2 less than Norfolk County's fee of $146 per tonne. The County's minimum fee is the largest of its comparators.

Figure 12: Comparison of Solid Waste Tipping Fees and Minimum Fees Per Tonne



For a review of tipping fees, the costs of providing the service were identified including capital costs, operating costs and lifecycle costs. Additionally, the tonnages associated with the tipping fee activities were considered.

5.10.1 Tipping Fee Tonnage and Forecast Activities

There are three categories of waste that the County receives where tipping fees are applied (referred to as tipping fee activities):

- HSW – Household Solid Waste;
- INYARD$ - In Yard (Tipping Fees Apply);
- Commercial solid waste (CSW).

Of the waste that is charged tipping fees, the County received approximately 2,905 tonnes in 2023. The 2024 budget identified $410,400 in tipping fee revenues. Based on the 2024 tipping fee per tonne of $144, this suggests approximately 2,850 tonnes of material was collected from tipping fee activities.

As outlined in **Appendix A**, the total tonnage handled by the County in 2025 is forecasted to be approximately 51,500 tonnes, with approximately 3,370 tonnes

attributed to tipping fee activities, assuming that there are no changes made to how current materials are charged. This indicates that approximately 6.54% of the total tonnage handled is related to tipping fees. The proportion of tonnage related to tipping fees was forecasted to 2034 based on the tonnage forecast, resulting in an average of 6.55% per year of the handled tonnage being related to tipping fee activities (**Table 12**).

Table 12: Tonnage Related to Current Tipping Fee Activities

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Tonnage Handled	51,512	52,430	53,505	54,580	55,654	56,729	57,276	57,822	58,369	58,915
Tonnage Related to Tipping Fee Activities	3,367	3,437	3,508	3,578	3,649	3,719	3,755	3,791	3,826	3,862
Proportion of Tonnage Related to Tipping Fees	6.54%	6.56%	6.56%	6.56%	6.56%	6.56%	6.56%	6.56%	6.56%	6.56%

The proportion of tonnage related to tipping fees was further investigated in **Table 13** for all tonnage excluding recyclables and LYW (further details provided in **Section 5.10.3**).

Table 13: Tonnage Related to Tipping Fee Activities – Excluding Recyclables and LYW

Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Total Tonnage Handled	45,986	46,949	47,911	48,873	49,836	50,798	51,288	51,777	52,266	52,756
Tonnage Related to Tipping Fee Activities	3,367	3,437	3,508	3,578	3,649	3,719	3,755	3,791	3,826	3,862
Proportion of Tonnage Related to Tipping Fees	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%	7.32%

5.10.2 Tipping Fee Capital Cost

The proportion of tonnage related to tipping fees identified in **Table 12** was applied to the total capital forecast identified in **Section 5.6** to calculate an approximate capital cost per year associated with tipping fee activities. The average capital cost per year over the forecast period related to tipping fee activities is approximately $13,200; however, it ranges from approximately $6,200 to $24,400 depending on the capital forecasted in each year.

5.10.3 Tipping Fee Operating Costs

The operating budget forecast was reviewed to identify any expenditures related to tipping fee activities. The proportion of tonnage related to tipping fees identified in **Table 12** was applied to the Solid Waste Administration operating expenditures budget.

When evaluating the Solid Waste Disposal Sites operating expenditures budget, it was assumed that the expenditures exclude recycling or LYW costs. The resulting proportion of tonnage related to tipping fees for waste disposal sites was forecasted out to 2034, averaging approximately 7.32% per year (as identified in **Table 13**). These proportions were then applied to the Solid Waste Disposal Sites operating expenditures budget. The resulting average operating cost per year related to tipping fee activities is approximately $452,500; however, it ranges from approximately $401,600 in 2025 to $507,100 due to inflation by the end of the forecast period in 2034.

5.10.4 Tipping Fee Lifecycle Costs

Finally, the proportion of tonnage related to tipping fees identified in **Table 12** was also applied to the savings for lifecycle contributions identified in **Section 5.7**. The average lifecycle cost per year over the forecast period related to tipping fee activities is approximately $232,400; however, it ranges from approximately $196,200 in 2025 to $266,200 due to inflation by the end of the forecast period in 2034.

5.10.5 Results

Based on this review, the average annual total cost related to tipping fee activities is $698,000. Based on the tonnages related to tipping fee activities identified in **Table 12**, the following tipping fees were estimated for full cost recovery in 2025 to 2034 (**Table 14**).

Table 14: Proposed Per Tonne Tipping Fees for Full Cost Recovery

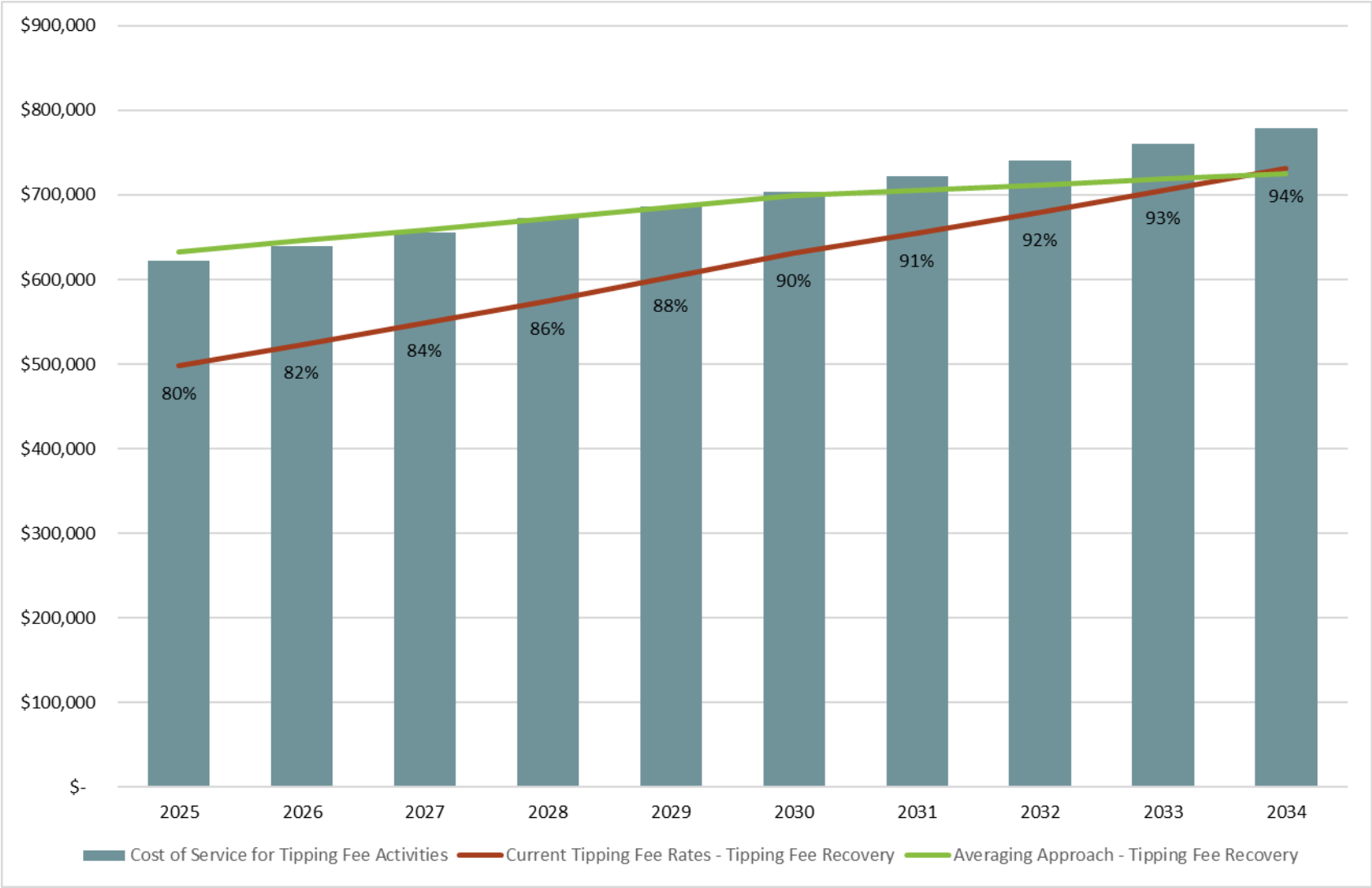
Category	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Proposed Tipping Fees	$184.79	$185.94	$186.84	$187.90	$188.09	$189.26	$192.29	$195.38	$198.58	$201.83
Current Tipping Fees (3% Annual Growth)	$148.00	$152.11	$156.34	$160.68	$165.14	$169.73	$174.44	$179.29	$184.27	$189.39
Difference	$(36.79)	$(33.83)	$(30.51)	$(27.22)	$(22.95)	$(19.53)	$(17.85)	$(16.09)	$(14.31)	$(12.44)

Based on the tonnage forecast identified, the estimated recovery from the County's current tipping fees (inflated by 3% annually) is 88% of the total cost of service for tipping fee activities (on average, over the 10-year forecast period). This means that the County is currently relying on property taxes to cover the remaining 12% of the total cost. The current tipping fee recovery is illustrated in **Figure 13** (red line), compared to the estimated full cost per year over the forecast period to 2034 (blue bars). The County did not previously budget for the saving of lifecycle expenditures related to solid waste services, therefore explaining the gap in the current fees compared to the recommended fees.

Achieving full cost recovery from tipping fees would require annual fluctuations in the tipping fee rates. For example, **Table 14** suggests that the general tipping fee to achieve full cost recovery should be $185.94in 2026 (26% increase), $186.84 in 2027 (0.48% increase) and $187.90 in 2028 (0.56% increase), etc. Fluctuations in tipping fee rate increases are not a sustainable or practical approach for the County. To address this, an average tipping fee of $187.89 over the forecast period to 2034 was calculated, with this rate to be adjusted annually by the Consumer Price Index. The tipping fee recovery under this approach is illustrated in **Figure 13** (green line).

If the County's goal is to achieve full cost recovery, it is recommended that the County consider these findings in future reviews of Council-approved user fees. This could potentially increase user fees to achieve full-cost recovery and reduce the reliance on property taxes. However, it is important to note that implementing full cost recovery through tipping fees would result in the County having the highest tipping fee per tonne among comparable municipalities. Specifically, this would increase the 2025 tipping fee by 27%, from $148 to the average fee of $188 per tonne.

Figure 13: Proposed Tipping Fees and Revenues



5.11 Cost of Services Analysis

The purpose of the cost of service review is to analyze the current state of the County's costs to provide solid waste services. A financial model of the County's current operating and capital budgets was prepared to ascertain the current cost of service. Further, consideration of lifecycle expenditures was included in the analysis to confirm a full cost of service was reviewed.

The goal of the cost of service review is to identify the total costs of providing the service and then to identify the revenues to fund the required expenditures. To understand these expenditures and revenues, the following County information was reviewed and analyzed:

- Current 10-year capital budget;
- Current operating budget;
- Development Charges background study;
- Asset inventory; and
- Policies regarding capital funding, use of reserve/reserve funds, and debt.

The cost of service review also provided the expenditures and revenues allocated by waste stream to isolate the cost of service into the following categories:

- Garbage;
- Blue Box;
- LYW;
- HSP; and
- Other (including furniture and appliances, wood waste, C&D waste, textiles and bikes for reuse, tires).

5.11.1 Cost of Service Components by Waste Stream

The expenditures and revenues for the solid waste service were compiled into a financial model. This financial model can be summarized into the following components: capital costs, operating costs and revenues, and lifecycle costs.

Allocation of Capital Costs by Waste Stream

The County's 10-year capital forecast and ongoing Development Charges Background Study information were reviewed and utilized for this analysis. The current budget provided the capital expenditures currently identified to 2034. These costs were allocated to each waste stream (i.e., garbage, LYW, HSP, and all other) based on the project's scope. Where a capital project's scope applied to more than one waste stream, the costs were allocated to the various streams based on the proportion of waste tonnage forecasted for each stream in **Appendix A**. **Table 15** and **Figure 14** provide a summary of the 10-year capital budget and forecast by waste stream.

Table 15: Summary of Capital Forecast by Waste Stream (Inflated Costs)

Waste Stream	Percentage Allocations	Total Capital Cost (2024 to 2034)
Garbage	87.71%	$1,947,498
LYW	9.26%	$205,533
Other	2.50%	$55,559
HSP	0.53%	$11,811
Total	**100%**	**$2,220,400**

Figure 14: Summary of Capital Forecast by Waste Stream

*Percent Allocations are rounded to the nearest percent

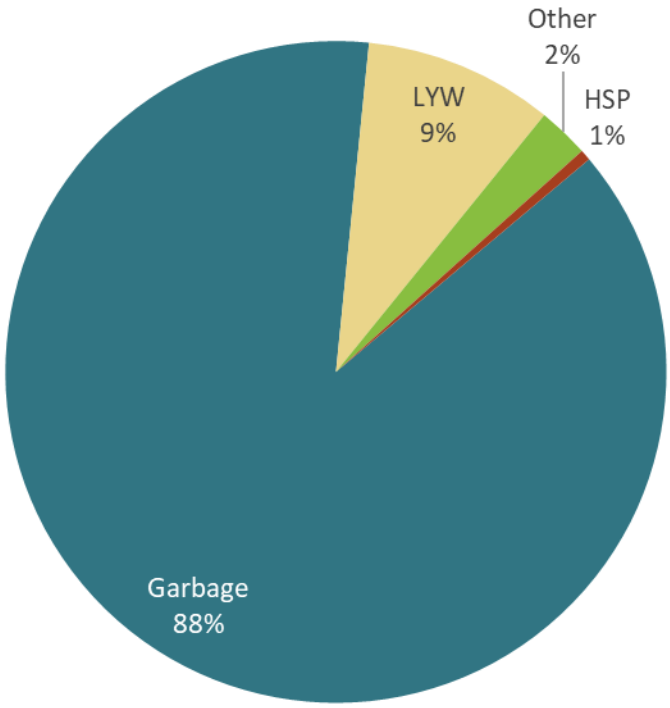


Table 16 provides a summary of the 10-year capital budget and forecast and **Table 17** identifies the basis for the allocation and the percentage allocated to each stream.

Table 16: Solid Waste 10-Year Capital Budget and Forecast (2024 to 2034)

Project Name	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Waste Management Facility Repairs	$37,400	$17,000	$18,000	$18,000	$44,000	$19,000	$20,000	$20,000	$49,000	$21,000	$22,000	**$285,400**
General Maintenance - Canborough Perpetual	$10,900	$12,000	$12,000	$12,000	$13,000	$13,000	$13,000	$14,000	$14,000	$15,000	$15,000	**$143,900**
General Maintenance - Tom Howe Perpetual	$10,900	$12,000	$12,000	$12,000	$13,000	$13,000	$13,000	$14,000	$14,000	$15,000	$15,000	**$143,900**
Pneumatic Pumps	N/A	$28,000	$29,000	$29,000	$30,000	$31,000	$32,000	$33,000	$33,000	$34,000	$35,000	**$314,000**
General Maintenance - Perpetual Sites	$5,600	$6,000	$6,000	$6,000	$7,000	$7,000	$7,000	$7,000	$7,000	$8,000	$8,000	**$74,600**
Closed Landfills - ESA Phase 1&2 and Land Survey	$89,600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$89,600**
424008 Tipping Floor Repairs/Resurfacing	N/A	N/A	$126,000	$133,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$259,000**
424009 Fiberglass Glazing Replacement	N/A	N/A	N/A	N/A	$35,000	N/A	N/A	N/A	N/A	N/A	N/A	**$35,000**
424010 Security Camera Replacement	N/A	N/A	N/A	N/A	$61,000	N/A	N/A	N/A	N/A	N/A	N/A	**$61,000**
Flare Control Hardware	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$8,000	N/A	N/A	N/A	**$8,000**
Servers (SCADA)	N/A	N/A	$9,000	N/A	N/A	N/A	N/A	$10,000	N/A	N/A	N/A	**$19,000**
Software (SCADA)	N/A	N/A	$19,000	N/A	N/A	N/A	N/A	$22,000	N/A	N/A	N/A	**$41,000**
Desktops (SCADA)	N/A	N/A	$3,000	N/A	N/A	N/A	N/A	$3,000	N/A	N/A	N/A	**$6,000**
Landfill Gas Flare Shell/Insulation Replacement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$42,000	N/A	**$42,000**
Connectivity Equipment (SCADA)	N/A	N/A	N/A	$2,000	N/A	N/A	N/A	N/A	$3,000	N/A	N/A	**$5,000**
Leachate manhole covers and extensions	N/A	$121,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$121,000**
Storm water pond maintenance	N/A	N/A	N/A	N/A	N/A	$29,000	N/A	N/A	N/A	N/A	N/A	**$29,000**
Leachate pump replacement	N/A	$85,000	N/A	N/A	N/A	$70,000	N/A	N/A	N/A	N/A	N/A	**$155,000**
425007 Stormwater management pond maintenance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$31,000	N/A	N/A	**$31,000**
212502 - Tom Howe - Willow Plantation Study	N/A	N/A	$12,000	$27,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$39,000**
222501 - Tom Howe - Perimeter gas probes	N/A	$36,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$36,000**
412517 - CWMF - Compactor repairs	N/A	$10,000	N/A	N/A	N/A	N/A	$11,000	N/A	N/A	N/A	N/A	**$21,000**
992500 - SWMMP Update	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$25,000	N/A	N/A	**$25,000**
Growth Related: Provision for Waste Diversion Services	$45,000	$46,000	$47,000	$48,000	$50,000	N/A	N/A	N/A	N/A	N/A	N/A	**$236,000**
Total Budget for Solid Waste Services	**$199,400**	**$373,000**	**$293,000**	**$287,000**	**$253,000**	**$182,000**	**$96,000**	**$131,000**	**$176,000**	**$135,000**	**$95,000**	**$2,220,400**

Table 17: Allocation of Capital Projects by Waste Stream

Project Name	Basis for Allocation	Garbage	Blue Box	LYW	HSP	Other
Waste Management Facility Repairs	100% garbage related capital project	100%	0%	0%	0%	0%
General Maintenance - Canborough Perpetual	100% garbage related capital project	100%	0%	0%	0%	0%
General Maintenance - Tom Howe Perpetual	100% garbage related capital project	100%	0%	0%	0%	0%
Pneumatic Pumps	100% garbage related capital project	100%	0%	0%	0%	0%
General Maintenance - Perpetual Sites	100% garbage related capital project	100%	0%	0%	0%	0%
Closed Landfills - ESA Phase 1&2 and Land Survey	100% garbage related capital project	100%	0%	0%	0%	0%
424008 Tipping Floor Repairs/Resurfacing	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
424009 Fiberglass Glazing Replacement	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
424010 Security Camera Replacement	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Flare Control Hardware	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Servers (SCADA)	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Software (SCADA)	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Desktops (SCADA)	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Landfill Gas Flare Shell/Insulation Replacement	100% garbage related capital project	100%	0%	0%	0%	0%
Connectivity Equipment (SCADA)	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Leachate manhole covers and extensions	100% garbage related capital project	100%	0%	0%	0%	0%
Storm water pond maintenance	100% garbage related capital project	100%	0%	0%	0%	0%
Leachate pump replacement	100% garbage related capital project	100%	0%	0%	0%	0%
425007 Stormwater management pond maintenance	100% garbage related capital project	100%	0%	0%	0%	0%
212502 - Tom Howe - Willow Plantation Study	100% garbage related capital project	100%	0%	0%	0%	0%
222501 - Tom Howe - Perimeter gas probes	100% garbage related capital project	100%	0%	0%	0%	0%
412517 – CWMF - Compactor repairs	100% garbage related capital project	100%	0%	0%	0%	0%
992500 - SWMMP Update	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Growth Related:						
Provision for Waste Diversion Services	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%

Allocation of Operating Expenditures and Revenues by Waste Stream

A review of the solid waste operating budget was undertaken and each expenditure and revenue were allocated to a respective waste stream following discussions and a workshop with staff. A summary of the operating forecast by waste stream is provided in **Table 18**.

Table 19 and **Table 20** include the 2024 to 2034 operating expenditures and revenues by waste stream along with the basis for the allocation. Furthermore, **Figure 15** and **Figure 16** indicate the operating expenditures by waste stream and the operating revenues by waste stream.

Table 18: Summary of Operating Forecast by Waste Stream

Waste Stream	Operating Expenditures Percentage Allocations	Operating Expenditures (2024 to 2034)	Operating Revenues Percentage Allocations	Operating Revenues (2024 to 2034)
Garbage	91.34%	$110,179,473	93.17%	$27,612,840
Blue Box[20]	0.18%	$214,731	0.72%	$214,731
LYW	6.35%	$7,654,530	2.82%	$836,838
HSP	0.37%	$452,198	1.59%	$470,609
Other	1.76%	$2,127,177	1.69%	$500,728
Total	**100%**	**$120,628,110**	**100%**	**$29,635,747**

[20] Note that the expenditures and revenues associated with the Blue Box waste stream occur only in 2024 and 2025. Following the transition period there are no costs allocated to the Blue Box stream.

Figure 15: Summary of Operating Expenditures by Waste Stream

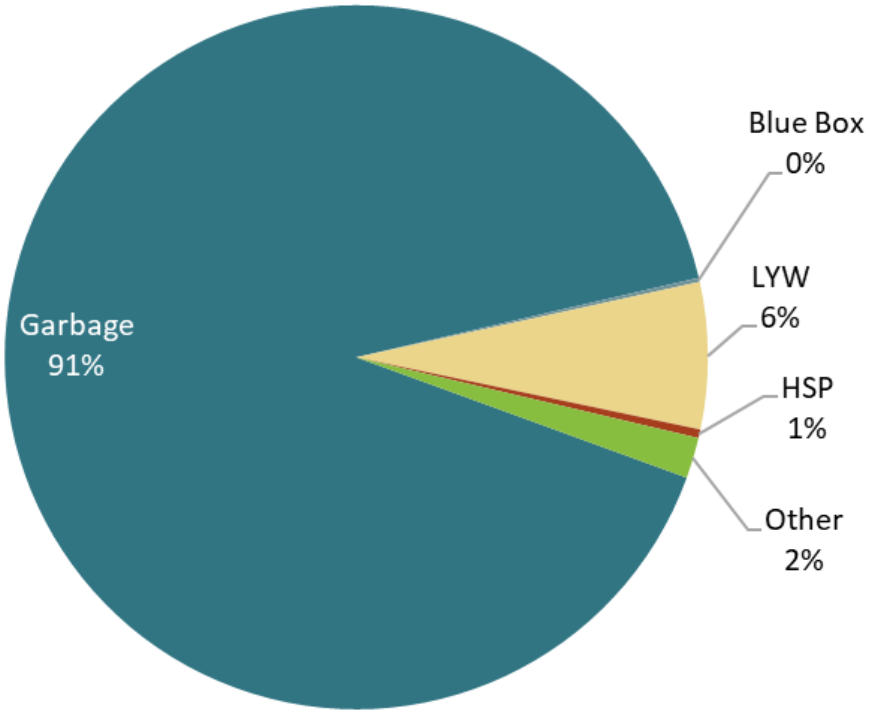


Figure 16: Summary of Operating Revenues by Waste Stream

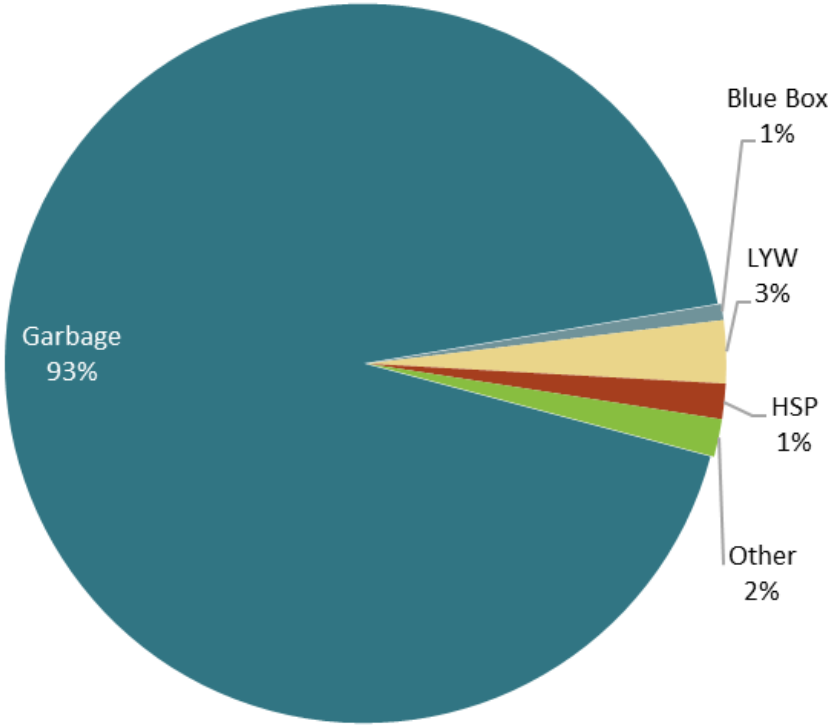


Table 19: Solid Waste 10 -Year Operating Budget and Forecast (2024 to 2034)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Solid Waste Administration											
Salaries, Wages & Benefits	$334,060	$340,700	$347,500	$354,500	$361,600	$368,800	$376,200	$383,700	$391,400	$399,200	$407,200
Materials	$63,600	$64,900	$66,200	$67,500	$68,900	$70,300	$71,700	$73,100	$74,600	$76,100	$77,600
Contracted Services	$122,280	$124,700	$127,200	$129,700	$132,300	$134,900	$137,600	$140,400	$143,200	$146,100	$149,000
Leachate - Treatment, Monitoring & Hauling	$751,340	$766,400	$781,700	$797,300	$813,200	$829,500	$846,100	$863,000	$880,300	$897,900	$915,900
Rents and Financial Expenses	$10,820	$11,000	$11,200	$11,400	$11,600	$11,800	$12,000	$12,200	$12,400	$12,600	$12,900
Interfunctional Adjustments	$205,100	$209,200	$213,400	$217,700	$222,100	$226,500	$231,000	$235,600	$240,300	$245,100	$250,000
Solid Waste Collection											
Salaries, Wages & Benefits	$43,670	$44,500	$45,400	$46,300	$47,200	$48,100	$49,100	$50,100	$51,100	$52,100	$53,100
Materials	$13,930	$14,200	$14,500	$14,800	$15,100	$15,400	$15,700	$16,000	$16,300	$16,600	$16,900
Contracted Services	$3,044,880	$3,155,500	$3,270,100	$3,388,900	$3,512,000	$3,639,600	$4,067,600	$4,215,300	$4,368,400	$4,527,100	$4,691,500
Solid Waste Disposal Sites											
Salaries, Wages & Benefits	$192,390	$196,200	$200,100	$204,100	$208,200	$212,400	$216,600	$220,900	$225,300	$229,800	$234,400
Materials	$70,740	$72,200	$73,600	$75,100	$76,600	$78,100	$79,700	$81,300	$82,900	$84,600	$86,300
Utilities	$32,410	$33,100	$33,800	$34,500	$35,200	$35,900	$36,600	$37,300	$38,000	$38,800	$39,600
Contracted Services	$1,924,490	$1,994,400	$2,066,800	$2,141,900	$2,219,700	$2,300,300	$2,383,800	$2,470,400	$2,560,100	$2,653,100	$2,749,500
Leachate - Treatment, Monitoring & Hauling	$1,772,690	$1,808,100	$1,844,300	$1,881,200	$1,918,800	$1,957,200	$1,996,300	$2,036,200	$2,076,900	$2,118,400	$2,160,800
Interfunctional Adjustments	$26,770	$27,300	$27,800	$28,400	$29,000	$29,600	$30,200	$30,800	$31,400	$32,000	$32,600

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Solid Waste Reduction											
Salaries, Wages & Benefits	$220,280	$224,700	$229,200	$233,800	$238,500	$243,300	$248,200	$253,200	$258,300	$263,500	$268,800
Materials	$66,330	$67,700	$69,100	$70,500	$71,900	$73,300	$74,800	$76,300	$77,800	$79,400	$81,000
Utilities	$10,580	$10,800	$11,000	$11,200	$11,400	$11,600	$11,800	$12,000	$12,200	$12,400	$12,600
Contracted Services	$431,840	$440,500	$449,300	$458,300	$467,500	$476,900	$486,400	$496,100	$506,000	$516,100	$526,400
Interfunctional Adjustments	$10,010	$10,200	$10,400	$10,600	$10,800	$11,000	$11,200	$11,400	$11,600	$11,800	$12,000
Total Expenditures	**$9,348,210**	**$9,616,300**	**$9,892,600**	**$10,177,700**	**$10,471,600**	**$10,774,500**	**$11,382,600**	**$11,715,300**	**$12,058,500**	**$12,412,700**	**$12,778,100**
Revenues											
Solid Waste Administration											
General Recoveries	$1,052,850	$1,073,900	$1,095,400	$1,117,30	$1,139,600	$1,162,400	$1,185,600	$1,209,300	$1,233,500	$1,258,200	$1,283,400
Solid Waste Disposal Sites											
General Recoveries	$1,291,480	$1,317,300	$1,343,600	$1,370,500	$1,397,900	$1,425,900	$1,454,400	$1,483,500	$1,513,200	$1,543,500	$1,574,400
Solid Waste Reduction											
Grants/Subsidies	$141,320	144,100	$36,407	$37,100	$37,800	$38,600	$39,400	$40,200	$41,000	$41,800	$42,600
General Recoveries	$28,170	$28,700	$29,300	$29,900	$30,500	$31,100	$31,700	$32,300	$32,900	$33,600	$34,300
Contribution from Reserves/Reserve Fund	$125,820										
Total Revenues	**$2,639,640**	**$2,564,000**	**$2,504,707**	**$2,554,800**	**$2,605,800**	**$2,658,000**	**$2,711,100**	**$2,765,300**	**$2,820,600**	**$2,877,100**	**$2,934,700**

Table 20: Allocation of Operating Expenditures and Revenues by Waste Stream

*Blue Box funding discontinued beyond 2025, after which 100% of the revenues will be related to HSP

Description	Basis for Allocation	Garbage	Blue Box	LYW	HSP	Other
Expenditures						
Solid Waste Administration						
Salaries, Wages & Benefits	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Materials	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Contracted Services	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Leachate - Treatment, Monitoring & Hauling	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Rents and Financial Expenses	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Interfunctional Adjustments	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Solid Waste Collection						
Salaries, Wages & Benefits	100% garbage related expenditures	100%	0%	0%	0%	0%
Materials	100% garbage related expenditures	100%	0%	0%	0%	0%
Contracted Services	100% garbage related expenditures	100%	0%	0%	0%	0%
Solid Waste Disposal Sites						
Salaries, Wages & Benefits	100% garbage related expenditures	100%	0%	0%	0%	0%
Materials	100% garbage related expenditures	100%	0%	0%	0%	0%
Utilities	100% garbage related expenditures	100%	0%	0%	0%	0%
Contracted Services	100% garbage related expenditures	100%	0%	0%	0%	0%
Leachate - Treatment, Monitoring & Hauling	100% garbage related expenditures	100%	0%	0%	0%	0%
Interfunctional Adjustments	100% garbage related expenditures	100%	0%	0%	0%	0%

Description	Basis for Allocation	Garbage	Blue Box	LYW	HSP	Other
Solid Waste Reduction						
Salaries, Wages & Benefits	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%
Materials	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%
Utilities	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%
Contracted Services	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%
Interfunctional Adjustments	Allocated between waste diversion streams based on forecasted tonnage	0%	0%	75.31%	4.33%	20.36%
Revenues						
Solid Waste Administration						
General Recoveries	Allocated based on forecasted tonnage	91.96%	0%	6.05%	0.35%	1.64%
Solid Waste Disposal Sites						
General Recoveries	100% garbage related revenues	100%	0%	0%	0%	0%
Solid Waste Reduction						
Grants/Subsidies	Allocation based on 2024 budget amounts: $106,320 – Blue Box Funding $35,000 HSP Funding	0%	75.23%*	0.00%	24.77%*	0%
General Recoveries	Allocation based on 2024 budget amounts: $4,400 LYW Recoveries $23,770 – Diversion Centre Recoveries	0%	0%	15.62%	0%	84.38%

Allocation of Lifecycle by Waste Stream

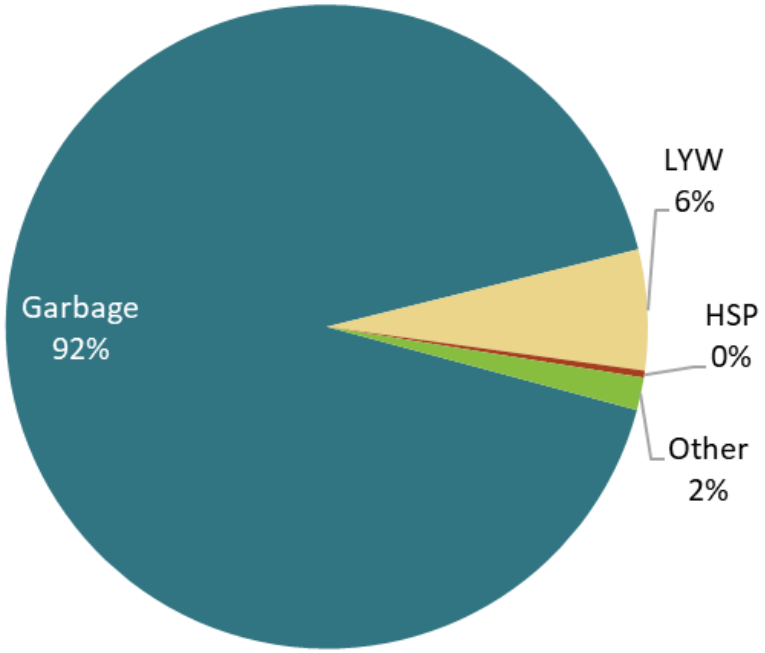
Section 5.7 provided an analysis of the County's solid waste inventory to estimate the annual lifecycle costs attributable to solid waste. Using the depreciation method, the total replacement value for solid waste assets was approximately $27 million, which translates into an annual lifecycle requirement of approximately $3.25 million. The difference between the annual lifecycle requirement of $3.25 million and the projected non-growth-related capital requirements was included in the calculations. The lifecycle costs are identified in the cost of service analysis as a contribution to the lifecycle reserve beginning in 2025. While these costs are not currently included in the County's solid waste budget, it is recommended that they be added as part of the full cost of service analysis.

The annual lifecycle costs were allocated to each respective waste stream based on the forecasted tonnage of materials processed for each waste stream (after removing Blue Box tonnages). **Table 21** and **Figure 17** provide a summary of the annual lifecycle costs attributable to each waste stream.

Table 21: Allocation of Lifecycle Savings by Waste Stream

Waste Stream	Percentage Allocations	Lifecycle Reserve Contributions (2024 to 2034)
Garbage	91.96%	$32,604,856
LYW	6.05%	$2,146,806
HSP	0.35%	$123,364
Other	1.64%	$580,313
Total	**100%**	**$35,455,339**

Figure 17: Summary of Lifecycle Savings by Waste Stream



5.11.2 Total Cost of Service

The cost of service analysis combines the reviews of the operating budget, capital forecast and the lifecycle analysis to prepare a forecast of the potential financial recovery requirements to 2034. The annual required expenditures, less any operating revenue (e.g., user fees) provides the full cost of service to provide solid waste services to the residents of the County. At a high-level, this is completed by identifying the following in each year:

- Capital needs;
- Funding of capital needs/reserve fund analysis;
- Operating costs (including transfers to pay for capital needs);
- Operating revenues; and
- Lifecycle costs.

Results of Analysis

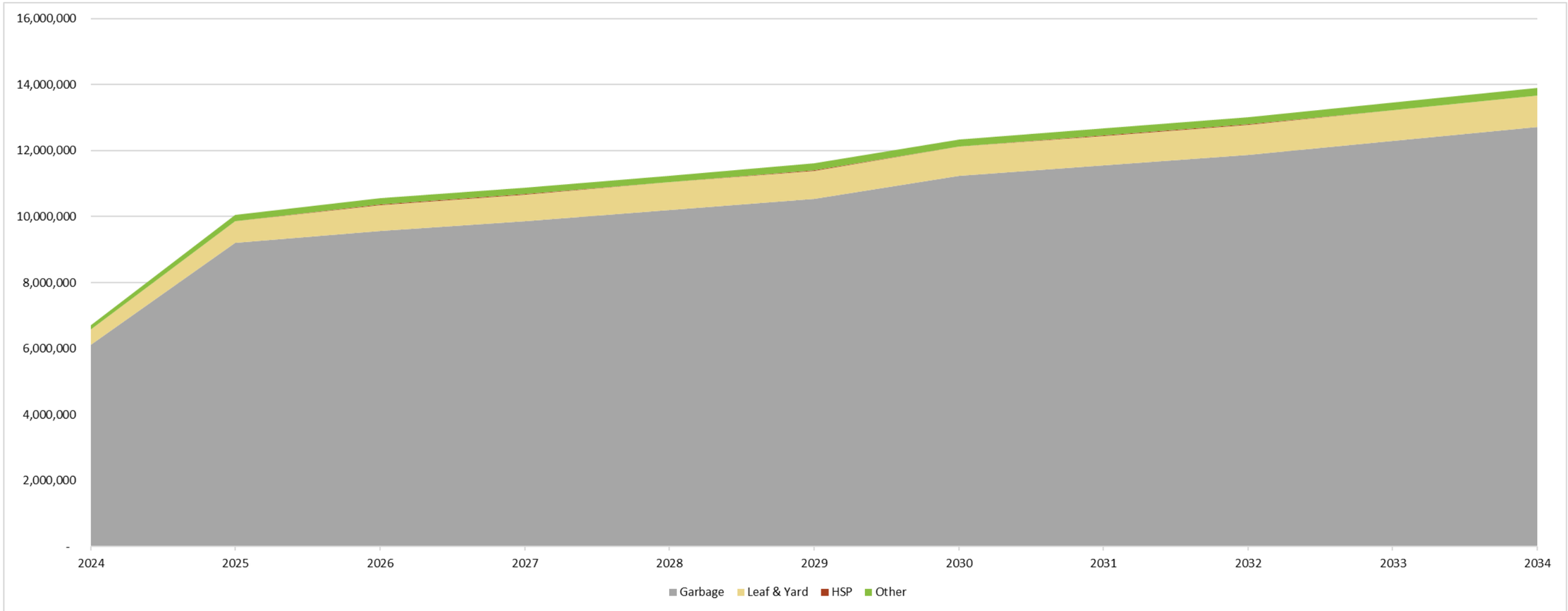
Based on the financial modelling prepared, along with the discussion with staff, the total net cost of service (after operating revenues) for 2024 is $6.71 million. The total net cost of service (after operating revenues) for 2025 is $10.05 million (note the savings for

lifecycle begin in 2025). By 2034, the anticipated net cost of service to be funded by property taxes will be approximately $13.90 million. These costs have also been calculated for each waste stream in **Table 22** and **Figure 18.** The calculations worksheets are provided in **Appendix B** for the total solid waste program, along with the calculations for each waste stream.

Table 22: Total Net Cost of Service for Recovery

Waste Stream	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Garbage	$6,114,215	$9,195,619	$9,560,224	$9,863,600	$10,205,571	$10,542,806	$11,244,656	$11,562,100	$11,880,392	$12,290,768	$12,711,538
Blue Box	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LYW	$464,560	$663,449	$793,674	$811,202	$831,016	$850,244	$873,709	$890,321	$906,635	$928,679	$951,008
HSP	(1,942)	$8,923	$9,464	$9,783	$10,227	$10,537	$11,091	$11,251	$11,394	$11,867	$12,357
Other	$131,737	$185,640	$191,055	$195,312	$200,188	$204,904	$210,766	$214,776	$218,705	$224,102	$229,577
Total	**$6,708,570**	**$10,053,631**	**$10,554,417**	**$10,879,897**	**$11,247,002**	**$11,608,492**	**$12,340,222**	**$12,678,448**	**$13,017,126**	**$13,455,417**	**$13,904,480**

Figure 18: Total Net Cost of Service by Waste Stream



6.0 Review of Comparable Providers

To explore best practices that could guide potential improvements to the County's waste management system, a comparative analysis of similar jurisdictions was conducted. This assessment aims to identify strategies and approaches that may be applicable to the County's operations. The following sections lay the groundwork for recommendations on how these practices could be integrated into the County's waste management framework.

6.1 Identification of Comparable Providers

A comprehensive list of local governments across Ontario was compiled, accompanied by a rationale explaining their relevance to the objectives of this assignment and focus area as outlined in **Table 23** and further detailed in **Section 6.2**. Additionally, a set of targeted questions was developed for these comparable jurisdictions, structured around key themes identified by the County.

Table 23: Comparable Providers and Rationale

Municipality	Focus Area	Rationale
Brantford	Curbside collection efficiency	Has implemented organics collection
City of Greater Sudbury (Greater Sudbury)	Curbside collection efficiency	Has bi-weekly collection with a bag tag
City of Belleville (Belleville)	Curbside collection efficiency	Has implemented organics collection and bag tags
Norfolk County	Transfer station optimization	Has two transfer stations, and is a neighbouring county
Brant	Transfer station optimization	Has one transfer station and one landfill, with a similar diversion rate, and is a neighbouring county

Municipality	Focus Area	Rationale
Hamilton	Transfer station optimization	Has three community recycling centres / transfer stations, and is a neighbouring city
Oxford County (Oxford)	Management of HSP	Provides a HSP drop-off depot
City of St. Thomas (St. Thomas)	Management of HSP	Has a similar population, accepts HSP at the Community Recycling Centre (CRC)
City of Kawartha Lakes (Kawartha Lakes)	Management of HSP	Has a HSP drop-off service with seasonal hours
Wellington County (Wellington)	Sustainable Landfill Solutions	Has multiple closed landfill sites
Durham Region	Sustainable Landfill Solutions	Has mined an old landfill and has biosystems to capture methane
City of Barrie (Barrie)	Sustainable Landfill Solutions	Has multiple closed landfill sites

The review process involved a multi-faceted approach, combining several research methods to building on the comparable provider research. Primary data was collected through a desktop study, supplemented by a questionnaire and/or interviews with the comparable jurisdictions. This direct engagement provided valuable insights into the waste management practices of these providers. In addition to the information gathered from the jurisdictions, supplementary data was sourced from various online platforms, studies, government reports and other desktop research. These additional resources were used to fill any data gaps and to provide further validation and context to the findings. This approach allowed for a robust identification of best practices, highlighted deficiencies in the current system and informed a set of supported recommendations tailored to the County's specific needs.

6.2 Research

The research focus areas considered are based on the County's current waste management system and its strengths, areas of concern and the expected changes, such as population growth, transition of the Blue Box program to IPR, etc.

Four focus areas were considered which included the following:

- **Curbside Collection Efficiencies and Opportunities**: As described in **Section 3.6** Norfolk Disposal Services Ltd. provides collection services across the County for garbage, bulky waste and LYW and is compensated on a per-stop basis. Overall, the contract is consistent with how services are provided in many other jurisdictions. However, the County may benefit from exploring opportunities related to efficiency improvements implemented in other jurisdictions including:
  - Implement service agreements for private roads and shared collection points;
  - Quantity limits for garbage collection;
  - Introduction of organic waste collection; and
  - Pay-per-use for bulky waste.
- **Transfer Station Operation Enhancements**: As described in **Section 3.7**, the CWMF receives and transfers all municipal solid waste collected in the County. Given that the County owns other properties, including closed landfills, the County could consider enhancing the accessibility of its transfer station services, either for public use or for contract services, to reduce travel time and distances. Municipalities that have planned for future growth and considered and assessed options, provide useful insights for the County.
- **Management of HSP**: Although municipalities are not under statutory obligation to provide HSP collection services, many jurisdictions do so for environmental and health and safety concerns. Notably, like numerous other jurisdictions, the County has faced rising costs associated with processing these materials (refer to **Section 3.11.5**). Municipal HSP programs can be delivered through various models, such as event days, permanent depots, or mobile depots, with some jurisdictions accepting materials that are not designated as HSP under the provincial framework. The best practices identified through this research describe the variations in service levels and delivery models that can help with the management of program costs.

- **Sustainable Solutions for Closed Landfill Sites**: The County is unique in that it manages 15 closed landfills but has no active landfills (refer to **Section 3.10**). As a result, identifying sustainable solutions for closed landfills is a priority for the County. Two approaches to reducing staff efforts and costs related to closed landfills were explored through the jurisdictional scan and included emergent approaches to leachate management and the transformation of landfill sites.

6.3 Best Practices Integration

The following four subsections describe best practices identified through the jurisdictional scan and desktop research. This information was further analyzed and used to inform recommendations aimed at improving the County's efficiency while maintaining quality waste management services.

6.3.1 Curbside Collection Efficiencies and Opportunities

Efficiency in collections can be achieved through a variety of means, from policy changes that limit waste quantities or stipulate how waste is to be set out to the use of technology or alternative fuels. The opportunities identified in the following subsections were selected to reflect collection challenges the County faces, such as collecting from private roads and shared collection sites, as well as possible lessons from other jurisdictions, namely, the opportunity to provide organic waste services or the introduction of a partial (i.e., bulky-waste-specific) user pay model.

6.3.1.1 Private Roads and Shared Collection Sites

The County had previously reached out to 40 municipalities to understand how they manage common collection points, private roads and private property. The responses describe how the municipality manages these operations and any enhancements they've tested. Select information from this research has been integrated into this section to discuss the best practices.

Wellington County

Wellington County (Wellington) provides collection services to residents on private roads under specific conditions. Service agreements are used to confirm roads are maintained and accessible for collection vehicles. The service agreements state that collection is provided if there is a throughway or turnaround spot for collection vehicles.

The agreements are made with the homeowner's association, condo corporations or property management groups. Agreement terms require roads to be kept clear for collection. If the road is not maintained, services will be withdrawn and residents can arrange private collection at their own cost. In situations where private roads are not suitable for collection, residents are advised to take their waste to one of Wellington's six waste facilities.

Simcoe County

Simcoe County (Simcoe) provides waste management services to residents on private roads through curbside collection, common collection points, landfill passes, and waste subsidies. For curbside collection, the roads must have turnaround space and must be well maintained. They also offer seasonal service from May until October for residents that are only accessible during the summer months. During the winter, they can use the other alternatives. Some properties use common collection points; however, Simcoe is trying to minimize their number by serving up to a maximum of five properties per common collection point. If issues arise, the collection point is removed and landfill passes are provided. Residents are required to submit an action plan for the collection point to be reinstated. The landfill passes offer free drop-off of curbside material at Simcoe facilities. Residents who use private collection services due to non-compliance receive a subsidy of $1.00 per unit per week for garbage and $1.00 per unit per week for recycling, paid out annually. Simcoe seeks to establish agreements with private road owners to clarify service expectations and confirm collection contractors use smaller vehicles for challenging routes. Simcoe has also recently updated its by-law to address private road requirements.

City of Kawartha Lakes

The City of Kawartha Lakes (Kawartha Lakes) provides waste collection services on private roads under specific conditions outlined in its by-laws, with established standards for road maintenance to confirm safe and efficient service. The maintenance standards include that the roads must be plowed to a minimum width of four metres, sanded or salted during icy conditions, have vegetation cut back to five metres in height and four metres in width, and have all potholes and cracks repaired. This standard also includes having an appropriate turnaround location for trucks.

The District Municipality of Muskoka

The District Municipality of Muskoka's (Muskoka) waste management collection services are provided through a combination of curbside collection, depot/transfer station drop-off services, and specialized services that are tailored to its unique geography and demography, which includes a large seasonal (e.g., cottage-dwelling) population. A significant portion of residents receive collection along private roads, through lakeside collection services and at common collection points. Historically, Muskoka engaged in formal and informal methods of assuming waste collection services on private roads, such as an agreement is provided verbally or via email.[21]

As a result of direction from the MECP, an ongoing initiative called the 'Bin Site Transition' is currently in place to transition the collection points at the end of residential driveways or at other designated common collection points along approximately 232 private roads across Muskoka. These sites were of concern as they were unlicensed 'waste sites' that were unstaffed, unsupervised and accessible by groups of neighbours who would access a common dumpster or another bin used for set out. Customers who formerly used these common collection points are being transitioned to curbside collection or depot/transfer station drop-off.

As part of the 'Bin Site Transition' initiative, Muskoka developed a Waste Collection Alternative Service Study Terms of Reference which identified objectives of the transition from common collection points and supported community consultation.[22]

As well, Muskoka is determining road standards and wishes to develop a service agreement to set out its policy related to access, space and maintenance requirements, animal resistant waste containers and other barriers for safe travel.

6.3.12 Collection Quantity Limits and Collection Frequency

The following two considerations have emerged from the research for consideration if the County implements a policy to reduce allowable curbside collection quantities. Firstly, consideration should be given to the Blue Box Regulation, which was described in

[21] The District of Muskoka. Staff report to Engineering and Public Works Committee. "Waste Collection Service on Privately Owned Roads and Common Collection Point Locations" PW-2-2024-5. February 21, 2024. https://muskoka.civicweb.net/filepro/documents/41005/?expanded=41121&preview=41158

[22] Engage Muskoka is the District's engagement page https://www.engagemuskoka.ca/bin-site-transition-plan

Section 2.2.1. Secondly, consideration could be given to long-term planning and the gradual implementation of policy changes (as was the case in Greater Sudbury).

Important Information on the Blue Box Transition

As described in **Section 2.2.1**, the County's Blue Box program transitioned to the IPR framework on January 1, 2024, and all municipal Blue Box programs across Ontario will be transitioned by January 1, 2026, when the Common Collection System will be in place. The Blue Box Regulation requires that, during the transition period from 2024 to 2026, producers provide services in the same way that they had been provided by the jurisdiction. After January 1, 2026, producers will be required to meet service level requirements described in the Blue Box Regulation and recovery targets will start to be enforced. Due to this, the services provided after January 1, 2026, will not necessarily be identical to those provided during the transition period. This raises a risk for municipalities including potential changes to the day of the week on which Blue Box recycling is collected. Moreover, the frequency of Blue Box collection has been stated that it will be based upon the frequency that garbage collection is provided, (i.e., jurisdictions with weekly garbage collection will receive weekly Blue Box collection and those with bi-weekly garbage collection will receive bi-weekly recycling collection). However, it is not clear if Circular Materials would in practice reduce the level of service of recycling from weekly to bi-weekly.

If the County considers a service level change to its garbage collection frequency, the Blue Box Regulation does not provide a specific date on which the determination of Blue Box collection frequency should be based. Therefore, Blue Box collection frequency could change to bi-weekly collection if garbage collection is reduced to bi-weekly.

Greater Sudbury

The City of Greater Sudbury (Greater Sudbury) has one of the largest land areas of municipalities in Canada (3,627 square kilometres) and is comprised of several different communities, including those with dissimilar population densities (i.e., it includes urban, sub-urban and rural communities). Greater Sudbury collects from approximately 63,000 single-family households, including garbage and organic collection. When Greater Sudbury secures additional processing capacity, it anticipates expanding organics collection services to additional customers, including IC&I establishments (e.g., grocery retailers and seniors' residences) and multi-residential buildings.

Over the last ten years, the amount of residential waste that has been diverted from landfill has been relatively stagnant, averaging 44%. However, in 2021, Sudbury introduced a new collection frequency: 'every other week' (as it is communicated to residents; i.e., bi-weekly) and is now achieving a 47% diversion rate. The change in the garbage collection service level was introduced gradually, with the following milestones:

- October 2016: Two bags were collected per household each week;
- October 2019: One bag was collected per household each week; and
- February 2021: Two bags were collected per household every other week.

Garbage bags must weigh less than 18 kg each, and if residents exceeded the allowable number of bags, garbage bag tags could be used, at a cost of $10 for five tags. Greater Sudbury recently had its Sustainable Waste Strategy approved which includes consideration of a clear garbage bag program as a further change to encourage waste diversion.

6.3.13 Introduction of Organics Collection Program for Food Waste

Described in **Section 2.2.2**, Ontario's Food and Organic Framework was released in 2018. Since then, several municipalities have considered their responsibility for implementing organics collection programs for food waste. In some cases (e.g., Greater Sudbury, Muskoka, etc.) consideration of expanding the organics collection program depends on the availability of processing capacity and is considered in conjunction with other waste collection quantity limits and set out policies (e.g., introduction of a clear bag program, transition of customers from legacy set out processes, etc.). Generally, implementing an organics collection program for food waste at the same time as introducing other service level changes (e.g., bi-weekly collection) is recommended.

City of Brantford

Brantford recently introduced a Green Bin program in November 2023. The provincial Food and Organic Waste Policy requires Brantford to have a residential organics diversion program in operation, servicing at least single-family dwellings, no later than December 2025. The changes are estimated to result in 8,750 tonnes of organics diverted per year from landfill, raising residential waste diversion from 35% to 51%. Additionally, Brantford modified its collection route to balance the number of collection locations. This will reduce the overtime hours at the landfill site which is estimated to

save $18,000 in overtime reduction. Brantford currently collects all three streams weekly serving 37,497 locations. Residents were informed by placing door hangers on household doors three weeks and one week before the transition.

6.3.14 Pay-Per-Use Bulky Item Collection

While the property tax base is the largest and most reliable revenue source for municipal solid waste systems, many jurisdictions apply fees and charges for specific services or activities to recover a portion of the costs. Revenue from fees and charges can offset specific program costs, enabling the jurisdiction of offer the program without budgetary impacts in other areas.

City of Belleville

Large household items, including furniture, appliances or other bulky items are not included in the City of Belleville's (Belleville) regular weekly waste collection services. Instead, if residents wish to dispose of these items, a request can be placed with Belleville through a user-pay system. Bulky item collection is available year-round and can be requested in-person at some municipal buildings or on-line by Wednesday afternoon each week. Bulky items are collected on Fridays, except for white goods which can be scheduled at any time and for which a specific pick-up day is scheduled. **Table 24** provides the fees charged to residents for bulky waste collection.

Table 24: Bulky Item and White Good Pickup Fees

Item	Unit Price (including tax)
White goods (e.g., stoves, dishwashers, washer, dryer, microwave, etc.)	$40
White goods with Freon (e.g., fridge, air conditioner, etc.)	$50
Bulky Item – Large (e.g., couch, desk, toilet, etc.)	$25
Bulky Item – Small (e.g., end table, TV stand, etc.)	$20

Belleville also provides residents with information about GFL Environmental Inc.'s local transfer station and Environmental 360 Solutions' local facility, which also accept bulky

items and where private-sector tipping fees are applicable. If a resident leaves bulky waste at the curb, Belleville is authorized through its by-laws, to enforce a fine.[23]

6.3.2 Transfer Station Operation Enhancements

To address the challenges and opportunities associated with population growth and waste management, municipalities must carefully plan and strategically invest. The following considerations are important:

- Understanding the capital and operating costs involved in siting new or expanded municipal depots;
- Identifying appropriate staffing levels for effective transfer station operations, which may require a balance between full-time, part-time and interim staff for smooth operations and cost efficiency; and
- Designing transfer stations to accommodate both public and contractor access, which is essential for safety and efficiency.

6.3.2.1 Planning for Future Growth

In addition to a larger population that will generate larger waste quantities, the distance to the CWMF may pose challenges for future developments that could double the County's population. Caledonia is expected to have a large population growth and is located more than 30 minutes away from the CWMF.

Given the expected growth, it is important to weigh both the challenges and potential benefits of opening a second waste management facility. While similar challenges experienced elsewhere could arise, careful planning and strategic investment could also present opportunities for improved efficiency and customer service.

Continuous Improvement Fund

The Continuous Improvement Fund produced a Small Municipal Depot Guidebook in 2016, outlining key economic considerations in siting new municipal depots. Capital costs vary depending on factors such as existing infrastructure, site servicing, the amount of site preparation required and the layout and features of the municipal depot.

[23] Belleville website. Last retrieved October 22, 2024, at https://www.belleville.ca/en/home-and-property/bulky-item-collection.aspx

Additionally, storage, handling and transportation configurations all play a role in determining these capital costs. Operating costs are another critical factor. While the County will understand these costs based on staffing levels and positions at the CWMF, these part-time staff positions could potentially be shared with other facilities such as a new depot to become full-time positions.

There is no prescribed population limit or minimum annual tonnage required for a municipality to construct a depot and depots can be constructed to provide access to more convenient disposal and diversion services when an existing site may be located too far from a population centre. The size and location of a depot(s) depends on factors such as accessibility, convenience and the ability to accommodate population growth, seasonal demand and changes in materials collected. In areas where the population is spread over larger geographic areas, the number of depots needed should be determined by using either recommended distances and/or travel time (less than 4 km and/or under 20 minutes) or through a public consultation process. Depots should be designed and sized to accommodate local long-term waste projections associated with population growth, anticipated users/traffic and types of materials that will be managed. In areas where significant population growth is anticipated, depots can be modular or phased for expansion to meet both short-term and eventual long-term needs.

The guidebook includes a Depot Costing Model which is intended to assist small municipalities estimate the cost of expansion, construction and operation of depots. The model permits the input of material types and tonnages, sorting configurations, collection and haul vehicle configurations, program operating costs and using those inputs, produces an estimate of cost/tonne and overall annual costs for comparison of different user selected options. Although the cost per unit has risen since the model's initial development in 2016, it could be updated to reflect 2024 costs for a more accurate assessment.

City of Edmonton

The City of Edmonton (Edmonton) operates four staffed "Eco Stations", which accept waste and recyclables from both residents and businesses. The Eco Stations are strategically located in four different geographic parts of Edmonton to service various neighbourhoods. Additionally, Edmonton manages 16 unstaffed recycling depots, which

accept paper, boxes, cardboard, plastic containers, cans and bottles but do not handle large items such as furniture, mattresses or appliances. The recycling depots are remotely monitored for illegal dumping, with offenders facing a $250 fine.

6.3.2.2 Staffing

Municipalities need to confirm that sufficient staff resources are available to operate a transfer station effectively. Staffing should reflect the extent of depot use, with more staff required during peak times to assist customers and provide smooth operations. Municipalities should consider combinations of full-time, part-time and interim staff to minimize costs while ensuring effective operations. Staff retention can be a challenge, especially when offering part-time hours, which can result in higher turnover. Balancing budget constraints with the need for adequate staffing for efficient operations is an ongoing challenge identified by several municipalities.

Norfolk County

Norfolk County operates two transfer stations: the Simcoe Transfer Station and the South Walsingham Transfer Station. The Simcoe Transfer Station is open Monday to Friday from 8 AM to 4:15 PM and Saturday from 9 AM to 1 PM. In contrast, the South Walsingham Transfer Station operates on Monday, Wednesday and Friday from 10 AM to 3:45 PM and Saturday from 9 AM to 1 PM

Norfolk County does not have a customer service standard for travel distances for residents when siting waste depots. The transfer stations were based on existing sites under the former Region of Haldimand-Norfolk and utilized old landfill sites. The two transfer stations are located in opposite ends of Norfolk (east and west) to service residents throughout the community and are approximately 30 minutes of travel time from each other.

Staffing at the Simcoe Transfer Station consists of one full-time employee working four 9-hour shifts, one part-time employee covering one nine-hour shift and one 4.5-hour shift and a contracted worker responsible for the drop-off area and loader operations. Meanwhile, the South Walsingham Transfer Station employs two part-time staff members: one working two 6.5-hour shifts and the other covering one 6.5-hour shift and one 4.5-hour shift, alongside a contracted staff member for similar operational duties.

Norfolk County faces challenges with staff retention due to the limited part-time hours currently offered, resulting in higher turnover rates. Additionally, Norfolk County contends with competition from private transfer stations that maintain lower tipping fees, which complicates their efforts to recover operational costs through transfer station revenue.

Brant County

Brant operates two transfer stations: Biggars Lane Landfill Site and Paris Waste Transfer and Recycling Station. There is no customer service standard for travel distances for residents when siting waste depots. Biggars Lane Landfill Site acts as a drop-off for large loads for recycling or disposal and is open Monday to Friday from 9:30 AM to 5 PM and Saturday from 9 AM to 1:45 PM. Paris Waste Transfer and Recycling Station acts as a drop-off for small amounts of garbage and recycling items and is open Tuesday and Thursday from 9:30 AM to 2 PM, and Saturday from 8 AM to 4 PM (April to November) and from 9 AM to 3 PM (November to April). The 2024 budget to operate the Paris Waste Transfer and Recycling Station is $187,583, while the budget for Biggars Land Landfill is $732,379.

Brant anticipates minimal impact from the full transition of the Blue Box program by January 1, 2026; however, they will need to issue a Request for Quotation (RFQ) for a processor to handle diverted Blue Box materials from non-eligible Blue Box materials. Two additional staff members have recently been hired to address staffing challenges at the scalehouse, bringing the total to five staff in rotation. At the Paris Waste Transfer and Recycling Station, two spotters are employed in the public drop-off area to help customers better sort materials. Brant emphasizes the importance of having good scale and spotter staff, as well as ease of use of the site, including signage and limited wait times for efficient operations and customer satisfaction.

As a result of the lessons learned through the jurisdictional scan, and in the event that Haldimand County builds an additional depot(s); the County should consider whether part-time staff could be transitioned to full-time positions and work across locations to improve staff retention. This approach could help mitigate challenges associated with high turnover rates due to limited part-time hours of depots. By increasing the hours of part-time staff to create full-time positions, the County could provide more stable employment opportunities, potentially reducing turnover, reducing re-training time and

improving operational efficiency. Additionally, having full-time staff who can work between the two sites may enhance operational flexibility and allow for each site to be adequately staffed during peak times.

6.3.2.3 Public Access versus Contractor Access

When designing a transfer station intended to serve both the public and contractors, careful consideration must be given to access points, especially in light of anticipated population growth. Increased traffic can present challenges that must be addressed for smooth operations and safety for all users.

City of Hamilton

In the late 1970's three transfer stations were strategically located throughout Hamilton. The transfer stations were designed to accept solid waste, top-load it into transfer trailers and transport it for final disposal. Based on recommendations of Hamilton's 2001 SWMMP, three Community Recycling Centres (CRCs) were constructed (one at each site) to become integrated into the existing transfer stations. Each of the new larger sites was divided into two separate components: the original transfer station, which contains the physical building and the new CRC. The transfer station was dedicated to servicing municipal collection vehicles and most commercial customers while the CRC includes a container station for waste and recyclable material disposal and a HSP depot. The Mountain CRC also contains a Reuse Centre which provides residents the opportunity to donate reusable items and/or shop for reusable items.[24] A copy of the Kenora Transfer Station and CRC layout is provided in **Figure 19**.[25]

[24] City of Hamilton. (2011). City of Hamilton Transfer Stations and Community Recycling Centres Solid Waste Association of North America Transfer Station Excellence Award

[25] City of Hamilton. (2011). City of Hamilton Transfer Stations and Community Recycling Centres Solid Waste Association of North America Transfer Station Excellence Award

Figure 19: Kenora Transfer Station and CRC



The design of the transfer stations/CRCs separates small vehicle traffic from site equipment and transfer vehicle traffic. Direct interaction between larger equipment and small vehicle users increases the risk of on-site vehicle collision and/or human injury. As part of the design, there are vehicle access only areas to minimize these risks. For example, only transfer vehicles access the back area of the transfer station where waste is top-loaded into transfer trailers. Small vehicles drop off their materials in front end bins that are set up in a concrete sawtooth bin configuration. A benefit of this design is that bins are top loaded and the grade separation keeps small vehicle traffic separated from large vehicle traffic. Bins can be safely removed when they are full and exchanged with empty bins with minimal interaction with users. This design enables waste materials to be dropped from above until the bin is full and require guard rails which require users to lift material over the wall above waist height (which could potentially increase strain injuries). A disadvantage of this design is that it can accommodate only a fixed number of bins and is not as flexible as other design options if new materials need to be added to the program.

Preconstruction, Hamilton was limited to diverting five types of materials (metal, co-mingle recyclables, LYW, paper/cardboard and HSP); however, post construction Hamilton has been able to expand the number of materials diverted from waste to include tires, electronics, wood, white goods and shingles.

Hamilton notes that there are several merits of the facility:

- One contractor is responsible for approximately 90% of the site operations and there is very limited overlap between contractors;
- There are two Contract Technicians which makes the management of these operations efficient from a City of Hamilton staffing perspective and allows staff to focus on program development and implementation;
- During the spring it is not uncommon for up to 1,500 customers to visit any one of the sites in one day. In response to customer requests Hamilton hires police officers to maintain traffic control during the business spring weekend. This is an additional cost; however, Hamilton endures the cost to provide efficient operations; and
- Hamilton is very proactive in addressing the concerns of customers. A significant portion of the transfer station/CRC designs are based on addressing the needs and concerns that were identified by customers during consultation. Hamilton has attempted to make the system as user friendly as possible which includes on-site attendants that assist customers visiting the CRCs/transfer stations. Attendants answer user questions, inform them of the different services offered, notify users on what materials are acceptable/unacceptable and assist users with disposing their materials.

6.3.3 Management of HSP

The information gathered from other jurisdictions highlights the variations in ways that services for Household Hazardous Waste (HHW) can be provided, as well as common challenges shared by service providers. The term HHW has been retained in this section, rather than HSP, as the programs described are identified as such by the jurisdictions discussed.

6.3.3.1 Escalating Service Costs

Several municipalities recently observed an escalation in the bid prices when seeking services for contracted services for the management of HHW collected through their

programs, including St. Thomas, Oxford County (Oxford) and York Region, among others. The increased costs can be presumed to be a result of inflation and related to increases in the cost of labour and materials. They have also been speculated to be a result of a shortage of competition in the market. Municipalities are not under any statutory requirement to provide HHW programs. Many municipalities choose to provide service to keep HHW from the natural environment, posing health and safety risks and contaminating garbage, recycling and organics loads. While HHW requires special handling and end-of-life management processes that can not be changed, cost mitigation strategies can be introduced through variations in how services are provided.

Both Oxford and St. Thomas noted a peak in the quantities of HHW received during the COVID-19 pandemic, that has not been sustained since. This trend has also been observed in other jurisdictions and is speculated that, since residents had time at home, more people were cleaning out their garages, sheds, basements, etc.

6.3.3.2 Service Level Variation

To mitigate against the high costs for municipalities to operate HHW programs, consideration can be given to various service levels. The following subsections identify the services levels in Oxford for the purpose of comparison and to identify that service variation can exist within a jurisdiction (i.e., Oxford County and the City of Woodstock (Woodstock) both provide HHW services but budget for these programs separately). HHW programs can sometimes incur additional costs due to their misuse by residents outside of the designated catchment area and due to misuse by the commercial sector. In the jurisdictional scan, St. Thomas indicated that they mitigated this concern by developing an application process that applies a limit on the quantity of HHW that can be dropped off annually.

Oxford County

Within Oxford there are two permanent facilities at where residents can drop off HHW: the Oxford Depot at 384060 Salford Road, in Salford, and the Woodstock EnviroDepot at 500 Dundas Street, in Woodstock. The Oxford Depot is open six days a week for eight hours per day. HHW is accepted from residents of Oxford free of charge and a maximum of 20 litres or five gallons of HHW is permitted per visit. The EnviroDepot, offers services to residents within Woodstock and all services are free of charge. If a resident lives in Oxford, but not within Woodstock, services are provided but some fees apply for the

drop off of large items and appliances, construction and renovation materials, and other recycling items. There are no fees charged to residents of Oxford for HHW services. The EnviroDepot has variable summer and winter hours for the depot and the HHW services. During the summer (April 1 through November 30), for four days a week, the depot is open at full service (eight hours per day) meaning that all diversion streams are available for collection. During the winter (December 1 through March 31) HHW services are provided on Saturday only, even though the depot is open for some recycling services.

While the two facilities provide similar HHW services, operational costs, budget and staffing is kept separate from one other. The Oxford facility operation costs for 2023 were approximately $126,600 for transportation and processing, plus $5,500 for supplies. There was one full-time equivalent (FTE) for Oxford's program in 2023 which cost approximately $63,500 exclusive of overtime, benefit, extended health benefits and pension (which were approximately $22,000 in addition).

City of St. Thomas

The City of St. Thomas (St. Thomas) has a permanent depot that is situated inside its CRC, located at 330 South Edgeware Road. Although the CRC hours are more extensive, the HHW depot is open every Saturday from 8 AM to 3 PM and Wednesday from 10 AM to 3 PM and it accepts specified items at no cost to residents. The depot includes a drive through lane and a by-pass lane, as well as a storage area which is adjoined to an office building of the CRC.

As is typical of municipal programs, and since St. Thomas is only permitted to store limited quantities of HHW on site, the program was only offered to residents. However, staff responded in the jurisdictional scan to indicate that, due to concerns regarding commercial customers accessing the service inappropriately, an application process was developed that would allow businesses to drop off specified quantities annually.

6.3.3.3 Alternative Service Delivery Models

Service delivery models for HHW programs take the form of event days, permanent depots and mobile depots. In 2018, Wellington County was awarded the Solid Waste Association of North America (SWANA) Excellence Award for its Mobile HHW Depot, which is described in the following subsection.

Wellington County

Wellington collects HHW from residents via permanent depots located in Aberfoyle, Belwood, Elora, Harriston and Riverstown, as well as a mobile HHW depot, which visits each of Wellington's six waste facilities and two Road's department garages.

The year-round mobile HHW depot is made of a used shipping container (**Figure 20**) that stays at each waste facility or garage for a period of one month before moving on to another County waste facility or garage. Through the mobile depot model for HHW collection, limited capital investment was required to provide convenient HHW services to a large geographical area.

Figure 20: Wellington County's Mobile HHW Depot



There is no specified limit on the amount of material a resident can drop off; however, if staff deems a load is excessive, they will request the resident bring the material in separate trips to maintain capacity at the depot. During the one month stay at the facility, the mobile depot operates under the same hours as the host facility.

Wellington's website posts an online schedule for both hours of operation and operation dates of the mobile depot.[26]

6.3.4 Sustainable Solutions for Closed Landfills

Landfill sites present significant environmental and logistical challenges, necessitating innovative and sustainable solutions. This section explores various strategies to manage and repurpose these sites. Highlighted initiatives include advanced leachate management techniques and transforming landfill areas into community assets, demonstrating a strong commitment to environmental stewardship and regulatory compliance. By examining diverse approaches and technologies, insights into mitigating the long-term impacts of landfills and converting them into valuable community resources are gained.

6.3.4.1 Leachate Management

Leachate management is a critical component of modern waste management practices, aimed at mitigating the environmental impact of landfill sites. Effective leachate management involves a combination of engineering controls, monitoring systems and treatment processes designed to capture, contain and neutralize harmful substances.

Wellington County

In 2001, Wellington assumed responsibility for its landfill sites, initiating a comprehensive cleanup and proper closure process to mitigate long-term issues, particularly leachate management. Wellington has since implemented a robust groundwater quality monitoring program and acquired additional buffer lands to protect groundwater resources. To further address leachate concerns, Wellington collaborated with conservation authorities to establish catchment areas, ensuring that any potential leachate does not contaminate nearby freshwater bodies. This initiative was approved by the MECP. Additionally, Wellington invested in enhanced testing of wetland areas and engaged biologists to confirm that leachate would not adversely affect local wildlife.

[26] https://www.wellington.ca/programmes-services/garbage-recycling/materials/household-hazardous-waste

Wellington's focus on leachate management extends to its closed landfill sites, with a dedicated landfill supervisor overseeing compliance and inspections. Annual monitoring reports are prepared for 10 of the 16 closed landfill sites, with a budget allocation of approximately $75,000 to $80,000 per year. Field monitoring is conducted at nine sites, costing around $200,000 annually, while the remaining sites either do not require or have never had monitoring.

Despite some groundwater quality concerns, the sites remain in compliance with their ECAs and Wellington has purchased buffer properties (30 metres) to mitigate potential environmental risks. While there have been no major leachate issues at the closed sites, Wellington has explored innovative leachate management solutions, including willow tree plantations and leachate evaporation systems. Currently, Wellington is considering integrating leachate treatment with the municipal water treatment plant or constructing a dedicated leachate treatment facility.

Wellington's approach to leachate management emphasizes robust monitoring and strategic partnerships. They advise other municipalities to carefully select partners and confirm that any potential sale of landfill sites includes thorough consideration of environmental responsibilities and compliance with ministry regulations. Their experience underscores the importance of proactive leachate management and continuous monitoring to safeguard environmental and public health.

Willow Plantations

Several reviewed jurisdictions indicated that they have been considering willow plantations. Ramo, a company based in Quebec, is at the forefront of developing plant-based technologies to tackle significant environmental challenges through its model centered around willow plantations. These plantations aim to address a range of issues, including the restoration of degraded sites, climate change mitigation, wastewater management and the production of eco-friendly products designed to reduce noise and visual pollution. One of Ramo's key initiatives is its Evaplant technology, which has been implemented at the Saint-Lambert-de-Lauzon landfill site in Quebec. Commissioned by the Chutes-de-la-Chaudière Intermunicipal Waste Management Board in September 2021, the technology began operations in June 2022, following an investment of $550,000. This landfill primarily manages solid waste from the City of Lévis and Municipality of Saint-Lambert-de-Lauzon.

Willows are selected for their exceptional water uptake capabilities, which can reach up to 1,500 millimetres per season. Their shallow root systems and extensive lateral growth make them effective for soil stabilization and nutrient absorption. Ramo's Evaplant technology involves the strategic planting of fast-growing willow shrubs, which are irrigated with landfill leachate to reduce wastewater volumes. The system is customized to meet specific landfill needs, considering factors such as effluent quality, site operations, and geographical conditions.

Ramo's claims that the Evaplant technology not only diminishes leachate volumes at landfill sites but also enhances the degradation of specific contaminants by soil microorganisms and facilitates pollutant absorption by the willows. The fully automated irrigation system adjusts based on the needs of the willows and prevailing weather conditions, ensuring optimal performance.

At the Saint-Lambert-de-Lauzon site 28,800 willows were planted across an area of 1.8 hectares and an anticipated annual production of 25 tonnes of dry wood matter is expected. In four months of operation in 2022, the Evaplant technology reduced the site's water discharge by three million litres. Additionally, the project is expected to capture around 45 tonnes of carbon dioxide (CO_2) equivalent annually from the willow biomass.

Poplar Tree Plantations

Poplar trees have also been used to manage leachate through phytoremediation (use of plants and microbes to reduce the concentrations or toxic effects of contaminants in the environment) at Waste Management of Canada Corporation's Twin Creeks Landfill in Watford, Ontario. The site has been certified by the Wildlife Habitat Council since 2004 and includes native grasslands, a mix of upland tree species, diverse plants and a poplar plantation that links existing forested areas.

In the 2023 Fourth Quarter and Annual Monitoring Report regarding the poplar system monitoring program, Waste Management of Canada Corporation states that "in 2023, irrigation liquid was applied to the poplar trees intermittently for a total of 77 days from May 2 to October 12, 2023. The Poplar System was operated in conformance with Condition 8.7 of the Waste ECA. The irrigation liquid applied to the Poplar System in 2023 contained approximately 100% leachate by concentration and 100% leachate by

volume. A total of approximately 8,658.85 cubic meters of leachate was applied to the Poplar System in 2023."[27]

6.3.4.2 Transforming Landfill Sites

Repurposing landfill sites is a complex yet essential task that municipalities across Canada are increasingly prioritizing. This section explores various strategies and initiatives undertaken by different jurisdictions to transform landfill sites into valuable community assets while addressing environmental concerns and regulatory requirements.

Wellington County

Wellington has explored the potential repurposing of its closed landfill sites, balancing environmental concerns with community interests. In the past, an interested party expressed interest in purchasing a closed landfill site. After reviewing the risks with the interested party, who had previous experience in site remediation, it was mutually agreed that the site was not suitable for transfer. Wellington remains cautious about selling closed landfill sites emphasizing that any sale would require the Ministry's approval.

Currently, Wellington focuses on naturalizing its closed landfill sites. Efforts include reducing mowing frequency to once annually before inspections and enhancing pollinator habitats by planting trees, shrubs and wildflowers. This approach not only supports local biodiversity but also aligns with Wellington's commitment to sustainable land management practices. By prioritizing naturalization and cautious repurposing, Wellington aims to transform former landfill sites into valuable ecological assets while maintaining compliance with environmental regulations and safeguarding public health.[28]

Regional Municipality of Durham

The Regional Municipality of Durham (Durham) is actively exploring innovative strategies to repurpose its seven closed landfill sites, which include Brock, Oshawa,

[27] https://www.wm.com/content/dam/wm/assets/landfills/twin-creeks/2023-annual-report-vol3-poplar-system.pdf
[28] https://pub-wellington.escribemeetings.com/filestream.ashx?DocumentId=13705&utm

Darlington, Scott, Whitby, Scugog and Blackstock. Each site is subject to rigorous monitoring programs for groundwater and surface water quality, with additional subsurface gas monitoring at the Oshawa Landfill.

In 2019, Durham undertook a significant project at the Blackstock Landfill, mining the site to reduce greenhouse gas emissions from methane, mitigate leachate impacts on groundwater, and recover recyclable materials. This project, which cost $1.2 million, was partially funded by a $350,000 grant from the Green Municipal Fund (GMF). The mining operation successfully recovered approximately 98 tonnes of scrap metal and 500 tires from 4,796 tonnes of excavated waste. Combustible waste was processed at the Durham-York Energy Centre (DYEC) for energy recovery, while non-combustible waste was sent to an engineered landfill for disposal. This initiative not only diverted materials from the landfill but also eliminated the need for long-term groundwater monitoring at the site. The operational costs were offset by reduced environmental monitoring liabilities and an increase in property values due to the removal of waste. Following a short-term monitoring period, it is anticipated that the monitoring requirement in the site ECA will be eliminated or significantly reduced.

Since 2023, Durham has been piloting a methane oxidation biosystem project at the Oshawa Landfill to test the effectiveness of two different biosystem technologies. Landfill gas generated in the waste is collected and directed through a media where biological activity reduces methane emissions by converting it into carbon dioxide. The systems operate passively and do not require electricity and only minimal maintenance to operate. The biosystems have demonstrated that they are converting over 95% of the methane captured into CO_2. These biosystems will have a significant impact on reducing the landfill's GHG footprint. Additionally, Durham is considering a willow tree plantation at the Oshawa Landfill to assess its potential for leachate remediation and its impact on groundwater quality.

Durham's landfill monitoring program operates on an annual budget of approximately $400,000, with consultants conducting fieldwork and reporting. Larger remedial projects, such as landfill mining, are funded through separate capital budgets. Durham is also looking to mine the Scott Landfill in the future, further demonstrating its commitment to innovative landfill management and repurposing strategies.

Challenges remain, such as managing groundwater quality and mitigating erosion at the Oshawa Landfill, which is adjacent to a creek. However, stream restoration projects have been implemented to address these issues and Durham continues to purchase additional land parcels to establish buffer zones around its landfill sites.

City of Barrie

Tasked with addressing the contamination of local water resources due to outdated landfill practices, the City of Barrie (Barrie) undertook a complex, multi-phase project over the course of eight years aimed at both rehabilitating the Barrie Landfill and extending its operational lifespan. At the core of the project was an innovative approach to waste reclamation and containment. The team employed a progressive excavation and screening process, where existing waste was excavated, sorted and compacted more efficiently than during the original landfill operations. This not only increased the landfill's capacity but also significantly reduced the environmental footprint.

The use of state-of-the-art geosynthetic liners and leachate collection systems, the first of their kind approved in Ontario, provided enhanced protection for surrounding groundwater systems and confirmed regulatory compliance. In addition, the project featured landfill gas collection and flaring systems, which contributed to reducing GHG emissions while also allowing for potential energy generation in the future.

Odour control and air quality management were crucial to the success of the project, given the landfill's proximity to residential areas. A series of innovative odour mitigation strategies, including night-time excavation and strategic weather-based operations were implemented. The careful management of odorous waste, combined with real-time monitoring and rapid response to complaints, minimized disruption to the local community.

The reclamation process involved handling over 1.6 million cubic metres of waste, representing nearly half of the landfill's total volume. The project also reclaimed valuable airspace—estimated at around 500,000 cubic metres—which resulted in an 18-year extension of the landfill's lifespan. This additional capacity provided Barrie with critical time to implement its long-term waste management strategies, avoiding costly alternatives such as waste export.

Economically, the project was a major success. With the reclamation extending the landfill's life to 2035, Barrie achieved a substantial return on investment, with the gained airspace valued between $40 million and $60 million. Environmentally, the project's impact was equally significant. The new leachate collection systems, coupled with enhanced stormwater management designs, improved water quality by reducing the leachate entering local streams and groundwater systems. The landfill gas collection system, which currently flares around 340 m^3/hr of gas, is designed to capture up to 500 m^3/hr, with potential future applications in renewable energy.[29]

City of Guelph

Eastview Park, once a landfill located northwest of Eastview Road and Watson Parkway North in the City of Guelph (Guelph), operated from 1961 until its closure in October 2003. Spanning 85 hectares, with 45 hectares filled by approximately four million tonnes of non-hazardous waste, the site underwent extensive planning and community input in 2002 to determine its future. After considering various concepts, the community opted to convert the space into a park. Collaborative discussions with the University of Guelph led to the idea of dedicating part of the former landfill to pollinator-friendly initiatives.

Between 2004 and 2008, infrastructure improvements were made to confirm the site's safety and environmental health for public use. This included installing a landfill cap, a groundwater monitoring system, a landfill gas collection system, power generation equipment and a leachate collection network. A fence was added around the landfill area to secure and protect these systems.

In 2008, Council approved the final master plan, which was followed in 2009 by a phased funding strategy. The master plan envisions both an active recreation area and a pollinator park. The pollinator park features extensive plantings, demonstration gardens, flowering fruit trees, a trail network, shade structures and decorative barriers to protect monitoring infrastructure.

Rural Municipality of Corman Park No. 344

In June 2013, the Rural Municipality of Corman Park No. 344 (RM) initiated a request for expressions of interest to develop and implement a cost-effective, long-term strategy

[29] https://www.canadianconsultingengineer.com/cce/awards/2017/D1_Barrie%20Landfill.pdf

for managing solid waste and recyclable materials generated within the municipality. This request closed on May 16, 2013, and garnered eight submissions, categorized into consulting services and operational/partnership services. The RM then advertised a Request for Proposal (RFP) to sell the South Corman Park Landfill, including all associated liabilities, with the stipulation that the landfill must remain accessible to RM residents[30].

In 2014, Green Prairie Environmental, a subsidiary of Brooks Road Environmental, acquired the South Saskatoon facility, formerly known as the South Corman Park Landfill. This acquisition marked a new chapter for the landfill, which had been serving the Saskatoon area since 1972. Green Prairie Environmental operates the South Saskatoon Landfill, providing essential waste management services to residents south of Saskatoon. The company emphasizes environmental stewardship, striving to minimize its environmental footprint and adhere to the highest environmental standards. This transition has allowed the landfill to continue serving the community effectively, upholding the RM's condition that the facility remains accessible to local residents.

6.4 Summary

The comprehensive review of comparable waste management practices across various jurisdictions focused on curbside collection efficiencies, transfer station operation enhancements, management of HSP and sustainable solutions for closed landfill sites. This comparative analysis identified best practices and innovative approaches that could be integrated into the County’s waste management framework to improve efficiency, reduce costs and enhance environmental sustainability.

Curbside Collection Efficiencies and Opportunities:
The review of curbside collection practices highlighted several strategies to enhance efficiency and service quality. Potential recommendations include:

- Implement service agreements for shared collection points;
- Introduce quantity limits for garbage collection; and
- Launch an organics collection program for food waste.

[30] https://www.rmcormanpark.ca/ArchiveCenter/ViewFile/Item/56

Transfer Station Operation Enhancements:
The analysis of transfer station operations emphasized the importance of strategic planning and investment to accommodate future growth and improve service accessibility. Potential recommendations include:

- Plan for future growth by considering the establishment of additional transfer stations or depots (e.g., a shipping container depot); and
- Confirm adequate staffing levels, potentially transitioning part-time staff to full-time positions to improve retention.

Management of HSP:
The review of HSP management practices revealed various service delivery models and cost mitigation strategies. Potential recommendations include:

- Explore alternative service delivery models such as a mobile depot;
- Implement measures to control escalating service costs, such as limiting the quantity of HSP accepted per visit; and
- Enhance service level variations to balance cost and accessibility.

Sustainable Solutions for Closed Landfills:
The examination of sustainable solutions for closed landfills highlighted innovative approaches to leachate management and site transformation. Potential recommendations include:

- Implement advanced leachate management techniques, such as willow and poplar tree plantations;
- Explore opportunities to repurpose closed landfill sites into community assets, such as a pollinator park; and
- Consider the sale of closed landfill sites to knowledgeable parties capable of managing environmental responsibilities and remediation efforts.

The insights gained from the comparative analysis provide a solid foundation for developing tailored recommendations to enhance the County's waste management system. The next steps involve further developing options for consideration.

7.0 Opportunities for Refinement and Future Planning

Through a comprehensive review of the County's historical and existing waste management services, an analysis of comparable providers and an assessment of emerging regulatory and industry trends, several opportunities for refinement and future planning have been identified. These opportunities align with the County's long-term waste management objectives and are intended to improve service efficiency, support waste diversion, financial and environmental sustainability goals.

7.1 Identification of Opportunities

The historical and current state review provided insight into waste generation patterns, service utilization and system challenges, highlighting areas where adjustments could enhance performance, identifying inefficiencies and potential service gaps. A comparison with other municipalities and service providers further identified best practices that could be adapted to the County's system. These included improvements in curbside collection methods, alternative approaches to HSP management, and strategies for optimizing transfer station operations. Additionally, statutory requirements and emerging industry trends presented both challenges and opportunities. The transition to IPR, the potential for new food and organic waste regulations and federal policies on plastics all influence the County's waste management planning.

Building on these findings, Dillon, in consultation with the County, developed a set of strategic options to refine and enhance its waste management system. These options consider factors such as curbside service delivery, depot infrastructure, landfill asset management and emergency waste planning.

7.2 Future Planning for Long-Term Growth

Each option has been designed to work in conjunction with others, for a cohesive and integrated approach to waste management that meets the County's current and future needs. They each play a role in shaping an integrated and efficient waste management system that aligns with the County's needs and future objectives. The approach taken

allows the options to work together to optimize service delivery, minimize environmental impact and maximize cost efficiencies.

The proposed options were assessed using a triple bottom line lens, considering their anticipated economic feasibility, social impact and environmental benefit. While no formal scoring or weighting was applied as each option was to be carried forward, this approach supported a review of each option's relative merits and implementation considerations.

Economic feasibility considered anticipated capital and operating cost implications and potential risks. Capital and operating cost estimates for the proposed options were developed to provide a high-level understanding of the financial implications associated with implementation. These estimates were informed by a combination of the County's current cost data, experience from comparable municipalities and market information available through past procurements and industry benchmarks.

For capital costs, estimates considered key expenditures such as infrastructure development (e.g., new depot construction), equipment and vehicle procurement (e.g., carts, bins), and required upgrades to existing assets. Where applicable, costs were escalated based on projected implementation timelines and inflationary factors.

Operating costs were projected based on anticipated changes to service delivery models, such as the introduction of new programs. These estimates included factors such as contractor service rates, ongoing maintenance, staffing requirements, and annualized lifecycle contributions where applicable.

The financial modelling in **Section 7.3** incorporates these estimates to provide a long-term view of system costs from 2024 to 2034. While cost estimates are preliminary and subject to refinement through detailed design and procurement processes, they provide a useful planning-level basis for evaluating affordability and informing decision-making.

Social impact reflected the extent to which each option would be practical and acceptable for residents. Factors considered included if the option had been proven or successfully adopted in other jurisdictions, level of effort to develop, implement, operate and maintain the option, and public acceptance of the option.

Environmental benefit focused on the potential for GHG emissions reduction, increased waste diversion and potential nuisance related impacts (e.g., odour, noise, traffic and litter).

This triple bottom line approach allowed the County and the project team to understand not only the financial implications of each option, but also how each could support long-term community objectives related to sustainability, resiliency and service excellence.

7.2.1 Integration of Curbside Collection Options

The first two options focus on curbside collection for single-family households. They are interdependent, as they shape how waste is sorted, collected and processed. influences other curbside collection options, such as the transition to automated garbage collection using carts (Option 1, **Table 25**) These changes help optimize collection efficiency and reduce landfill reliance. Additionally, a study on waste generation by customer type and seasonal properties (Option 2, **Table 26**) will provide critical data to support these service adjustments, confirming that collection contracts and policies reflect waste generation patterns.

The next option focuses on businesses and institutional customers, recognizing the need for tailored waste management strategies for commercial and multi-residential properties. Reducing garbage limits for farms and IC&I on collection routes (Option 3, **Table 27**) encourages diversion efforts by aligning commercial waste generation policies with residential standards.

Meanwhile, integrating front-end bin services for multi-residential and IC&I sectors has been combined with evaluating curbside service level options under a single approach. Together, these strategies are consolidated into “Assessing and Optimizing Collection Services” (Option 4, **Table 28**). This combined option allows for curbside collection initiatives and front-end service requirements to be assessed holistically, informing potential policy decisions such as pay-per-use models, receptacle limits and service tiers. Its findings will help refine the County’s collection strategy, supporting waste reduction goals while maintaining service efficiency and fairness for all users.

Table 25: Option 1 – Introduce Garbage Collection in Carts

Parameter	Description
Description	This option works towards a transition from manual garbage collection to automated. A number of steps are required for the transition. This may include conducting a market sounding (seeking input on the availability of collection services offering manual and automated methods); the preparation of a collection contract; the purchase of carts; and the development of a roll out plan to deliver the carts to residents and IC&I customers (all stops).
Assumptions	• That the County's collection contract could continue to include disposal services, within the County's budget. • That the collection contract RFP evaluation form could separately consider the cost and benefits of a carts system, without impacting other RFP requirements, so that the County knows the cost implication of this transition. If the cost of collection is increased significantly as a result of changing their collection method, that this option would not be carried forward. Only one size of garbage cart would be available to the public. Multi-residential and IC&I customers that have higher quantities of garbage may transition to front end collection. • A centralized set of carts (rather than one per household) may be deployed at common collection points, based on the number of households using each location. For example, a ratio such as 1 cart per 2 to 3 households could be used, adjusted by seasonal waste generation data from Option 2.
Supporting Rationale	• The introduction of cart-based garbage collection would enable the use of automated collection vehicles, which are becoming standard across the industry. This transition could improve service efficiency and worker safety, reduce roadside litter and offer residents a more consistent and contained way to manage their waste. For the County, automated collection may also lead to more competitive pricing when procuring future collection contracts, as it aligns with the preferred service model of many contractors.

Parameter	Description
Supplemental Tools Required and Dependencies	• Market research to learn about collection service providers, the type of vehicles currently in their fleet and the degree of flexibility they have to convert to different collection methods. • Market research on the cost of carts. A Council decision to introduce the program will be required before contracts are developed and Council will require information on: • Cost analysis; • Program design and logistics (timeline, implementation, collection, processing); • Community engagement and education; • Performance metrics and evaluation; and • Risk assessment and mitigation. A plan that considers and communicates timing for the procurement of collection services and carts – which will require periods of time for successful vendors to: • Purchase fleet vehicles or transition existing ones (i.e., following award of the contract but prior to the start of automated curbside collection); • Manufacture carts (i.e., once a decision has been made for the collection award, but prior to the roll out of carts to residents); • Distribute carts to residents (i.e., once a number of carts have been made, but prior start of automated collection).
Compatibilities	This option will have implications for how the next collection RFP will be developed. Requirements in the RFP will need to be aligned with the County's needs, if the option is to be implemented.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Collection would begin in 2030, cart procurement in 2028. • Households in 2030 is estimated to be 22,480. • Assuming weekly collection contract = $4.0 million to $4.5 million per year, starting in 2030. • Additional ongoing operation costs starting in 2031, such as increased households, cart replacements and repairs, would be approximately $100,000 to $200,000 per year.

Parameter	Description
	• Total = $4.1 million to $$4.7 million.
	Capital Costs • Cost for carts = $95 per household excluding shipping & distribution, total capital for carts would be approximately $2.3 million. • P&E to residents to communicate changes = $30,000.
	Level of Risk • The implementation of carts will have moderate risks as a result of the extent of changes to the collection contract, operational processes and resident behaviour.
Social Impact	Proven or Unproven • Widely accepted collection practice in Ontario.

	Level of Effort to develop, implement, operate and maintain the option
	• Initially, the effort to implement is negligible as the County requires a collection contract regardless of whether the collection model is manual or automated.
	• If carts are used, effort will be considerable, as it will include:
	  ○ Program implementation decisions – whether to launch the program on a start date or use a staggered approach.
	  ○ Cart procurement.
	  ○ Roll out planning.
	  ○ Ongoing maintenance and planning (which may be included in the agreement for the production of carts; or become the responsibility of County staff).
	  ○ Public communications.
	  ○ A review of sidewalk accessibility may be required to indicate whether an alternative is required in specific locations to meet standards for people with disabilities. This review would evaluate whether carts are likely to block access for people with disabilities in public spaces.

	Public acceptance of the option • Other municipalities have converted to cart collection, particularly in large urban centres.

Parameter	Description
	• Considerable effort is required to address residents' concerns with having carts on their property, particularly for townhouses with limited storage or densely populated areas. Concerns exist around where to place the cart at the curb when there are snowbanks.

Environmental Impact	Climate change impacts
	• To reduce emissions impacts related to the manufacture of carts:
	  ○ The RFP for carts can require the manufacturer to include recycled content in its resin.
	  ○ The RFP can include warranty and repair conditions (e.g., the vendor may be asked whether they can take back broken carts for recycling and replace components such as wheels and lids rather than replacing the entire bin.
	• To reduce emissions related to waste collection:
	  ○ If bi-weekly collection is introduced concurrently with a transition to carts, there would be a reduction in fuel consumption.
	  ○ Routes are likely to be completed more quickly with automated collection, resulting in potential fuel consumption reduction.

	Potential for diversion Limited: While carts may introduce collection efficiency, it is difficult to see what has been placed inside, making it difficult for the County to spot recycling in the garbage.
	Nuisance impacts (odour, noise, traffic, litter) May reduce some nuisance impacts commonly associated with manual receptacle-based garbage collection. Carts with tight-fitting lids can better contain odours and deter animals, particularly in rural and semi-urban areas. Litter from ripped garbage bags is also expected to decrease. However, carts may present new challenges related to visual clutter, snow clearing and pedestrian access—especially in higher-density neighbourhoods or areas with narrow sidewalks. Collection vehicle noise levels may be slightly reduced due to more efficient operations and fewer manual lifts, although the use of hydraulic arms can still generate mechanical noise.

Table 26: Option 2 – Conduct a Common Collection Points and Private Roads Study

Parameter	Description
Description	This option involves conducting a study to obtain further data (e.g., seasonal usage patterns, household occupancy, quantities generated, collection challenges and collection point mapping) and analysis to better understand the needs and waste generation of customer groups, particularly those generating waste seasonally, living on private roads and setting out waste at common collection points. Residents' sense of responsibility needs consideration due to: • Residents who are present only seasonally may generate higher than average quantities (e.g., while hosting family and friends at a cottage) during the summer, while generating no waste during the winter. • Residents living on private roads are required to take responsibility for the road condition and may experience impacts to their waste collection as a result of storms. • Residents who have a higher level of anonymity (i.e., those using common collection points), may lack a sense of responsibility for the quantity or waste they generate. The analysis will provide further insight into residents' behaviour and waste management needs, so as to support future decision-making on service levels and waste set-out policies.
Assumptions	• The study should be completed prior to the development of a new collection contract. This is necessary so that the findings can inform County decisions on appropriate service levels and conditions for these customers. • For the purpose of the cost of service analysis (Section **5.11**), it has been assumed that the County will complete the study in-house.
Supporting Rationale	Provides a baseline from which decisions can be made, including: • Requirements for the next collection contract. • Policy mechanisms to reduce litter and enforce quantity limits at common collection points.

Parameter	Description
	• Policies related to the frequency of collection for collection points that are not typically occupied in the winter season (e.g., first of November until end of April). • Opportunity and drawbacks of seasonal households to accessing services at the CWMF. • Relative magnitude of issue: the impact of various customer types to waste quantities.
Supplemental Tools Required and Dependencies	There are no additional tools required prior to the commencement of the study. Upon its conclusion, staff will need to inform Council of the expected County needs and associated costs to implement the recommendation of the study.
Compatibilities	• This option will have implications for how the next collection RFP will be developed. Requirements in the RFP will need to be aligned with the County's needs, if the option is to be implemented. • It is possible that the RFP should include requirements for the contactor to enforce/ adhere to policies, such as leaving behind waste that is improperly set out or refusing work on private roads that fail to comply with standards.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Will come before the next RFP in 2028. • Staff could complete the study internally. • If taken externally, consultation fee's may be approximately $30,000 to $40,000.
	Capital Costs • N/A
	Level of Risk • This service level evaluation of common collection points is a low risk.

Parameter	Description
Social Impact	Proven or Unproven • There is a proven need for the County to develop solutions to address these concerns, as it impacts day-to-day operations. • While other jurisdictions have similar concerns about seasonal fluctuation in waste quantities, the best practices research on the accessibility of private roads and surplus / accountability at common collection points is limited and localized research is recommended.
	Level of Effort to develop, implement, operate and maintain the option • Moderate level of effort.
	Public acceptance of the option • N/A
Environmental Impact	Climate change impacts • N/A
	Potential for diversion • N/A
	Nuisance impacts (odour, noise, traffic, litter) • N/A

Table 27: Option 3 – Reduction of Garbage Limits for Farms and IC&I on Collection Routes

Parameter	Description
Description	This option introduces more stringent limits on the quantity of waste that will be picked up from businesses, which is currently 10 receptacles per week. It will involve an assessment of how much waste is typically set out by businesses such as farms and strip malls and whether those quantities can be reduced to a quantity that is more consistent with residential customers.
Assumptions	• To implement the limits, the County's waste by-law will be updated, and communication and enforcement measures will be required to transition to the new limits. • Where necessary, business customers who routinely generate garbage in excess of the new receptacle limit could convert to front-end collection. To do so, consideration would be given to spatial constraints for the customer. As well, consideration would be given to the business case for the County to provide front-end collection. If there is no business case for the County to provide front-end service, these customers would be asked to seek private-sector services. • Current collection contract based on payment per stop can change on an annual basis for it to start in 2026.
Supporting Rationale	This option will reduce the quantity of garbage managed and encourage the use of diversion programs. Currently, properties that are registered as businesses (including farms) are allowed to set out 10 receptacles per week, which exceeds the three-bag limit that other residential properties are allowed. If the County reduces the garbage receptacle limit for businesses, there would be less discrepancy between the residents and businesses, in terms of the quantity that they are allowed to set out.

Parameter	Description
Supplemental Tools Required and Dependencies	• This option has the potential to impact the total quantity of waste collected by the County. The next curbside collection contract will need to inform prospective bidders of the tonnage of garbage requiring disposal. The County should therefore decide on whether to implement this option prior to the RFP being issued. • Council will need to be informed of the business case for reduction of garbage limits, and potential risks (such as illegal dumping). • A by-law update will be required to enact the change.
Compatibilities	If pay-per-use is implemented, the excess number of receptacles above the limit could be charged at a different rate (e.g., tags could be more expensive than the base bin rate). If front end is introduced as part of the evaluation of curbside services, the garbage limit for multi-residential could be based on the number of front-end bins for the number of units in the building. Consideration may be required for managing excess waste, with the option to arrange an additional bin collection per week, if necessary.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Can begin in 2026; however, as the County currently pays per stop now, this saving would not be realized until the new contract is released. • Staff time to update by-law (included in existing staff time, no cost). • $10,000 for communication to businesses (P&E). • Temporary By-law officer for enforcement (approximately 4 months a year, 35 hours/week) = $35,000.
	Capital Costs • Vehicle allowance/rental for by-law officer (4-month rental) = $5,000.
	Level of Risk • Possibility of increase in illegal dumping. • Possibility of non-compliance: Businesses may continue to exceed limits. Enforcement efforts will be required.

Parameter	Description
Social Impact	Proven or Unproven • Limits are effective in reducing how much waste customers dispose and municipalities have aligned receptacle limits for all customers on municipal collection.
	Level of Effort to develop, implement, operate and maintain the option • Low as it would involve some monitoring initially for compliance. • Low as it may require more services for business to drop off waste rather than have it collected curbside.
	Public acceptance of the option • It is more typical in other jurisdictions the set out limits for business customers to be consistent with residential customers. As a result, it is likely that the new policy will be accepted (particularly by residents).
Environmental Impact	Climate change impacts • Minimal as it is possible that businesses that exceed the receptacle limit will continue to generate waste and will dispose of it through alternative service providers/ visits to the CWMF.
	Potential for diversion • Potential exists as businesses that have excess garbage may make a trip to the CWMF to drop it off. Since they will be making the effort to come into the facility, they are more likely to access Blue Box program available at that site.
	Nuisance impacts (odour, noise, traffic, litter) • Minimal impact – could be faster collection since less garbage per stop.

Table 28: Option 4 – Assessing and Optimizing Collection Services

Parameter	Description
Description	This option is to conduct a study on cost recovery methods, including cost recovery from residential, multi-residential and other IC&I customers. The study would inform the County of the potential outcome of implementing a pay-per-use, bag tag and/or receptacle limits. It would include an assessment of the anticipated level of acceptance expected from the public.
Assumptions	• Study would occur before the next RFP, in 2028. • That the next collection RFP can include front end service for multi-residential and IC&I customers. A separate cost for this service would inform the County of whether to proceed with providing this service. Alternatively, a market sounding, issued prior to the RFP preparation, could be conducted to learn more about how the County's needs can be met for the multi-residential and IC&I sectors. • It is assumed that the front-end bins would be purchased or rented by multi-residential and IC&I customers, not the County. • If there is a transition to carts, the bag tags would only be used for surplus garbage. • It is out of scope to consider the use of different sizes of garbage carts and a varied fee system. Due to the administrative costs associated with the introduction and maintenance of carts, this study will focus on other financial mechanisms. • For the purpose of the cost of service analysis (Section **5.11**), it has been assumed that the County will complete the study in-house.
Supporting Rationale	The study would provide information on mechanisms / policy instruments that encourage residents to set less waste at the curb. The purpose of the study is to support the County's decision-making process on policy instruments. The intended outcome is to better inform the County on opportunities to reduce waste quantities set out by residents and IC&I customers, by requiring customers to: • Purchase bag tags and affix them to their garbage bags (or to their excess garbage in the event that the transition to carts is complete). • Use front end bins (applies to multi-residential and IC&I customers) for which a lift-fee is applied.

Parameter	Description
	• Pay-per-use for bulky waste collection.
Supplemental Tools Required and Dependencies	None – this is a preliminary study
Compatibilities	• This option will have implications for how the next collection RFP will be developed. Requirements in the RFP will need to be aligned with the County's needs, if the option is to be implemented.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • The study would be incorporated into existing staff's portfolios. • If taken externally, consultation fee's may be approximately $30,000 to $40,000.
	Capital Costs • No applicable capital costs for this option.
	Level of Risk • This service level evaluation of garbage collection options is low risk.
Social Impact	Proven or Unproven • Several other jurisdictions have conducted similar studies, resulting in various recommended actions.
	Level of Effort to develop, implement, operate and maintain the option • Would require a contract for a consultant.
	Public acceptance of the option • N/A
Environmental Impact	Climate change impacts • N/A
	Potential for diversion • N/A
	Nuisance impacts (odour, noise, traffic, litter) • N/A

Table 29 summarizes each option, year of implementation and operating and capital costs for curbside collection options.

Table 29: Curbside Collection Options Summary

Option	Year of Implementation	Operating	Capital
1 Garbage Collection in Carts	2030 (capital 2028)	$4.1 million to $4.7 million	$2.3 million
2 Common Collection Point and Private Roads Study	2026	N/A	N/A
3 Reduction of Garbage Limits for Farms and IC&I on Collection Routes	2026	$45,000	$5,000
4 Optimizing Collection Services	2026	N/A	N/A

7.2.2 Integration of Depot-Related Options

Options 5 to 7 focus on enhancing waste management infrastructure through depot services. These options recognize the need for accessible, well-designed facilities to support waste diversion and hazardous waste management. Each option considers different service models so that residents and businesses have convenient and effective ways to manage their waste while optimizing County resources.

The development of a new permanent waste depot (Option 5, **Table 30**) is aimed at improving service availability in potentially growing areas. As the County's population increases, so does the demand for waste services, making a strategically located depot a vital component of long-term planning.

Options 6 and 7 specifically address HSP, with two approaches that can be implemented sequentially to support the County’s transition from event-based HSP collection to a more accessible and consistent service. During discussions, the County confirmed that available land at the CWMF could accommodate a HSP depot. The establishment of a permanent residential HSP depot at the CWMF (Option 6, **Table 31**) would provide a

year-round, fixed-location service, increasing convenience for residents while providing proper handling of HSP. The mobile HSP depot model (Option 7, **Table 32**) would allow HSP collection services to move throughout the County, bringing disposal options closer to different communities on a rotating schedule. The mobile HSP depot could be implemented as a temporary service, with anticipated operations from 2026 through to 2030, when the permanent depot would become operational.

Together, these depot-related options improve accessibility and efficiency in waste diversion and hazardous waste management. Whether through mobile service delivery or permanent infrastructure, these options aim to enhance the County's ability to manage waste responsibly while supporting long-term growth and environmental protection.

Table 30: Option 5 – Build a New Permanent Waste Depot

Parameter	Description
Description	This option is to build a new permanent waste depot that will be positioned to service the potential growing neighbourhoods. In addition, consideration can be given to the expansion of diversion programs.
Assumptions	• Population growth will continue throughout the County. As the County experiences population growth, there is a need for waste services to grow. • The County has land available for the construction of the new facility. • The County is successful in obtaining permits/ approvals and constructing and commissioning the facility; with regards to expanded diversion programs. • It is assumed that end markets for new diversion programs exist and that new producer responsibility programs are not developed.
Supporting Rationale	• Growth of facilities and diversion programs supports the provision of facilities and services, in line with projected population growth. • An additional transfer station roughly to the south or west of the County boundaries would reduce resident travel time (as compared to these residents traveling to CWMF).

Parameter	Description
	• Additional diversion programs would reduce the quantity of waste sent to landfill.
Supplemental Tools Required and Dependencies	• A Design and Operations Plan that would be submitted to the MECP as part of an ECA amendment application. • ECA approval from the MECP. • Information would be provided to Council on estimated costs for a new facility and the benefits that the service would provide. An assessment of services available to the public through private sector waste providers and other jurisdictions would be provided for a holistic analysis and comparison. In addition, a comparative analysis to identify the typical driving distances for residents in similar jurisdictions to travel to access depot/ transfer station services would support communication to Council.
Compatibilities	None
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Assuming consultation would not occur until 2028, and the drop-off would not open until 2035. • Operational costs including staffing, contractors and processing is approximately $3 million annually.
	Capital Costs • To build a new facility professional consultants would be hired for design and contract, construction including roadworks and buildings, and the supply and delivery of equipment would approximately be $8 million to $12 million depending on size and complexity.
	Level of Risk • Building a new drop-off depot involves higher risk due to uncertainties in achieving desired operational outcomes, increased liability for site safety and regulatory compliance, and potential environmental impacts such as land disturbance and pollution. • County has operational experience with this type of facility which reduces overall risk.

Parameter	Description
Social Impact	Proven or Unproven • Provides a higher level of convenience for residents which enhances their customer experience.
	Level of Effort to develop, implement, operate and maintain the option • Extensive efforts would be required to develop a new transfer station: site planning (zoning), design and operational plan, approvals, infrastructure development, etc.
	Public acceptance of the option • High level given improved accessibility to diversion programs.
Environmental Impact	Climate change impacts • Potential for increased impacts related to construction initially and lower greenhouse gas emissions for residents travelling a shorter distance.
	Potential for diversion • Potential for increased diversion due to user convenience.
	Nuisance impacts (odour, noise, traffic, litter) • Minimal – activities assumed to incorporate standard operating procedures and mitigation measures to reduce potential nuisance impacts.

Table 31: Option 6 – Locate a Permanent Residential HSP Depot at the CWMF

Parameter	Description
Description	This option involves transitioning the current HSP event day program model to a permanent depot model. It would involve obtaining approval from the MECP, planning the program (e.g., specialized staffing with Transportation of Dangerous Goods Training, hours of operation, etc.), developing infrastructure and obtaining equipment (e.g., a facility). A new contract for a service provider to accept and process the HSP would also be required.
Assumptions	• The County is successful in obtaining permits/ approvals and creating the HSP facility within the CWMF (e.g., modified sea containers) and launching the program. • The ECA will be amended to add the HSP depot. • That there are no further changes to the HSP Regulation that would impact this business decision (e.g., regulations impacting PROs' choices with respect to programs).
Supporting Rationale	• Potential to increase the quantity of HSP as the hours of operation for a permanent depot is more extensive than an event day. • While there is no obligation for the County to provide HSP services, providing a high level of service may help the County keep it out of their garbage stream, which reduces operational hazards and risk of exposure of substances that can harm human health and the environment.
Supplemental Tools Required and Dependencies	To initiate, the new program would require the County to prepare and obtain: • A Design and Operations Plan that would be submitted to the MECP as part of an ECA amendment application. • ECA from the MECP. • Staffing plan. • Information regarding costs, benefits and provincial regulations for HSP (and available services through HSP programs); as well as programs in other jurisdictions would be provided to Council.
Compatibilities	None
Triple-Bottom Line Analysis	
	Annual Operating Costs • Assuming implementation in 2030.

Parameter	Description
Economic Feasibility	• Assuming the Drop-off is open during depot operational hours. • Cost for staffing is approximately $250,000. • Cost for contractors and processing is approximately $160,000.
	Capital Costs • The capital costs including the ECA modification, pavement, modified sea containers and equipment is estimated to be $300,000.
	Level of Risk • Higher level of risk due to the potential for chemical spills, increased regulatory compliance requirements, and the need for specialized handling and storage procedures to mitigate environmental and safety hazards.
Social Impact	Proven or Unproven • Dedicated HSP depots are operated in Ontario. • A facility is anticipated to be well used. However, it does not align well with the policy intention of the HSP Regulation, whereby producers should provide access for residents to HSP services.
	Level of Effort to develop, implement, operate and maintain the option • High level of effort to develop and implement. Refer to the Supplemental Tools Required and Dependencies. • High level of effort to operate as it would require staffing, supervision, training, etc.; P&E for residents; facility maintenance; contract maintenance (service provider).
	Public acceptance of the option • High level as provides more convenient services.
Environmental Impact	Climate change impacts • High due to emissions associated with a construction project initially and minimal once operational.
	Potential for diversion • Likelihood that more HSP will be received.
	Nuisance impacts (odour, noise, traffic, litter) • Minimal – activities assumed to incorporate standard operating procedures and mitigation measures to reduce potential nuisance impacts.

Table 32: Option 7 – Develop a Mobile HSP Depot Program

Parameter	Description
Description	This option involves transitioning the current HSP event day program to a mobile depot program (e.g., depot stays for one month at one location then moves to another County facility/ garage/ Canborough). It would involve selecting the sites, obtaining approval from the MECP (referred to as a Mobile Processing ECA), planning the program (e.g., staffing, hours of operation, etc.), purchasing a unit to use as the mobile facility and obtaining equipment and contracts (i.e., a service provider to accept and process the HSP as well as a service to move the mobile facility).
Assumptions	• The County is successful in obtaining permits/ approvals, constructing the mobile unit, and launching the program. • That there are no further changes to the HSP Regulation that would impact this business decision (e.g., regulations impacting PROs' choices with respect to programs). • As the County is still in contract with Photech until approximately 2030 for HSP event days it is assumed that the County could negotiate the contract with Photech or initiate this option when the Photech agreement has ended.
Supporting Rationale	• A mobile program provides services to be brought to neighbourhoods across the County. • While there is no obligation for the County to provide HSP services, providing a high level of service may help the County keep it out of their garbage stream, which reduces operational hazards and risk of exposure of substances that can harm human health and the environment.
Supplemental Tools Required and Dependencies	To get started, the new program would require the County to prepare and obtain: • A Design and Operations Plan that would be submitted to the MECP as part of an ECA application. • ECA from the MECP. • Staffing plan. • Information regarding costs, benefits and provincial regulations for HSP (and available services through HSP programs); as well as programs in other jurisdictions would be provided to Council.

Parameter	Description
Compatibilities	This option would be implemented as soon as possible and would be in place until a permanent depot is operational or when the current Photech agreement is completed.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Assuming implementation in 2026. • Staff, assuming 1 full time staff and roving supervisor = $125,000. • Cost for contractors and processing is approximately $160,000. • Moving (assuming six locations per year) = $5,000. • P&E = $12,000. • Total Operating Cost = $302,000.
	Capital Costs • Shipping Container = $21,000. • ECA Application and fees = $40,000. • Container Modifications = $9,000. • Equipment = $5,000. • Total Capital Costs = $75,000.
	Level of Risk • Moderate risk: Potential exists for the quantity of HSP dropped off to increase (e.g., Wellington County's experience).
Social Impact	Proven or Unproven • Mobile HSP facilities are used in similar jurisdictions (e.g., Wellington County and West Grey). • A mobile facility is anticipated to be well used and have lower construction impacts and capital costs than a permanent depot. However, it does not align well with the policy intention of the HSP Regulation, whereby producers should provide access for residents to HSP services.
	Level of Effort to develop, implement, operate and maintain the option • High level of effort to develop and implement; refer to the Supplemental Tools Required and Dependencies. • High level of effort to operate as it would require staffing, supervision, training, etc.; P&E for residents; facility maintenance; contract maintenance (service provider).

Parameter	Description
	Public acceptance of the option • High level – provides more convenient services.
Environmental Impact	Climate change impacts • Potential to reduce greenhouse gas emissions with closer options for residents to dispose of HSP.
	Potential for diversion • Minimal - Likelihood that an increased quantity HSP will be received (compared to status quo).
	Nuisance impacts (odour, noise, traffic, litter) • Minimal – activities assumed to incorporate standard operating procedures and mitigation measures to reduce potential nuisance impacts.

Table 33 summarizes each option, year of implementation and operating and capital costs for depot-related options. While these HSP options are more than the current event day costs, the level of service received would be significantly higher that what is currently being received.

Table 33: Depot-Related Options Summary

Option	Year of Implementation	Operating	Capital
5 Build a New Permanent Waste Depot	2035 (Capital 2032)	$3 million	$8 million to $12 million
6 Locate a Permanent HSP Depot at the CWMF	2030	$410,000	$300,000
7 Develop a Mobile HSP Depot Program	2026	$302,000	$75,000

7.2.3 Integration of Landfill-Related Options

Options 8 and 9 focus on the management of the County's closed landfill sites, recognizing them as both assets and potential liabilities. These options explore different approaches to determining the future of these lands, balancing financial, environmental and operational considerations.

The sale of closed landfill sites (Option 8, **Table 34**) would allow the County to divest land that is no longer in use, potentially generating revenue and reducing ongoing monitoring and maintenance obligations. However, this option requires careful evaluation of environmental liabilities, legal risks and market interest before proceeding.

Alternatively, the development of a plan to repurpose closed landfills (Option 9, **Table 35**) would provide a strategic framework for identifying future uses for these sites. This could include repurposing land for new waste infrastructure, recreational spaces or other community needs. A study would assess the feasibility of such initiatives and establish guidelines for determining when and how repurposing should occur.

These two options are not mutually exclusive: The County may decide to sell some closed landfill sites while repurposing others. Both options aim to optimize the management of closed landfill sites while addressing financial and environmental responsibilities.

Table 34: Option 8 – Sell Closed Landfills

Parameter	Description
Description	This option involves the County selling some or all of its closed landfill sites. The Tom Howe and Canborough closed landfill sites are not contemplated in this option.
Assumptions	• That MECP compliance conditions can be satisfied. • That the County receives legal advice on legacy risks related to the sale. • That a buyer is interested in the land. • That five sites would be sold over the 10-year planning period, with one being sold every second year (i.e., one in each of the following years 2025, 2027, 2029, 2031 and 2033). To develop the future state cost of service, this assumption has been applied.
Supporting Rationale	The County is considering this option due to the potential for: • Revenue generation. • Risk reduction (i.e., currently people may encroach or trespass on the closed landfill and the County is concerned about their liability). • Reduction in staff time for monitoring.

Parameter	Description
	• Costs savings due to reduced need for monitoring and maintenance.
Supplemental Tools Required and Dependencies	• Legal advice on extent of liability and potential mitigation measures. • Probes to better understand waste quantities disposed and state of decomposition.
Compatibilities	• While an assumption about the timing of the sale of the closed landfills is included for the purpose of budgeting, the County may choose to either sell or repurpose each closed landfill, and may choose to sell some and repurpose others, depending on the outcome of preliminary legal discussions and market conditions.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • Due to the potential cessation of activities, including clean-up (e.g., of culverts, fallen branches), inspections and maintenance of signage and fencing, management of access routes, and attending to monitoring wells, operational costs are anticipated to decrease by approximately $6,000-8,000 a year if all closed landfills were sold or approximately $450 a year per landfill.
	Capital Costs • Costs may be incurred for preparing the site and will be better known once additional research is conducted. • Site remediation activities would require additional capital funds.
	Level of Risk • High level of risk: The County does not have information about the history of what has been disposed in all of the closed landfills. Legal teams should be consulted.
Social Impact	Proven or Unproven Unproven: • There are limited examples of selling closed landfill sites.
	Level of Effort to develop, implement, operate and maintain the option • Considerable effort required to consult legal team and prepare for the sale.

Parameter	Description
	Public acceptance of the option • High level as beneficial reuse of site.
Environmental Impact	Climate change impacts • N/A
	Potential for diversion • N/A
	Nuisance impacts (odour, noise, traffic, litter) • N/A

Table 35: Option 9 – Develop a Closed Landfill Repurpose Plan

Parameter	Description
Description	This option involves developing a plan to repurpose landfill sites. The Tom Howe and Canborough closed landfill sites are not contemplated in this option. The aim of the option is to establish parameters to guide the County in selecting sites and their new purpose. The study will support decision making on: • Potential value / opportunities at the various closed sites. • The County's anticipated future service-level and land-use needs (e.g., future waste infrastructure/ depot needs). • Timing considerations for repurposing the site(s) and number of years required to transition the site(s).
Assumptions	• That the surveys take place in 2027 in order to gain proper approvals. • That an alternate purpose for the landfill space is identified. • MECP compliance conditions can be satisfied.
Supporting Rationale	• Anticipated population growth and a need for planning of services, infrastructure and land-use. • To establish a baseline analysis of current closed landfill assets.
Supplemental Tools Required and Dependencies	• Landfill probing where historic landfill quantities are unknown.
Compatibilities	While the County will choose to either sell or repurpose each closed landfill, it may choose to sell some and repurpose others.

Parameter	Description
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • It has been assumed that the existing staff complement will develop the repurposing plan. • It would cost approximately $2,500 for a subsurface investigation per closed landfill site. This is included for information only and is not included in the future state cost analysis. • The total cost for subsurface investigations is estimated to be approximately $35,000. This is included for information only and is not included in the future state cost analysis.
	Capital Costs • Not applicable as this option is for a study.
	Level of Risk • Not applicable as this option involves conducting research.
Social Impact	Proven or Unproven • Several communities have repurposed closed landfills, including Niagara Region's Gord Harry Trail; London's Euston Park and Sarnia's Canatara Park (formerly the Michigan Avenue landfill).
	Level of Effort to develop, implement, operate and maintain the option • Not significant – this option is for a preliminary study.
	Public acceptance of the option • High level, compared to other municipalities acceptance.
Environmental Impact	Climate change impacts • No impacts.
	Potential for diversion • No impacts.
	Nuisance impacts (odour, noise, traffic, litter) • No impacts.

Table 36 summarizes each option, year of implementation operating and capital costs for landfill-related options.

Table 36: Landfill-Related Options Summary

Option	Year of Implementation	Operating	Capital
8 Sell Closed Landfills	2025	-$6,000 to $8,000 per year	N/A
9 Develop a Closed Landfill Repurpose Plan	2027	N/A	N/A

7.2.4 Integration of Strategic Planning and Communication

Options 10 and 11 address broader planning and communication needs that support the successful implementation of the SWMMP. These initiatives confirm that residents are well-informed about changes to waste services and that the County is prepared for unexpected events that could impact waste management operations.

The development of a P&E strategy (Option 10, **Table 37**) recognizes that clear, consistent communication is essential for public understanding and compliance with waste management programs. As the County transitions to new waste collection and diversion systems, a structured P&E strategy will help to communicate key messages effectively, reducing confusion and improving participation in waste programs.

The creation of a Disaster Debris Management Plan (Option 11, **Table 38**) prepares the County for emergencies such as floods and storms, which can generate large volumes of debris requiring management. By establishing a proactive response strategy, including collection logistics and potential disposal agreements, the County can minimize service disruptions and mitigate costs associated with managing disaster-related waste.

While these options do not directly impact waste collection or processing, they play a critical role in confirming that waste management programs are well-supported, resilient and adaptable to changing circumstances.

Table 37: Option 10 – Develop a Promotion and Education Strategy

Parameter	Description
Description	This option creates a strategy that identifies what, how and when the County provides information to residents about waste management. The strategy will identify who needs to be informed and why, as well as the effectiveness of various types of media.
Assumptions	• That the P&E Strategy would be created in 2025. • That the public will continue to require information on County programs. • That the Blue Box transition has potential to confuse residents. • That service level and waste policy changes will occur as a result of the SWMMP and the County will need to communicate on those changes. • For the purpose of the cost of service analysis (**Section 5.11**), it has been assumed that the County will develop the P&E strategy in-house.
Supporting Rationale	The P&E strategy will provide the County with an overview of how communications align with one another, including: • Timing of communication on initiatives and programs. • Consistency in key messages. • Enhanced ability to communicate with other departments and external parties (e.g., contracted services) on the use of media, key messages, timing of media releases, etc. • Possibility of efficiencies though strategic planning of similar initiatives.
Supplemental Tools Required and Dependencies	• The SWMMP recommendations will inform the County so that P&E needs can be set out more clearly.
Compatibilities	• This option will complement other options by supporting the County's outreach needs.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • If taken externally, consultation fee's may be approximately $15,000 to $20,000, depending on scope.
	Capital Costs • None.

Parameter	Description
	Level of Risk • Low risks as this option mitigates risks associated with other activities. For example, when the County implements service level changes, such as bi-weekly garbage collection or a transition to carts, this strategy will inform its staff on how to address public concerns and communicate effectively.
Social Impact	Proven or Unproven • It is standard for municipalities to develop P&E strategies and to implement tactics such as using of social, print, radio and television media to convey messages to target audiences.
	Level of Effort to develop, implement, operate and maintain the option • Low – P&E is required regardless; this option refines the approach that County takes to developing and providing it, the tactics used, etc.
	Public acceptance of the option • High as will support other initiatives.
Environmental Impact	Climate change impacts • Low – The P&E provided to residents and IC&I customers may help them participate in the County's waste management programs more effectively.
	Potential for diversion • Low – The P&E provided to residents and IC&I customers may increase waste diversion; however, attributing the P&E efforts to diversion performance is challenging.
	Nuisance impacts (odour, noise, traffic, litter) • Low – The P&E provided to residents and IC&I customers may help mitigate nuisance impacts. For example, campaigns may target behaviours such as littering and illegal dumping. As well, communications may advise residents and IC&I customers of site operating hours, which could reduce line-ups and wait times.

Table 38: Option 11 – Develop a Disaster Debris Management Plan

Parameter	Description
Description	This option is for the County to develop a Disaster Debris Management Plan (DDM Plan) that addresses risks due to disasters such as flood and storm events. The DDM Plan may address: • How and where debris would be received from residents / collected by contractors. • The potential need for a disposal contract to accept sudden increases in volume (this addresses the current risk of not having an active landfill). • Appropriate handling for waste streams such as construction and demolition materials (water-damaged dry-wall and bulky items), spoiled food (that has gone bad during power outages) and downed trees/ branches. The County has held preliminary meetings with the County's Emergency Management Coordinator to understand what would be involved in the development of the DDM Plan and to be included in the County's Emergency Plan.
Assumptions	• That the DDM Plan would be completed in 2026. • Emergencies are increasingly likely to impact municipal services. • The DDM Plan can be developed in-house or a contract can be established for a consultant to provide it. • For the purpose of the cost of service analysis (**Section 5.11**), it has been assumed that the County will develop a DDM Plan in-house.
Supporting Rationale	• A DDM Plan would enable the County to respond immediately in the event of a disaster. • A DDM Plan may mitigate costs incurred as a result of a disaster, such as administrative costs (overtime) and contract price escalations if additional resources are required to manage waste quantities. • A DDM may provide the necessary documentation for the County to apply for Provincial and Federal funding. • A DDM Plan would support effective communication within the County (e.g., across departments) and with contractors.

Parameter	Description
Supplemental Tools Required and Dependencies	• Coordination with other departments that may also have a need to address the potential for emergencies. • Inform Council of the expected County needs and associated costs to execute elements of the plan.
Compatibilities	Other options that affect this option or its implementation.
Triple-Bottom Line Analysis	
Economic Feasibility	Annual Operating Costs • If taken externally, consultation fee's may be approximately $40,000 to $60,000, depending on scope.
	Capital Costs • None.
	Level of Risk • Low risk study.
Social Impact	Proven or Unproven • Proven as planning can offset impacts of disasters. For example, identifying space available for temporary use as a transfer station and considering in advance the permitting and operational requirements can alleviate tension between the parties involved and can reduce staff overtime, if a disaster is to occur.
	Level of Effort to develop, implement, operate and maintain the option • Low – it is anticipated that the option would involve hiring a consultant and providing information to the consultant on the geography and current waste management infrastructure and practices.
	Public acceptance of the option • Not applicable – DDM Plan is a tool for municipal staff and associated partners.
Environmental Impact	Climate change impacts • Low compared to no DDM Plan as potential for a reduction in impacts due to better management of materials.

Parameter	Description
	Potential for diversion • Moderate as potential for an increase in diversion by finding end market options ahead of emergency situations (e.g., grinders for downed branches).
	Nuisance impacts (odour, noise, traffic, litter) • Moderate as potential for clearing of debris to occur more efficiently following a weather event.

Table 39 summarizes each option, year of implementation operating and capital costs for additional consideration options.

Table 39: Additional Consideration Options Summary

Option	Year of Implementation	Operating	Capital
10 Develop a Promotion and Education Strategy	2025	N/A	N/A
11 Develop a Disaster Debris Management Plan	2026	N/A	N/A

7.3 Future State Cost of Service

Based on the opportunities for refinement and future planning identified in **Section 7.2**, the cost of service financial model in **Section 5.11** was updated for the future state to layer on the incremental costs. The following cost of service review provides an analysis of the County's anticipated future costs to provide solid waste services.

7.3.1 Capital Budget Impact

Table 40 identifies the required capital over the forecast period to 2034 based on the identified opportunities. The following capital expenditures are in addition to the capital identified in **Section 5.6**. Of the 11 options identified in **Section 7.2**, not all require capital expenditures.

Table 40: Future State - Summary of Estimated Solid Waste Capital Expenditures (Inflated Costs)

Option	Description	Total 2024 to 2034	Years Undertaken
Option 1- Introduce Garbage Collection in Carts	Carts	$2,300,000	2028 to 2030
Option 1- Introduce Garbage Collection in Carts	P&E	$30,000	2029 to 2030
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	Vehicle Allowance/Rental for By-law Officer	$51,842	2026 to 2034
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	P&E	$10,000	2026
Option 5 - Build a New Permanent Waste Depot	Facility Cost	$10,000,000	2032 to 2034
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	ECA Modification, Pavement, Modified Sea Containers, and Equipment	$300,000	2030
Option 7 - Develop a Mobile HSP Depot Program	Shipping Container	$21,000	2026
Option 7 - Develop a Mobile HSP Depot Program	Shipping Container Modifications	$9,000	2026

Option	Description	Total 2024 to 2034	Years Undertaken
Option 7 - Develop a Mobile HSP Depot Program	ECA Applications and Fees	$40,000	2026
Option 7 - Develop a Mobile HSP Depot Program	Equipment	$5,000	2026
Option 7 - Develop a Mobile HSP Depot Program	P&E	$12,000	2026
	Total	**$12,778,842**	N/A

The current state capital expenditures identified over the 2024 to 2034 forecast period in **Section 5.6** total approximately $2.22 million. The additional capital expenditures identified for the future state total approximately $12.78 million. The capital expenditures total approximately $15.00 million with the addition of the 11 options identified and the expenditures included in the County budget currently.

The detailed future state capital budget from 2024 to 2034 is provided in **Appendix C**.

7.3.2 Lifecycle Impact

Based on the capital expenditures identified, the County will need to save for the future replacements of these assets over the forecast period. Based on the asset's estimated average useful lives and replacement costs in **Table 41,** the following annual savings are incorporated into the future state model. It is noted that lifecycle savings for the new permanent waste depot facility are not included in **Table 41** given the timing for savings is beyond the forecast period to 2034. Savings for this facility are recommended to begin in 2035.

Table 41: Future State – Lifecycle Costs

Option	Asset	Useful Life (Years)	Replacement Value	Year to Begin Savings	Annual Savings
Option 1 - Introduce Garbage Collection in Carts	Carts	10	$2,300,000	2031	$220,000
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	Modified Sea Container	30	$300,000	2031	$10,000
	Total		**$2,600,000**		**$230,000**

The current state savings for lifecycle costs identified over the 2024 to 2034 forecast period in **Section 5.7** total approximately $35.46 million. The additional savings for lifecycle identified over the forecast period for the future state solid waste assets total approximately $1.01 million. The savings for lifecycle total approximately $36.47 million with the addition of savings from the 11 options identified and the existing solid waste asset savings.

7.3.3 Recommended Capital Financing Approach

Table 42 identifies the proposed funding strategy for the total capital identified in **Section 7.3.1**.

Table 42: Future State – Capital Funding Summary 2024 to 2034 (Inflated Costs)

Funding Summary	Current State Total $ 2024 to 2034	Future State Total $ 2024 to 2034
Provincial/Federal Grants	$444,600	$444,600
Development Charges Reserve Fund	$236,000	$236,000
Norfolk Recoveries	$624,761	$624,761
Capital Replacement Reserve - Information Technology	$17,727	$17,727
Capital Replacement Reserve - General	$897,312	$13,677,579[31]
Total	**$2,220,400**	**$14,999,242**

The detailed future state capital financing approach from 2024 to 2034 is provided in **Appendix C**.

7.3.4 Operating Expenditures and Revenues

The following subsections summarize the required operating expenditures and revenues over the forecast period to 2034.

7.3.4.1 Solid Waste Operating Expenditures

Table 43 identifies the required operating expenditures over the forecast period to 2034 based on the 11 identified opportunities. The following operating expenditures are incremental to the operating expenditures identified in **Section 5.9.1**. Of the 11 options identified in **Section 7.2**, not all require operating expenditures. Additionally, Option 5 – Build a New Permanent Waste Depot is anticipated to begin operations in 2035 (beyond the 10-year forecast period to 2034), with an estimated annual operating cost of approximately $3 million.

[31] It is assumed that funding for the Capital Replacement Reserve – General comes from the Capital Levy. The increase of $12.78 million would require additional funding from the Capital Levy.

Table 43: Future State - Summary of Estimated Solid Waste Operating Expenditures (Inflated Costs)

Option	Future State – Operating Expenditures	Total 2024 to 2034
Option 1 - Introduce Garbage Collection in Carts	Collection Contract – Incremental Costs	$920,580
Option 1 - Introduce Garbage Collection in Carts	Cart Costs for Increased Households and Cart Replacements and Repairs	$804,370
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	Temporary By-law Officer for Enforcement	$362,897
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	Cost Reduction	$(640,845)
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	Staffing, Contractors, and Processing	$2,198,611
Option 7 - Develop a Mobile HSP Depot Program	Staffing	$1,296,062
Option 7 - Develop a Mobile HSP Depot Program	Contractors and Processing	$1,658,959
Option 7 - Develop a Mobile HSP Depot Program	Moving (assuming six locations per year)	$51,842
Option 8 - Sell Closed Landfills	Operating Cost Savings	$(16,562)
	Total Operating Expenditures	**$6,635,915**

The current state operating expenditures identified over the 2024 to 2034 forecast period in **Section 5.9.1** total approximately $120.63 million. The additional operating expenditures identified for the future state total approximately $6.64 million. The

operating expenditures total approximately $127.26 million with the addition of the 11 options identified and the expenditures included in the County budget currently.

Table 44: Future State – Solid Waste Operating Expenditures 2024 to 2034 (Inflated Costs)

Operating Expenditures	Current State Total $ 2024 to 2034	Future State Total $ 2024 to 2034
Solid Waste Administration	$18,095,300	$18,095,300
Solid Waste Collection	$42,580,980	$42,580,980
Solid Waste Disposal Sites	$50,957,990	$50,957,990
Solid Waste Reduction	$8,993,840	$8,993,840
Future State Operating Expenditures	N/A	$6,635,915
Total Operating Expenditures	**$120,628,110**	**$127,264,025**

The detailed future state operating budget from 2024 to 2034 is provided in **Appendix C**.

7.3.4.2 Solid Waste Operating Revenues

To be conservative no additional revenues have been estimated for the 11 options. However, the County may receive additional revenues from the sale of materials as a result of the new waste depot (Option 5), additional revenues in the event of agreement renewals with PROs whereby compensation is provided for the provision of an HSP depot (Options 6 and 7) and proceeds from the sale of closed landfills (Option 8).

7.3.5 Cost of Service Components by Waste Stream

This section provides an allocation of capital costs, operating expenditures, revenues and lifecycle contributions by waste stream to support financial planning and performance monitoring under the future waste management system. By assigning costs and revenues to specific waste streams—including garbage, organics, LYW, HSP, Blue Box and other streams, the County can better understand the financial implications of service enhancements and program changes.

The allocations are based on the nature and purpose of each cost item, the design of proposed programs and the relative tonnage or service requirements associated with each stream. This breakdown supports the provision of transparency in the development of long-term financial models.

7.3.5.1 Allocation of Capital Costs by Waste Stream

The total capital identified in **Section 7.3.2** is allocated to the various waste streams as provided in **Table 45**. **Table 46** and **Figure 21** provide a summary of the total capital budget forecast by waste stream.

Table 45: Future State – Allocation of Capital Projects by Waste Stream

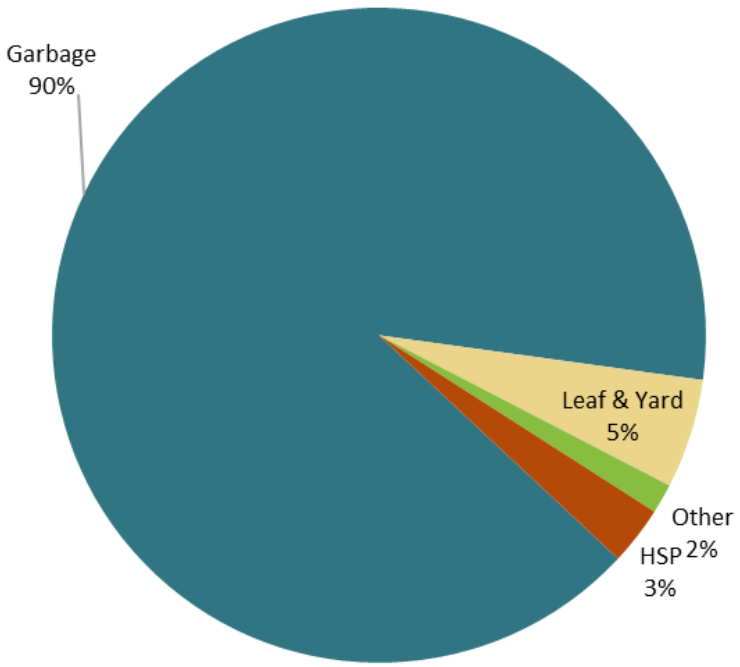
*It is assumed that the new permanent waste depot will not handle organics tonnage

Project Name	Basis for Allocation	Garbage	Blue Box	LYW	HSP	Other
Option 1 - Introduce Garbage Collection in Carts						
Carts	100% garbage related capital project	100%	0%	0%	0%	0%
P&E	100% garbage related capital project	100%	0%	0%	0%	0%
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes						
Vehicle Allowance/Rental for By-law Officer	100% garbage related capital project	100%	0%	0%	0%	0%
P&E	100% garbage related capital project	100%	0%	0%	0%	0%
Option 5 - Build a New Permanent Waste Depot						
Facility Cost	Allocated based on forecasted tonnage*	91.96%	0%	6.05%	0.35%	1.64%
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF						
ECA Modification, Pavement, Modified Sea Containers, and Equipment	100% HSP related capital project	0%	0%	0%	100%	0%
Option 7 - Develop a Mobile HSP Depot Program						
Shipping Container	100% HSP related capital project	0%	0%	0%	100%	0%
Shipping Container Modifications	100% HSP related capital project	0%	0%	0%	100%	0%
ECA Applications and Fees	100% HSP related capital project	0%	0%	0%	100%	0%
Equipment	100% HSP related capital project	0%	0%	0%	100%	0%
P&E	100% HSP related capital project	0%	0%	0%	100%	0%

Table 46: Future State – Summary of Capital Forecast by Waste Stream (Inflated Costs)

Waste Stream	Current State Percentage Allocations - Capital	Current State - Capital (2024 to 2034)	Future State Percentage Allocations - Capital	Future State - Capital (2024 to 2034)
Garbage	88%	$1,947,498	90%	$13,535,376
Other	2%	$205,533	2%	$219,233
LYW	9%	$55,559	5%	$811,028
HSP	1%	$11,811	3%	$433,605
Total	**100%**	**$2,220,400**	**100%**	**$14,999,242**

Figure 21: Future State – Summary of Capital Forecast by Waste Stream



7.3.5.2 Allocation of Operating Expenditures and Revenues by Waste Stream

The total operating expenditures identified in **Section 7.3.5.1** are allocated to the various waste streams. **Table 47**, **Table 48**, **Figure 22** and **Figure 23** provide a summary of the total operating budget (expenditures and revenues) forecasted by waste stream.

Table 47: Future State – Summary of Operating Expenditures by Waste Stream

Waste Stream	Current State Percentage Allocations - Operating Expenditures	Current State Operating Expenditures (2024 to 2034)	Future State Percentage Allocations - Operating Expenditures	Future State Operating Expenditures (2024 to 2034)
Garbage	91%	$110,179,473	88%	$111,609,912
LYW	6%	$7,654,530	6%	$7,654,530
Other	2%	$2,127,177	2%	$2,127,177
HSP	<1%	$452,198	4%	$5,657,673
Blue Box[32]	<1%	$214,731	<1%	$214,731
Total	**100%**	**$113,753,810**	**100%**	**$127,264,025**

Table 48: Future State – Summary of Operating Revenues by Waste Stream

Waste Stream	Current State Percentage Allocations- Operating Revenues	Current State Operating Revenues (2024 to 2034)	Future State Percentage Allocations- Operating Revenues	Future State Operating Revenues (2024 to 2034)
Garbage	93%	$27,612,840	93%	$27,612,840
LYW	3%	$836,838	3%	$836,838
Other	2%	$500,728	2%	$500,728
HSP	2%	$470,609	2%	$470,609
Blue Box	<1%	$214,731	<1%	$214,731
Total	**100%**	**$29,635,747**	**100%**	**$29,635,747**

[32] Note that the expenditures and revenues associated with the Blue Box waste stream occur only in 2024 and 2025. Following the transition period there are no costs allocated to the Blue Box stream.

Figure 22: Future State – Summary of Operating Expenditures by Waste Stream

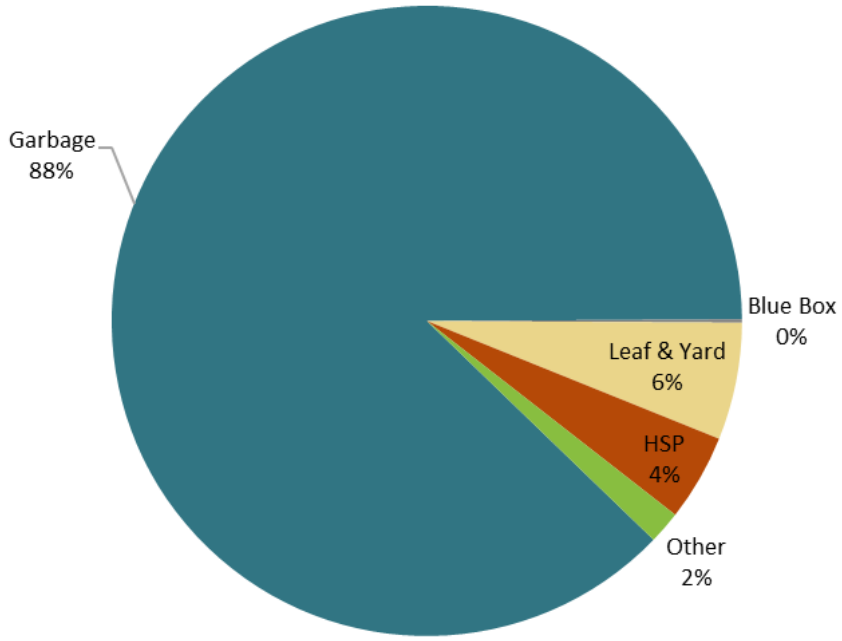


Figure 23: Future State – Summary of Operating Revenues by Waste Stream

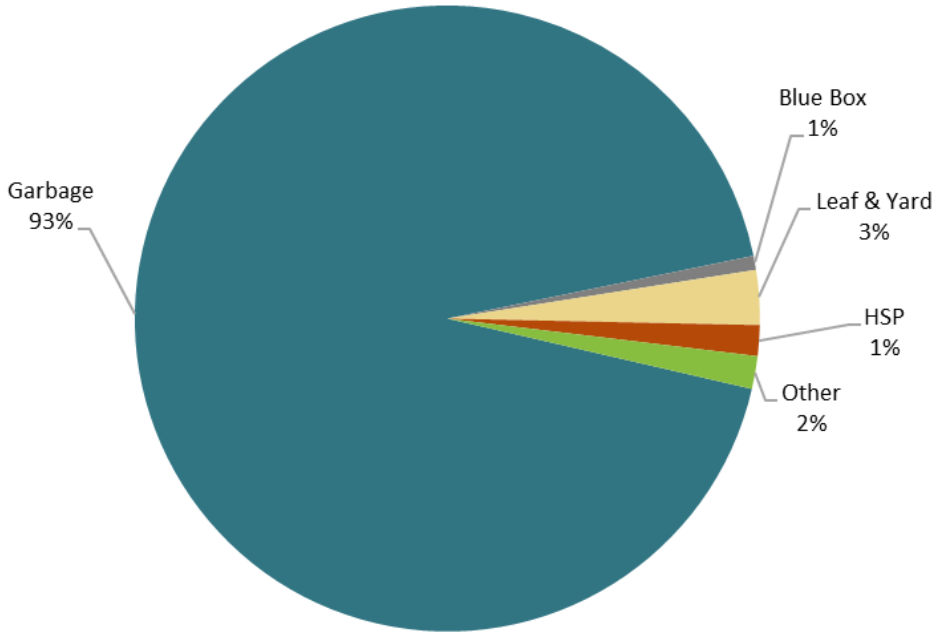


Table 49: Future State – Allocation of Operating Expenditures and Revenues by Waste Stream

Description	Basis for Allocation	Garbage	Blue Box	LYW	HSP	Other
Expenditures						
Option 1 - Introduce Garbage Collection in Carts						
Collection Contract – Incremental Costs	100% garbage related	100%	0%	0%	0%	0%
Cart Costs for Increased Households and Cart Replacements and Repairs	100% garbage related	100%	0%	0%	0%	0%
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes						
Temporary By-law Officer for Enforcement	100% garbage related	100%	0%	0%	0%	0%
Cost Reduction	100% garbage related	100%	0%	0%	0%	0%
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF						
Staffing, Contractors, and Processing	100% HSP related	0%	0%	0%	100%	0%
Option 7 - Develop a Mobile HSP Depot Program						
Staffing	100% HSP related	0%	0%	0%	100%	0%
Collection and Moving Costs	100% HSP related	0%	0%	0%	100%	0%
Moving (assuming six locations per year)	100% HSP related	0%	0%	0%	100%	0%
Option 8 - Sell Closed Landfills						
Operating Cost Savings	100% garbage related	100%	0%	0%	0%	0%

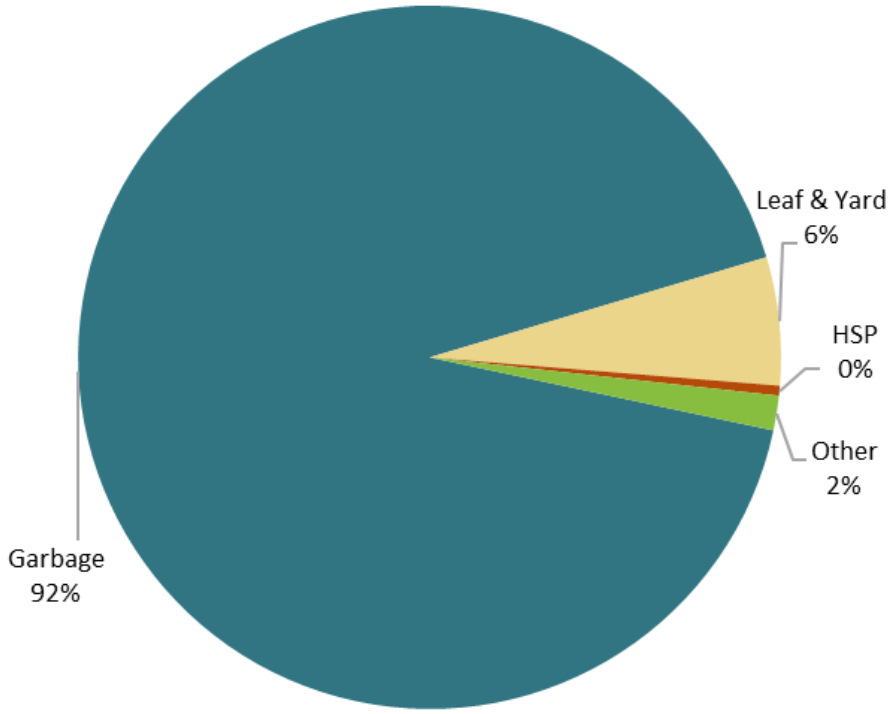
7.3.5.3 Allocation of Lifecycle Costs by Waste Stream

The future savings for lifecycle replacements as identified in **Section 7.3.2**, are allocated to waste streams based on the asset's associated waste stream. The incremental lifecycle savings are fully allocated to their respective waste streams: organics cart savings to the organics stream, garbage cart savings to the garbage stream, and HSP Waste Depot savings to the HSP stream. **Table 50** and **Figure 24** present the future state summary of lifecycle savings by waste stream.

Table 50: Future State – Summary of Lifecycle Savings by Waste Stream (Inflated Costs)

Waste Stream	Current State Percentage Allocations- Lifecycle Contributions	Current State Lifecycle Contributions (2024 to 2034)	Future State Percentage Allocations- Lifecycle Contributions	Future State Lifecycle Contributions (2024 to 2034)
Garbage	92%	$32,604,856	92%	$33,574,293
Other	2%	$580,313	2%	$580,313
LYW	6%	$2,146,806	6%	$2,146,806
HSP	<1%	$123,364	<1%	$165,513
Total	**100%**	**$35,455,339**	**100%**	**$36,466,925**

Figure 24: Future State – Summary of Lifecycle Savings by Waste Stream



7.3.6 Future State Total Cost of Service

Based on the analysis, the future state cost of service analysis combines the current state cost of service model with the 11 new options for the future state to determine the total future costs of providing solid waste services in the County to 2034. The analysis considers capital needs, lifecycle savings and operating expenditures and revenues.

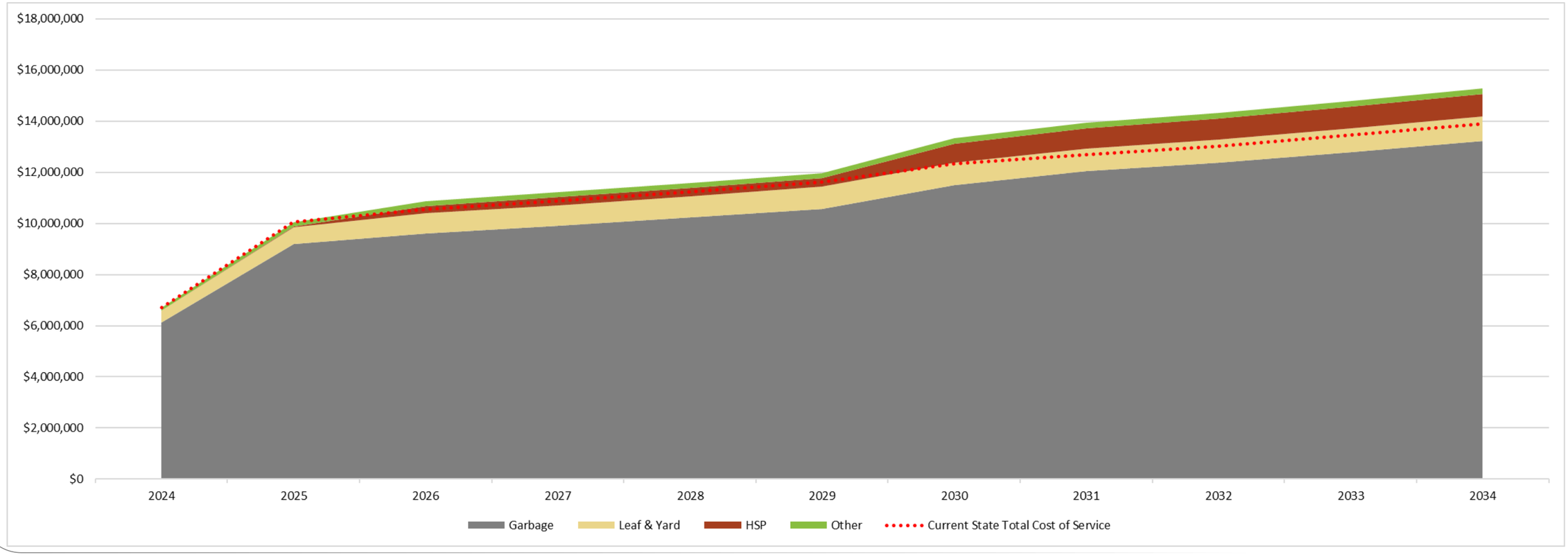
The total future state net cost of service (after operating revenues) for 2025 is approximately $10.05 million. By 2034, the anticipated future state net cost of service to be funded by property taxes will be approximately $15.29 million.

These costs have also been calculated for each waste stream in **Table 51** and **Figure 25**. The detailed calculations worksheets are provided in **Appendix C** for the total solid waste program, along with the calculations for each waste stream.

Table 51: Total Future State Net Cost of Service for Recovery

Waste Stream	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Garbage	$9,195,169	$9,594,758	$9,898,860	$10,242,066	$10,580,062	$11,496,426	$12,046,636	$12,376,161	$12,797,320	$13,229,691
Blue Box	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LYW	$663,449	$793,674	$811,202	$831,016	$850,244	$873,709	$890,321	$906,635	$928,679	$951,008
HSP	$8,923	$299,464	$309,933	$320,882	$332,066	$753,873	$790,030	$817,430	$846,115	$875,803
Other	$185,640	$191,055	$195,312	$200,188	$204,904	$210,766	$214,776	$218,705	$224,102	$229,577
Total	**$10,053,181**	**$10,878,952**	**$11,215,308**	**$11,594,152**	**$11,967,276**	**$13,334,774**	**$13,941,763**	**$14,318,931**	**$14,796,217**	**$15,286,079**

Figure 25: Total Net Cost of Service by Waste Stream



7.3.7 Financial Impact Analysis

Table 52 compares the total cost of service in the Current State analysis to the Future State cost of service resulting from the 11 identified options in **Section 7.2**. By 2034 the anticipated net cost of service to be funded by property taxes will be approximately $15.02 million, a 20% increase from the estimated current state net cost of service in 2034.

Table 52: Current State Versus Future State Net Cost of Service for Recovery Comparison

Cost of Service	Current State	Future State	Percentage Change
2025	$10,053,631	$10,053,181	0.00%
2026	$10,554,417	$10,878,952	3.07%
2027	$10,879,897	$11,215,308	3.08%
2028	$11,247,002	$11,594,152	3.09%
2029	$11,608,492	$11,967,276	3.09%
2030	$12,340,222	$13,334,774	8.06%
2031	$12,678,448	$13,941,763	9.96%
2032	$13,017,126	$14,318,931	10.00%
2033	$13,455,417	$14,796,217	9.96%
2034	$13,904,480	$15,286,079	9.94%

7.4 Additional Options for Consideration

The options presented in **Section 7.1** have been designed as a coordinated package to be implemented collectively. Two additional options have been analyzed separately. Implementing a residential organic waste collection program (Option 12, **Table 53**)was evaluated independently due to the anticipated costs associated with its level of implementation and other operational considerations. The reduction of garbage collection frequency to bi-weekly (Option 3, **Table 54**) has also been analyzed; however it is not assessed independently of Option 12 as its viability is dependent on the presence of organics diversion; therefore, Option 13 is excluded from the coordinated package presented in **Section 7.1.**

Table 53: Option 12 - Implement a Residential Organic Waste Collection Program

Parameter	Description
Description	This option involves the County introducing a curbside collection program for residential organic waste (i.e., Green Bin program). Initially this may only include urban areas. This may include the preparation of a collection contract; the purchase of carts; and the development of a roll out plan to deliver the carts to residents.

Assumptions	• The organic waste collection program service level will be weekly in the spring, summer and fall and bi-weekly during the winter months. This reflects seasonal variations in organic waste generation and reduced collection costs.
	• The organic waste collection program will begin in 2030, as part of the County's new collection program.
	• The County will be able to secure a collection contract to start in 2030.
	• The County will be able to secure processing of the collected organic waste.
	• The County will be able to secure a contract for the manufacturing of carts (e.g., green carts, kitchen containers).
	• The collection contractor will have a transfer station for organics or the County will obtain an ECA amendment for CWMF for organics to not limit bidders.
	• **Timing:**
	  ○ Council will require information on the program before staff prepare the collection contract.
	  ○ A Council decision to proceed with a Residential Organic Waste Collection program will be required.
	  ○ The County will be able to secure services for collection of organic waste with the award of the collection contract.
	  ○ A separate organic waste processing / composting contract will be required. It is assumed that at this time there is no interest in developing this in-house. This will need to be secured in parallel with the award of the waste collection contract.
	  ○ Alignment is required for carts to be manufactured, shipped, built and delivered to households prior to the start of collection.

Parameter	Description
Supporting Rationale	• Prepares the County for population growth. • Reduces organic waste sent to landfill. • Prepares the County in the event that the Province bans organic waste from disposal by enabling a proactive, phased implementation that minimizes operational risks and avoids the challenges of a last-minute rollout. • Turns organic waste into a beneficial product such as compost or soil amendment.
Supplemental Tools Required and Dependencies	• A pilot project is not needed due to the success of other similar jurisdictions in the roll-out of their pilot projects. However, the County may want to conduct public consultation to raise awareness, get feedback on concerns to support implementation efforts and confirm that the public will participate and what their concern(s) may be so that mitigation tools can be developed. • Market research to learn about collection service providers, the type of vehicles currently in their fleet and the degree of flexibility they have to convert to different collection methods. • Market research on the cost of carts. A Council decision to introduce the program will be required before contracts are developed and Council will require information on: • Cost analysis (e.g., market research on the cost of carts). • Program design and logistics (timeline, implementation, collection, processing). • Community engagement and education. • Organic waste program performance metrics. • Risk assessment and mitigation. A plan that considers and communicates timing for the procurement of collection services and carts– which will require periods of time for successful vendors to: • Purchase fleet vehicles (i.e., following award of the contract but prior to the start of curbside collection). • Manufacture carts (i.e., once a decision has been made for the collection award, but prior to the roll out of carts to residents). • Distribute carts to residents (i.e., once a number of carts have been made, but prior start of curbside collection).

Parameter	Description
	Council will be engaged through the bid award process, in accordance with County policy.
Compatibilities	• This option will have implications for how the next collection RFP will be developed. Requirements in the RFP will need to be aligned with the County's needs, if the option is to be implemented. • The option provides residents with a program to divert food waste, which will ease the implementation of a receptacle limit for garbage.
Triple-Bottom Line Analysis	

Economic Feasibility	Annual Operating Costs
	• Collection contract would begin in 2030, cart purchase should occur in 2028.
	• The estimated number of urban households is approximately 16,000 in 2030 and 22,480 County-wide.
	• Assuming weekly organics collection, the cost of collection is approximately $93 to $111 per household by 2030. The collection cost for organics is estimated to be:
	  ○ Urban only: $1.5 million to $1.8 million per year.
	  ○ County-wide: $2.1 million to $2.5 million per year.
	• Additional ongoing operation costs starting in 2031, such as increased households, cart replacements and repairs, would be approximately:
	  ○ Urban only: $75,000 to $150,000.
	  ○ County-wide: $100,000 to $200,000 per year.
	• Processing may range from $135 to $505 per tonne by 2030, based on facility type. It is assumed that approximately 30% of the current garbage tonnage is composed of food and organic waste that could be diverted. Based on this quantity assumption, and the processing cost per tonne, the range could be:
	  ○ Urban only: $0.5 million to $1.7 million per year.
	  ○ County-wide: $0.7 million to $2.4 million per year.
	• There will be additional transportation costs that cannot be determined until the processing location is selected.
	• Total Annual Operating Costs starting in 2030 range from:
	  ○ Urban only: $2 million to $3.7 million plus transportation costs to a processing facility.

Parameter	Description
	○ County-wide: $2.9 million to $5.1 million plus transportation costs to a processing facility.
	Capital Costs • Cart Costs: Includes carts, cart exchanges, assembly, delivery, ongoing repairs, replacement parts and hot stamping. As the options can vary depending on the County's selection, a range has been provided. Cost per household in 2030 is $85 to $105. Estimated costs starting in 2028 (when carts ordered) is: ○ Urban only: $1.4 million to $1.7 million. ○ County-wide: $1.9 million to $2.4 million. • Cost for P&E to residents to communicate changes is estimated at $30,000.
	Level of Risk • Securing a processor: Moderate Risk, due to limited service-providers in the market, and expansion of programs in other jurisdictions. • New contract and transfer logistics: Moderate Risk, due to the need to implement this option along with other options related to procuring a new collection contract. For greater efficiency, the new service provider may choose to co-collect garbage and food waste or may choose to operate different trucks for different streams. The service provider will also be responsible for transfer station access and permits. While these responsibilities lie with the contractor, the County has some vulnerability due to the potential for the contractor to fail to fulfill these responsibilities. • This option addresses the risk that there would be a future statutory requirement for the County to divert organic waste. Due to the length of time that it takes to plan and roll out a program, advancing an organic waste program now mitigates the possibility of the County needing to act quickly to secure contracts such as the production of Green Bins and organic waste processing.
Social Impact	Proven or Unproven • There are other similar jurisdictions that have implemented organic waste programs and lessons can be learned from their experience.

Parameter	Description

	Level of Effort to develop, implement, operate and maintain the option.
	• Considerable:
	  ○ Requires including organic waste collection in the next waste collection RFP.
	  ○ Requires a processing solution.
	  ○ Requires the procurement and delivery of Green Bins and kitchen carts. Ongoing maintenance and delivery of Green Bins and replacement kitchen containers may be included in the RFP requirements.
	  ○ Requires new program P&E.

	Public acceptance of the option • Since other jurisdictions have organic waste programs, it is anticipated that public acceptance will be high. Currently, the County is experiencing an influx of population, and many new residents expect to be able to divert their organic waste. • The number of complaints that the County receives about not offering organic waste collection will be reduced.
Environmental Impact	Climate change impacts There will be an increase in GHG emissions due to the potential addition of collection vehicles for organics if separately collected. Methane emissions will decrease at landfills in correlation with the quantity of organics that are diverted through the organics collection program.
	Potential for diversion Implementing an organics collection program will result in less waste being landfilled and a significant increase in waste diverted. Studies from similar jurisdictions showed up to a 50% decrease of organic materials in garbage containers from long-term programs.
	Nuisance impacts (odour, noise, traffic, litter) Potential for an increase in odour and litter from animal attraction with the separated organics waste stream.

Table 54: Option 13 – Reduce Garbage Collection Frequency to Bi-weekly

Parameter	Description
Description	This option identifies the opportunity to reduce garbage collection service from weekly to bi-weekly, given the introduction of an Organic Waste Collection Program. This option assumes that only households receiving organics collection will receive bi-weekly garbage collection e.g., if organics is implemented for urban households only, rural households will continue to receive weekly garbage collection. This option also assumes that garbage is collected in carts (Option 1).
Assumptions	• Cost savings would result due to the reduction in collection efforts (approximately half as many stops). • Policies would be created such as exception policies / accommodations for residents whose needs will make compliance difficult (e.g., medical exceptions or diaper accommodations). • Introduced concurrently with the implementation of the Organic Waste Collection Program and while a new curbside collection contract is being developed.
Supporting Rationale	• Potential to reduce collection costs, a reduction in the volume of garbage (which would come from the removal of organic waste from this stream). • A reduction in GHG emission from collections.
Supplemental Tools Required and Dependencies	• The County would need to consider residents / businesses that would not be able to meet garbage quantity limits and/or hold on to their waste for two weeks. • Accommodation/ exemption policies may be required for people who are away on their collection day (e.g., allowing cottagers to drop-off at CWMF in advance of a collection day that they will miss) and people requiring additional collection (e.g., medical exemptions, those using diapers). • Council will need to be informed of the business case for the service level change and potential impacts to residents and IC&I customers. • A by-law update will be required to enact the change.

Parameter	Description
Compatibilities	• This option will only be considered if the Organic Waste Collection Program is approved. • This option will have implications for how the next collection RFP will be developed. Requirements in the RFP will need to be aligned with the County's needs, if the option is to be implemented.
Triple-Bottom Line Analysis	

Economic Feasibility	Annual Operating Costs
	• Collection would begin in 2030.
	• Assuming bi-weekly garbage collection contract (combined with option 12) for households receiving organics collection the estimated costs are:
	  ○ Urban only: $3 million to $3.5 million.
	  ○ County-wide: $2.5 million to $2.8 million.

	Capital Costs • N/A included in Option 12.
	Level of Risk • Minimal risk, although may be initial threats of illegal dumping.
Social Impact	Proven or Unproven • Experience from jurisdictions shows that bi-weekly garbage collection increases participation in diversion programs thus reduces the quantity of garbage set out by residents.
	Level of Effort to develop, implement, operate and maintain the option • Initial effort is medium for P&E efforts– needs to be implemented alongside another option (addressing organic waste) to give residents an alternative. • Effort needs to align with changes to the curbside collection contract.
	Public acceptance of the option • Concurrent and clear messaging on overall changes to collection will be required so that residents' anticipated concerns are addressed (e.g., less garbage service but new program offered). As well, residents will need to be provided with P&E information on the organic waste program.

Parameter	Description
	• To address the potential for illegal dumping, residents should be informed of how to dispose of surplus waste (above the 2-week limit), as well as by-law provisions and consequences for illegal dumping.
Environmental Impact	Climate change impacts • Reduction in fuel consumption due to fewer kilometres being travelled.
	Potential for diversion • Diversion impacts are likely to be experienced through the implementation of the Organic Waste Collection program.
	Nuisance impacts (odour, noise, traffic, litter) • Fewer days when vehicles are on the road. • Residents may be concerned about odours on their property, resulting from holding over garbage (e.g., diapers), especially in the summer. P&E will be needed to educate residents that if organics are diverted that it will not smell as it will be collected weekly.

Table 55 summarizes each option, year of implementation and operating and capital costs for curbside collection options.

Table 55: Curbside Collection Options Summary

Option	Year of Implementation	Operating	Capital
12 Residential Organic Waste Collection Program	2030 (capital 2028)	Urban only: $2 million to $3.7 million plus transportation costs to a processing facility. County-wide: $2.9 million to $5.1 million plus transportation costs to a processing facility.	Urban only: $1.4 million to $1.7 million County-wide: $1.9 million to $2.4 million

Option	Year of Implementation	Operating	Capital
13 Bi-weekly Garbage Collection	2030 (capital 2028)	Urban only: $3 million to $3.5 million County-wide: $2.5 million to $2.8 million	N/A

7.5 Cost of Service of Additional Options for Consideration

The two aforementioned options of implementing a residential organic waste collection program (either in the urban area only or County-wide) and reducing the garbage collection frequency to bi-weekly are evaluated in the following subsections.

7.5.1 Capital Budget Impact

The total capital cost of the Urban Only Residential Organic Waste Collection program (Option 12) is approximately $1.58 million over the 10-year period with expenditures in 2028 to 2030 for the purchase of carts and a P&E program.

The total capital cost of the County-Wide Residential Organic Waste Collection program (Option 12) is approximately $2.18 million over the 10-year period with expenditures in 2028 to 2030 for the purchase of carts and a P&E program.

There are no capital costs associated with bi-weekly garbage collection (Option 13).

7.5.2 Operating Expenditures

The total operating cost of the Urban Only Residential Organic Waste Collection program (Option 12) is approximately $15.23 million over the 10-year period with expenditures beginning in 2030 when the program would be implemented.

The estimated total operating cost of Reducing Garbage Collection Frequency to Bi-Weekly in the Urban-Only area (Option 13) is approximately $17.43 million over the 10-year period with expenditures beginning in 2030 when the program would be implemented. Note, these expenditures are for the garbage collection contract. Based on this, this option costs less than the current garbage collection contract costs and

would result in net savings on the contract of approximately $4.41 million over the forecast period (2030 to 2034).

The total net operating expenditures combined for Option 12 and 13 in the Urban-Area only is approximately $10.79 million over the forecast period to 2034.

The total operating cost of the County-Wide Residential Organic Waste Collection program (Option 12) is approximately $21.29 million over the 10-year period with expenditures beginning in 2030 when the program would be implemented.

The estimated total operating cost of Reducing Garbage Collection Frequency to Bi-Weekly in the entire County (Option 13) is approximately $14.21 million over the 10-year period with expenditures beginning in 2030 when the program would be implemented. Note, these expenditures are for the garbage collection contract. Based on this, this option costs less than the current garbage collection contract costs and would result in net savings on the contract of approximately $7.66 million over the forecast period (2030 to 2034).

The total net operating expenditures combined for option 12 and 13 in the entire County is approximately $13.64 million over the forecast period to 2034.

7.5.3 Lifecycle Costing

The County will need to save for the future replacements of organics carts over the forecast period. Based on the cart's estimated average useful lives and replacement costs, the savings for lifecycle costs identified over the 2024 to 2034 forecast for the Urban-Area only organics program total approximately $0.65 million.

The savings for lifecycle costs identified over the 2024 to 2034 forecast for the County-Wide organics program total approximately $0.91 million.

7.5.4 Cost of Service

If the County implemented the Organics Waste Collection program in the Urban Area, the total cost of service (including the costs for bi-weekly garbage collection in the urban-only area) would be approximately $13.03 million over the forecast period to 2034.

If the County implemented the County-Wide Organics Waste Collection program, the total cost of service (including the costs for bi-weekly garbage collection in the entire County) would be approximately $16.72 million over the forecast period to 2034.

Table 56 summarizes the cost of service for the current state, future state (11 options), future state– urban area (11 options plus additional options for consideration), and future state– county-wide (11 options plus additional options for consideration).

Table 56: Cost of Service for the Current State Plus Additional Options for Consideration

Year	Current State	Future State - 11 Options	Future State - Additional Options - Urban Area (Including 11 Options)	Future State - Additional Options - County-Wide (Including 11 Options)
2025	$10,053,631	$10,053,181	$10,053,181	$10,053,181
2026	$10,554,417	$10,878,952	$10,878,952	$10,878,952
2027	$10,879,897	$11,215,308	$11,215,308	$11,215,308
2028	$11,247,002	$11,594,152	$11,594,152	$11,594,152
2029	$11,608,492	$11,967,276	$11,967,276	$11,967,276
2030	$12,340,222	$13,334,774	$15,084,774	$15,584,774
2031	$12,678,448	$13,941,763	$16,020,513	$16,635,513
2032	$13,017,126	$14,318,931	$16,474,513	$17,112,396
2033	$13,455,417	$14,796,217	$17,027,244	$17,687,453
2034	$13,904,480	$15,286,079	$17,595,192	$18,278,509

7.6 Strategic Plan

A Strategic Plan outlining implementation considerations for each of the 13 recommended options is included in **Appendix D**. This includes required Council decisions, potential risks, mitigation measures and key timing dependencies. It provides guidance on contract development, policy updates and operational planning to support a coordinated transition to the future state solid waste management system. A timeline to identify key milestones in the implementation of the options over the next ten years has also been provided.

8.0 Public Survey

As part of the development of the SWMMP, a public survey was conducted to gather community input on current waste management practices, program awareness and potential enhancements to municipal services. While surveys are typically administered earlier in the planning process, this one was added later at the County's request as a scoped addition to the original project. It was carried out following the completion of Task 4 and the development of preliminary options, with the intent of using community feedback to supplement and validate the draft recommendations, including identifying areas of alignment or concern from the public's perspective.

The survey was open from April 7 to April 28, 2025, and promoted through multiple channels to encourage widespread participation. Outreach included:

- A County news release;
- Posts on the County's official website, Facebook, Instagram and X (formerly Twitter);
- The municipal newsletter; and
- On-site advertising with a QR code at advanced polling stations during the federal election, allowing residents to access the survey while waiting in line.

The survey invited residents to provide input on topics such as:

- Current waste disposal habits and use of municipal services (e.g., curbside collection, drop-off depots);
- Awareness and satisfaction with existing programs;
- Opinions on potential service changes, including organics collection and expanded diversion programs; and
- Preferences related to service convenience, environmental outcomes and cost implications.

In total, 1,309 responses were received; 738 respondents identified as urban residents and 547 respondents identified as rural residents (24 respondents did not identify as either).

Separate analyses were conducted for urban and rural responses to reflect potential differences in service access and expectations. The input collected through this process

will help the County evaluate current service delivery models, identify opportunities for improvement and confirm that future waste management strategies align with resident priorities. Survey results for each question by urban and rural residents is included in **Appendix E.**

8.1 Summary of Survey Findings – Urban and Rural

The public survey provided valuable insight into residents' waste management practices, preferences and priorities across both urban and rural areas within Haldimand County. While many themes were consistent across the two populations, some notable differences emerged that may help tailor future program delivery and communications.

8.11 Shared Priorities

The followed shared priorities were noted between the urban and rural responses:

- **Waste diversion:** A strong commitment to waste diversion was evident in responses from both urban and rural residents. A majority in each group rated it as "very important", with approximately 60% of urban respondents and 55% of rural respondents expressing this view;
- **Residential organics collection:** There was broad support for the introduction of a residential organics collection program to reduce landfill waste and improve environmental outcomes. Support was slightly stronger among urban residents (61%) than rural (46%), though both groups had a significant portion who were open to the idea but wanted more information (refer to **Figure 26**);
- **Composting interest:** Residents in both areas expressed interest in enhanced composting support. Approximately 35 to 40% indicated they would be "very likely" to participate in a program that supported at-home composting or provided kitchen food waste reduction appliances;
- **Lack of awareness of County services:** Most respondents felt at least "somewhat informed" regarding existing County waste programs, though rural respondents were slightly more likely to report lower awareness levels; and
- **Increased Costs for Waste Services:** While residents overall are generally open to modest tax increases to support improved diversion efforts, rural respondents showed greater price sensitivity, with a higher proportion preferring no increase to maintain current services (refer to **Figure 27**).

Figure 26: Response to "Would you Support an Organics Collection Program (e.g., Green Bin for Food Waste) if it Helped Extend the Life of Local Landfills and Improve Environmental Sustainability?"

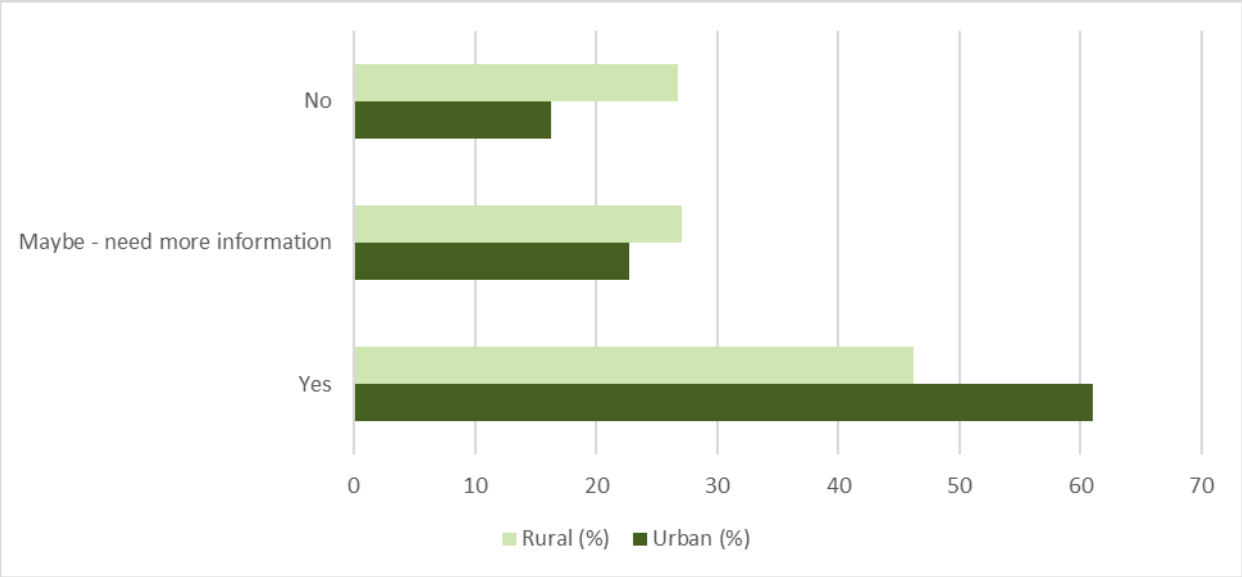
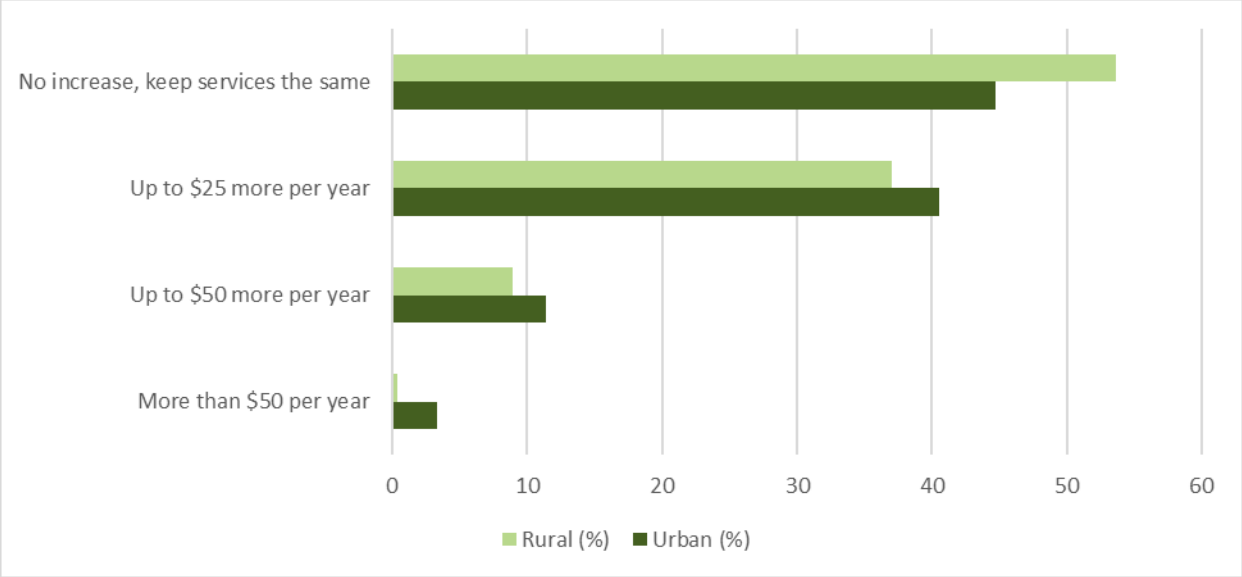


Figure 27: Response to "If Enhanced Waste Diversion Programs (e.g., Organics Collection, Increased Yard Waste Collection, More Frequent Hazardous Waste Disposal) Required a Tax Increase, How Much Would you be Willing to Pay?"



8.12 Key Differences

The following key differences were noted between urban and rural responses:

- **Service use and access**: Rural residents indicated that they were far less likely to use the current 11-week curbside LYW collection program (75% indicated they do not use it due to rural location), whereas over 60% of urban respondents indicated they use it regularly;
- **Interest in expanded LYW collection:** Among rural residents, 56% indicated they would use an expanded curbside LYW program if offered; however, rural respondents were more likely to express hesitation around paying increased taxes to fund this expansion; 80% of rural respondents preferred to keep the service "as is," compared to 75% of urban respondents;
- **Use of the CWMF:** This was more common among rural residents, with 63% using it at least occasionally, compared to 28% of urban respondents. Rural residents were also more likely to express interest for longer operating hours and additional waste diversion options at the CWMF; and
- **Hazardous waste:** Both groups supported improved access to hazardous waste disposal; however, urban respondents were more likely to prefer mobile or centralized permanent options, while rural respondents leaned toward improving the current system or expanding the Canborough depot.

8.13 Observations from Open Ended Comments

In addition to structured responses, many residents used the open-ended comment field to elaborate on their waste-related experiences, preferences and concerns. A review of these comments revealed several recurring themes that add context to the survey findings.

Common Themes Across Urban and Rural Residents:

- **Cost sensitivity**: Many respondents voiced concern about rising taxes and the affordability of new or expanded programs. Cost-related comments were evenly distributed between urban and rural respondents, indicating a shared sensitivity to potential fee increases;

- **Support for organics collection**: Many residents independently expressed interest in the introduction of a green bin or organics collection program. This support aligns with the structured survey data and reinforces its priority across both populations;
- **Concerns about animals and odour**: Both groups expressed concerns that organics collection may attract pests such as raccoons or rodents, particularly during warmer months; and
- **Education and awareness:** Both groups expresses the need for more education and awareness on waste collection, schedule, and limits, and better awareness among residents on waste reduction.

Themes More Common Among Urban Respondents:

- **LYW collection timing**: Urban residents were more likely to comment on LYW collection windows being misaligned with actual gardening and LYW maintenance seasons with the desire for the service to extend further into the spring and fall seasons; and
- **Litter from wind**: Several urban respondents reported that garbage and recycling are frequently blown around due to uncovered bins or improperly placed receptacles.

Themes More Common Among Rural Respondents:

- **Hazardous waste and large item disposal**: Rural respondents raised concerns about limited access to hazardous waste and large item disposal options, and some advocated for pick up options or more flexible or decentralized services;
- **Illegal dumping**: Rural comments frequently cited illegal dumping along roadways and in ditches, often linked to tipping fees, limited curbside access or insufficient communication; and
- **Transfer station location and access**: Some residents, particularly those in areas such as Dunnville and Caledonia expressed concerns that the CWMF is too far and inconvenient to access. There is a desire for additional transfer sites or drop-off locations.

8.2 Summary of Survey Responses – Local Businesses

A total of 26 businesses participated in the public survey. Of these, 13 identified as urban and 13 as rural, offering balanced geographic representation. Business responses

provided insight into the expectations and challenges faced by non-residential users of the County's waste services. Several key themes emerged from their input:

- **Concerns regarding commercial recycling**: Many business respondents expressed concern over the removal of curbside recycling services for the IC&I sector. There was strong support for reinstating this service, particularly among smaller businesses that lack the space, volume or resources to contract private recycling service. Several comments noted that, since the removal of the service, recyclables are increasingly being disposed of in the garbage;
- **Equity and cost fairness**: Businesses raised concerns regarding service equity, noting that they pay commercial property taxes yet receive fewer waste services compared to residential properties. Several respondents emphasized the need for more transparent and fair service models that recognize the contributions and constraints of small commercial operators;
- **HSP disposal**: Rural businesses, particularly those in sectors such as agriculture or automotive services, expressed interest in expanded HSP disposal options, such as more frequent drop-off events or small-quantity generator allowances at existing depots; and
- **Tailored solutions for business needs**: Respondents highlighted the importance of designing waste services that reflect the specific operating needs of businesses, including seasonal service fluctuations and limited access to curbside collection in some areas.

During the survey period, a local organization initiated a coordinated social media campaign across several community groups encouraging residents, businesses and their customers to raise concerns about the removal of commercial recycling services. While the initiative may have helped increase participation, it also likely influenced the tone and volume of responses related to this topic. Notably**,** 19 residential respondents (not identifying as business owners) also submitted comments specifically calling for the reinstatement of business recycling. This overlap suggests the social media effort may have shaped residents' perceptions and concerns regarding commercial recycling.

9.0 Conclusion

The County's SWMMP is the culmination of a multi-phase planning process. Tasks included an assessment of existing infrastructure, programs and service delivery, a jurisdictional scan of comparable providers, a review of statutory requirements and emerging policy trends at the local, provincial and federal levels and interviews with County staff.

A set of 13 strategic options aimed at improving long-term service delivery, enhancing diversion, and providing financial and environmental sustainability have been developed. These options reflect a system-wide approach to refining waste management services and preparing for future demands, particularly in the context of population growth, evolving regulatory frameworks and emerging service expectations. The options are organized into four core areas:

- Curbside service improvements (Options 1 to 4) include automated cart-based garbage collection, and targeted enhancements for specific customer groups. Complementary strategies target seasonal properties, farms, IC&I on collection routes and multi-residential customers, supported by proposed policy changes and studies to guide service levels and future procurement.
- Depot infrastructure upgrades (Options 5 to 7) include the development of a new waste depot and permanent or mobile HSP depots to provide accessible, year-round service. These options aim to expand diversion opportunities and provide flexibility to residents while modernizing depot infrastructure.
- Landfill-related strategies (Options 8 and 9) consider both the divestment and repurposing of closed landfill sites to reduce liabilities or create new value. These approaches confirm that legacy sites are managed proactively and align with broader County objectives for land use and risk management.
- Strategic planning and communication options (Options 10 and 11) allow for the County to remain adaptable and resilient. A P&E Strategy will support resident understanding and participation in program changes, while a DDM Plan will equip the County to respond effectively to emergencies.
- Two additional curbside service improvements (Options 12 and 13) were evaluated independently from the other 11 options. Option 12 explores the implementation of

a residential organics collection program, while Option 13 examines the potential to reduce garbage collection to a bi-weekly schedule, contingent on the implementation of a residential organics collection program.

Together, the 13 strategic options provide a flexible yet coordinated path forward—one that balances affordability, service quality, regulatory readiness and environmental responsibility. The recommendations and financial forecasts laid out in this SWMMP offer the County a solid foundation for decision-making and future implementation.

Appendix A

Waste Generation Forecast

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Appendix A: Waste Generation Forecast

Canborough Waste Management Facility - Waste Category	Historical					Average Tonnage Per Capita 2019 to 2023	Forecast										
	2019	2020	2021	2022	2023		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Population	48,008	48,443	49,217	51,061	52,098		53,206	54,314	55,451	56,587	57,724	58,860	59,997	60,575	61,153	61,731	62,309
INBOUND MATERIALS																	
CONC - CONCRETE						-											
CONS - CONSTRUCTION MATERIAL						-											
CSW - COMMERCIAL SOLID WASTE	375.49	310.88	183.52	127.99	58.88	0.0043	229.90	234.68	239.60	244.51	249.42	254.33	259.24	261.74	264.24	266.73	269.23
DEMO - DEMOLITION MATERIAL						-											
DRY - DRYWALL MATERIAL						-											
HASPCL - HALDIMAND SPECIAL CLEANUP						-	-	-	-	-	-	-	-	-	-	-	-
BULKY - HALDIMAND SPECIAL CLEANUP	177.54	165.13	215.44	192.26	175.63	0.0037	198.15	202.27	206.51	210.74	214.97	219.20	223.44	225.59	227.74	229.89	232.05
HSW - HOUSEHOLD SOLID WASTE	2,476.71	2,745.01	2,814.28	2,829.16	2,760.42	0.0548	2,913.86	2,974.54	3,036.78	3,099.03	3,161.28	3,223.52	3,285.77	3,317.43	3,349.08	3,380.73	3,412.39
MIX - BRUSH WHITE MSW						-											
MSW - MUNICIPAL SOLID WASTE	10,909.43	11,593.22	11,918.50	11,503.21	11,527.23	0.2311	12,293.41	12,549.41	12,812.03	13,074.64	13,337.26	13,599.87	13,862.49	13,996.04	14,129.59	14,263.13	14,396.68
NCMSW - NEW CREDIT MUNICIPAL SOLID WASTE	143.82	120.82	95.38	17.64	42.64	0.0017	91.43	93.33	95.28	97.24	99.19	101.14	103.10	104.09	105.08	106.07	107.07
NCSPECIAL - SPECIAL EVENT - POW WOW, BULK	32.02	4.86	-	27.14	19.24	0.0003	17.75	18.12	18.50	18.88	19.26	19.64	20.02	20.21	20.40	20.59	20.79
RSW - ROAD SIDE WASTE						-	-	-	-	-	-	-	-	-	-	-	-
SHI - SINGLES						-											
WOOD - WOOD WASTE						-											
MNC - MISSISSAUGA NEW CREDIT						-	-	-	-	-	-	-	-	-	-	-	-
NCMSW - NEW CREDIT MUNICIPAL SOLID WASTE						-	-	-	-	-	-	-	-	-	-	-	-
NCCD - NEWW CREDIT CONSTRUCTION & DEMO						-	-	-	-	-	-	-	-	-	-	-	-
OUTBOUND TWIN CREEKS																	
MSWCTS - MSW CANBOROUGH TRANSFER (O)	13,202.38	13,939.42	14,360.48	14,227.38	14,258.64	0.2814	14,970.63	15,282.39	15,602.19	15,922.00	16,241.81	16,561.61	16,881.42	17,044.05	17,206.68	17,369.32	17,531.95
LEAF AND YARD WASTE																	
INYARD - YARD WASTE COLLECTION PROGRAM	249.92	303.12	280.84	433.48	567.00	0.0073	388.85	396.95	405.26	413.56	421.87	430.18	438.48	442.71	446.93	451.15	455.38
INYARD$ - IN YARD - TIPPING FEES APPLY	159.45	128.45	230.03	113.12	85.28	0.0029	154.29	157.50	160.80	164.09	167.39	170.68	173.98	175.66	177.33	179.01	180.68
OBYARD - YARD WASTE COLLECTION OUTBOUND	102.75	86.68	87.67	106.10	114.24	0.0020	106.22	108.43	110.70	112.97	115.23	117.50	119.77	120.93	122.08	123.23	124.39
CHIPOUT - WOODCHIPS OUTBOUND	194.61	200.08	486.77	446.73	316.77	0.0066	350.13	357.42	364.90	372.38	379.86	387.34	394.82	398.62	402.43	406.23	410.04
CHIPIN - WOODCHIPS FROM FPCFO	18.48	-	22.70	63.70	78.38	0.0007	38.29	39.09	39.90	40.72	41.54	42.36	43.18	43.59	44.01	44.42	44.84
SOIL MATERIAL																	
SOIL - INTERDEPARTMENTAL SOIL MATERIAL			-	322.11	848.71	0.0045	240.48	245.49	250.63	255.76	260.90	266.04	271.17	273.79	276.40	279.01	281.62
SOILOUT - OUTBOUND SOIL			-	196.70	741.81	0.0036	192.51	196.52	200.63	204.74	208.86	212.97	217.08	219.17	221.26	223.36	225.45
DIVERSION CENTRE																	
BRU - BRUSH						-											
C&DOUT- CONSTRUCTION & DEMO	462.85	557.33	548.82	432.59	400.72	0.0097	515.68	526.42	537.43	548.45	559.47	570.48	581.50	587.10	592.70	598.31	603.91
METOUT- CANBOROUGH TRANSFER WHITE GOODS	83.89	85.04	76.43	67.35	74.96	0.0016	83.15	84.88	86.65	88.43	90.21	91.98	93.76	94.66	95.57	96.47	97.37
ELEC - COMPUTERS AND ELECTRONICS	29.77	30.21	24.87	20.73	26.92	0.0005	28.43	29.02	29.63	30.24	30.84	31.45	32.06	32.37	32.68	32.99	33.29
TEXOUT - CLOTHING BIN	0.28	0.33	1.43	1.02	1.44	0.0000	0.95	0.97	0.99	1.01	1.03	1.05	1.07	1.08	1.09	1.10	1.11
SHIOUT - SHINGLES OUTBOUND	259.38	332.99	229.48	185.15	103.46	0.0045	239.97	244.97	250.10	255.22	260.35	265.48	270.60	273.21	275.82	278.42	281.03
UNACOUT - PRODUCTS PULLED OUT OF WASTE	0.76	0.70	0.41	0.82	0.76	0.0000	0.74	0.75	0.77	0.78	0.80	0.82	0.83	0.84	0.85	0.86	0.86
REUSE - REUSED MATERIAL OUTBOUND	1.17	1.04	1.24	1.85	1.58	0.0000	1.46	1.49	1.53	1.56	1.59	1.62	1.65	1.67	1.68	1.70	1.71
BATOUT - BATTERIES OUTBOUND			0.17	0.22	0.74	0.0000											
TIRES																	
TIRPRO - USED TIRE PROGRAM	2,342.00	2,066.00	3,518.00	1,968.00	3,881.00	0.0552											
TIREIN - TIRES IN BOUND						-											
TIROUT - TIRES OUTBOUND	2,580.00	3,267.00	3,888.00	2,439.00	4,456.00	0.0667											
Weight MT (Inbound)	37.20	32.81	55.87	31.26	61.64	0.0009	46.64	47.61	48.61	49.60	50.60	51.59	52.59	53.10	53.60	54.11	54.62
Weight MT (Outbound)	40.98	51.89	61.75	38.74	70.77	0.0011	56.36	57.53	58.74	59.94	61.15	62.35	63.55	64.17	64.78	65.39	66.00
BIKES FOR YOUTH																	
BIKES - BIKES FOR YOUTH					110.00	0.0004											
Weight MT					1.61	0.0000	1.64	1.68	1.71	1.75	1.78	1.82	1.85	1.87	1.89	1.91	1.93
FREON																	
FREON - APPLIANCE WITH FREON		41.00	41.00	54.00	42.00	0.0007											
FREOUT - FREON APPLIANCES OUTBOUND		58.00	45.00	95.00	39.00	0.0009											
Weight MT (Inbound)		2.20	2.20	2.89	2.25	0.0000	2.52	2.58	2.63	2.69	2.74	2.79	2.85	2.87	2.90	2.93	2.96
Weight MT (Outbound)		3.11	2.41	5.09	2.09	0.0001	3.36	3.43	3.51	3.58	3.65	3.72	3.79	3.83	3.87	3.90	3.94
METAL PROGRAM																	
CTSW - CANBOROUGH TRS. WHITE GDS						-											
METAL - METAL APPLIANCES						-											
HOUSEHOLD AND SPECIAL PRODUCTS																	
HSP - Household and Special Products (Collected)	66.85	59.54	60.96	22.15	65.75	0.0011	59.12	60.35	61.62	62.88	64.14	65.41	66.67	67.31	67.95	68.60	69.24
STORM MATERIAL																	
STORM - BRUSH DEBRIS 2019	285.68	99.43				0.0016											
STORM20 - BRUSH DEBRIS 2020		263.11	17.59			0.0012											
STORM21 - BRUSH DEBRIS 2021			190.31	8.52		0.0008											
STORM22 - BRUSH DEBRIS 2022					15.57	0.0001											
STORM23 - BRUSH DEBRIS 2023					15.12	0.0001											
Inbound Storm Brush Debris - Future Years						0.0037	195.95	200.03	204.22	208.41	212.59	216.78	220.96	223.09	225.22	227.35	229.48
STORMR - RES. DEBRIS 2019	13.53	17.36				0.0001											
STORMR20- RES. DEBRIS 2020		15.10	2.64			0.0001											
STORMR21 - RES. DEBRIS 2021			0.77	0.72		0.0000											
STORMR22 - RES. DEBRIS 2022					-	-											
Inbound Storm Res. Debris - Future Years						0.0002	11.02	11.25	11.48	11.72	11.95	12.19	12.42	12.54	12.66	12.78	12.90
STRMOUT - STORM MATERIAL OUTBOUND 2019		381.40				0.0016											
STRMOUT20 - STORM MATERIAL OUTBOUND 2020		-	-			-											
STRMOUT21 - STORM MATERIAL OUTBOUND 2021			-	323.03		0.0013											
STRMOUT22 - STORM MATERIAL OUTBOUND 2022					-	-											
Outbound Storm - Future Years						0.0028	151.10	154.25	157.47	160.70	163.93	167.16	170.39	172.03	173.67	175.31	176.95
INBOUND RECYCLING																	
BRP - BULKY RIGID PLASTIC (TRANSFER BUILDING)						-	-	-									
OCCBIN - OLD CORRAGUATED CARDBOARD (TRSF	15.85	10.79	20.46	20.55	29.68	0.0004	20.65	21.08									
MREC - MUNICIPAL RECYCLE	3,375.26	3,399.19	3,516.53	3,310.01	3,202.77	0.0676											
RREC - RESIDENTIAL RECYCLING	87.68	86.48	122.29	106.72	80.57	0.0019	103.57	105.73									
CREC - COMMERCIAL RECYCLING	29.94	25.48	26.36	18.47	37.12	0.0006	29.36	29.98									
Niagara MRF																	
BRPOUT - BULKY RIGID PLASTIC BIN	26.53	3.56				0.0001											
CTMREC - CANBOROUGH TRS. MUN REC-OUT TO	1,355.10	1,465.54	1,516.21	1,439.23	1,418.13	0.0289	1,539.71	1,571.77	1,604.66	1,637.55	1,670.45	1,703.34	1,736.23	1,752.96	1,769.68	1,786.41	1,803.13
CTMREF - CANBOROUGH TRS MUN REC FIBRE-OUT TO						0.0384											
NIAGARA MRF	2,013.98	1,876.84	1,945.50	1,845.22	1,867.84		2,045.38	2,087.97	2,131.67	2,175.36	2,219.06	2,262.75	2,306.44	2,328.66	2,350.88	2,373.10	2,395.32
LEACHATE																	
LEACH - LEACHATE HAG BOUND	153.92	-	-	-	-	0.0006											
LEACHD - LEACHATE DUNNVILLE BOUND	13,524.98	11,337.13	11,534.19	12,293.36	12,313.47	0.2454	13,059.07	13,331.02	13,609.99	13,888.97	14,167.94	14,446.91	14,725.88	14,867.75	15,009.61	15,151.48	15,293.34
LEACHS - LECHATE SIMCOE BOUND						-	-	-	-	-	-	-	-	-	-	-	-
PROCESS WATER																	
PWATER - PROCESS WATER	65.32	91.72	86.91	51.00	77.34	0.0015	79.84	81.51	83.21	84.92	86.62	88.33	90.03	90.90	91.77	92.64	93.50
Total Tonnage Handled (Inbound and Outbound)	**49,973.50**	**49,827.99**	**50,741.41**	**50,833.41**	**51,467.17**		**50,461.57**	**51,512.42**	**52,430.32**	**53,505.01**	**54,579.71**	**55,654.40**	**56,729.09**	**57,275.61**	**57,822.13**	**58,368.64**	**58,915.16**
Total Tonnage Outbound	**31,396.27**	**30,318.82**	**30,852.55**	**31,609.76**	**31,686.66**		**33,315.68**	**34,009.47**	**34,721.17**	**35,432.87**	**36,144.56**	**36,856.26**	**37,567.96**	**37,929.88**	**38,291.81**	**38,653.73**	**39,015.65**
Total Tonnage Inbound	**18,577.23**	**19,509.17**	**19,888.86**	**19,223.65**	**19,780.51**		**17,145.89**	**17,502.94**	**17,709.15**	**18,072.15**	**18,435.14**	**18,798.14**	**19,161.13**	**19,345.72**	**19,530.32**	**19,714.91**	**19,899.51**
Total Tonnage Inbound less Blue Box	**15,068.50**	**15,987.23**	**16,203.22**	**15,767.90**	**16,430.37**		**16,992.30**	**17,346.16**	**17,709.15**	**18,072.15**	**18,435.14**	**18,798.14**	**19,161.13**	**19,345.72**	**19,530.32**	**19,714.91**	**19,899.51**

Appendix B

Current State – Cost of Service Model

Appendix B: Current State Cost of Service Model

Current State Total Cost of Service – All Streams

Current State Total Cost of Service – Capital Forecast (Uninflated Costs)

Description	Budget 2024	Total	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	37,400	248,800	17,200	17,700	18,200	44,200	19,200	19,700	20,200	49,000	21,400	22,000
General Maintenance - Canborough Perpetual	10,900	131,300	11,500	11,800	12,100	12,500	12,900	13,300	13,700	14,100	14,500	14,900
General Maintenance - Tom Howe Perpetual	10,900	131,300	11,500	11,800	12,100	12,500	12,900	13,300	13,700	14,100	14,500	14,900
Pneumatic Pumps	-	313,700	27,800	28,500	29,300	30,100	30,900	31,700	32,500	33,400	34,300	35,200
General Maintenance - Perpetual Sites	5,600	69,000	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800
Closed Landfills - ESA Phase 1&2 and Land Survey	89,600	-										
424008 Tipping Floor Repairs/Resurfacing	-	258,600	-	126,100	132,500	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	35,200	-	-	-	35,200	-	-	-	-	-	-
424010 Security Camera Replacement	-	61,300	-	-	-	61,300	-	-	-	-	-	-
Flare Control Hardware	-	8,200	-	-	-	-	-	-	8,200	-	-	-
Servers (SCADA)	-	18,500	-	8,500	-	-	-	-	10,000	-	-	-
Software (SCADA)	-	41,400	-	19,300	-	-	-	-	22,100	-	-	-
Desktops (SCADA)	-	5,700	-	2,600	-	-	-	-	3,100	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	42,400	-	-	-	-	-	-	-	-	42,400	-
Connectivity Equipment (SCADA)	-	4,500	-	-	2,000	-	-	-	-	2,500	-	-
Leachate manhole covers and extensions	-	121,100	121,100	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	28,500	-	-	-	-	28,500	-	-	-	-	-
Leachate pump replacement	-	155,000	85,000	-	-	-	70,000	-	-	-	-	-
425007 Stormwater management pond maintenance	-	30,900	-	-	-	-	-	-	-	30,900	-	-
212502 - Tom Howe - Willow Plantation Study	-	38,500	-	11,900	26,600	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	36,300	36,300	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	21,300	10,000	-	-	-	-	11,300	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	25,000	-	-	-	-	-	-	-	25,000	-	-
Growth Related:												
Provision for Waste Diversion Services	45,000	191,535	46,125	47,278	48,460	49,672						
Total Capital Expenditures	**199,400**	**2,018,035**	**372,525**	**291,678**	**287,660**	**252,072**	**181,200**	**96,300**	**130,700**	**176,400**	**134,700**	**94,800**

Current State Total Cost of Service – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	37,400	248,000	17,000	18,000	18,000	44,000	19,000	20,000	20,000	49,000	21,000	22,000
General Maintenance - Canborough Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
General Maintenance - Tom Howe Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
Pneumatic Pumps	-	314,000	28,000	29,000	29,000	30,000	31,000	32,000	33,000	33,000	34,000	35,000
General Maintenance - Perpetual Sites	5,600	69,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000	7,000	8,000	8,000
Closed Landfills - ESA Phase 1&2 and Land Survey	89,600	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	259,000	-	126,000	133,000	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	35,000	-	-	-	35,000	-	-	-	-	-	-
424010 Security Camera Replacement	-	61,000	-	-	-	61,000	-	-	-	-	-	-
Flare Control Hardware	-	8,000	-	-	-	-	-	-	8,000	-	-	-
Servers (SCADA)	-	19,000	-	9,000	-	-	-	-	10,000	-	-	-
Software (SCADA)	-	41,000	-	19,000	-	-	-	-	22,000	-	-	-
Desktops (SCADA)	-	6,000	-	3,000	-	-	-	-	3,000	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	42,000	-	-	-	-	-	-	-	-	42,000	-
Connectivity Equipment (SCADA)	-	5,000	-	-	2,000	-	-	-	-	3,000	-	-
Leachate manhole covers and extensions	-	121,000	121,000	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	29,000	-	-	-	-	29,000	-	-	-	-	-
Leachate pump replacement	-	155,000	85,000	-	-	-	70,000	-	-	-	-	-
425007 Stormwater management pond maintenance	-	31,000	-	-	-	-	-	-	-	31,000	-	-
212502 - Tom Howe - Willow Plantation Study	-	39,000	-	12,000	27,000	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	36,000	36,000	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	21,000	10,000	-	-	-	-	11,000	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	25,000	-	-	-	-	-	-	-	25,000	-	-
Growth Related:		-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	45,000	191,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-
Total Capital Expenditures	**199,400**	**2,021,000**	**373,000**	**293,000**	**287,000**	**253,000**	**182,000**	**96,000**	**131,000**	**176,000**	**135,000**	**95,000**
Capital Financing												
Provincial/Federal Grants	89,600	355,000	-	126,000	133,000	96,000	-	-	-	-	-	-
Development Charges Reserve Fund	45,000	191,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	12,361	612,400	166,284	54,475	46,471	31,717	88,329	32,849	59,089	36,349	60,022	36,815
Capital Replacement Reserve - Information Technology	-	17,727	-	8,215	-	-	-	-	9,512	-	-	-
Capital Replacement Reserve - General	52,439	844,873	160,716	57,310	59,529	75,283	93,671	63,151	62,399	139,651	74,978	58,185
Total Capital Financing	**199,400**	**2,021,000**	**373,000**	**293,000**	**287,000**	**253,000**	**182,000**	**96,000**	**131,000**	**176,000**	**135,000**	**95,000**

Current State Total Cost of Service – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Total Cost of Service – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Total Cost of Service – Solid Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	178,259	160,716	57,310	59,529	75,283	93,671	63,151	62,399	139,651	74,978	58,185
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	52,439	160,716	57,310	59,529	75,283	93,671	63,151	62,399	139,651	74,978	58,185
Transfer to Lifecycle Reserve											
Transfer to Operating	125,820	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Total Cost of Service – Solid Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	8,215	-	-	-	-	9,512	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	8,215	-	-	-	-	9,512	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Total Cost of Service – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	327,826	393,822	462,279	540,454	621,498	705,470	843,433	986,522	1,077,448	1,171,591	1,269,154
Development Charge Proceeds	103,274	105,393	114,578	116,857	119,140	121,425	123,745	69,800	71,171	72,678	74,187
Transfer to Capital	45,000	46,000	47,000	48,000	49,000	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**386,100**	**453,215**	**529,857**	**609,311**	**691,637**	**826,895**	**967,178**	**1,056,321**	**1,148,618**	**1,244,269**	**1,343,341**
Interest	7,722	9,064	10,597	12,186	13,833	16,538	19,344	21,126	22,972	24,885	26,867
Required from Development Charges	45,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-

Current State Total Cost of Service – Solid Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	3,061,357	6,352,439	9,801,625	13,446,484	17,277,245	21,364,887	25,595,201	29,961,916	34,559,367
Transfer from Operating	-	3,001,331	3,166,524	3,256,997	3,381,202	3,491,992	3,668,722	3,728,448	3,779,226	3,919,817	4,061,080
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**3,001,331**	**6,227,881**	**9,609,436.30**	**13,182,827**	**16,938,476**	**20,945,967**	**25,093,334**	**29,374,427**	**33,881,732**	**38,620,447**
Interest	-	60,027	124,558	192,189	263,657	338,770	418,919	501,867	587,489	677,635	772,409

Current State Total Cost of Service – Operating Forecast (Inflated Costs)

Description	Budget 2024		Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures												
Operating Costs												
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	334,060	3,730,800	340,700	347,500	354,500	361,600	368,800	376,200	383,700	391,400	399,200	407,200
Materials	63,600	710,900	64,900	66,200	67,500	68,900	70,300	71,700	73,100	74,600	76,100	77,600
Contracted Services	122,280	1,365,100	124,700	127,200	129,700	132,300	134,900	137,600	140,400	143,200	146,100	149,000
Leachate - Treatment, Monitoring & Hauling	751,340	8,391,300	766,400	781,700	797,300	813,200	829,500	846,100	863,000	880,300	897,900	915,900
Rents and Financial Expenses	10,820	119,100	11,000	11,200	11,400	11,600	11,800	12,000	12,200	12,400	12,600	12,900
Interfunctional Adjustments	205,100	2,290,900	209,200	213,400	217,700	222,100	226,500	231,000	235,600	240,300	245,100	250,000
Solid Waste Collection		-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	43,670	487,000	44,500	45,400	46,300	47,200	48,100	49,100	50,100	51,100	52,100	53,100
Materials	13,930	155,500	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600	16,900
Contracted Services	3,044,880	38,836,000	$ 3,155,500	$ 3,270,100	$ 3,388,900	$ 3,512,000	$ 3,639,600	$ 4,067,600	$ 4,215,300	$ 4,368,400	$ 4,527,100	$ 4,691,500
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	192,390	2,148,000	196,200	200,100	204,100	208,200	212,400	216,600	220,900	225,300	229,800	234,400
Materials	70,740	790,400	72,200	73,600	75,100	76,600	78,100	79,700	81,300	82,900	84,600	86,300
Utilities	32,410	362,800	33,100	33,800	34,500	35,200	35,900	36,600	37,300	38,000	38,800	39,600
Contracted Services	1,924,490	23,540,000	$ 1,994,400	$ 2,066,800	$ 2,141,900	$ 2,219,700	$ 2,300,300	$ 2,383,800	$ 2,470,400	$ 2,560,100	$ 2,653,100	$ 2,749,500
Leachate - Treatment, Monitoring & Hauling	1,772,690	19,798,200	1,808,100	1,844,300	1,881,200	1,918,800	1,957,200	1,996,300	2,036,200	2,076,900	2,118,400	2,160,800
Interfunctional Adjustments	26,770	299,100	27,300	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000	32,600
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	220,280	2,461,500	224,700	229,200	233,800	238,500	243,300	248,200	253,200	258,300	263,500	268,800
Materials	66,330	741,800	67,700	69,100	70,500	71,900	73,300	74,800	76,300	77,800	79,400	81,000
Utilities	10,580	117,000	10,800	11,000	11,200	11,400	11,600	11,800	12,000	12,200	12,400	12,600
Contracted Services	431,840	4,823,500	440,500	449,300	458,300	467,500	476,900	486,400	496,100	506,000	516,100	526,400
Interfunctional Adjustments	10,010	111,000	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800	12,000
Sub Total Operating	**9,348,210**	**111,279,900**	**9,616,300**	**9,892,600**	**10,177,700**	**10,471,600**	**10,774,500**	**11,382,600**	**11,715,300**	**12,058,500**	**12,412,700**	**12,778,100**
Capital-Related												
Existing Debt (Principal) - Growth Related												
Existing Debt (Interest) - Growth Related												
New Growth Related Debt (Principal)			-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)			-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related												
Existing Debt (Interest) - Non-Growth Related												
New Non-Growth Related Debt (Principal)			-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)			-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-		-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-		-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-		-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**9,348,210**		**9,616,300**	**9,892,600**	**10,177,700**	**10,471,600**	**10,774,500**	**11,382,600**	**11,715,300**	**12,058,500**	**12,412,700**	**12,778,100**

Current State Total Cost of Service – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024		Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues												
Solid Waste Administration												
General Recoveries	1,052,850	11,758,600	1,073,900	1,095,400	1,117,300	1,139,600	1,162,400	1,185,600	1,209,300	1,233,500	1,258,200	1,283,400
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-	-
General Recoveries	1,291,480	14,424,200	1,317,300	1,343,600	1,370,500	1,397,900	1,425,900	1,454,400	1,483,500	1,513,200	1,543,500	1,574,400
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	141,320	499,007	144,100	36,407	37,100	37,800	38,600	39,400	40,200	41,000	41,800	42,600
General Recoveries	28,170	314,300	28,700	29,300	29,900	30,500	31,100	31,700	32,300	32,900	33,600	34,300
Other Revenue				-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Transfers from Reserves / Reserve Funds	125,820	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**2,639,640**	**26,996,107**	**2,564,000**	**2,504,707**	**2,554,800**	**2,605,800**	**2,658,000**	**2,711,100**	**2,765,300**	**2,820,600**	**2,877,100**	**2,934,700**
Solid Waste Billing Recovery - Operating	**6,708,570**		**7,052,300**	**7,387,893**	**7,622,900**	**7,865,800**	**8,116,500**	**8,671,500**	**8,950,000**	**9,237,900**	**9,535,600**	**9,843,400**
Lifecycle Reserve Contribution ($)			3,001,331	3,166,524	3,256,997	3,381,202	3,491,992	3,668,722	3,728,448	3,779,226	3,919,817	4,061,080
Solid Waste Billing Recovery - Total	**6,708,570**		**10,053,631**	**10,554,417**	**10,879,897**	**11,247,002**	**11,608,492**	**12,340,222**	**12,678,448**	**13,017,126**	**13,455,417**	**13,904,480**

Current State Total Cost of Service – Garbage

Current State Garbage – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	37,400	248,000	17,000	18,000	18,000	44,000	19,000	20,000	20,000	49,000	21,000	22,000
General Maintenance - Canborough Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
General Maintenance - Tom Howe Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
Pneumatic Pumps	-	314,000	28,000	29,000	29,000	30,000	31,000	32,000	33,000	33,000	34,000	35,000
General Maintenance - Perpetual Sites	5,600	69,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000	7,000	8,000	8,000
Closed Landfills - ESA Phase 1&2 and Land Survey	89,600	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	238,177	-	115,870	122,307	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	32,186	-	-	-	32,186	-	-	-	-	-	-
424010 Security Camera Replacement	-	56,096	-	-	-	56,096	-	-	-	-	-	-
Flare Control Hardware	-	7,357	-	-	-	-	-	-	7,357	-	-	-
Servers (SCADA)	-	17,472	-	8,276	-	-	-	-	9,196	-	-	-
Software (SCADA)	-	37,704	-	17,472	-	-	-	-	20,231	-	-	-
Desktops (SCADA)	-	5,518	-	2,759	-	-	-	-	2,759	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	42,000	-	-	-	-	-	-	-	-	42,000	-
Connectivity Equipment (SCADA)	-	4,598	-	-	1,839	-	-	-	-	2,759	-	-
Leachate manhole covers and extensions	-	121,000	121,000	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	29,000	-	-	-	-	29,000	-	-	-	-	-
Leachate pump replacement	-	155,000	85,000	-	-	-	70,000	-	-	-	-	-
425007 Stormwater management pond maintenance	-	31,000	-	-	-	-	-	-	-	31,000	-	-
212502 - Tom Howe - Willow Plantation Study	-	39,000	-	12,000	27,000	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	36,000	36,000	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	21,000	10,000	-	-	-	-	11,000	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	22,990	-	-	-	-	-	-	-	22,990	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**154,400**	**1,793,098**	**327,000**	**233,378**	**228,146**	**195,282**	**182,000**	**96,000**	**127,543**	**173,749**	**135,000**	**95,000**
Capital Financing												
Provincial/Federal Grants	89,600	326,459	-	115,870	122,307	88,282	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	12,361	608,765	166,284	53,054	46,374	31,717	88,329	32,849	57,116	36,204	60,022	36,815
Capital Replacement Reserve - Information Technology	-	16,302	-	7,555	-	-	-	-	8,747	-	-	-
Capital Replacement Reserve - General	52,439	841,572	160,716	56,899	59,465	75,283	93,671	63,151	61,680	137,545	74,978	58,185
Total Capital Financing	**154,400**	**1,793,098**	**327,000**	**233,378**	**228,146**	**195,282**	**182,000**	**96,000**	**127,543**	**173,749**	**135,000**	**95,000**

Current State Garbage – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State Garbage – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State Garbage – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	168,143	160,716	56,899	59,465	75,283	93,671	63,151	61,680	137,545	74,978	58,185
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	52,439	160,716	56,899	59,465	75,283	93,671	63,151	61,680	137,545	74,978	58,185
Transfer to Lifecycle Reserve											
Transfer to Operating	115,705	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Garbage – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	7,555	-	-	-	-	8,747	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	7,555	-	-	-	-	8,747	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Garbage – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Development Charge Proceeds	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Current State Garbage – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	2,815,235	5,841,726	9,013,609	12,365,434	15,888,217	19,647,226	23,537,438	27,553,085	31,780,918
Transfer from Operating	-	2,760,035	2,911,947	2,995,146	3,109,366	3,211,248	3,373,770	3,428,694	3,475,390	3,604,678	3,734,583
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**2,760,035**	**5,727,182**	**8,836,872**	**12,122,975**	**15,576,683**	**19,261,986**	**23,075,920**	**27,012,828**	**31,157,762**	**35,515,501**
Interest	-	55,201	114,544	176,737	242,459	311,534	385,240	461,518	540,257	623,155	710,310

Current State Garbage – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	307,203	313,309	319,562	325,999	332,529	339,150	345,955	352,852	359,933	367,106	374,463
Materials	58,487	59,682	60,878	62,073	63,361	64,648	65,936	67,223	68,602	69,982	71,361
Contracted Services	112,449	114,675	116,974	119,273	121,664	124,055	126,537	129,112	131,687	134,354	137,021
Leachate - Treatment, Monitoring & Hauling	690,935	704,784	718,854	733,200	747,822	762,811	778,077	793,618	809,527	825,712	842,265
Rents and Financial Expenses	9,950	10,116	10,300	10,483	10,667	10,851	11,035	11,219	11,403	11,587	11,863
Interfunctional Adjustments	188,611	192,381	196,243	200,198	204,244	208,290	212,428	216,659	220,981	225,395	229,901
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	43,670	44,500	45,400	46,300	47,200	48,100	49,100	50,100	51,100	52,100	53,100
Materials	13,930	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600	16,900
Contracted Services	3,044,880	3,155,500	3,270,100	3,388,900	3,512,000	3,639,600	4,067,600	4,215,300	4,368,400	4,527,100	4,691,500
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	192,390	196,200	200,100	204,100	208,200	212,400	216,600	220,900	225,300	229,800	234,400
Materials	70,740	72,200	73,600	75,100	76,600	78,100	79,700	81,300	82,900	84,600	86,300
Utilities	32,410	33,100	33,800	34,500	35,200	35,900	36,600	37,300	38,000	38,800	39,600
Contracted Services	1,924,490	1,994,400	2,066,800	2,141,900	2,219,700	2,300,300	2,383,800	2,470,400	2,560,100	2,653,100	2,749,500
Leachate - Treatment, Monitoring & Hauling	1,772,690	1,808,100	1,844,300	1,881,200	1,918,800	1,957,200	1,996,300	2,036,200	2,076,900	2,118,400	2,160,800
Interfunctional Adjustments	26,770	27,300	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000	32,600
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**8,489,604**	**8,740,447**	**8,999,211**	**9,266,426**	**9,542,086**	**9,826,405**	**10,415,568**	**10,728,983**	**11,052,533**	**11,386,636**	**11,731,573**
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**8,489,604**	**8,740,447**	**8,999,211**	**9,266,426**	**9,542,086**	**9,826,405**	**10,415,568**	**10,728,983**	**11,052,533**	**11,386,636**	**11,731,573**

Current State Garbage – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Solid Waste Administration											
General Recoveries	968,205	987,562	1,007,334	1,027,473	1,047,980	1,068,947	1,090,282	1,112,077	1,134,331	1,157,045	1,180,219
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	1,291,480	1,317,300	1,343,600	1,370,500	1,397,900	1,425,900	1,454,400	1,483,500	1,513,200	1,543,500	1,574,400
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	115,705	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**2,375,389**	**2,304,862**	**2,350,934**	**2,397,973**	**2,445,880**	**2,494,847**	**2,544,682**	**2,595,577**	**2,647,531**	**2,700,545**	**2,754,619**
Solid Waste Billing Recovery - Operating	**6,114,215**	**6,435,584**	**6,648,277**	**6,868,453**	**7,096,206**	**7,331,558**	**7,870,886**	**8,133,406**	**8,405,002**	**8,686,090**	**8,976,954**
Lifecycle Reserve Contribution ($)		2,760,035	2,911,947	2,995,146	3,109,366	3,211,248	3,373,770	3,428,694	3,475,390	3,604,678	3,734,583
Solid Waste Billing Recovery - Total	**6,114,215**	**9,195,619**	**9,560,224**	**9,863,600**	**10,205,571**	**10,542,806**	**11,244,656**	**11,562,100**	**11,880,392**	**12,290,768**	**12,711,538**

Current State Total Cost of Service – Blue Box

Current State Blue Box – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	-	-	-	-	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	-	-	-	-	-	-	-	-	-	-	-
424010 Security Camera Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Flare Control Hardware	-	-	-	-	-	-	-	-	-	-	-	-
Servers (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Software (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Desktops (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Financing	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Current State Blue Box – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Transfer to Lifecycle Reserve Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	-	-	-	-	-	-	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Development Charge Proceeds	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Blue Box – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Rents and Financial Expenses	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	106,320	108,411	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Current State Blue Box – Operating Forecast (Inflated Costs) – Continued

Description	Budget	Forecast									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Solid Waste Administration											
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	106,320	108,411	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Solid Waste Billing Recovery - Operating	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	-	-	-	-
Solid Waste Billing Recovery - Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Current State Total Cost of Service – Leaf & Yard Waste

Current State Leaf & Yard Waste – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	15,682	-	7,629	8,053	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	2,119	-	-	-	2,119	-	-	-	-	-	-
424010 Security Camera Replacement	-	3,694	-	-	-	3,694	-	-	-	-	-	-
Flare Control Hardware	-	484	-	-	-	-	-	-	484	-	-	-
Servers (SCADA)	-	1,150	-	545	-	-	-	-	605	-	-	-
Software (SCADA)	-	2,483	-	1,150	-	-	-	-	1,332	-	-	-
Desktops (SCADA)	-	363	-	182	-	-	-	-	182	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	303	-	-	121	-	-	-	-	182	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	1,514	-	-	-	-	-	-	-	1,514	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	33,891	143,849	34,644	35,397	36,151	37,657	-	-	-	-	-	-
Total Capital Expenditures	**33,891**	**171,642**	**34,644**	**44,904**	**44,325**	**43,470**	**-**	**-**	**2,604**	**1,695**	**-**	**-**
Capital Financing												
Provincial/Federal Grants	-	21,495	-	7,629	8,053	5,813	-	-	-	-	-	-
Development Charges Reserve Fund	33,891	143,849	34,644	35,397	36,151	37,657	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	6,297	-	1,877	121	-	-	-	2,604	1,695	-	-
Total Capital Financing	**33,891**	**171,642**	**34,644**	**44,904**	**44,325**	**43,470**	**-**	**-**	**2,604**	**1,695**	**-**	**-**

Current State Leaf & Yard Waste – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State Leaf & Yard Waste – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State Leaf & Yard Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	7,618	-	1,877	121	-	-	-	2,604	1,695	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	1,877	121	-	-	-	2,604	1,695	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	7,618	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Leaf & Yard Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-									
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Leaf & Yard Waste – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	246,898	296,602	348,160	407,036	468,073	531,316	635,221	742,987	811,466	882,369	955,848
Development Charge Proceeds	77,780	79,375	86,293	88,010	89,728	91,450	93,197	52,569	53,601	54,736	55,873
Transfer to Capital	33,891	34,644	35,397	36,151	36,904	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**290,786**	**341,333**	**399,055**	**458,895**	**520,898**	**622,766**	**728,418**	**795,555**	**865,068**	**937,106**	**1,011,721**
Interest	5,816	6,827	7,981	9,178	10,418	12,455	14,568	15,911	17,301	18,742	20,234
Required from Development Charges	33,891	34,644	35,397	36,151	37,657	-	-	-	-	-	-

Current State Leaf & Yard Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	185,364	384,637	593,484	814,179	1,046,130	1,293,635	1,549,778	1,814,181	2,092,555
Transfer from Operating	-	181,729	191,732	197,210	204,730	211,439	222,140	225,756	228,831	237,343	245,897
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**181,729**	**377,096**	**581,847**	**798,215**	**1,025,617**	**1,268,269**	**1,519,391**	**1,778,609**	**2,051,524**	**2,338,452**
Interest	-	3,635	7,542	11,637	15,964	20,512	25,365	30,388	35,572	41,030	46,769

Current State Leaf & Yard Waste – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	20,227	20,629	21,041	21,465	21,895	22,331	22,779	23,233	23,699	24,171	24,656
Materials	3,851	3,930	4,008	4,087	4,172	4,257	4,341	4,426	4,517	4,608	4,699
Contracted Services	7,404	7,551	7,702	7,853	8,011	8,168	8,332	8,501	8,671	8,846	9,022
Leachate - Treatment, Monitoring & Hauling	45,493	46,405	47,332	48,276	49,239	50,226	51,231	52,254	53,302	54,367	55,457
Rents and Financial Expenses	655	666	678	690	702	714	727	739	751	763	781
Interfunctional Adjustments	12,419	12,667	12,921	13,182	13,448	13,714	13,987	14,265	14,550	14,841	15,137
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	165,901	169,230	172,619	176,084	179,623	183,238	186,929	190,694	194,535	198,452	202,443
Materials	49,956	50,987	52,042	53,096	54,151	55,205	56,335	57,464	58,594	59,799	61,004
Utilities	7,968	8,134	8,285	8,435	8,586	8,736	8,887	9,038	9,188	9,339	9,490
Contracted Services	218,915	223,346	338,385	345,163	352,092	359,171	366,326	373,632	381,088	388,694	396,452
Interfunctional Adjustments	7,539	7,682	7,833	7,983	8,134	8,285	8,435	8,586	8,736	8,887	9,038
Sub Total Operating	**540,328**	**551,227**	**672,845**	**686,314**	**700,052**	**714,046**	**728,308**	**742,833**	**757,631**	**772,768**	**788,179**
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**540,328**	**551,227**	**672,845**	**686,314**	**700,052**	**714,046**	**728,308**	**742,833**	**757,631**	**772,768**	**788,179**

Current State Leaf & Yard Waste – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Solid Waste Administration											
General Recoveries	63,750	65,024	66,326	67,652	69,002	70,383	71,788	73,223	74,688	76,183	77,709
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	4,400	4,483	4,576	4,670	4,764	4,858	4,951	5,045	5,139	5,248	5,357
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	7,618	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**75,768**	**69,507**	**70,903**	**72,322**	**73,766**	**75,240**	**76,739**	**78,268**	**79,827**	**81,432**	**83,067**
Solid Waste Billing Recovery - Operating	**464,560**	**481,720**	**601,943**	**613,992**	**626,286**	**638,805**	**651,569**	**664,565**	**677,805**	**691,336**	**705,112**
Lifecycle Reserve Contribution ($)		181,729	191,732	197,210	204,730	211,439	222,140	225,756	228,831	237,343	245,897
Solid Waste Billing Recovery - Total	**464,560**	**663,449**	**793,674**	**811,202**	**831,016**	**850,244**	**873,709**	**890,321**	**906,635**	**928,679**	**951,008**

Current State Total Cost of Service – HSP

Current State HSP – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	901	-	438	463	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	122	-	-	-	122	-	-	-	-	-	-
424010 Security Camera Replacement	-	212	-	-	-	212	-	-	-	-	-	-
Flare Control Hardware	-	28	-	-	-	-	-	-	28	-	-	-
Servers (SCADA)	-	66	-	31	-	-	-	-	35	-	-	-
Software (SCADA)	-	143	-	66	-	-	-	-	77	-	-	-
Desktops (SCADA)	-	21	-	10	-	-	-	-	10	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	17	-	-	7	-	-	-	-	10	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	87	-	-	-	-	-	-	-	87	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	1,948	8,266	1,991	2,034	2,077	2,164	-	-	-	-	-	-
Total Capital Expenditures	**1,948**	**9,863**	**1,991**	**2,580**	**2,547**	**2,498**	**-**	**-**	**150**	**97**	**-**	**-**
Capital Financing												
Provincial/Federal Grants	-	1,235	-	438	463	334	-	-	-	-	-	-
Development Charges Reserve Fund	1,948	8,266	1,991	2,034	2,077	2,164	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	362	-	108	7	-	-	-	150	97	-	-
Total Capital Financing	**1,948**	**9,863**	**1,991**	**2,580**	**2,547**	**2,498**	**-**	**-**	**150**	**97**	**-**	**-**

Current State HSP – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State HSP – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Current State HSP – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	438	-	108	7	-	-	-	150	97	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	108	7	-	-	-	150	97	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	438	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State HSP – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital											
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State HSP – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	14,188	17,044	20,007	23,390	26,897	30,531	36,502	42,695	46,630	50,704	54,927
Development Charge Proceeds	4,470	4,561	4,959	5,057	5,156	5,255	5,355	3,021	3,080	3,145	3,211
Transfer to Capital	1,948	1,991	2,034	2,077	2,121	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**16,710**	**19,614**	**22,931**	**26,370**	**29,933**	**35,787**	**41,858**	**45,716**	**49,710**	**53,850**	**58,137**
Interest	334	392	459	527	599	716	837	914	994	1,077	1,163
Required from Development Charges	1,948	1,991	2,034	2,077	2,164	-	-	-	-	-	-

Current State HSP – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	10,652	22,103	34,104	46,786	60,115	74,337	89,056	104,250	120,246
Transfer from Operating	-	10,443	11,018	11,332	11,765	12,150	12,765	12,973	13,149	13,639	14,130
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**10,443**	**21,669**	**33,435**	**45,869**	**58,936**	**72,880**	**87,310**	**102,206**	**117,889**	**134,377**
Interest	-	209	433	669	917	1,179	1,458	1,746	2,044	2,358	2,688

Current State HSP – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	1,162	1,185	1,209	1,233	1,258	1,283	1,309	1,335	1,362	1,389	1,417
Materials	221	226	230	235	240	245	249	254	260	265	270
Contracted Services	425	434	443	451	460	469	479	489	498	508	518
Leachate - Treatment, Monitoring & Hauling	2,614	2,667	2,720	2,774	2,829	2,886	2,944	3,003	3,063	3,124	3,187
Rents and Financial Expenses	38	38	39	40	40	41	42	42	43	44	45
Interfunctional Adjustments	714	728	743	757	773	788	804	820	836	853	870
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	9,533	9,725	9,919	10,118	10,322	10,530	10,742	10,958	11,179	11,404	11,633
Materials	2,871	2,930	2,991	3,051	3,112	3,172	3,237	3,302	3,367	3,436	3,506
Utilities	458	467	476	485	493	502	511	519	528	537	545
Contracted Services	18,689	19,064	19,445	19,834	20,233	20,639	21,051	21,470	21,899	22,336	22,782
Interfunctional Adjustments	433	441	450	459	467	476	485	493	502	511	519
Sub Total Operating	**37,159**	**37,905**	**38,664**	**39,438**	**40,228**	**41,032**	**41,851**	**42,686**	**43,536**	**44,406**	**45,292**
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**37,159**	**37,905**	**38,664**	**39,438**	**40,228**	**41,032**	**41,851**	**42,686**	**43,536**	**44,406**	**45,292**

Current State HSP – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Solid Waste Administration											
General Recoveries	3,663	3,737	3,811	3,888	3,965	4,044	4,125	4,208	4,292	4,378	4,465
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	35,000	35,689	36,407	37,100	37,800	38,600	39,400	40,200	41,000	41,800	42,600
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	438	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**39,101**	**39,425**	**40,218**	**40,988**	**41,765**	**42,644**	**43,525**	**44,408**	**45,292**	**46,178**	**47,065**
Solid Waste Billing Recovery - Operating	**(1,942)**	**(1,520)**	**(1,554)**	**(1,549)**	**(1,537)**	**(1,613)**	**(1,674)**	**(1,722)**	**(1,755)**	**(1,772)**	**(1,774)**
Lifecycle Reserve Contribution ($)		10,443	11,018	11,332	11,765	12,150	12,765	12,973	13,149	13,639	14,130
Solid Waste Billing Recovery - Total	**(1,942)**	**8,923**	**9,464**	**9,783**	**10,227**	**10,537**	**11,091**	**11,251**	**11,394**	**11,867**	**12,357**

Current State Total Cost of Service – Other Waste

Current State Other Waste – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	4,239	-	2,062	2,177	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	573	-	-	-	573	-	-	-	-	-	-
424010 Security Camera Replacement	-	998	-	-	-	998	-	-	-	-	-	-
Flare Control Hardware	-	131	-	-	-	-	-	-	131	-	-	-
Servers (SCADA)	-	311	-	147	-	-	-	-	164	-	-	-
Software (SCADA)	-	671	-	311	-	-	-	-	360	-	-	-
Desktops (SCADA)	-	98	-	49	-	-	-	-	49	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	82	-	-	33	-	-	-	-	49	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	409	-	-	-	-	-	-	-	409	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	9,161	38,885	9,365	9,568	9,772	10,179	-	-	-	-	-	-
Total Capital Expenditures	**9,161**	**46,397**	**9,365**	**12,138**	**11,982**	**11,750**	**-**	**-**	**704**	**458**	**-**	**-**
Capital Financing												
Provincial/Federal Grants	-	5,810	-	2,062	2,177	1,571	-	-	-	-	-	-
Development Charges Reserve Fund	9,161	38,885	9,365	9,568	9,772	10,179	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	1,702	-	507	33	-	-	-	704	458	-	-
Total Capital Financing	**9,161**	**46,397**	**9,365**	**12,138**	**11,982**	**11,750**	**-**	**-**	**704**	**458**	**-**	**-**

Current State Other Waste– Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Other Waste – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Current State Other Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	2,059	-	507	33	-	-	-	704	458	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	507	33	-	-	-	704	458	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	2,059	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Other Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital											
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Current State Other Waste – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	66,740	80,176	94,113	110,028	126,527	143,622	171,710	200,840	219,351	238,517	258,380
Development Charge Proceeds	21,025	21,456	23,326	23,790	24,255	24,720	25,193	14,210	14,489	14,796	15,103
Transfer to Capital	9,161	9,365	9,568	9,772	9,976	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**78,604**	**92,267**	**107,871**	**124,046**	**140,806**	**168,343**	**196,902**	**215,050**	**233,841**	**253,313**	**273,483**
Interest	1,572	1,845	2,157	2,481	2,816	3,367	3,938	4,301	4,677	5,066	5,470
Required from Development Charges	9,161	9,365	9,568	9,772	10,179	-	-	-	-	-	-

Current State Other Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	50,107	103,973	160,428	220,085	282,784	349,688	418,928	490,400	565,648
Transfer from Operating	-	49,124	51,828	53,309	55,342	57,155	60,048	61,025	61,856	64,157	66,469
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**49,124**	**101,934**	**157,282**	**215,769**	**277,239**	**342,832**	**410,714**	**480,784**	**554,557**	**632,118**
Interest	-	982	2,039	3,146	4,315	5,545	6,857	8,214	9,616	11,091	12,642

Current State Other Waste – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	5,468	5,576	5,688	5,802	5,918	6,036	6,157	6,280	6,406	6,534	6,665
Materials	1,041	1,062	1,084	1,105	1,128	1,151	1,174	1,196	1,221	1,246	1,270
Contracted Services	2,001	2,041	2,082	2,123	2,165	2,208	2,252	2,298	2,344	2,391	2,439
Leachate - Treatment, Monitoring & Hauling	12,298	12,544	12,794	13,050	13,310	13,577	13,848	14,125	14,408	14,696	14,991
Rents and Financial Expenses	177	180	183	187	190	193	196	200	203	206	211
Interfunctional Adjustments	3,357	3,424	3,493	3,563	3,635	3,707	3,781	3,856	3,933	4,012	4,092
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	44,846	45,745	46,661	47,598	48,555	49,532	50,530	51,548	52,586	53,644	54,723
Materials	13,504	13,783	14,068	14,353	14,638	14,923	15,228	15,533	15,839	16,165	16,490
Utilities	2,154	2,199	2,239	2,280	2,321	2,362	2,402	2,443	2,484	2,524	2,565
Contracted Services	87,916	89,679	91,470	93,303	95,176	97,089	99,023	100,998	103,014	105,070	107,167
Interfunctional Adjustments	2,038	2,077	2,117	2,158	2,199	2,239	2,280	2,321	2,362	2,402	2,443
Sub Total Operating	**174,798**	**178,310**	**181,880**	**185,521**	**189,234**	**193,017**	**196,872**	**200,799**	**204,799**	**208,890**	**213,056**
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**174,798**	**178,310**	**181,880**	**185,521**	**189,234**	**193,017**	**196,872**	**200,799**	**204,799**	**208,890**	**213,056**

Current State Other Waste – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Solid Waste Administration											
General Recoveries	17,232	17,577	17,929	18,287	18,652	19,026	19,405	19,793	20,189	20,594	21,006
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	23,770	24,217	24,724	25,230	25,736	26,242	26,749	27,255	27,761	28,352	28,943
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	2,059	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**43,062**	**41,794**	**42,652**	**43,517**	**44,388**	**45,268**	**46,154**	**47,048**	**47,950**	**48,945**	**49,948**
Solid Waste Billing Recovery - Operating	**131,737**	**136,516**	**139,228**	**142,004**	**144,846**	**147,749**	**150,719**	**153,750**	**156,848**	**159,945**	**163,108**
Lifecycle Reserve Contribution ($)		49,124	51,828	53,309	55,342	57,155	60,048	61,025	61,856	64,157	66,469
Solid Waste Billing Recovery - Total	**131,737**	**185,640**	**191,055**	**195,312**	**200,188**	**204,904**	**210,766**	**214,776**	**218,705**	**224,102**	**229,577**

Appendix C

Future State – Cost of Service Model

Appendix C: Future State Cost of Service Model

Future State Total Cost of Service – All Streams

Future State Total Cost of Service – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	37,400	248,000	17,000	18,000	18,000	44,000	19,000	20,000	20,000	49,000	21,000	22,000
General Maintenance - Canborough Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
General Maintenance - Tom Howe Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
Pneumatic Pumps	-	314,000	28,000	29,000	29,000	30,000	31,000	32,000	33,000	33,000	34,000	35,000
General Maintenance - Perpetual Sites	5,600	69,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000	7,000	8,000	8,000
Closed Landfills - ESA Phase 1&2 and Land Survey	89,600	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	259,000	-	126,000	133,000	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	35,000	-	-	-	35,000	-	-	-	-	-	-
424010 Security Camera Replacement	-	61,000	-	-	-	61,000	-	-	-	-	-	-
Flare Control Hardware	-	8,000	-	-	-	-	-	-	8,000	-	-	-
Servers (SCADA)	-	19,000	-	9,000	-	-	-	-	10,000	-	-	-
Software (SCADA)	-	41,000	-	19,000	-	-	-	-	22,000	-	-	-
Desktops (SCADA)	-	6,000	-	3,000	-	-	-	-	3,000	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	42,000	-	-	-	-	-	-	-	-	42,000	-
Connectivity Equipment (SCADA)	-	5,000	-	-	2,000	-	-	-	-	3,000	-	-
Leachate manhole covers and extensions	-	121,000	121,000	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	29,000	-	-	-	-	29,000	-	-	-	-	-
Leachate pump replacement	-	155,000	85,000	-	-	-	70,000	-	-	-	-	-
425007 Stormwater management pond maintenance	-	31,000	-	-	-	-	-	-	-	31,000	-	-
212502 - Tom Howe - Willow Plantation Study	-	39,000	-	12,000	27,000	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	36,000	36,000	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	21,000	10,000	-	-	-	-	11,000	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	25,000	-	-	-	-	-	-	-	25,000	-	-
Growth Related:		-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	45,000	191,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-
		-										

Future State Total Cost of Service – Capital Forecast (Inflated Costs) - Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-										
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		30,000	-	-	-	-	15,000	15,000	-	-	-	-
Carts		2,300,000	-	-	-	575,000	575,000	1,150,000	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		10,000	-	10,000	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		51,842	-	5,000	5,175	5,356	5,544	5,738	5,938	6,146	6,361	6,584
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		10,000,000	-	-	-	-	-	-	-	2,500,000	3,750,000	3,750,000
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		300,000	-	-	-	-	-	300,000	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		12,000	-	12,000	-	-	-	-	-	-	-	-
Shipping Container		21,000	-	21,000	-	-	-	-	-	-	-	-
Shipping Container Modifications		9,000	-	9,000	-	-	-	-	-	-	-	-
ECA Applications and Fees		40,000	-	40,000	-	-	-	-	-	-	-	-
Equipment		5,000	-	5,000	-	-	-	-	-	-	-	-
Total Capital Expenditures	**199,400**	**14,799,842**	**373,000**	**395,000**	**292,175**	**833,356**	**777,544**	**1,566,738**	**136,938**	**2,682,146**	**3,891,361**	**3,851,584**
Capital Financing												
Provincial/Federal Grants	89,600	355,000	-	126,000	133,000	96,000	-	-	-	-	-	-
Development Charges Reserve Fund	45,000	191,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	12,361	612,400	166,284	54,475	46,471	31,717	88,329	32,849	59,089	36,349	60,022	36,815
Capital Replacement Reserve - Information Technology	-	16,302	-	7,555	-	-	-	-	8,747	-	-	-
Capital Replacement Reserve - General	52,439	13,625,140	160,716	159,970	64,704	655,639	689,215	1,533,889	69,102	2,645,797	3,831,339	3,814,769
Total Capital Financing	**199,400**	**14,799,842**	**373,000**	**395,000**	**292,175**	**833,356**	**777,544**	**1,566,738**	**136,938**	**2,682,146**	**3,891,361**	**3,851,584**

Future State Total Cost of Service – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Total Cost of Service – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Total Cost of Service – Solid Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	178,259	160,716	159,970	64,704	655,639	689,215	1,533,889	69,102	2,645,797	3,831,339	3,814,769
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	52,439	160,716	159,970	64,704	655,639	689,215	1,533,889	69,102	2,645,797	3,831,339	3,814,769
Transfer to Lifecycle Reserve											
Transfer to Operating	125,820	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Total Cost of Service – Solid Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	7,555	-	-	-	-	8,747	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	7,555	-	-	-	-	8,747	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Total Cost of Service – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	327,826	393,822	462,279	540,454	621,498	705,470	843,433	986,522	1,077,448	1,171,591	1,269,154
Development Charge Proceeds	103,274	105,393	114,578	116,857	119,140	121,425	123,745	69,800	71,171	72,678	74,187
Transfer to Capital	45,000	46,000	47,000	48,000	49,000	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**386,100**	**453,215**	**529,857**	**609,311**	**691,637**	**826,895**	**967,178**	**1,056,321**	**1,148,618**	**1,244,269**	**1,343,341**
Interest	7,722	9,064	10,597	12,186	13,833	16,538	19,344	21,126	22,972	24,885	26,867
Required from Development Charges	45,000	46,000	47,000	48,000	50,000	-	-	-	-	-	-

Future State Total Cost of Service – Solid Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	3,061,357	6,352,439	9,801,625	13,446,484	17,277,245	21,364,887	25,840,001	30,464,980	35,334,728
Transfer from Operating	-	3,001,331	3,166,524	3,256,997	3,381,202	3,491,992	3,668,722	3,968,448	4,027,626	4,176,911	4,327,172
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**3,001,331**	**6,227,881**	**9,609,436.30**	**13,182,827**	**16,938,476**	**20,945,967**	**25,333,334**	**29,867,627**	**34,641,890**	**39,661,900**
Interest	-	60,027	124,558	192,189	263,657	338,770	418,919	506,667	597,353	692,838	793,238

Future State Total Cost of Service – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	334,060	340,700	347,500	354,500	361,600	368,800	376,200	383,700	391,400	399,200	407,200
Materials	63,600	64,900	66,200	67,500	68,900	70,300	71,700	73,100	74,600	76,100	77,600
Contracted Services	122,280	124,700	127,200	129,700	132,300	134,900	137,600	140,400	143,200	146,100	149,000
Leachate - Treatment, Monitoring & Hauling	751,340	766,400	781,700	797,300	813,200	829,500	846,100	863,000	880,300	897,900	915,900
Rents and Financial Expenses	10,820	11,000	11,200	11,400	11,600	11,800	12,000	12,200	12,400	12,600	12,900
Interfunctional Adjustments	205,100	209,200	213,400	217,700	222,100	226,500	231,000	235,600	240,300	245,100	250,000
Solid Waste Collection		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	43,670	44,500	45,400	46,300	47,200	48,100	49,100	50,100	51,100	52,100	53,100
Materials	13,930	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600	16,900
Contracted Services	3,044,880	3,155,500	3,270,100	3,388,900	3,512,000	3,639,600	4,067,600	4,215,300	4,368,400	4,527,100	4,691,500
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	192,390	196,200	200,100	204,100	208,200	212,400	216,600	220,900	225,300	229,800	234,400
Materials	70,740	72,200	73,600	75,100	76,600	78,100	79,700	81,300	82,900	84,600	86,300
Utilities	32,410	33,100	33,800	34,500	35,200	35,900	36,600	37,300	38,000	38,800	39,600
Contracted Services	1,924,490	1,994,400	2,066,800	2,141,900	2,219,700	2,300,300	2,383,800	2,470,400	2,560,100	2,653,100	2,749,500
Leachate - Treatment, Monitoring & Hauling	1,772,690	1,808,100	1,844,300	1,881,200	1,918,800	1,957,200	1,996,300	2,036,200	2,076,900	2,118,400	2,160,800
Interfunctional Adjustments	26,770	27,300	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000	32,600
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	220,280	224,700	229,200	233,800	238,500	243,300	248,200	253,200	258,300	263,500	268,800
Materials	66,330	67,700	69,100	70,500	71,900	73,300	74,800	76,300	77,800	79,400	81,000
Utilities	10,580	10,800	11,000	11,200	11,400	11,600	11,800	12,000	12,200	12,400	12,600
Contracted Services	431,840	440,500	449,300	458,300	467,500	476,900	486,400	496,100	506,000	516,100	526,400
Interfunctional Adjustments	10,010	10,200	10,400	10,600	10,800	11,000	11,200	11,400	11,600	11,800	12,000
Future State Options - Operating Costs											
Option 1 - Introduce Garbage Collection in Carts											
Collection Contract - Incremental Costs		-	-	-	-	-	182,400	183,450	184,306	184,951	185,473
Cart Costs for Increased Households and Cart Replacements and Repairs		-	-	-	-	-	150,000	155,250	160,684	166,308	172,128
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes											
Temporary By-law Officer for Enforcement		-	35,000	36,225	37,493	38,805	40,163	41,569	43,024	44,530	46,088
Cost Reduction		-	-	-	-	-	(119,190)	(123,520)	(128,005)	(132,655)	(137,475)
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF											
Staffing, Contractors, and Processing		-	-	-	-	-	410,000	424,350	439,202	454,574	470,484
Option 7 - Develop a Mobile HSP Depot Program											
Staffing		-	125,000	129,375	133,903	138,590	143,440	148,461	153,657	159,035	164,601
Contractors and Processing		-	160,000	165,600	171,396	177,395	183,604	190,030	196,681	203,565	210,689
Moving (assuming six locations per year)		-	5,000	5,175	5,356	5,544	5,738	5,938	6,146	6,361	6,584
Option 8 - Sell Closed Landfills		-	-	-	-	-	-	-	-	-	-
Operating Cost Savings		(450)	(466)	(964)	(998)	(1,549)	(1,603)	(2,213)	(2,290)	(2,963)	(3,067)
Sub Total Operating	**9,348,210**	**9,615,850**	**10,217,134**	**10,513,111**	**10,818,750**	**11,133,284**	**12,377,152**	**12,738,615**	**13,111,905**	**13,496,406**	**13,893,607**

Future State Total Cost of Service – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**9,348,210**	**9,615,850**	**10,217,134**	**10,513,111**	**10,818,750**	**11,133,284**	**12,377,152**	**12,738,615**	**13,111,905**	**13,496,406**	**13,893,607**
Revenues											
Solid Waste Administration											
General Recoveries	1,052,850	1,073,900	1,095,400	1,117,300	1,139,600	1,162,400	1,185,600	1,209,300	1,233,500	1,258,200	1,283,400
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	1,291,480	1,317,300	1,343,600	1,370,500	1,397,900	1,425,900	1,454,400	1,483,500	1,513,200	1,543,500	1,574,400
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	141,320	144,100	36,407	37,100	37,800	38,600	39,400	40,200	41,000	41,800	42,600
General Recoveries	28,170	28,700	29,300	29,900	30,500	31,100	31,700	32,300	32,900	33,600	34,300
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	125,820	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**2,639,640**	**2,564,000**	**2,504,707**	**2,554,800**	**2,605,800**	**2,658,000**	**2,711,100**	**2,765,300**	**2,820,600**	**2,877,100**	**2,934,700**
Solid Waste Billing Recovery - Operating	**6,708,570**	**7,051,850**	**7,712,428**	**7,958,311**	**8,212,950**	**8,475,284**	**9,666,052**	**9,973,315**	**10,291,305**	**10,619,306**	**10,958,907**
Lifecycle Reserve Contribution ($)		3,001,331	3,166,524	3,256,997	3,381,202	3,491,992	3,668,722	3,728,448	3,779,226	3,919,817	4,061,080
Future State - Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	240,000	248,400	257,094	266,092
Solid Waste Billing Recovery - Total	**6,708,570**	**10,053,181**	**10,878,952**	**11,215,308**	**11,594,152**	**11,967,276**	**13,334,774**	**13,941,763**	**14,318,931**	**14,796,217**	**15,286,079**

Future State Total Cost of Service – Garbage

Future State Garbage – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	37,400	248,000	17,000	18,000	18,000	44,000	19,000	20,000	20,000	49,000	21,000	22,000
General Maintenance - Canborough Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
General Maintenance - Tom Howe Perpetual	10,900	133,000	12,000	12,000	12,000	13,000	13,000	13,000	14,000	14,000	15,000	15,000
Pneumatic Pumps	-	314,000	28,000	29,000	29,000	30,000	31,000	32,000	33,000	33,000	34,000	35,000
General Maintenance - Perpetual Sites	5,600	69,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000	7,000	8,000	8,000
Closed Landfills - ESA Phase 1&2 and Land Survey	89,600	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	238,177	-	115,870	122,307	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	32,186	-	-	-	32,186	-	-	-	-	-	-
424010 Security Camera Replacement	-	56,096	-	-	-	56,096	-	-	-	-	-	-
Flare Control Hardware	-	7,357	-	-	-	-	-	-	7,357	-	-	-
Servers (SCADA)	-	17,472	-	8,276	-	-	-	-	9,196	-	-	-
Software (SCADA)	-	37,704	-	17,472	-	-	-	-	20,231	-	-	-
Desktops (SCADA)	-	5,518	-	2,759	-	-	-	-	2,759	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	42,000	-	-	-	-	-	-	-	-	42,000	-
Connectivity Equipment (SCADA)	-	4,598	-	-	1,839	-	-	-	-	2,759	-	-
Leachate manhole covers and extensions	-	121,000	121,000	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	29,000	-	-	-	-	29,000	-	-	-	-	-
Leachate pump replacement	-	155,000	85,000	-	-	-	70,000	-	-	-	-	-
425007 Stormwater management pond maintenance	-	31,000	-	-	-	-	-	-	-	31,000	-	-
212502 - Tom Howe - Willow Plantation Study	-	39,000	-	12,000	27,000	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	36,000	36,000	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	21,000	10,000	-	-	-	-	11,000	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	22,990	-	-	-	-	-	-	-	22,990	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		30,000	-	-	-	-	15,000	15,000	-	-	-	-
Carts		2,300,000	-	-	-	575,000	575,000	1,150,000	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		10,000	-	10,000	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		51,842	-	5,000	5,175	5,356	5,544	5,738	5,938	6,146	6,361	6,584
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		9,196,036	-	-	-	-	-	-	-	2,299,009	3,448,513	3,448,513
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Shipping Container		-	-	-	-	-	-	-	-	-	-	-
Shipping Container Modifications		-	-	-	-	-	-	-	-	-	-	-
ECA Applications and Fees		-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**154,400**	**13,380,976**	**327,000**	**248,378**	**233,321**	**775,638**	**777,544**	**1,266,738**	**133,481**	**2,478,904**	**3,589,875**	**3,550,097**

Future State Garbage – Capital Forecast (Inflated Costs) - Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		30,000	-	-	-	-	15,000	15,000	-	-	-	-
Carts		2,300,000	-	-	-	575,000	575,000	1,150,000	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		10,000	-	10,000	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		51,842	-	5,000	5,175	5,356	5,544	5,738	5,938	6,146	6,361	6,584
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		9,196,036	-	-	-	-	-	-	-	2,299,009	3,448,513	3,448,513
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Shipping Container		-	-	-	-	-	-	-	-	-	-	-
Shipping Container Modifications		-	-	-	-	-	-	-	-	-	-	-
ECA Applications and Fees		-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**154,400**	**13,380,976**	**327,000**	**248,378**	**233,321**	**775,638**	**777,544**	**1,266,738**	**133,481**	**2,478,904**	**3,589,875**	**3,550,097**
Capital Financing												
Provincial/Federal Grants	89,600	326,459	-	115,870	122,307	88,282	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	12,361	608,765	166,284	53,054	46,374	31,717	88,329	32,849	57,116	36,204	60,022	36,815
Capital Replacement Reserve - Information Technology	-	16,302	-	7,555	-	-	-	-	8,747	-	-	-
Capital Replacement Reserve - General	52,439	12,429,450	160,716	71,899	64,640	655,639	689,215	1,233,889	67,618	2,442,700	3,529,852	3,513,283
Total Capital Financing	**154,400**	**13,380,976**	**327,000**	**248,378**	**233,321**	**775,638**	**777,544**	**1,266,738**	**133,481**	**2,478,904**	**3,589,875**	**3,550,097**

Future State Garbage – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Garbage – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Garbage – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	168,143	160,716	71,899	64,640	655,639	689,215	1,233,889	67,618	2,442,700	3,529,852	3,513,283
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	52,439	160,716	71,899	64,640	655,639	689,215	1,233,889	67,618	2,442,700	3,529,852	3,513,283
Transfer to Lifecycle Reserve											
Transfer to Operating	115,705	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Garbage – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	7,555	-	-	-	-	8,747	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	7,555	-	-	-	-	8,747	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Garbage – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Development Charge Proceeds	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Future State Garbage – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	2,815,235	5,841,726	9,013,609	12,365,434	15,888,217	19,647,226	23,772,038	28,035,188	32,523,972
Transfer from Operating	-	2,760,035	2,911,947	2,995,146	3,109,366	3,211,248	3,373,770	3,658,694	3,713,440	3,851,059	3,989,589
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**2,760,035**	**5,727,182**	**8,836,872**	**12,122,975**	**15,576,683**	**19,261,986**	**23,305,920**	**27,485,478**	**31,886,247**	**36,513,561**
Interest	-	55,201	114,544	176,737	242,459	311,534	385,240	466,118	549,710	637,725	730,271

Future State Garbage – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	307,203	313,309	319,562	325,999	332,529	339,150	345,955	352,852	359,933	367,106	374,463
Materials	58,487	59,682	60,878	62,073	63,361	64,648	65,936	67,223	68,602	69,982	71,361
Contracted Services	112,449	114,675	116,974	119,273	121,664	124,055	126,537	129,112	131,687	134,354	137,021
Leachate - Treatment, Monitoring & Hauling	690,935	704,784	718,854	733,200	747,822	762,811	778,077	793,618	809,527	825,712	842,265
Rents and Financial Expenses	9,950	10,116	10,300	10,483	10,667	10,851	11,035	11,219	11,403	11,587	11,863
Interfunctional Adjustments	188,611	192,381	196,243	200,198	204,244	208,290	212,428	216,659	220,981	225,395	229,901
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	43,670	44,500	45,400	46,300	47,200	48,100	49,100	50,100	51,100	52,100	53,100
Materials	13,930	14,200	14,500	14,800	15,100	15,400	15,700	16,000	16,300	16,600	16,900
Contracted Services	3,044,880	3,155,500	3,270,100	3,388,900	3,512,000	3,639,600	4,067,600	4,215,300	4,368,400	4,527,100	4,691,500
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	192,390	196,200	200,100	204,100	208,200	212,400	216,600	220,900	225,300	229,800	234,400
Materials	70,740	72,200	73,600	75,100	76,600	78,100	79,700	81,300	82,900	84,600	86,300
Utilities	32,410	33,100	33,800	34,500	35,200	35,900	36,600	37,300	38,000	38,800	39,600
Contracted Services	1,924,490	1,994,400	2,066,800	2,141,900	2,219,700	2,300,300	2,383,800	2,470,400	2,560,100	2,653,100	2,749,500
Leachate - Treatment, Monitoring & Hauling	1,772,690	1,808,100	1,844,300	1,881,200	1,918,800	1,957,200	1,996,300	2,036,200	2,076,900	2,118,400	2,160,800
Interfunctional Adjustments	26,770	27,300	27,800	28,400	29,000	29,600	30,200	30,800	31,400	32,000	32,600
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
Future State Options - Operating Costs	-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts	-	-	-	-	-	-	-	-	-	-	-
Collection Contract - Incremental Costs	-	-	-	-	-	-	182,400	183,450	184,306	184,951	185,473
Cart Costs for Increased Households and Cart Replacements and Repairs	-	-	-	-	-	-	150,000	155,250	160,684	166,308	172,128
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	-	-	-	-	-	-	-	-	-	-	-
Temporary By-law Officer for Enforcement	-	-	35,000	36,225	37,493	38,805	40,163	41,569	43,024	44,530	46,088
Cost Reduction	-	-	-	-	-	-	(119,190)	(123,520)	(128,005)	(132,655)	(137,475)
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	-	-	-	-	-	-	-	-	-	-	-
Staffing, Contractors, and Processing	-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program	-	-	-	-	-	-	-	-	-	-	-
Staffing	-	-	-	-	-	-	-	-	-	-	-
Contractors and Processing	-	-	-	-	-	-	-	-	-	-	-
Moving (assuming six locations per year)	-	-	-	-	-	-	-	-	-	-	-
Option 8 - Sell Closed Landfills	-	-	-	-	-	-	-	-	-	-	-
Operating Cost Savings	-	(450)	(466)	(964)	(998)	(1,549)	(1,603)	(2,213)	(2,290)	(2,963)	(3,067)
Sub Total Operating	**8,489,604**	**8,739,997**	**9,033,745**	**9,301,687**	**9,578,581**	**9,863,661**	**10,667,338**	**10,983,519**	**11,310,252**	**11,646,806**	**11,994,721**

Future State Garbage – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**8,489,604**	**8,739,997**	**9,033,745**	**9,301,687**	**9,578,581**	**9,863,661**	**10,667,338**	**10,983,519**	**11,310,252**	**11,646,806**	**11,994,721**
Revenues											
Solid Waste Administration											
General Recoveries	968,205	987,562	1,007,334	1,027,473	1,047,980	1,068,947	1,090,282	1,112,077	1,134,331	1,157,045	1,180,219
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	1,291,480	1,317,300	1,343,600	1,370,500	1,397,900	1,425,900	1,454,400	1,483,500	1,513,200	1,543,500	1,574,400
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	115,705	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**2,375,389**	**2,304,862**	**2,350,934**	**2,397,973**	**2,445,880**	**2,494,847**	**2,544,682**	**2,595,577**	**2,647,531**	**2,700,545**	**2,754,619**
Solid Waste Billing Recovery - Operating	**6,114,215**	**6,435,134**	**6,682,811**	**6,903,714**	**7,132,701**	**7,368,814**	**8,122,656**	**8,387,943**	**8,662,721**	**8,946,261**	**9,240,102**
Lifecycle Reserve Contribution ($)		2,760,035	2,911,947	2,995,146	3,109,366	3,211,248	3,373,770	3,428,694	3,475,390	3,604,678	3,734,583
Future State - Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	230,000	238,050	246,382	255,005
Solid Waste Billing Recovery - Total	**6,114,215**	**9,195,169**	**9,594,758**	**9,898,860**	**10,242,066**	**10,580,062**	**11,496,426**	**12,046,636**	**12,376,161**	**12,797,320**	**13,229,691**

Future State Total Cost of Service – Blue Box

Future State Blue Box – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	-	-	-	-	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	-	-	-	-	-	-	-	-	-	-	-
424010 Security Camera Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Flare Control Hardware	-	-	-	-	-	-	-	-	-	-	-	-
Servers (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Software (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Desktops (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	-	-	-	-	-	-	-	-	-	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	-	-	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Capital Forecast (Inflated Costs) – Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Carts		-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		-	-	-	-	-	-	-	-	-	-	-
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		-	-	-	-	-	-	-	-	-	-	-
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Shipping Container		-	-	-	-	-	-	-	-	-	-	-
Shipping Container Modifications		-	-	-	-	-	-	-	-	-	-	-
ECA Applications and Fees		-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Financing												
Provincial/Federal Grants	-	-	-	-	-	-	-	-	-	-	-	-
Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Financing	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Future State Blue Box – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Transfer to Lifecycle Reserve Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	-	-	-	-	-	-	-	-	-
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Development Charge Proceeds	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-
Required from Development Charges	-	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Blue Box – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Rents and Financial Expenses	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	106,320	108,411	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-
Future State Options - Operating Costs	-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts	-	-	-	-	-	-	-	-	-	-	-
Collection Contract - Incremental Costs	-	-	-	-	-	-	-	-	-	-	-
Cart Costs for Increased Households and Cart Replacements and Repairs	-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	-	-	-	-	-	-	-	-	-	-	-
Temporary By-law Officer for Enforcement	-	-	-	-	-	-	-	-	-	-	-
Cost Reduction	-	-	-	-	-	-	-	-	-	-	-
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	-	-	-	-	-	-	-	-	-	-	-
Staffing, Contractors, and Processing	-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program	-	-	-	-	-	-	-	-	-	-	-
Staffing	-	-	-	-	-	-	-	-	-	-	-
Contractors and Processing	-	-	-	-	-	-	-	-	-	-	-
Moving (assuming six locations per year)	-	-	-	-	-	-	-	-	-	-	-
Option 8 - Sell Closed Landfills	-	-	-	-	-	-	-	-	-	-	-
Operating Cost Savings	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Future State Blue Box – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Revenues											
Solid Waste Administration											
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	106,320	108,411	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**106,320**	**108,411**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Solid Waste Billing Recovery - Operating	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	-	-	-	-
Future State - Lifecycle Reserve Contribution ($)	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Billing Recovery - Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Future State Total Cost of Service – Leaf & Yard Waste

Future State Leaf & Yard Waste – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	15,682	-	7,629	8,053	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	2,119	-	-	-	2,119	-	-	-	-	-	-
424010 Security Camera Replacement	-	3,694	-	-	-	3,694	-	-	-	-	-	-
Flare Control Hardware	-	484	-	-	-	-	-	-	484	-	-	-
Servers (SCADA)	-	1,150	-	545	-	-	-	-	605	-	-	-
Software (SCADA)	-	2,483	-	1,150	-	-	-	-	1,332	-	-	-
Desktops (SCADA)	-	363	-	182	-	-	-	-	182	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	303	-	-	121	-	-	-	-	182	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	1,514	-	-	-	-	-	-	-	1,514	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	33,891	143,849	34,644	35,397	36,151	37,657	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-

Future State Leaf & Yard Waste – Capital Forecast (Inflated Costs) - Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Carts		-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		-	-	-	-	-	-	-	-	-	-	-
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		605,496	-	-	-	-	-	-	-	151,374	227,061	227,061
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Shipping Container		-	-	-	-	-	-	-	-	-	-	-
Shipping Container Modifications		-	-	-	-	-	-	-	-	-	-	-
ECA Applications and Fees		-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**33,891**	**777,137**	**34,644**	**44,904**	**44,325**	**43,470**	**-**	**-**	**2,604**	**153,069**	**227,061**	**227,061**
Capital Financing												
Provincial/Federal Grants	-	21,495	-	7,629	8,053	5,813	-	-	-	-	-	-
Development Charges Reserve Fund	33,891	143,849	34,644	35,397	36,151	37,657	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	611,793	-	1,877	121	-	-	-	2,604	153,069	227,061	227,061
Total Capital Financing	**33,891**	**777,137**	**34,644**	**44,904**	**44,325**	**43,470**	**-**	**-**	**2,604**	**153,069**	**227,061**	**227,061**

Future State Leaf & Yard Waste – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Future State Leaf & Yard Waste – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Future State Leaf & Yard Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	7,618	-	1,877	121	-	-	-	2,604	153,069	227,061	227,061
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	1,877	121	-	-	-	2,604	153,069	227,061	227,061
Transfer to Lifecycle Reserve											
Transfer to Operating	7,618	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Leaf & Yard Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital											
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Leaf & Yard Waste – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	246,898	296,602	348,160	407,036	468,073	531,316	635,221	742,987	811,466	882,369	955,848
Development Charge Proceeds	77,780	79,375	86,293	88,010	89,728	91,450	93,197	52,569	53,601	54,736	55,873
Transfer to Capital	33,891	34,644	35,397	36,151	36,904	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**290,786**	**341,333**	**399,055**	**458,895**	**520,898**	**622,766**	**728,418**	**795,555**	**865,068**	**937,106**	**1,011,721**
Interest	5,816	6,827	7,981	9,178	10,418	12,455	14,568	15,911	17,301	18,742	20,234
Required from Development Charges	33,891	34,644	35,397	36,151	37,657	-	-	-	-	-	-

Future State Leaf & Yard Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	185,364	384,637	593,484	814,179	1,046,130	1,293,635	1,549,778	1,814,181	2,092,555
Transfer from Operating	-	181,729	191,732	197,210	204,730	211,439	222,140	225,756	228,831	237,343	245,897
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**181,729**	**377,096**	**581,847**	**798,215**	**1,025,617**	**1,268,269**	**1,519,391**	**1,778,609**	**2,051,524**	**2,338,452**
Interest	-	3,635	7,542	11,637	15,964	20,512	25,365	30,388	35,572	41,030	46,769

Future State Leaf & Yard Waste – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	20,227	20,629	21,041	21,465	21,895	22,331	22,779	23,233	23,699	24,171	24,656
Materials	3,851	3,930	4,008	4,087	4,172	4,257	4,341	4,426	4,517	4,608	4,699
Contracted Services	7,404	7,551	7,702	7,853	8,011	8,168	8,332	8,501	8,671	8,846	9,022
Leachate - Treatment, Monitoring & Hauling	45,493	46,405	47,332	48,276	49,239	50,226	51,231	52,254	53,302	54,367	55,457
Rents and Financial Expenses	655	666	678	690	702	714	727	739	751	763	781
Interfunctional Adjustments	12,419	12,667	12,921	13,182	13,448	13,714	13,987	14,265	14,550	14,841	15,137
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	165,901	169,230	172,619	176,084	179,623	183,238	186,929	190,694	194,535	198,452	202,443
Materials	49,956	50,987	52,042	53,096	54,151	55,205	56,335	57,464	58,594	59,799	61,004
Utilities	7,968	8,134	8,285	8,435	8,586	8,736	8,887	9,038	9,188	9,339	9,490
Contracted Services	218,915	223,346	338,385	345,163	352,092	359,171	366,326	373,632	381,088	388,694	396,452
Interfunctional Adjustments	7,539	7,682	7,833	7,983	8,134	8,285	8,435	8,586	8,736	8,887	9,038
	-	-	-	-	-	-	-	-	-	-	-
Future State Options - Operating Costs	-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts	-	-	-	-	-	-	-	-	-	-	-
Collection Contract - Incremental Costs	-	-	-	-	-	-	-	-	-	-	-
Cart Costs for Increased Households and Cart Replacements and Repairs	-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	-	-	-	-	-	-	-	-	-	-	-
Temporary By-law Officer for Enforcement	-	-	-	-	-	-	-	-	-	-	-
Cost Reduction	-	-	-	-	-	-	-	-	-	-	-
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	-	-	-	-	-	-	-	-	-	-	-
Staffing, Contractors, and Processing	-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program	-	-	-	-	-	-	-	-	-	-	-
Staffing	-	-	-	-	-	-	-	-	-	-	-
Contractors and Processing	-	-	-	-	-	-	-	-	-	-	-
Moving (assuming six locations per year)	-	-	-	-	-	-	-	-	-	-	-
Option 8 - Sell Closed Landfills	-	-	-	-	-	-	-	-	-	-	-
Operating Cost Savings	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**540,328**	**551,227**	**672,845**	**686,314**	**700,052**	**714,046**	**728,308**	**742,833**	**757,631**	**772,768**	**788,179**

Future State Leaf & Yard Waste – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**540,328**	**551,227**	**672,845**	**686,314**	**700,052**	**714,046**	**728,308**	**742,833**	**757,631**	**772,768**	**788,179**
Revenues											
Solid Waste Administration											
General Recoveries	63,750	65,024	66,326	67,652	69,002	70,383	71,788	73,223	74,688	76,183	77,709
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	4,400	4,483	4,576	4,670	4,764	4,858	4,951	5,045	5,139	5,248	5,357
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	7,618	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**75,768**	**69,507**	**70,903**	**72,322**	**73,766**	**75,240**	**76,739**	**78,268**	**79,827**	**81,432**	**83,067**
Solid Waste Billing Recovery - Operating	**464,560**	**481,720**	**601,943**	**613,992**	**626,286**	**638,805**	**651,569**	**664,565**	**677,805**	**691,336**	**705,112**
Lifecycle Reserve Contribution ($)		181,729	191,732	197,210	204,730	211,439	222,140	225,756	228,831	237,343	245,897
Future State - Lifecycle Reserve Contribution ($)	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Billing Recovery - Total	**464,560**	**663,449**	**793,674**	**811,202**	**831,016**	**850,244**	**873,709**	**890,321**	**906,635**	**928,679**	**951,008**

Future State Total Cost of Service – HSP

Future State HSP – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	901	-	438	463	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	122	-	-	-	122	-	-	-	-	-	-
424010 Security Camera Replacement	-	212	-	-	-	212	-	-	-	-	-	-
Flare Control Hardware	-	28	-	-	-	-	-	-	28	-	-	-
Servers (SCADA)	-	66	-	31	-	-	-	-	35	-	-	-
Software (SCADA)	-	143	-	66	-	-	-	-	77	-	-	-
Desktops (SCADA)	-	21	-	10	-	-	-	-	10	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	17	-	-	7	-	-	-	-	10	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	87	-	-	-	-	-	-	-	87	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	1,948	8,266	1,991	2,034	2,077	2,164	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-

Future State HSP – Capital Forecast (Inflated Costs) - Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Carts		-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		-	-	-	-	-	-	-	-	-	-	-
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		34,794	-	-	-	-	-	-	-	8,699	13,048	13,048
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		300,000	-	-	-	-	-	300,000	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		12,000	-	12,000	-	-	-	-	-	-	-	-
Shipping Container		21,000	-	21,000	-	-	-	-	-	-	-	-
Shipping Container Modifications		9,000	-	9,000	-	-	-	-	-	-	-	-
ECA Applications and Fees		40,000	-	40,000	-	-	-	-	-	-	-	-
Equipment		5,000	-	5,000	-	-	-	-	-	-	-	-
Total Capital Expenditures	**1,948**	**431,657**	**1,991**	**89,580**	**2,547**	**2,498**	**-**	**300,000**	**150**	**8,796**	**13,048**	**13,048**
Capital Financing												
Provincial/Federal Grants	-	1,235	-	438	463	334	-	-	-	-	-	-
Development Charges Reserve Fund	1,948	8,266	1,991	2,034	2,077	2,164	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	422,156	-	87,108	7	-	-	300,000	150	8,796	13,048	13,048
Total Capital Financing	**1,948**	**431,657**	**1,991**	**89,580**	**2,547**	**2,498**	**-**	**300,000**	**150**	**8,796**	**13,048**	**13,048**

Future State HSP – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State HSP – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	**-**	-	-	-	-	-	-	-	-	-	-

Future State HSP – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	438	-	87,108	7	-	-	300,000	150	8,796	13,048	13,048
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	87,108	7	-	-	300,000	150	8,796	13,048	13,048
Transfer to Lifecycle Reserve											
Transfer to Operating	438	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State HSP – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital											
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State HSP – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	14,188	17,044	20,007	23,390	26,897	30,531	36,502	42,695	46,630	50,704	54,927
Development Charge Proceeds	4,470	4,561	4,959	5,057	5,156	5,255	5,355	3,021	3,080	3,145	3,211
Transfer to Capital	1,948	1,991	2,034	2,077	2,121	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**16,710**	**19,614**	**22,931**	**26,370**	**29,933**	**35,787**	**41,858**	**45,716**	**49,710**	**53,850**	**58,137**
Interest	334	392	459	527	599	716	837	914	994	1,077	1,163
Required from Development Charges	1,948	1,991	2,034	2,077	2,164	-	-	-	-	-	-

Future State HSP – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	10,652	22,103	34,104	46,786	60,115	74,337	99,256	125,211	152,553
Transfer from Operating	-	10,443	11,018	11,332	11,765	12,150	12,765	22,973	23,499	24,351	25,217
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**10,443**	**21,669**	**33,435**	**45,869**	**58,936**	**72,880**	**97,310**	**122,756**	**149,562**	**177,770**
Interest	-	209	433	669	917	1,179	1,458	1,946	2,455	2,991	3,555

Future State HSP – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration		-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	1,162	1,185	1,209	1,233	1,258	1,283	1,309	1,335	1,362	1,389	1,417
Materials	221	226	230	235	240	245	249	254	260	265	270
Contracted Services	425	434	443	451	460	469	479	489	498	508	518
Leachate - Treatment, Monitoring & Hauling	2,614	2,667	2,720	2,774	2,829	2,886	2,944	3,003	3,063	3,124	3,187
Rents and Financial Expenses	38	38	39	40	40	41	42	42	43	44	45
Interfunctional Adjustments	714	728	743	757	773	788	804	820	836	853	870
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	9,533	9,725	9,919	10,118	10,322	10,530	10,742	10,958	11,179	11,404	11,633
Materials	2,871	2,930	2,991	3,051	3,112	3,172	3,237	3,302	3,367	3,436	3,506
Utilities	458	467	476	485	493	502	511	519	528	537	545
Contracted Services	18,689	19,064	19,445	19,834	20,233	20,639	21,051	21,470	21,899	22,336	22,782
Interfunctional Adjustments	433	441	450	459	467	476	485	493	502	511	519
Future State Options - Operating Costs	-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts	-	-	-	-	-	-	-	-	-	-	-
Collection Contract - Incremental Costs	-	-	-	-	-	-	-	-	-	-	-
Cart Costs for Increased Households and Cart Replacements and Repairs	-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	-	-	-	-	-	-	-	-	-	-	-
Temporary By-law Officer for Enforcement	-	-	-	-	-	-	-	-	-	-	-
Cost Reduction	-	-	-	-	-	-	-	-	-	-	-
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	-	-	-	-	-	-	-	-	-	-	-
Staffing, Contractors, and Processing	-	-	-	-	-	-	410,000	424,350	439,202	454,574	470,484
Option 7 - Develop a Mobile HSP Depot Program	-	-	-	-	-	-	-	-	-	-	-
Staffing	-	-	125,000	129,375	133,903	138,590	143,440	148,461	153,657	159,035	164,601
Contractors and Processing	-	-	160,000	165,600	171,396	177,395	183,604	190,030	196,681	203,565	210,689
Moving (assuming six locations per year)	-	-	5,000	5,175	5,356	5,544	5,738	5,938	6,146	6,361	6,584
Option 8 - Sell Closed Landfills	-	-	-	-	-	-	-	-	-	-	-
Operating Cost Savings	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**37,159**	**37,905**	**328,664**	**339,588**	**350,883**	**362,560**	**784,633**	**811,465**	**839,223**	**867,942**	**897,651**

Future State HSP – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**37,159**	**37,905**	**328,664**	**339,588**	**350,883**	**362,560**	**784,633**	**811,465**	**839,223**	**867,942**	**897,651**
Revenues											
Solid Waste Administration											
General Recoveries	3,663	3,737	3,811	3,888	3,965	4,044	4,125	4,208	4,292	4,378	4,465
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	35,000	35,689	36,407	37,100	37,800	38,600	39,400	40,200	41,000	41,800	42,600
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	438	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**39,101**	**39,425**	**40,218**	**40,988**	**41,765**	**42,644**	**43,525**	**44,408**	**45,292**	**46,178**	**47,065**
Solid Waste Billing Recovery - Operating	**(1,942)**	**(1,520)**	**288,446**	**298,601**	**309,118**	**319,916**	**741,108**	**767,057**	**793,931**	**821,764**	**850,585**
Lifecycle Reserve Contribution ($)		10,443	11,018	11,332	11,765	12,150	12,765	12,973	13,149	13,639	14,130
Future State - Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	10,000	10,350	10,712	11,087
Solid Waste Billing Recovery - Total	**(1,942)**	**8,923**	**299,464**	**309,933**	**320,882**	**332,066**	**753,873**	**790,030**	**817,430**	**846,115**	**875,803**

Future State Total Cost of Service – Other Waste

Future State Other Waste – Capital Forecast (Inflated Costs)

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures												
Waste Management Facility Repairs	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Canborough Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Tom Howe Perpetual	-	-	-	-	-	-	-	-	-	-	-	-
Pneumatic Pumps	-	-	-	-	-	-	-	-	-	-	-	-
General Maintenance - Perpetual Sites	-	-	-	-	-	-	-	-	-	-	-	-
Closed Landfills - ESA Phase 1&2 and Land Survey	-	-	-	-	-	-	-	-	-	-	-	-
424008 Tipping Floor Repairs/Resurfacing	-	4,239	-	2,062	2,177	-	-	-	-	-	-	-
424009 Fiberglass Glazing Replacement	-	573	-	-	-	573	-	-	-	-	-	-
424010 Security Camera Replacement	-	998	-	-	-	998	-	-	-	-	-	-
Flare Control Hardware	-	131	-	-	-	-	-	-	131	-	-	-
Servers (SCADA)	-	311	-	147	-	-	-	-	164	-	-	-
Software (SCADA)	-	671	-	311	-	-	-	-	360	-	-	-
Desktops (SCADA)	-	98	-	49	-	-	-	-	49	-	-	-
Landfill Gas Flare Shell/Insulation Replacement	-	-	-	-	-	-	-	-	-	-	-	-
Connectivity Equipment (SCADA)	-	82	-	-	33	-	-	-	-	49	-	-
Leachate manhole covers and extensions	-	-	-	-	-	-	-	-	-	-	-	-
Storm water pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
Leachate pump replacement	-	-	-	-	-	-	-	-	-	-	-	-
425007 Stormwater management pond maintenance	-	-	-	-	-	-	-	-	-	-	-	-
212502 - Tom Howe - Willow Plantation Study	-	-	-	-	-	-	-	-	-	-	-	-
222501 - Tom Howe - Perimeter gas probes	-	-	-	-	-	-	-	-	-	-	-	-
412517 - Canb WMF - Compactor repairs (CWMF)	-	-	-	-	-	-	-	-	-	-	-	-
992500 - Solid Waste Management Master Plan Update	-	409	-	-	-	-	-	-	-	409	-	-
Growth Related:	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Waste Diversion Services	9,161	38,885	9,365	9,568	9,772	10,179	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-

Future State Other Waste – Capital Forecast (Inflated Costs) - Continued

Description	Budget	Total	Forecast									
	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Future State Options - Capital Costs		-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Carts		-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Vehicle Allowance/Rental for By-law Officer		-	-	-	-	-	-	-	-	-	-	-
Option 5 - Build a New Permanent Waste Depot		-	-	-	-	-	-	-	-	-	-	-
Facility Cost		163,674	-	-	-	-	-	-	-	40,919	61,378	61,378
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF		-	-	-	-	-	-	-	-	-	-	-
ECA Modification, Pavement, Modified Sea Containers, and Equipment		-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program		-	-	-	-	-	-	-	-	-	-	-
P&E		-	-	-	-	-	-	-	-	-	-	-
Shipping Container		-	-	-	-	-	-	-	-	-	-	-
Shipping Container Modifications		-	-	-	-	-	-	-	-	-	-	-
ECA Applications and Fees		-	-	-	-	-	-	-	-	-	-	-
Equipment		-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	**9,161**	**210,072**	**9,365**	**12,138**	**11,982**	**11,750**	**-**	**-**	**704**	**41,377**	**61,378**	**61,378**
Capital Financing												
Provincial/Federal Grants	-	5,810	-	2,062	2,177	1,571	-	-	-	-	-	-
Development Charges Reserve Fund	9,161	38,885	9,365	9,568	9,772	10,179	-	-	-	-	-	-
Non-Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Growth Related Debenture Requirements	-	-	-	-	-	-	-	-	-	-	-	-
Operating Contributions	-	-	-	-	-	-	-	-	-	-	-	-
Lifecycle Reserve Fund	-	-	-	-	-	-	-	-	-	-	-	-
Norfolk Recoveries	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - Information Technology	-	-	-	-	-	-	-	-	-	-	-	-
Capital Replacement Reserve - General	-	165,377	-	507	33	-	-	-	704	41,377	61,378	61,378
Total Capital Financing	**9,161**	**210,072**	**9,365**	**12,138**	**11,982**	**11,750**	**-**	**-**	**704**	**41,377**	**61,378**	**61,378**

Future State Other Waste – Non-Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Future State Other Waste – Growth Related Debenture Repayments (Inflated Costs)

Debenture Year	2024	Principal (Inflated)	Forecast									
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2025		-		-	-	-	-	-	-	-	-	-
2026		-			-	-	-	-	-	-	-	-
2027		-				-	-	-	-	-	-	-
2028		-					-	-	-	-	-	-
2029		-						-	-	-	-	-
2030		-							-	-	-	-
2031		-								-	-	-
2032		-									-	-
2033		-										-
2034		-										
Total Annual Debt Charges	-	-	-	-	-	-	-	-	-	-	-	-

Future State Other Waste – Capital Replacement Reserve – General Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	2,059	-	507	33	-	-	-	704	41,377	61,378	61,378
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital		-	507	33	-	-	-	704	41,377	61,378	61,378
Transfer to Lifecycle Reserve											
Transfer to Operating	2,059	-	-	-	-	-	-	-	-	-	-
Closing Balance	-	-	-	-	-	-	-	-	-	-	-
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Other Waste – Capital Replacement Reserve –Information Technology Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	-	-	-	-	-	-	-	-	-
Transfer from Operating	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital											
Transfer to Lifecycle Reserve											
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Interest	-	-	-	-	-	-	-	-	-	-	-

Future State Other Waste – Solid Waste Development Charges Reserve Fund Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	66,740	80,176	94,113	110,028	126,527	143,622	171,710	200,840	219,351	238,517	258,380
Development Charge Proceeds	21,025	21,456	23,326	23,790	24,255	24,720	25,193	14,210	14,489	14,796	15,103
Transfer to Capital	9,161	9,365	9,568	9,772	9,976	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**78,604**	**92,267**	**107,871**	**124,046**	**140,806**	**168,343**	**196,902**	**215,050**	**233,841**	**253,313**	**273,483**
Interest	1,572	1,845	2,157	2,481	2,816	3,367	3,938	4,301	4,677	5,066	5,470
Required from Development Charges	9,161	9,365	9,568	9,772	10,179	-	-	-	-	-	-

Future State Other Waste – Lifecycle Reserve Continuity (Inflated Costs)

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Opening Balance	-	-	50,107	103,973	160,428	220,085	282,784	349,688	418,928	490,400	565,648
Transfer from Operating	-	49,124	51,828	53,309	55,342	57,155	60,048	61,025	61,856	64,157	66,469
Transfer from General Reserve	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Operating	-	-	-	-	-	-	-	-	-	-	-
Closing Balance	**-**	**49,124**	**101,934**	**157,282**	**215,769**	**277,239**	**342,832**	**410,714**	**480,784**	**554,557**	**632,118**
Interest	-	982	2,039	3,146	4,315	5,545	6,857	8,214	9,616	11,091	12,642

Future State Other Waste – Operating Forecast (Inflated Costs)

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Expenditures											
Operating Costs											
Solid Waste Administration	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	5,468	5,576	5,688	5,802	5,918	6,036	6,157	6,280	6,406	6,534	6,665
Materials	1,041	1,062	1,084	1,105	1,128	1,151	1,174	1,196	1,221	1,246	1,270
Contracted Services	2,001	2,041	2,082	2,123	2,165	2,208	2,252	2,298	2,344	2,391	2,439
Leachate - Treatment, Monitoring & Hauling	12,298	12,544	12,794	13,050	13,310	13,577	13,848	14,125	14,408	14,696	14,991
Rents and Financial Expenses	177	180	183	187	190	193	196	200	203	206	211
Interfunctional Adjustments	3,357	3,424	3,493	3,563	3,635	3,707	3,781	3,856	3,933	4,012	4,092
Solid Waste Collection	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Disposal Sites	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	-	-	-	-	-	-	-	-	-	-	-
Materials	-	-	-	-	-	-	-	-	-	-	-
Utilities	-	-	-	-	-	-	-	-	-	-	-
Contracted Services	-	-	-	-	-	-	-	-	-	-	-
Leachate - Treatment, Monitoring & Hauling	-	-	-	-	-	-	-	-	-	-	-
Interfunctional Adjustments	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction	-	-	-	-	-	-	-	-	-	-	-
Salaries, Wages & Benefits	44,846	45,745	46,661	47,598	48,555	49,532	50,530	51,548	52,586	53,644	54,723
Materials	13,504	13,783	14,068	14,353	14,638	14,923	15,228	15,533	15,839	16,165	16,490
Utilities	2,154	2,199	2,239	2,280	2,321	2,362	2,402	2,443	2,484	2,524	2,565
Contracted Services	87,916	89,679	91,470	93,303	95,176	97,089	99,023	100,998	103,014	105,070	107,167
Interfunctional Adjustments	2,038	2,077	2,117	2,158	2,199	2,239	2,280	2,321	2,362	2,402	2,443
Future State Options - Operating Costs	-	-	-	-	-	-	-	-	-	-	-
Option 1 - Introduce Garbage Collection in Carts	-	-	-	-	-	-	-	-	-	-	-
Collection Contract - Incremental Costs	-	-	-	-	-	-	-	-	-	-	-
Cart Costs for Increased Households and Cart Replacements and Repairs	-	-	-	-	-	-	-	-	-	-	-
Option 3 - Reduction of Garbage Limits for Farms and IC&I on Collection Routes	-	-	-	-	-	-	-	-	-	-	-
Temporary By-law Officer for Enforcement	-	-	-	-	-	-	-	-	-	-	-
Cost Reduction	-	-	-	-	-	-	-	-	-	-	-
Option 6 - Locate a Permanent Residential HSP Depot at the CWMF	-	-	-	-	-	-	-	-	-	-	-
Staffing, Contractors, and Processing	-	-	-	-	-	-	-	-	-	-	-
Option 7 - Develop a Mobile HSP Depot Program	-	-	-	-	-	-	-	-	-	-	-
Staffing	-	-	-	-	-	-	-	-	-	-	-
Contractors and Processing	-	-	-	-	-	-	-	-	-	-	-
Moving (assuming six locations per year)	-	-	-	-	-	-	-	-	-	-	-
Option 8 - Sell Closed Landfills	-	-	-	-	-	-	-	-	-	-	-
Operating Cost Savings	-	-	-	-	-	-	-	-	-	-	-
Sub Total Operating	**174,798**	**178,310**	**181,880**	**185,521**	**189,234**	**193,017**	**196,872**	**200,799**	**204,799**	**208,890**	**213,056**

Future State Other Waste – Operating Forecast (Inflated Costs) – Continued

Description	Budget 2024	Forecast 2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital-Related											
Existing Debt (Principal) - Growth Related											
Existing Debt (Interest) - Growth Related											
New Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Existing Debt (Principal) - Non-Growth Related											
Existing Debt (Interest) - Non-Growth Related											
New Non-Growth Related Debt (Principal)		-	-	-	-	-	-	-	-	-	-
New Non-Growth Related Debt (Interest)		-	-	-	-	-	-	-	-	-	-
Transfer to Capital	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve - Information Technolog	-	-	-	-	-	-	-	-	-	-	-
Transfer to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-	-
Sub Total Capital Related	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Expenditures	**174,798**	**178,310**	**181,880**	**185,521**	**189,234**	**193,017**	**196,872**	**200,799**	**204,799**	**208,890**	**213,056**
Revenues											
Solid Waste Administration											
General Recoveries	17,232	17,577	17,929	18,287	18,652	19,026	19,405	19,793	20,189	20,594	21,006
Solid Waste Disposal Sites		-	-	-	-	-	-	-	-	-	-
General Recoveries	-	-	-	-	-	-	-	-	-	-	-
Solid Waste Reduction		-	-	-	-	-	-	-	-	-	-
Grants/Subsidies	-	-	-	-	-	-	-	-	-	-	-
General Recoveries	23,770	24,217	24,724	25,230	25,736	26,242	26,749	27,255	27,761	28,352	28,943
Other Revenue			-	-	-	-	-	-	-	-	-
Contributions from Development Charges Reserve Fund	-	-	-	-	-	-	-	-	-	-	-
Contributions from Reserves / Reserve Funds	2,059	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	**43,062**	**41,794**	**42,652**	**43,517**	**44,388**	**45,268**	**46,154**	**47,048**	**47,950**	**48,945**	**49,948**
Solid Waste Billing Recovery - Operating	**131,737**	**136,516**	**139,228**	**142,004**	**144,846**	**147,749**	**150,719**	**153,750**	**156,848**	**159,945**	**163,108**
Lifecycle Reserve Contribution ($)		49,124	51,828	53,309	55,342	57,155	60,048	61,025	61,856	64,157	66,469
Future State - Lifecycle Reserve Contribution ($)		-	-	-	-	-	-	-	-	-	-
Solid Waste Billing Recovery - Total	**131,737**	**185,640**	**191,055**	**195,312**	**200,188**	**204,904**	**210,766**	**214,776**	**218,705**	**224,102**	**229,577**

Future State Total Cost of Service – Additional Options for Consideration

Urban Only (Inflated Costs)

Urban-Only Additional Options for Consideration	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
Option 12 - Implement an Organic Waste Collection Program											
P&E		-	-	-	-	15,000	15,000	-	-	-	-
Carts		-	-	-	387,500	387,500	775,000	-	-	-	-
Total Capital Expenditures	**-**	**-**	**-**	**-**	**387,500**	**402,500**	**790,000**	**-**	**-**	**-**	**-**
Operating Expenditures											
Option 12 - Implement an Organic Waste Collection Program											
Collection Contract		-	-	-	-	-	1,650,000	1,707,750	1,767,521	1,829,384	1,893,413
Processing Costs		-	-	-	-	-	1,100,000	1,138,500	1,178,348	1,219,590	1,262,275
Ongoing Operating (e.g. increased households, cart replacements and repairs)		-	-	-	-	-	-	112,500	120,513	124,731	129,096
Option 13 - Reduce Garbage Collection Frequency to Bi-Weekly											
Collection Contract		-	-	-	-	-	- 817,600	- 851,550	- 886,919	- 923,767	- 962,050
Total Operating Expenditures	**-**	**-**	**-**	**-**	**-**	**-**	**1,932,400**	**2,107,200**	**2,179,463**	**2,249,938**	**2,322,734**
Lifecycle Savings											
Savings for Lifecycle Replacements		-	-	-	-	-	-	155,000	160,425	166,040	171,851
Total Lifecycle Savings	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**155,000**	**160,425**	**166,040**	**171,851**
Cost of Service	**-**	**-**	**-**	**-**	**-**	**-**	**1,932,400**	**2,262,200**	**2,339,888**	**2,415,978**	**2,494,586**

Future State Total Cost of Service – Additional Options for Consideration

County-Wide (Inflated Costs)

County-Wide Additional Options for Consideration	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Capital Expenditures											
Option 12 - Implement an Organic Waste Collection Program											
P&E		-	-	-	-	15,000	15,000	-	-	-	-
Carts		-	-	-	537,500	537,500	1,075,000	-	-	-	-
Total Capital Expenditures	**-**	**-**	**-**	**-**	**537,500**	**552,500**	**1,090,000**	**-**	**-**	**-**	**-**
Operating Expenditures											
Option 12 - Implement an Organic Waste Collection Program											
Collection Contract		-	-	-	-	-	2,300,000	2,380,500	2,463,818	2,550,051	2,639,303
Processing Costs		-	-	-	-	-	1,550,000	1,604,250	1,660,399	1,718,513	1,778,661
Ongoing Operating (e.g. increased households, cart replacements and repairs)		-	-	-	-	-	-	150,000	160,684	166,308	172,128
Option 13 - Reduce Garbage Collection Frequency to Bi-Weekly											
Collection Contract		-	-	-	-	-	- 1,417,600	- 1,472,550	- 1,529,654	- 1,588,998	- 1,650,564
Total Operating Expenditures	**-**	**-**	**-**	**-**	**-**	**-**	**2,432,400**	**2,662,200**	**2,755,246**	**2,845,874**	**2,939,528**
Lifecycle Savings											
Savings for Lifecycle Replacements		-	-	-	-	-	-	215,000	222,525	230,313	238,374
Total Lifecycle Savings	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**215,000**	**222,525**	**230,313**	**238,374**
Cost of Service	**-**	**-**	**-**	**-**	**-**	**-**	**2,432,400**	**2,877,200**	**2,977,771**	**3,076,187**	**3,177,902**

Appendix D

Strategic Plan

DILLON CONSULTING

Strategic Plan

The SWMMP provides a review of the County's existing waste management services, including how programs are administered and contracts are managed to enable service delivery. This analysis, grounded in the County's current operational context, supports planning for future needs, particularly as population growth and increased waste generation place added system pressures.

Developing the SWMMP is strategic for the County as it will set a direction for enhancing its current practices and increasing its financial and environmental sustainability over the long term. This long-term view may allow for prioritization and a more efficient and effective allocation of resources through changes and enhancements to waste management contracts, operational practices, programs and service delivery.

The SWMMP identified options for improvements to the County's waste management system. While all the options respond to the County's needs and reflect its priorities, consideration is required of how and when they can feasibly be implemented. This Strategic Plan considers the desired outcomes of the implementation of the options and risks associated with its implementation to provide guidance on how to work towards the future state of waste management.

Curbside Collection Options

Six options have implementations for the County's next curbside collection contract. Four of these are presented as a coordinated package intended for collective implementation, while two additional options have been assessed separately. These include:

- Introduce Garbage Collection in Carts;
- Conduct a Common Collection Points and Private Roads Study;
- Reduction of Receptacle Limits for Farms and IC&I on Collection Routes; and
- Assessing and Optimizing Collection Services.

Additional curbside options evaluated independently include:

- Implement a Residential Organic Waste Collection Program; and
- Reduce Garbage Collection Frequency to Bi-weekly.

Opportunity exists for the County to implement these options strategically. It is imperative that the approach to the next collection contract is carefully considered, in part due to the County's need for waste disposal, which is currently part of the collection contract.

The following risks and mitigation measures should be noted in relation to the curbside-collection options:

Risks	Mitigation Measures
• Across Ontario, municipalities are increasingly challenged when seeking additional landfill disposal capacity. The Office of the Auditor General of Ontario reported in May 2023 that there is only 10 to 13 years of landfill capacity remaining across the province if current waste generation, diversion and export levels continue.[33] It is critical that the County's collection contract continue to provide disposal services, at a cost acceptable to the County, over the long term.	• Implement policies to reduce the quantity of waste requiring disposal (e.g., Garbage Receptacle Limits for Farms and IC&I on Collection Routes; Reduction in Garbage Collection Frequency and Implement a Residential Organic Waste Collection Program). • Landfill space is available at the Canborough Landfill. • Develop contingency disposal plan (including the DDM Plan). • Forecast the County's future disposal needs and provide a high degree of accuracy in the estimated quantities in the collection contract to avoid exceeding the expected tonnage during the life of the contract.

[33] The Office of the Auditor General of Ontario. May 2023; "The State of the Environment in Ontario" Page 57; https://www.auditor.on.ca/en/content/specialreports/specialreports/The_State_Of_The_Environment_EN.pdf

Risks	Mitigation Measures
• The potential impact of tariffs from the United States regarding the availability of new collection vehicles and replacement parts remains uncertain at this time.	• Monitor the market and procure the new collection contractor as early as reasonably possible.
• Residents, farms and IC&I on collection routes may disagree with County decisions to implement receptacle limits and change collection frequency to bi-weekly.	• Council will need to discuss the proposed changes and amend or revoke and replace the by-law. Changes to the by-law will need to include enforcement measures. • P&E will be needed to inform residents, farms and IC&I on collection routes of the changes. The County will need to allow sufficient time for communications / key messages to be prepared and for information to be posted and/or distributed.
• The successful waste collection service proponent will require at least two years, following the contract award date, to secure collection vehicles.	• Issue the collection RFP at least three years prior to the end date for the current collection contract (i.e., 2027).
• Garbage and organic carts will need to be procured early enough that they can be manufactured and distributed before the start date of the new collection contract (in 2030). However, in the event that the procurement of the collection contract fails, the County may need to rethink a decision on transitioning to carts.	• Need to have responses to the collection contact by 2027 so that the carts can be manufactured and distributed after the County is aware of the outcome of their collection contract.

Risks	Mitigation Measures
• Organic waste processing services will be required upon the start date for the Organic Waste Program; however, the County will need to know market availability and per tonne processing costs prior to executing a contract for the manufacture of Green Bins.	• Procure organic waste processing with terms in the agreement that the first operational day will be approximately three years following the award of the processing contract. • Use County audit data to provide an estimated quantity in the procurement for an organic waste processor.
• Collection contract proponents may have questions about the RFP if it does not identify the destination of organic waste (e.g., transfer station or processing facility).	• In preparing the collection RFP, the County will need to identify potential transfer and processing options so that proposals can be priced and evaluated. Language will need to be included to indicate that the actual destination is subject to change, or a price per kilometre (assuming no transfer location) would need to be included on the price form.

To implement these options accordingly, Council decisions will be required. This includes, but is not limited to:

- Adoption of by-law amendments, or a decision to revoke and adopt a new waste by-law, reflecting changes, including receptacle limits for farms and IC&I on and reduction in collection frequency for residential properties;
- Direction to update policies on the collection of waste at common collection points and on private roads;
- Direction to proceed with the organic waste program implementation;
- Direction to transition to carts; and
- Direction, in accordance with Council procurement policies, on the development and execution of the collection contract, organic waste processing contract and carts / in-unit containers contracts.

Depot-Related Options

As the County's population continues to grow, opportunity exists to enhance its service level through the construction of a new permanent waste depot. This SWMMP contemplates the development of a new permanent waste depot, as well as a new temporary, mobile HSP depot program, which would be transitioned to a permanent HSP depot that would be operational by 2030.

The following risks and mitigation measures should be noted in relation to the depot-related options:

Risks	Mitigation Measures
• Developing new facilities involves considerable effort to secure approvals and develop design and operational plans. Risks include time delays in the application process, particularly in the event of errors or omissions on submitted documents.	• Consultation with the MECP • Careful preparation of the documents required during the application process.
• Currently, part of the County's budget allocation to its HSP program is recovered due to an agreement between its service providers and PROs. When the County procures its next contract for the provision of HSP services, it will need to negotiate to maintain revenues that are currently supporting the "Subsidies and Grants" portion of the budget. Regulatory changes as well as the potential for PROs to change their approach to fulfilling their statutory obligations would impact the availability of this revenue.	• Continue to monitor developments in the industry related to the HSP Regulation, including experiences in other jurisdictions. • In contracting a service provider for HSP, seek a proponent that will support the County in receiving revenue from PROs.

To implement these options accordingly, Council decisions will be required. This includes, but is not limited to:

- Direction on program and service level changes;
- Budget approval for capital and operating costs; and
- Direction, in accordance with Council procurement policies, on the development and execution of the design and construction contracts and depot and HSP operational services.

Landfill-Related Options

Landfill-related options are intended to optimize the management of closed landfill sites while addressing financial and environmental responsibilities. In implementing these options, the following risks and mitigation measures should be noted in relation to the curbside-collection options:

Risks	Mitigation Measures
• Considerable information is unknown at this time and may impact the Country's future decisions about the sites.	• Due diligence in seeking legal advice. • Clear communication with the MECP regarding gaps in available information (e.g., the history of disposal activities at the closed sites may never become available).
• Research on the condition of the sites, costs of activities required prior to the sale of the sites, and the anticipated revenue from the sale may alter future decisions on the management of the sites.	• Continue to inform Council as information becomes available.

Council should be informed as information becomes available, including information that impacts the budget and timeline for the sale/ repurposing of the sites.

Strategic Planning and Communication Initiatives

The development of a P&E Strategy is recommended to be undertaken in 2025 and can be updated as needed. In identifying key parties (e.g., residents, local businesses, community groups etc.) who have an interest in the options, the County can plan when

and how to communicate key messages effectively. This option will mitigate several risks (such as resident confusion and poor participation in waste programs) associated with the implementation of the other options.

Similarly, the development of a DDM Plan is recommended to be undertaken relatively soon and can be updated as needed. It too will mitigate risks, particularly those associated with emergencies and the sudden generation of large volumes of debris. The DDM Plan has the potential to minimize service disruptions and mitigate costs associated with managing disaster-related waste.

The P&E Strategy and the DDM Plan can be brought to Council for information and to support budget deliberations.

Implementation Timeline

The following table provides a timeline to identify key milestones in the implementation of the options over the next ten years.

Implementation Timeline

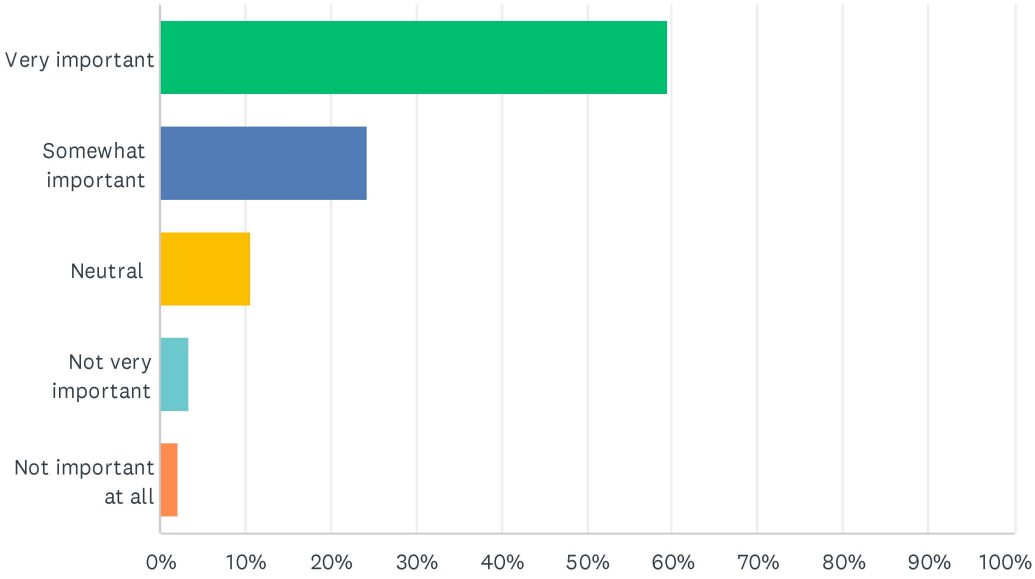
Option Name	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Reduction of Garbage Limits for Farms and IC&I on Collection Routes	Update Bylaw, Develop P&E Plan	Hire By-Law Officer, implement and ongoing option monitoring									
Develop a Promotion and Education Strategy	Develop P&E Strategy		Implement P&E Stratey, Ongoing Program Review and Monitoring. Updates as Necessary, Including New Programming.								
Sell Closed Landfills	Sell Closed Landfills										
Develop a Mobile HSP Depot Program	Develop Mobile HSP Depot Plan			Implement Mobile Program and Ongoing Review		N/A - Replaced by Option 8					
Reduce Garbage Collection Frequency to Bi-weekly		Plan	RFP for Collection Contract	Collection Contract Planning		New collection contract begins	Ongoing Program Review and Monitoring				
Conduct a Common Collection Points and Private Roads Study		Complete Study	Incorporate Recommendations into RFP for Collection Contract	Collection Contract Planning		New collection contract begins	Ongoing Program Review and Monitoring				
Assessing and Optimizing Collection Services		Complete Study	Incorporate Recommendations into RFP for Collection Contract	Collection Contract Planning		New collection contract begins	Ongoing Program Review and Monitoring				
Develop a Closed Landfill Repurpose Plan		Develop Closed Landfill Repurpose Plan	Complete Surveys of Identified Closed Landfills	Select Sites for Repurposing	Future Work: Begin Planning for Repurposing						
Develop a DDM Plan		Develop DDM Plan	Ongoing DDM Plan Review and Update								
Implement a Residential Organic Waste Collection Program			RFP for Collection Contract and Carts	Collection Contract and Cart Planning	Distribute Carts	New collection contract begins	Ongoing Program Review and Monitoring				
Introduce Garbage Collection in Carts			RFP for Collection Contract and Carts	Collection Contract and Cart Planning	Distribute Carts	New collection contract begins	Ongoing Program Review and Monitoring				
Build a New Permanent Waste Depot				Public Consultation	Planning of Permanent Waste Depot		RFP for Permanent Waste Depot		Construct Facility		Facility Opening
Locate a Permanent Residential HSP Depot at the CWMF				Planning, RFP for Construction	Construct HSP Depot	Facility Opening	Ongoing Program Review and Monitoring				

Appendix E

Survey Results

Q1 How important is increasing waste diversion (reducing landfill waste through recycling, composting, etc.) to you?

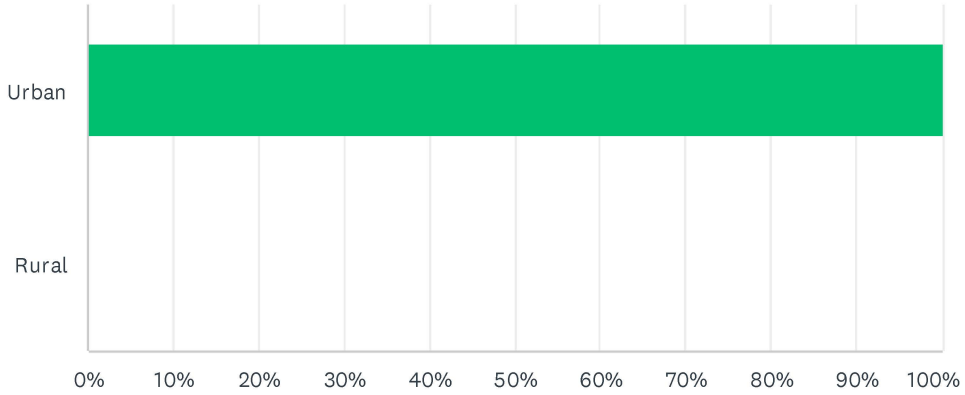
Answered: 735 Skipped: 3



ANSWER CHOICES	RESPONSES	
Very important	59.59%	438
Somewhat important	24.22%	178
Neutral	10.61%	78
Not very important	3.40%	25
Not important at all	2.18%	16
TOTAL		735

Q2 Are you responding for an URBAN or RURAL property? Please check one. If you are unsure of the answer, please click here to open a County map with those boundaries outlined.

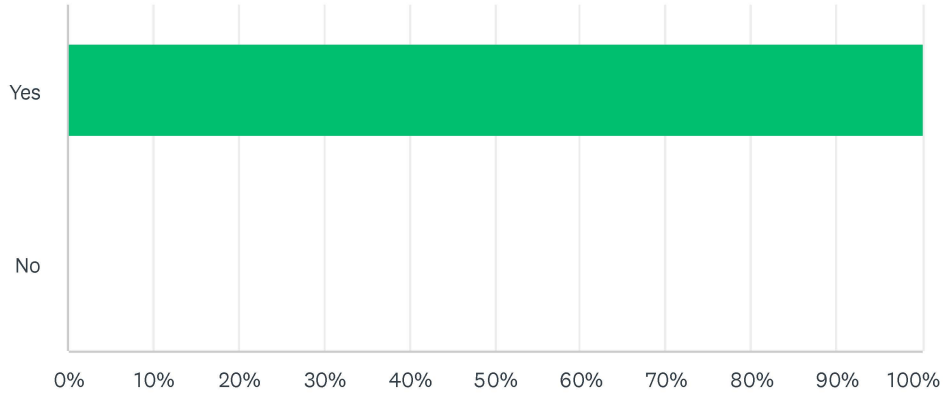
Answered: 738 Skipped: 0



ANSWER CHOICES	RESPONSES	
Urban	100.00%	738
Rural	0.00%	0
TOTAL		738

Q3 If curbside yard waste collection were expanded to rural areas, would you use it?

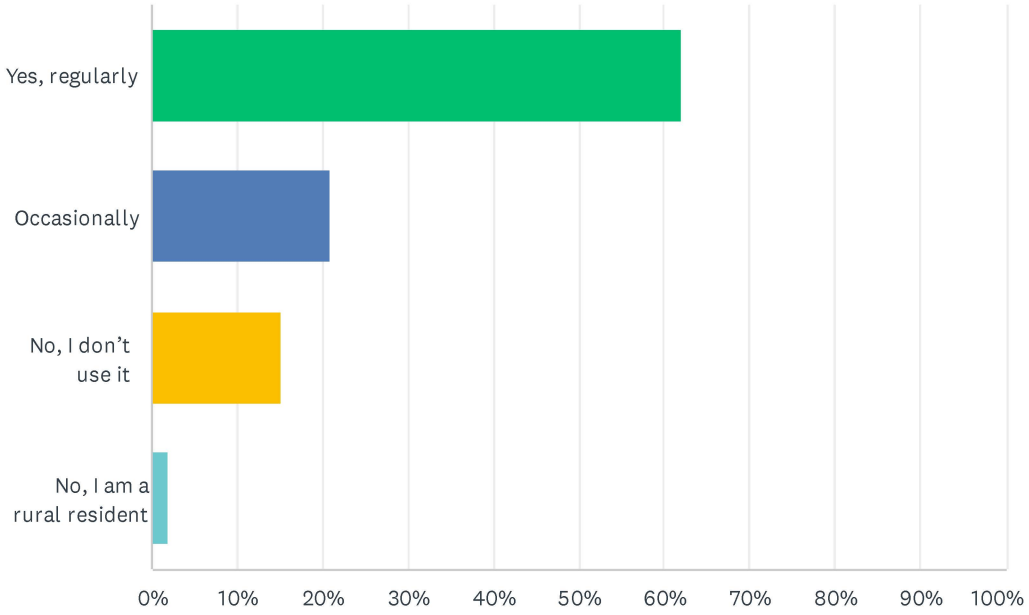
Answered: 9 Skipped: 729



ANSWER CHOICES	RESPONSES	
Yes	100.00%	9
No	0.00%	0
TOTAL		9

Q4 Do you use the current 11-week curbside yard waste collection program available in urban areas?

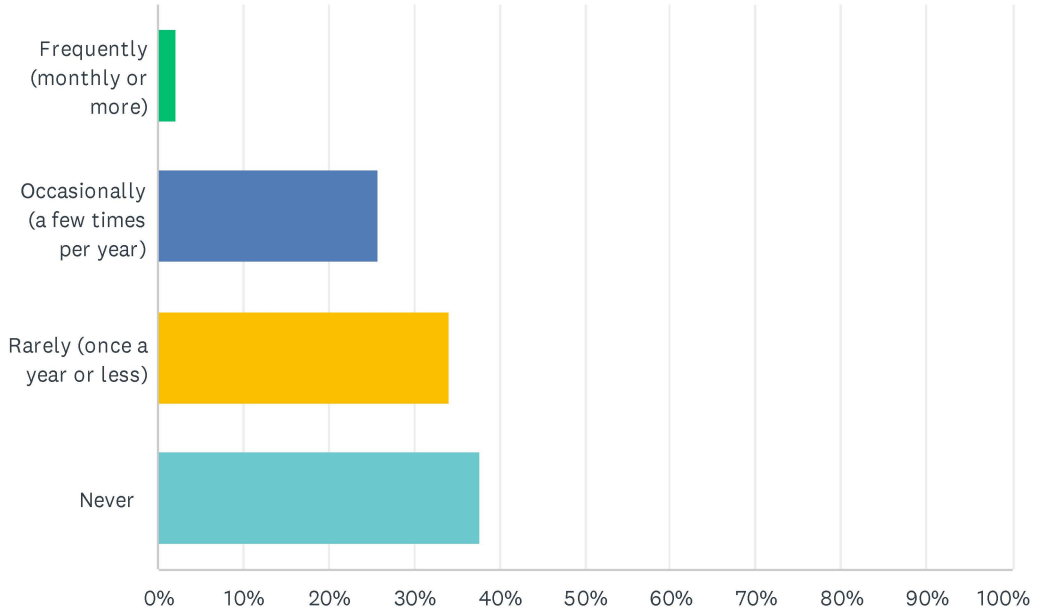
Answered: 731 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes, regularly	62.11%	454
Occasionally	20.93%	153
No, I don't use it	15.05%	110
No, I am a rural resident	1.92%	14
TOTAL		731

Q5 How often do you use the Canborough Waste Management Facility at 499 James Rd in Dunnville?

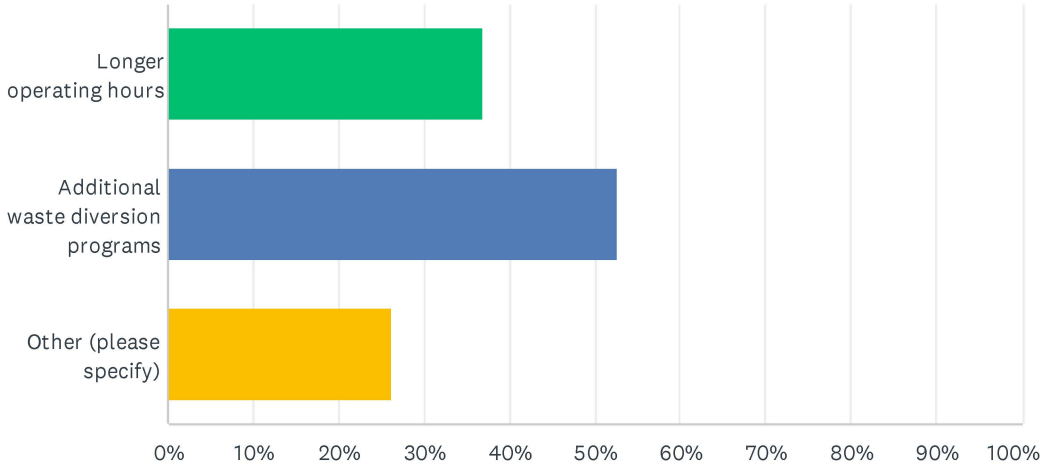
Answered: 722 Skipped: 16



ANSWER CHOICES	RESPONSES	
Frequently (monthly or more)	2.08%	15
Occasionally (a few times per year)	25.90%	187
Rarely (once a year or less)	34.21%	247
Never	37.81%	273
TOTAL		722

Q6 Are there any services you would like to see improved or expanded at Canborough Waste Management Facility? (Select all that apply)

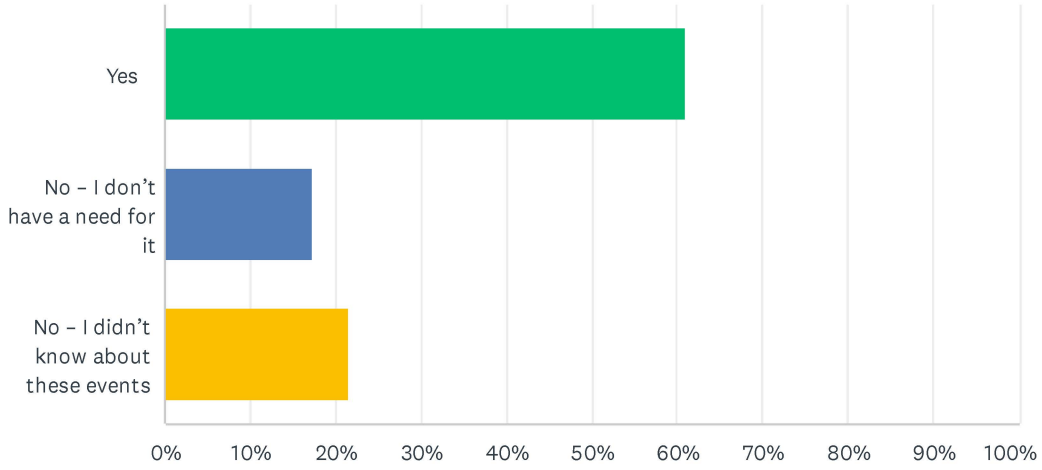
Answered: 415 Skipped: 323



ANSWER CHOICES	RESPONSES	
Longer operating hours	36.87%	153
Additional waste diversion programs	52.77%	219
Other (please specify)	26.27%	109
Total Respondents: 415		

Q7 Currently, hazardous waste is collected through four event days per year. Have you used this service?

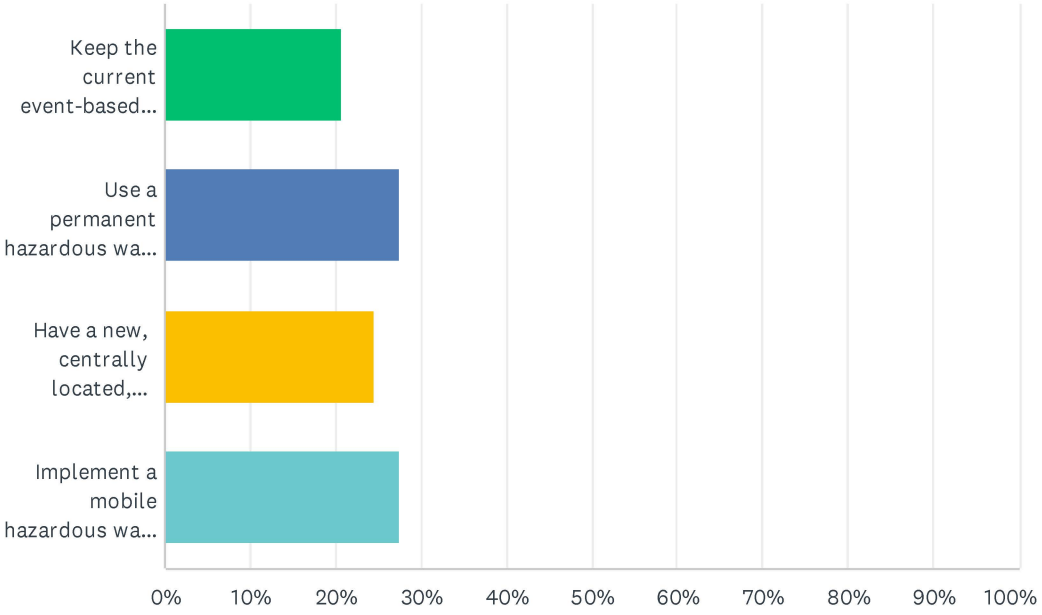
Answered: 714 Skipped: 24



ANSWER CHOICES	RESPONSES	
Yes	61.06%	436
No – I don't have a need for it	17.37%	124
No – I didn't know about these events	21.57%	154
TOTAL		714

Q8 How would you prefer to dispose of household hazardous waste?

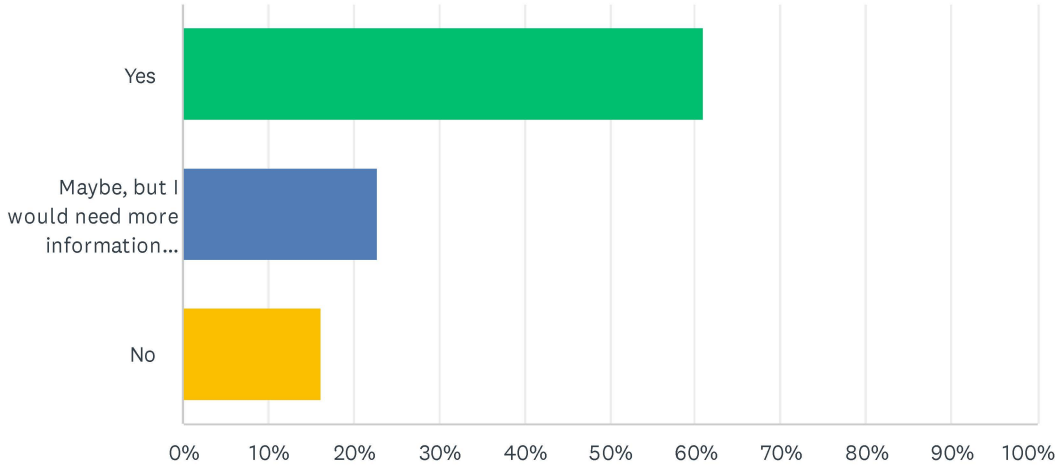
Answered: 708 Skipped: 30



ANSWER CHOICES	RESPONSES	
Keep the current event-based system.	20.76%	147
Use a permanent hazardous waste depot open year-round at the Canborough Waste Management Facility.	27.40%	194
Have a new, centrally located, year-round hazardous waste depot in Haldimand County.	24.44%	173
Implement a mobile hazardous waste collection program that visits different areas more frequently.	27.40%	194
TOTAL		708

Q9 Would you support an organics collection program (e.g., green bin for food waste) if it helped extend the life of local landfills and improve environmental sustainability?

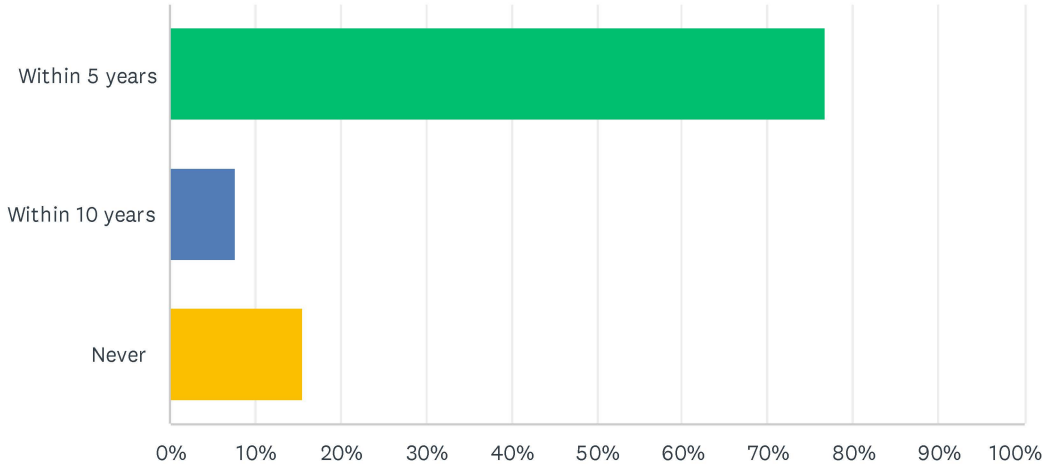
Answered: 708 Skipped: 30



ANSWER CHOICES	RESPONSES	
Yes	61.02%	432
Maybe, but I would need more information about the program	22.74%	161
No	16.24%	115
TOTAL		708

Q10 How soon do you think Haldimand County should implement an organics collection program?

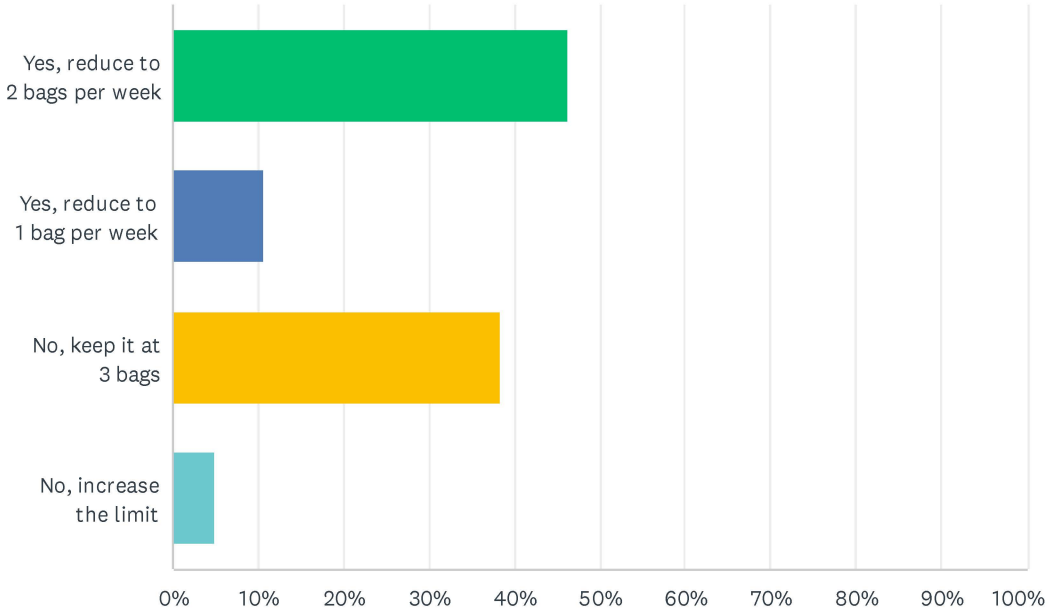
Answered: 698 Skipped: 40



ANSWER CHOICES	RESPONSES	
Within 5 years	76.79%	536
Within 10 years	7.74%	54
Never	15.47%	108
TOTAL		698

Q11 The current bag limit for residential curbside garbage collection is three bags per week. Would you support a reduction in the bag limit if an organics collection program were introduced?

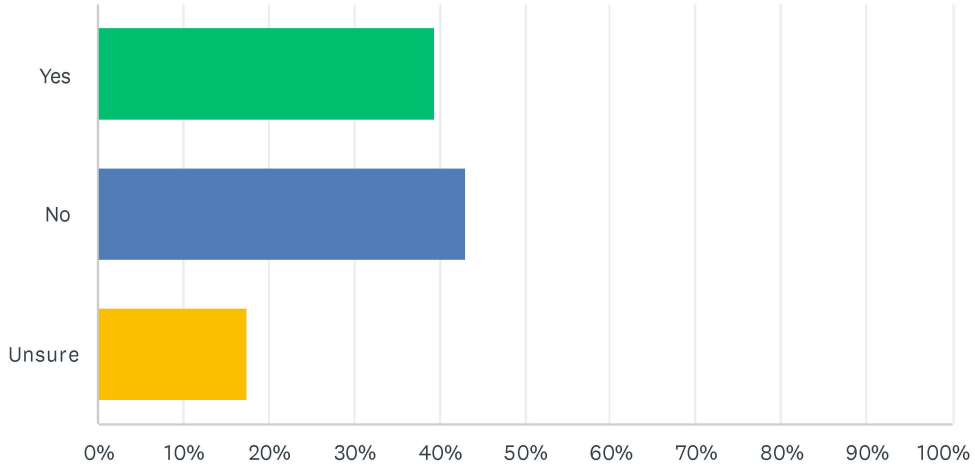
Answered: 708 Skipped: 30



ANSWER CHOICES	RESPONSES	
Yes, reduce to 2 bags per week	46.19%	327
Yes, reduce to 1 bag per week	10.73%	76
No, keep it at 3 bags	38.28%	271
No, increase the limit	4.80%	34
TOTAL		708

Q12 If waste diversion efforts are increased through the implementation of organics collection, thereby reducing the amount of garbage set out each week, would you support a system where residents are charged a fee for any additional garbage bags that exceed the established limit?

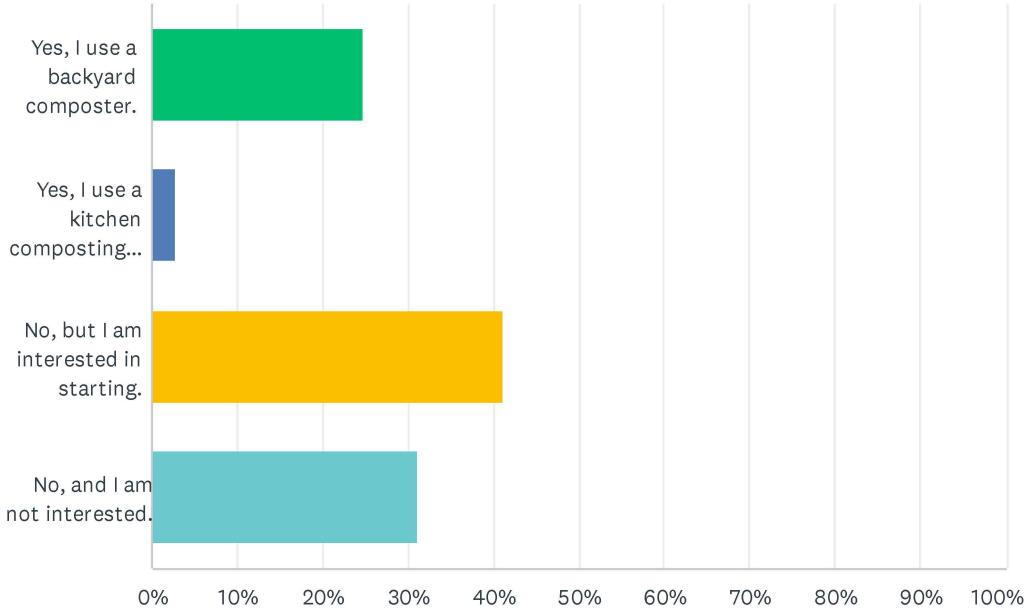
Answered: 708 Skipped: 30



ANSWER CHOICES	RESPONSES	
Yes	39.41%	279
No	43.08%	305
Unsure	17.51%	124
TOTAL		708

Q13 Do you currently compost food waste at home?

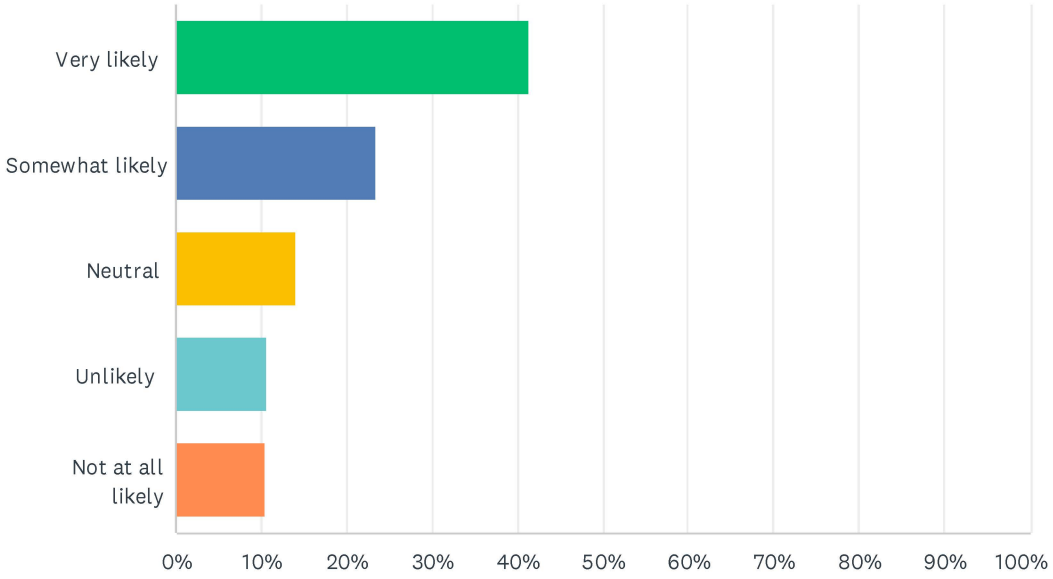
Answered: 709 Skipped: 29



ANSWER CHOICES	RESPONSES	
Yes, I use a backyard composter.	24.82%	176
Yes, I use a kitchen composting appliance (e.g., dehydrator, electric composter).	2.82%	20
No, but I am interested in starting.	41.18%	292
No, and I am not interested.	31.17%	221
TOTAL		709

Q14 If a program were enhanced to support at-home composting or introduced to provide a kitchen food waste reduction appliance (e.g., dehydrator, electric composter), how likely would you be to participate?

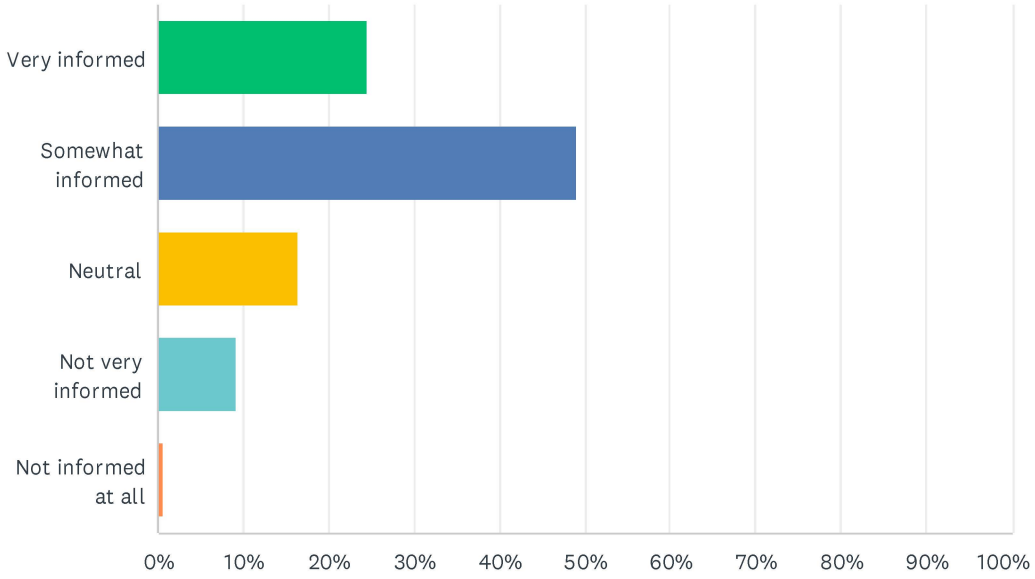
Answered: 707 Skipped: 31



ANSWER CHOICES	RESPONSES	
Very likely	41.44%	293
Somewhat likely	23.48%	166
Neutral	14.00%	99
Unlikely	10.61%	75
Not at all likely	10.47%	74
TOTAL		707

Q15 How informed do you feel about Haldimand County's waste management programs and services?

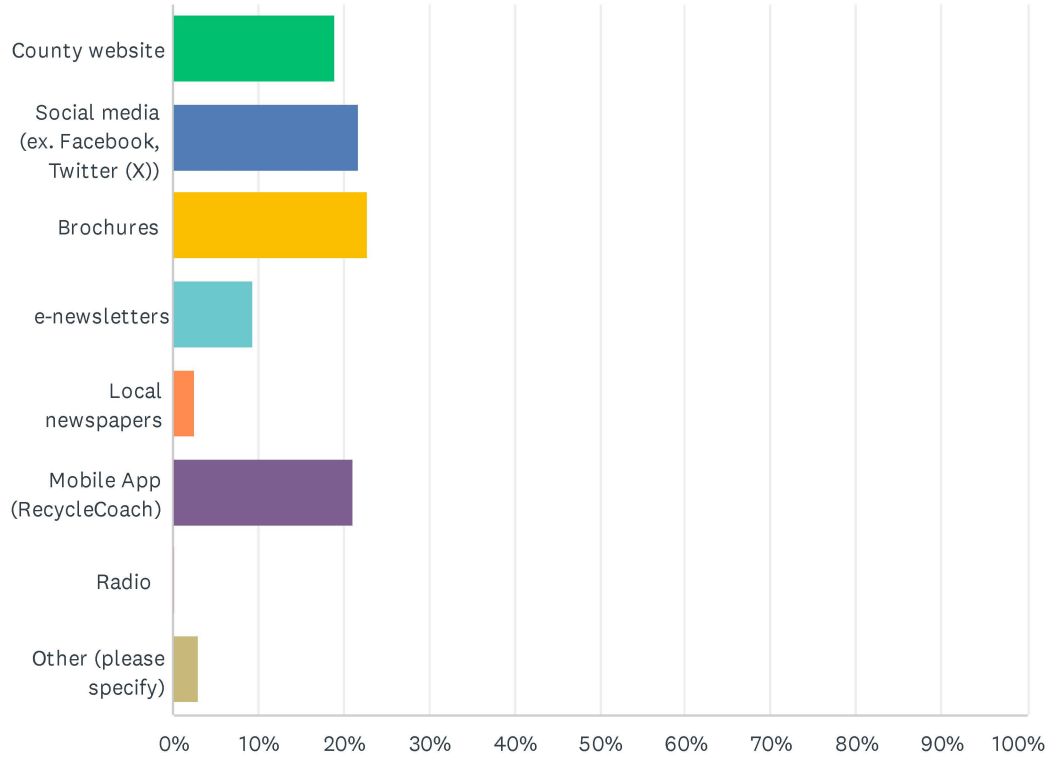
Answered: 702 Skipped: 36



ANSWER CHOICES	RESPONSES	
Very informed	24.50%	172
Somewhat informed	49.15%	345
Neutral	16.38%	115
Not very informed	9.26%	65
Not informed at all	0.71%	5
TOTAL		702

Q16 What is your preferred method for receiving information about waste management programs?

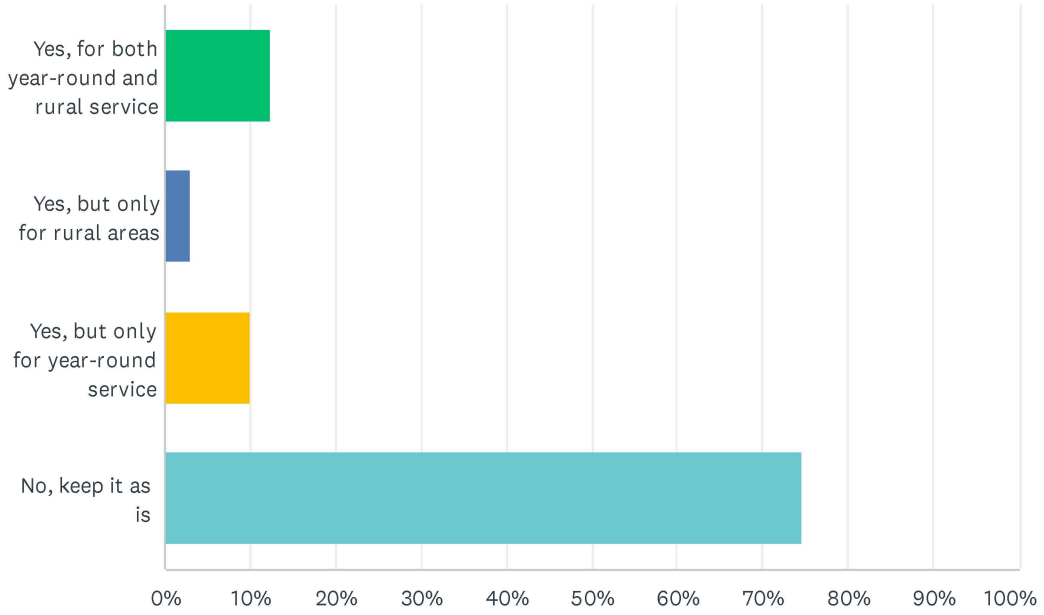
Answered: 697 Skipped: 41



ANSWER CHOICES	RESPONSES	
County website	19.08%	133
Social media (ex. Facebook, Twitter (X))	21.81%	152
Brochures	22.81%	159
e-newsletters	9.47%	66
Local newspapers	2.58%	18
Mobile App (RecycleCoach)	21.09%	147
Radio	0.14%	1
Other (please specify)	3.01%	21
TOTAL		697

Q17 Would you support a tax increase to expand the yard waste collection program (e.g., extending the service year-round or to rural areas)?

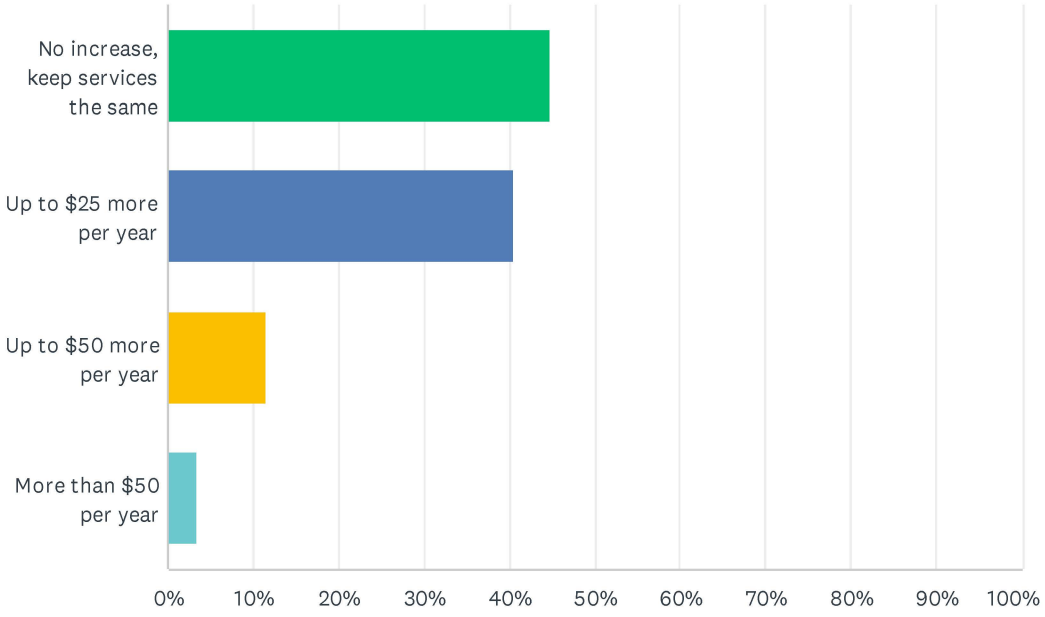
Answered: 692 Skipped: 46



ANSWER CHOICES	RESPONSES	
Yes, for both year-round and rural service	12.43%	86
Yes, but only for rural areas	2.89%	20
Yes, but only for year-round service	9.97%	69
No, keep it as is	74.71%	517
TOTAL		692

Q18 If enhanced waste diversion programs (e.g., organics collection, increased yard waste collection, more frequent hazardous waste disposal) required a tax increase, how much would you be willing to pay?

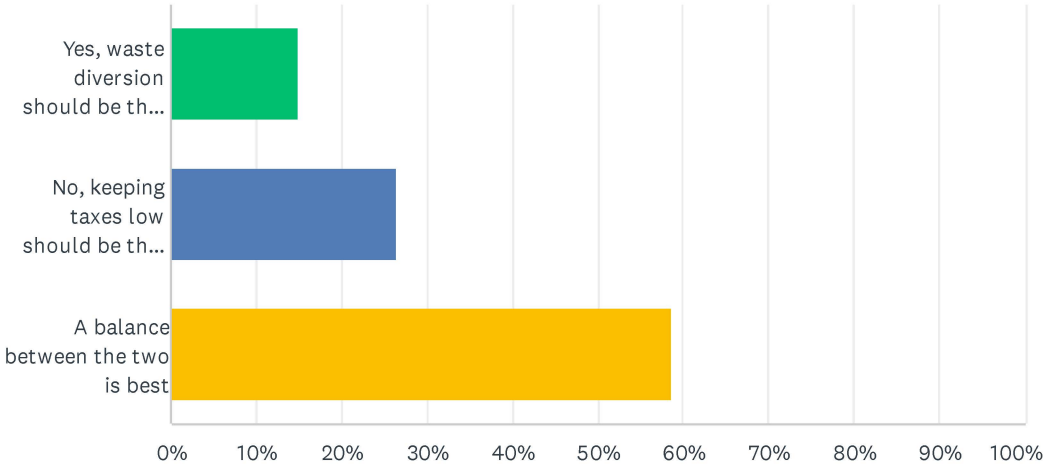
Answered: 691 Skipped: 47



ANSWER CHOICES	RESPONSES	
No increase, keep services the same	44.72%	309
Up to $25 more per year	40.52%	280
Up to $50 more per year	11.43%	79
More than $50 per year	3.33%	23
TOTAL		691

Q19 Do you think Haldimand County should prioritize keeping waste from landfills over keeping tax rates low?

Answered: 695 Skipped: 43



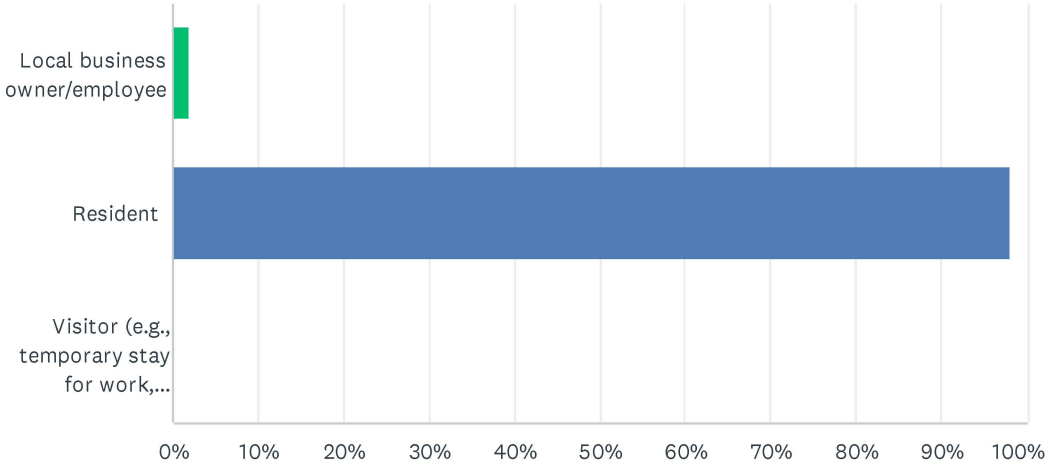
ANSWER CHOICES	RESPONSES	
Yes, waste diversion should be the priority	14.96%	104
No, keeping taxes low should be the priority	26.47%	184
A balance between the two is best	58.56%	407
TOTAL		695

Q20 Do you have any additional comments or suggestions on how Haldimand County should improve waste management services?

Answered: 239 Skipped: 499

Q21 Are you using the waste system as a:

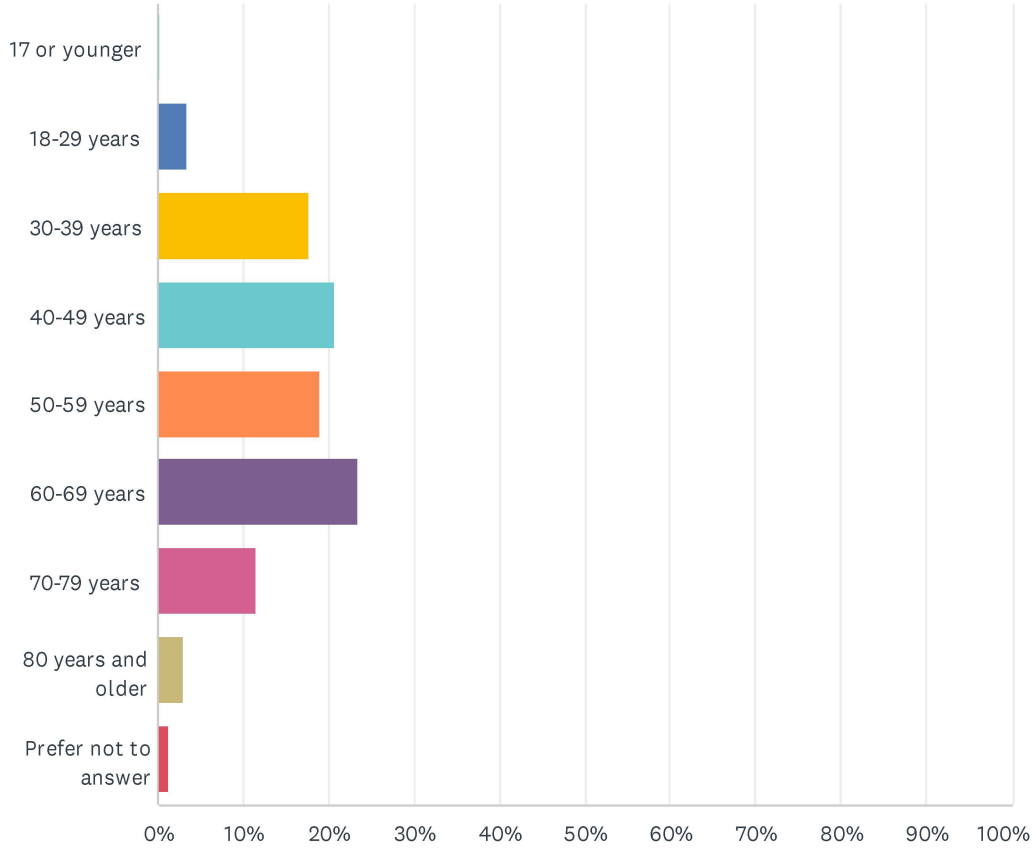
Answered: 690 Skipped: 48



ANSWER CHOICES	RESPONSES	
Local business owner/employee	1.88%	13
Resident	98.12%	677
Visitor (e.g., temporary stay for work, tourism, or visiting family/friends)	0.00%	0
TOTAL		690

Q22 What is your age?

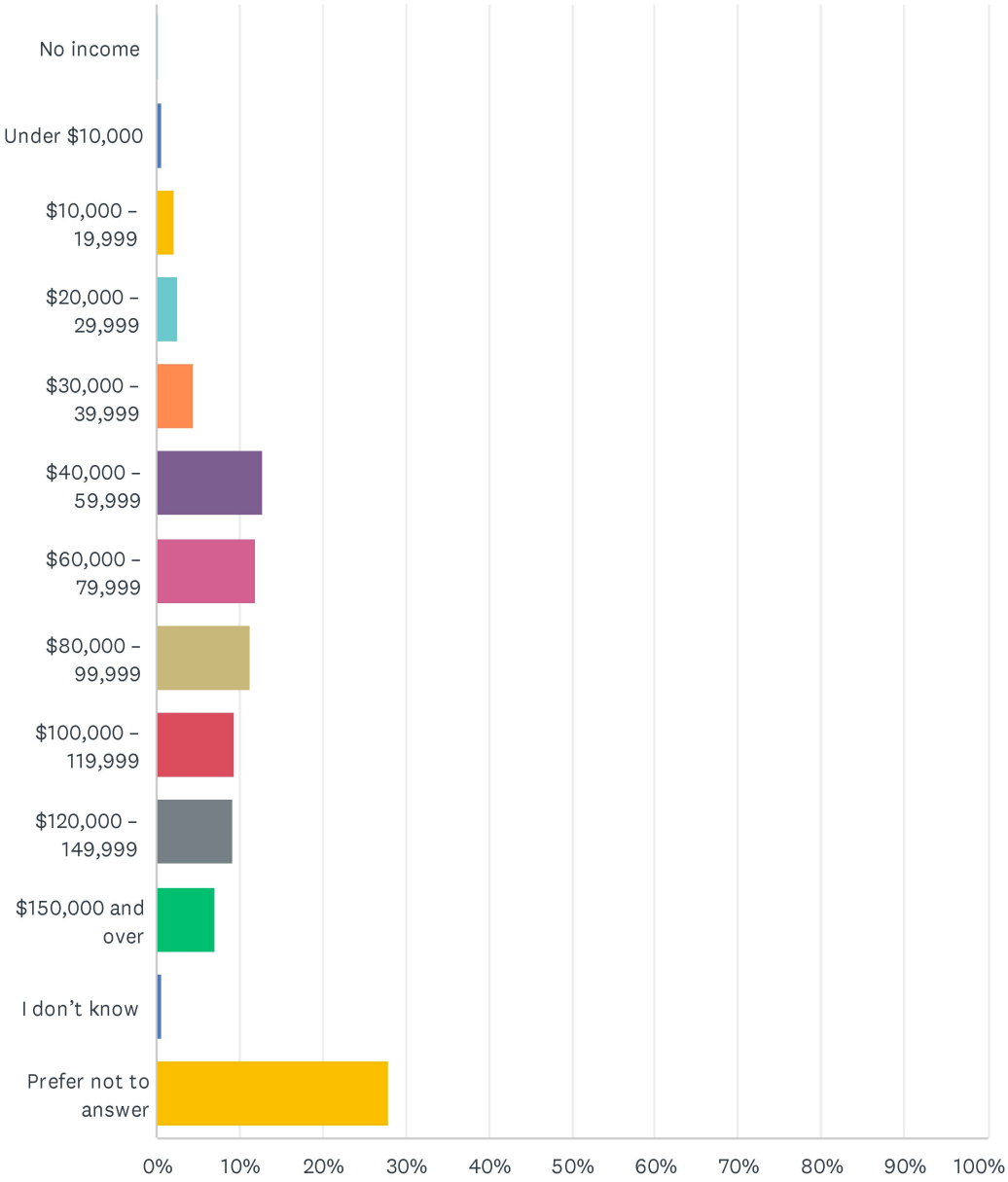
Answered: 692 Skipped: 46



ANSWER CHOICES	RESPONSES	
17 or younger	0.14%	1
18-29 years	3.47%	24
30-39 years	17.63%	122
40-49 years	20.66%	143
50-59 years	18.93%	131
60-69 years	23.41%	162
70-79 years	11.56%	80
80 years and older	2.89%	20
Prefer not to answer	1.30%	9
TOTAL		692

Q23 What is your total personal annual income before taxes from all sources?

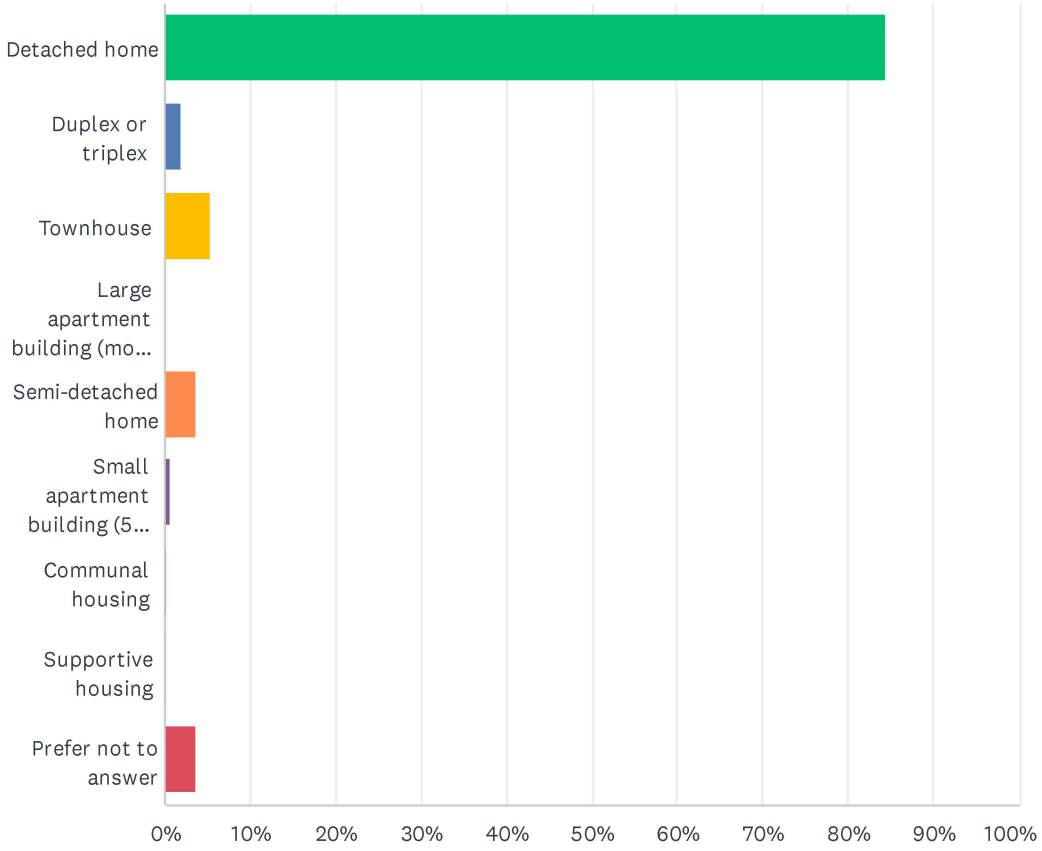
Answered: 686 Skipped: 52



ANSWER CHOICES	RESPONSES	
No income	0.29%	2
Under $10,000	0.73%	5
$10,000 – 19,999	2.04%	14
$20,000 – 29,999	2.62%	18
$30,000 – 39,999	4.37%	30
$40,000 – 59,999	12.83%	88
$60,000 – 79,999	11.95%	82
$80,000 – 99,999	11.22%	77
$100,000 – 119,999	9.33%	64
$120,000 – 149,999	9.18%	63
$150,000 and over	7.00%	48
I don’t know	0.58%	4
Prefer not to answer	27.84%	191
TOTAL		686

Q24 What type of residence do you live in?

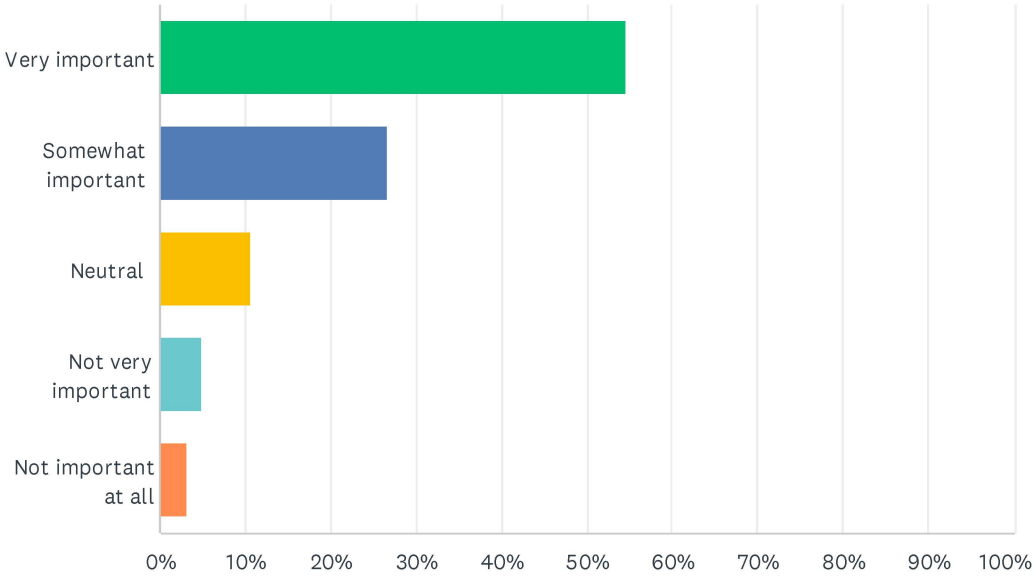
Answered: 688 Skipped: 50



ANSWER CHOICES	RESPONSES	
Detached home	84.45%	581
Duplex or triplex	1.89%	13
Townhouse	5.38%	37
Large apartment building (more than 5 floors)	0.00%	0
Semi-detached home	3.63%	25
Small apartment building (5 floors or less)	0.73%	5
Communal housing	0.15%	1
Supportive housing	0.15%	1
Prefer not to answer	3.63%	25
TOTAL		688

Q1 How important is increasing waste diversion (reducing landfill waste through recycling, composting, etc.) to you?

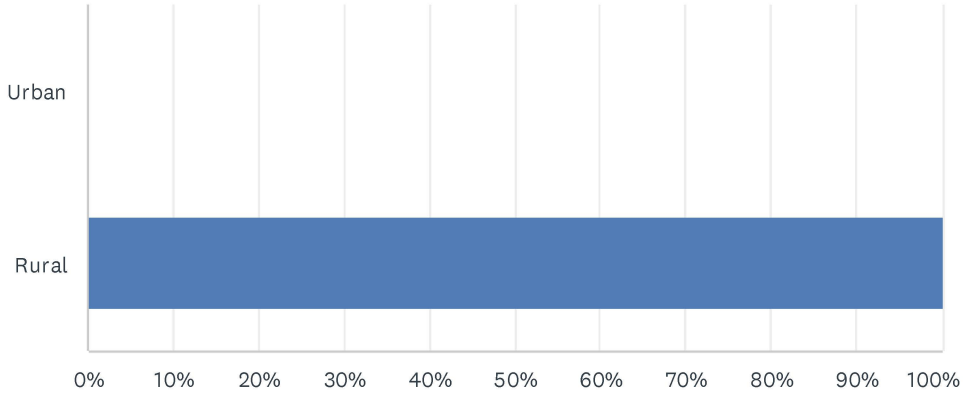
Answered: 546 Skipped: 1



ANSWER CHOICES	RESPONSES	
Very important	54.58%	298
Somewhat important	26.74%	146
Neutral	10.62%	58
Not very important	4.95%	27
Not important at all	3.11%	17
TOTAL		546

Q2 Are you responding for an URBAN or RURAL property? Please check one. If you are unsure of the answer, please click here to open a County map with those boundaries outlined.

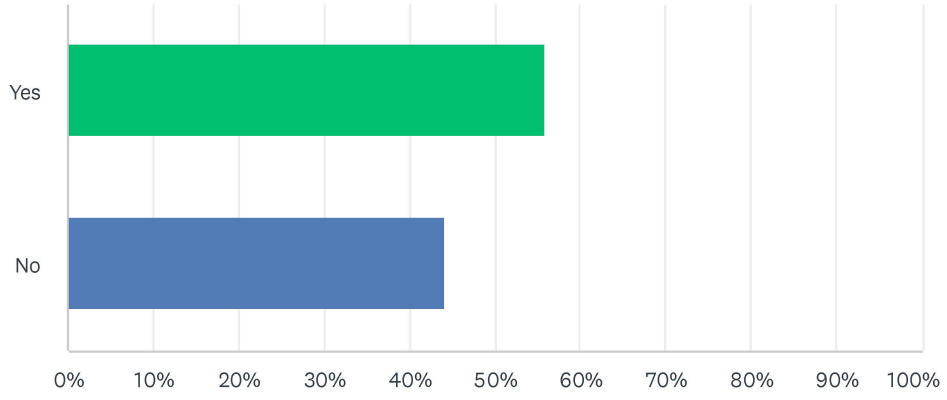
Answered: 547 Skipped: 0



ANSWER CHOICES	RESPONSES	
Urban	0.00%	0
Rural	100.00%	547
TOTAL		547

Q3 If curbside yard waste collection were expanded to rural areas, would you use it?

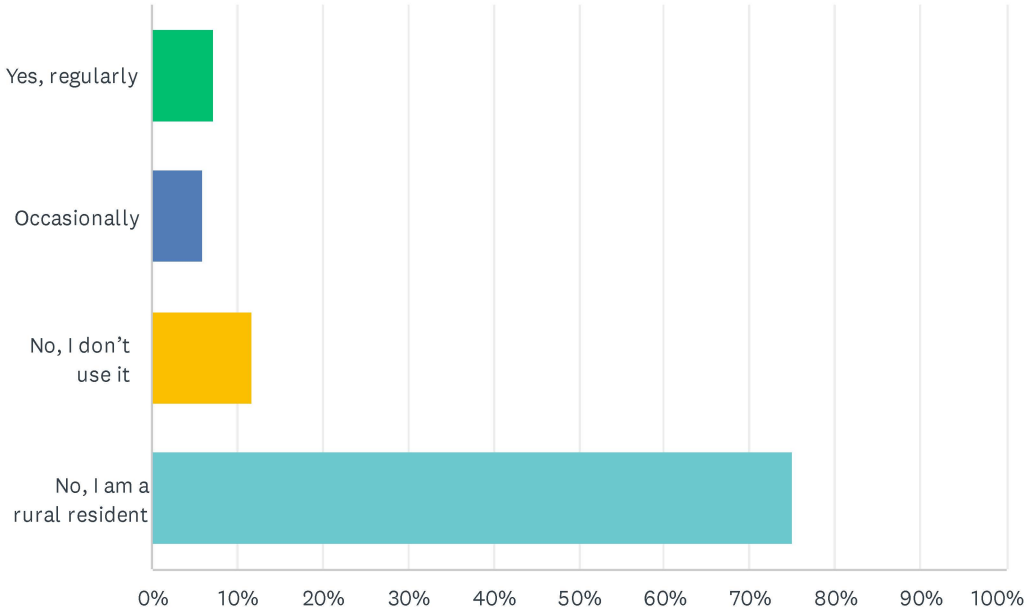
Answered: 538 Skipped: 9



ANSWER CHOICES	RESPONSES	
Yes	55.95%	301
No	44.05%	237
TOTAL		538

Q4 Do you use the current 11-week curbside yard waste collection program available in urban areas?

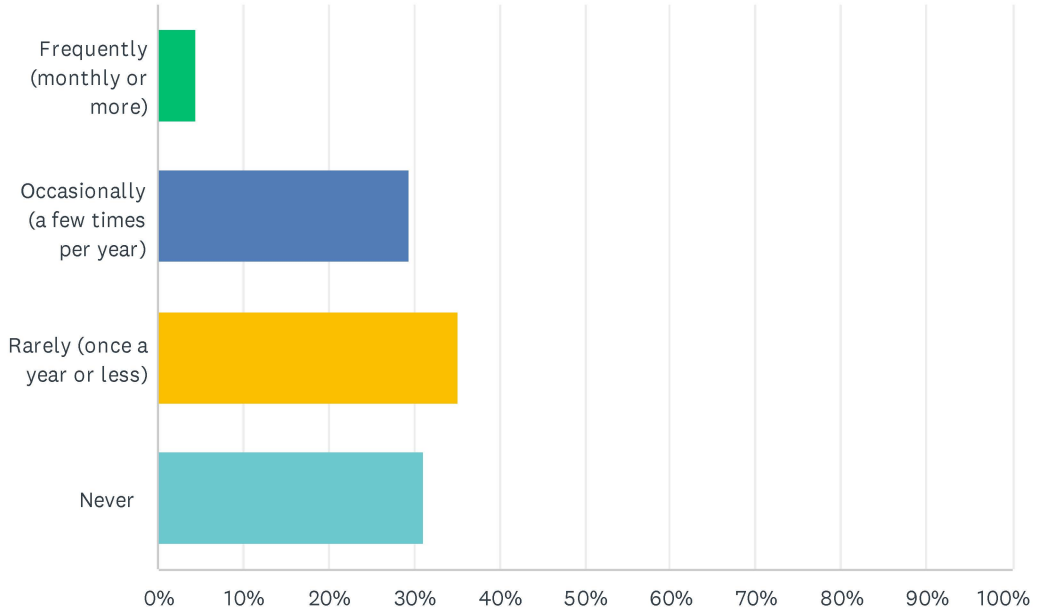
Answered: 529 Skipped: 18



ANSWER CHOICES	RESPONSES	
Yes, regularly	7.18%	38
Occasionally	6.05%	32
No, I don't use it	11.72%	62
No, I am a rural resident	75.05%	397
TOTAL		529

Q5 How often do you use the Canborough Waste Management Facility at 499 James Rd in Dunnville?

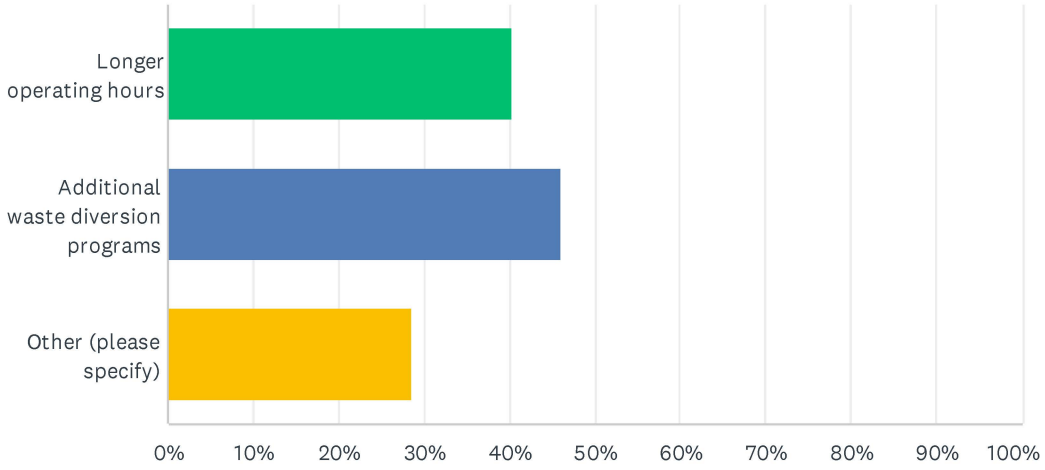
Answered: 521 Skipped: 26



ANSWER CHOICES	RESPONSES	
Frequently (monthly or more)	4.41%	23
Occasionally (a few times per year)	29.37%	153
Rarely (once a year or less)	35.12%	183
Never	31.09%	162
TOTAL		521

Q6 Are there any services you would like to see improved or expanded at Canborough Waste Management Facility? (Select all that apply)

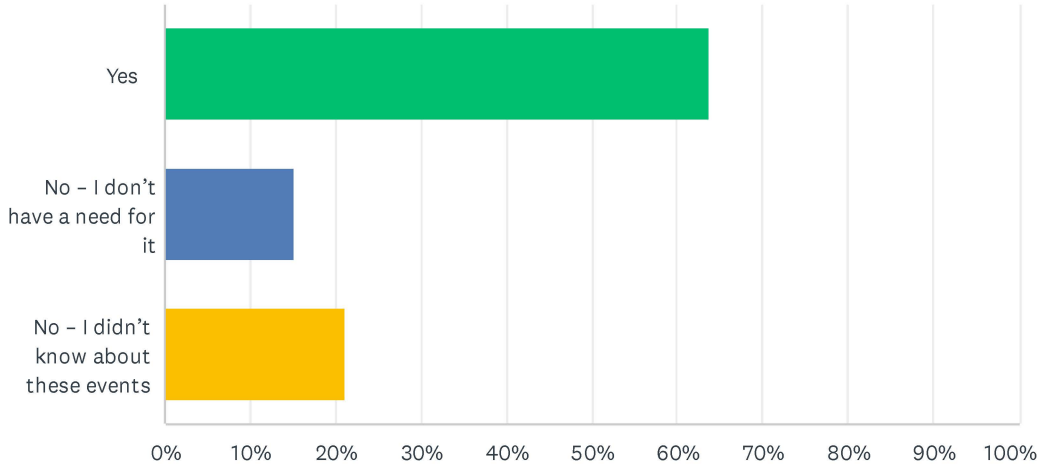
Answered: 297 Skipped: 250



ANSWER CHOICES	RESPONSES	
Longer operating hours	40.40%	120
Additional waste diversion programs	46.13%	137
Other (please specify)	28.62%	85
Total Respondents: 297		

Q7 Currently, hazardous waste is collected through four event days per year. Have you used this service?

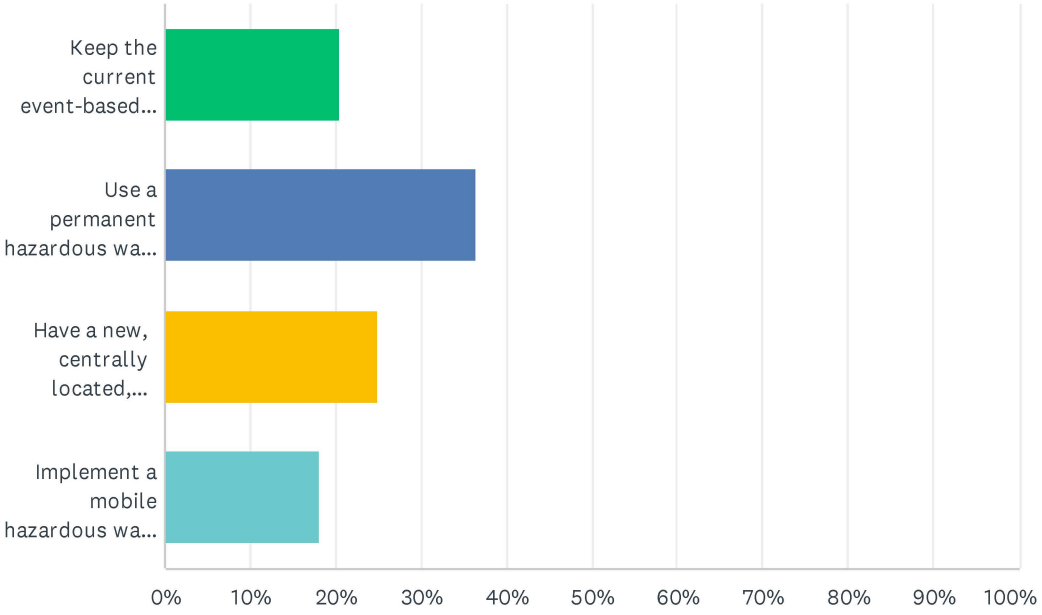
Answered: 514 Skipped: 33



ANSWER CHOICES	RESPONSES	
Yes	63.81%	328
No – I don't have a need for it	15.18%	78
No – I didn't know about these events	21.01%	108
TOTAL		514

Q8 How would you prefer to dispose of household hazardous waste?

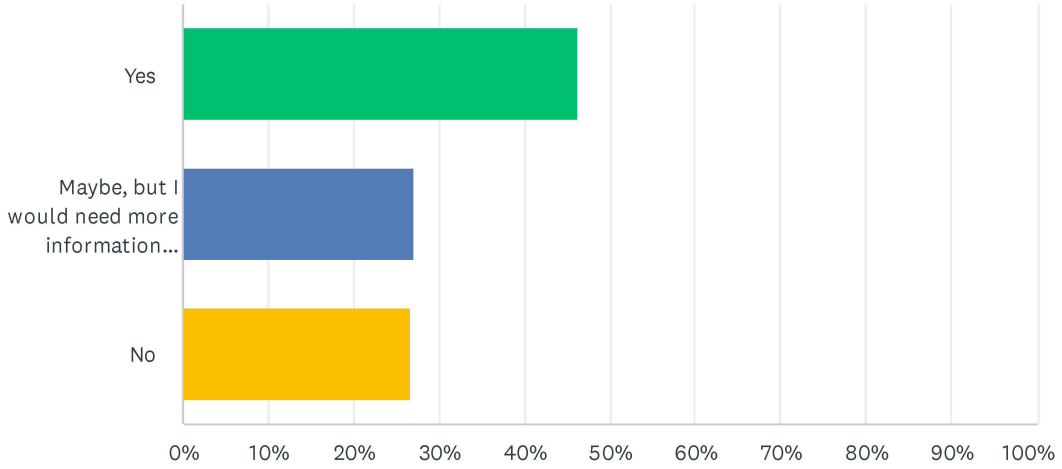
Answered: 508 Skipped: 39



ANSWER CHOICES	RESPONSES	
Keep the current event-based system.	20.47%	104
Use a permanent hazardous waste depot open year-round at the Canborough Waste Management Facility.	36.42%	185
Have a new, centrally located, year-round hazardous waste depot in Haldimand County.	25.00%	127
Implement a mobile hazardous waste collection program that visits different areas more frequently.	18.11%	92
TOTAL		508

Q9 Would you support an organics collection program (e.g., green bin for food waste) if it helped extend the life of local landfills and improve environmental sustainability?

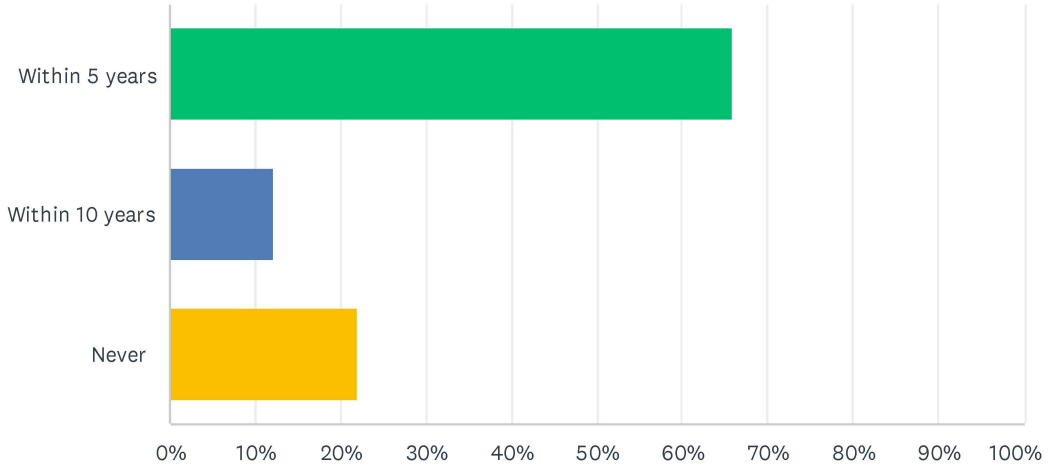
Answered: 509 Skipped: 38



ANSWER CHOICES	RESPONSES	
Yes	46.17%	235
Maybe, but I would need more information about the program	27.11%	138
No	26.72%	136
TOTAL		509

Q10 How soon do you think Haldimand County should implement an organics collection program?

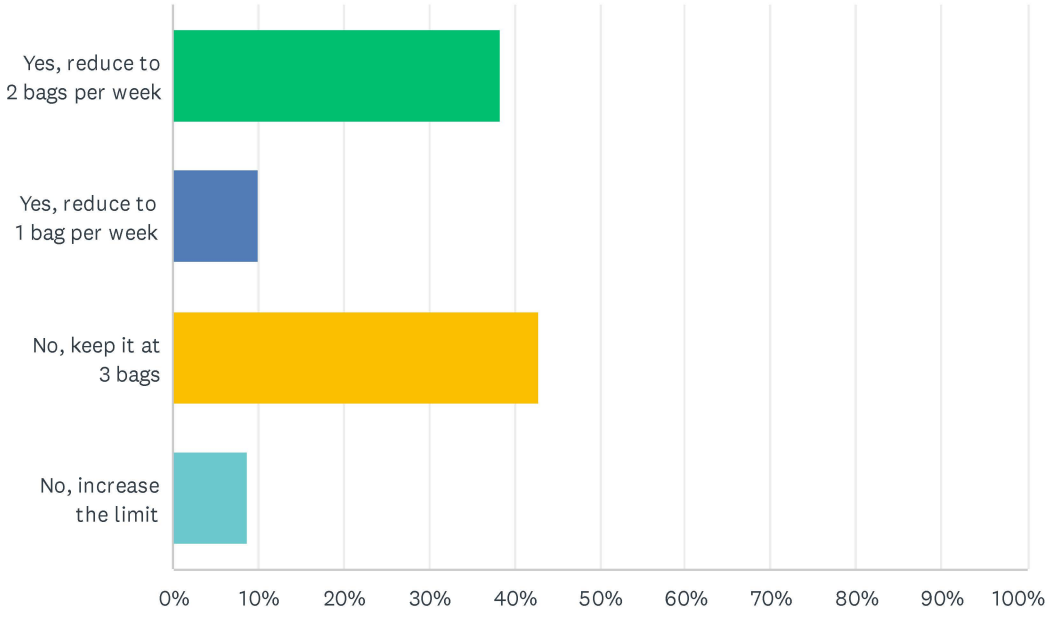
Answered: 502 Skipped: 45



ANSWER CHOICES	RESPONSES	
Within 5 years	65.94%	331
Within 10 years	12.15%	61
Never	21.91%	110
TOTAL		502

Q11 The current bag limit for residential curbside garbage collection is three bags per week. Would you support a reduction in the bag limit if an organics collection program were introduced?

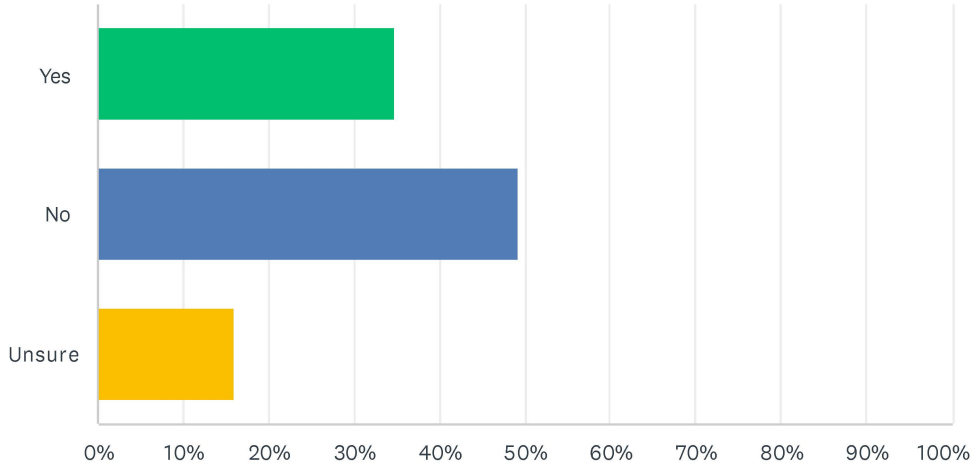
Answered: 503 Skipped: 44



ANSWER CHOICES	RESPONSES	
Yes, reduce to 2 bags per week	38.37%	193
Yes, reduce to 1 bag per week	9.94%	50
No, keep it at 3 bags	42.94%	216
No, increase the limit	8.75%	44
TOTAL		503

Q12 If waste diversion efforts are increased through the implementation of organics collection, thereby reducing the amount of garbage set out each week, would you support a system where residents are charged a fee for any additional garbage bags that exceed the established limit?

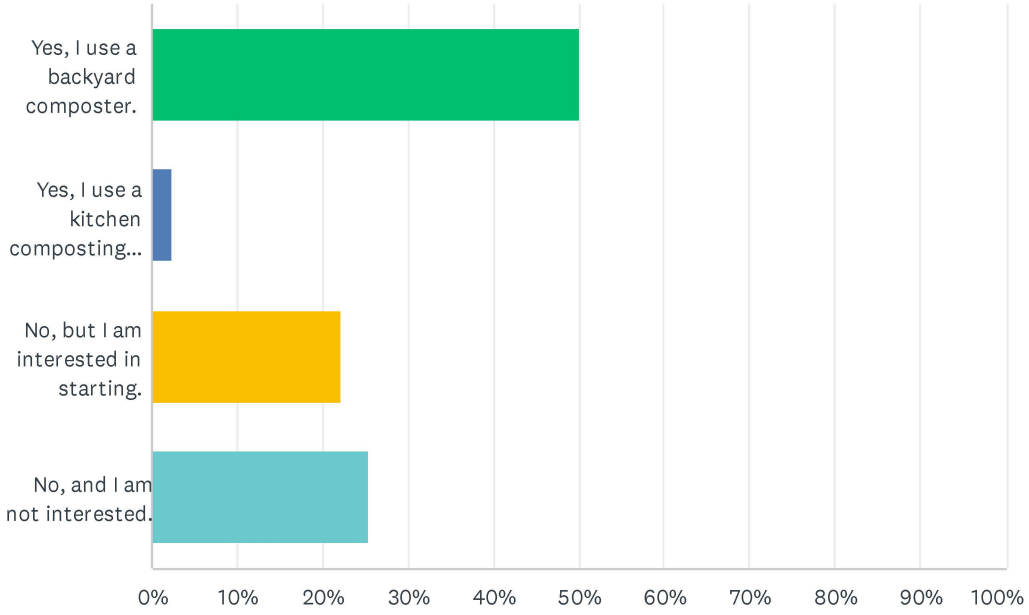
Answered: 508 Skipped: 39



ANSWER CHOICES	RESPONSES	
Yes	34.84%	177
No	49.21%	250
Unsure	15.94%	81
TOTAL		508

Q13 Do you currently compost food waste at home?

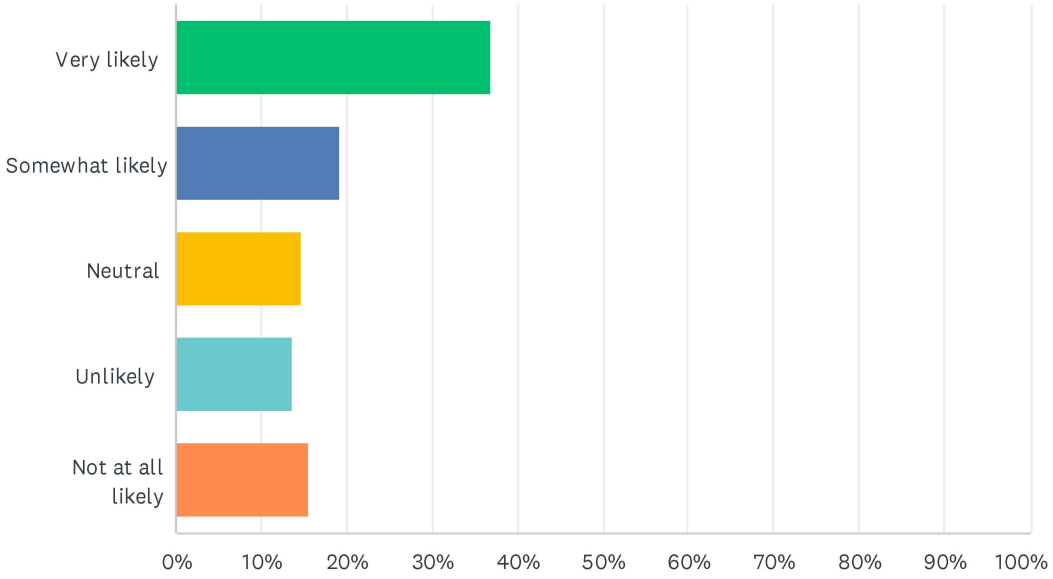
Answered: 509 Skipped: 38



ANSWER CHOICES	RESPONSES	
Yes, I use a backyard composter.	50.10%	255
Yes, I use a kitchen composting appliance (e.g., dehydrator, electric composter).	2.36%	12
No, but I am interested in starting.	22.20%	113
No, and I am not interested.	25.34%	129
TOTAL		509

Q14 If a program were enhanced to support at-home composting or introduced to provide a kitchen food waste reduction appliance (e.g., dehydrator, electric composter), how likely would you be to participate?

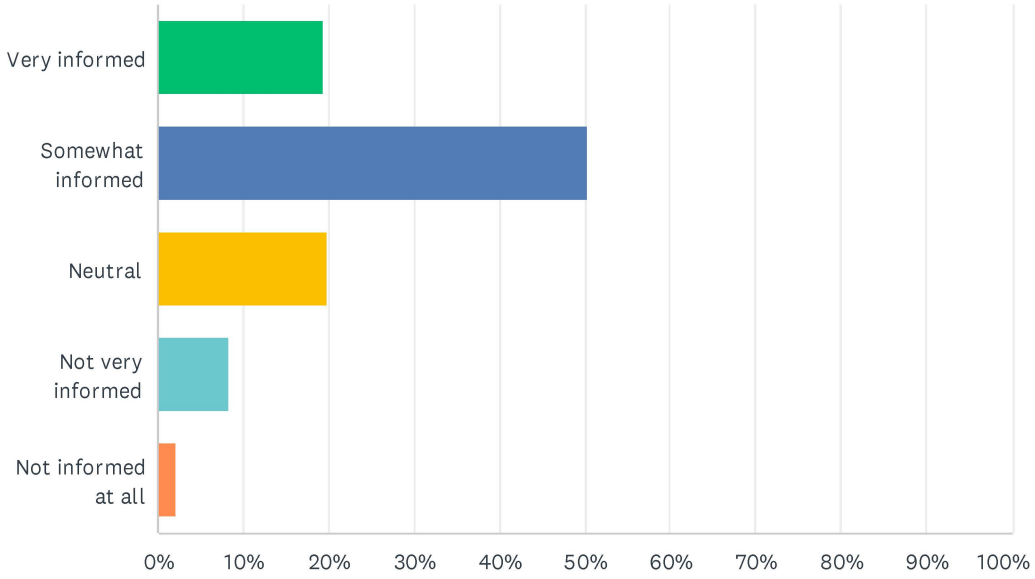
Answered: 509 Skipped: 38



ANSWER CHOICES	RESPONSES	
Very likely	36.94%	188
Somewhat likely	19.25%	98
Neutral	14.73%	75
Unlikely	13.56%	69
Not at all likely	15.52%	79
TOTAL		509

Q15 How informed do you feel about Haldimand County's waste management programs and services?

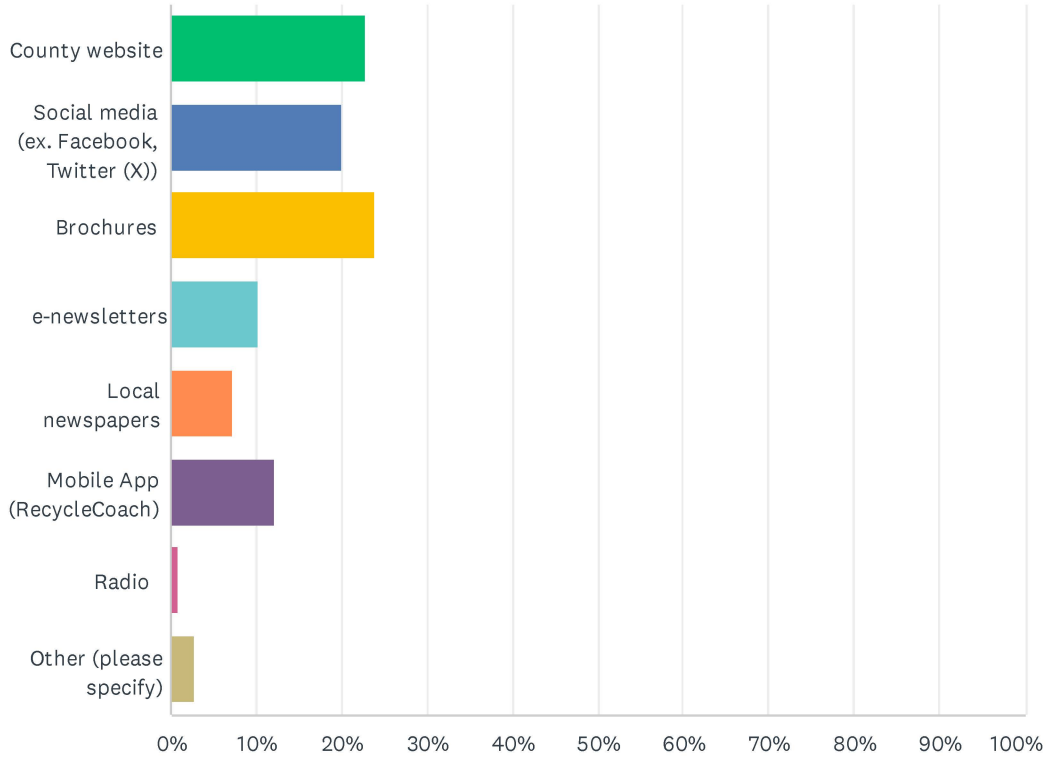
Answered: 506 Skipped: 41



ANSWER CHOICES	RESPONSES	
Very informed	19.37%	98
Somewhat informed	50.40%	255
Neutral	19.76%	100
Not very informed	8.30%	42
Not informed at all	2.17%	11
TOTAL		506

Q16 What is your preferred method for receiving information about waste management programs?

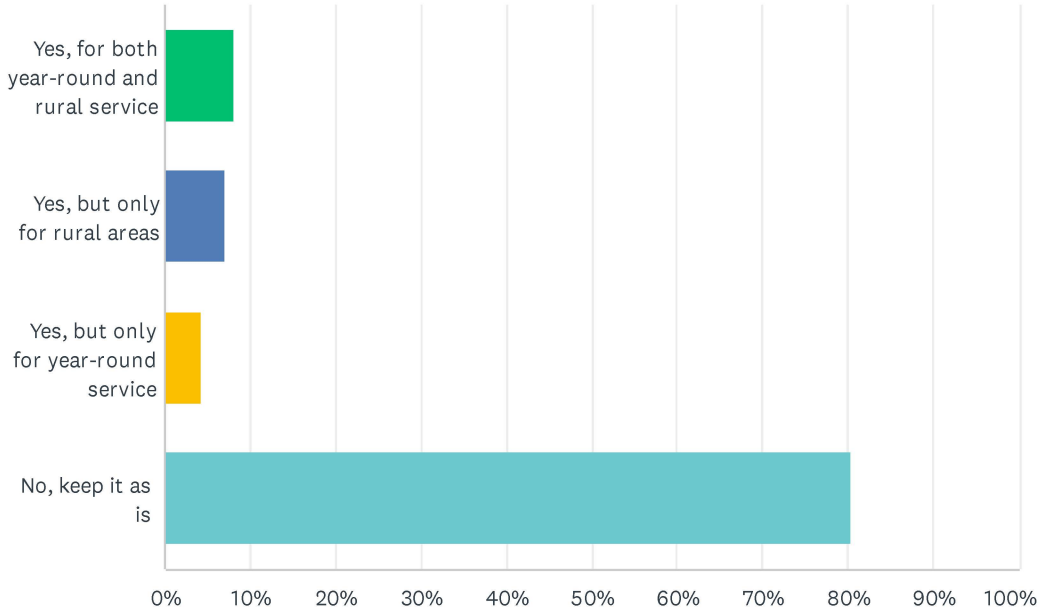
Answered: 505 Skipped: 42



ANSWER CHOICES	RESPONSES	
County website	22.77%	115
Social media (ex. Facebook, Twitter (X))	20.00%	101
Brochures	23.96%	121
e-newsletters	10.30%	52
Local newspapers	7.33%	37
Mobile App (RecycleCoach)	12.08%	61
Radio	0.79%	4
Other (please specify)	2.77%	14
TOTAL		505

Q17 Would you support a tax increase to expand the yard waste collection program (e.g., extending the service year-round or to rural areas)?

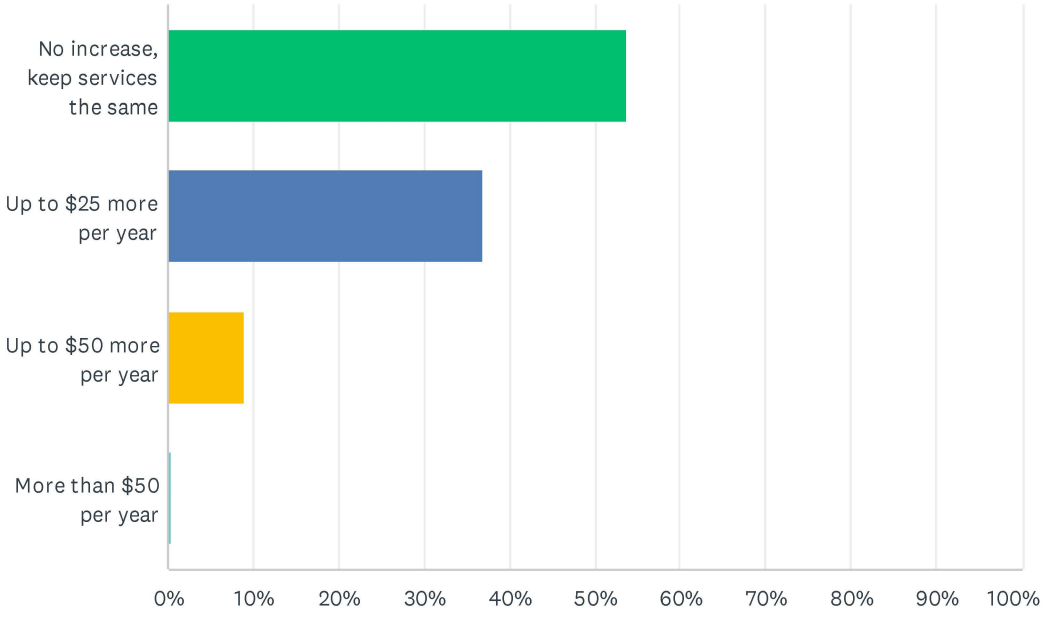
Answered: 492 Skipped: 55



ANSWER CHOICES	RESPONSES	
Yes, for both year-round and rural service	8.13%	40
Yes, but only for rural areas	7.11%	35
Yes, but only for year-round service	4.27%	21
No, keep it as is	80.49%	396
TOTAL		492

Q18 If enhanced waste diversion programs (e.g., organics collection, increased yard waste collection, more frequent hazardous waste disposal) required a tax increase, how much would you be willing to pay?

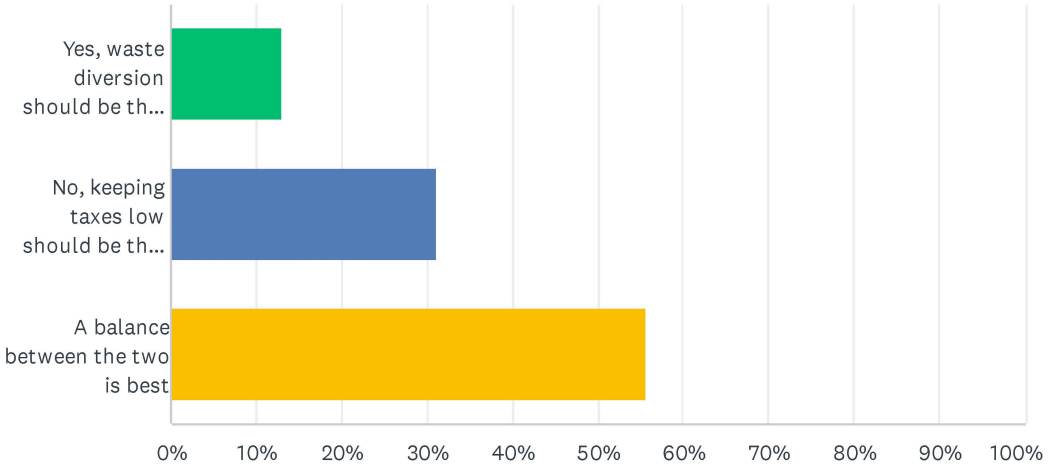
Answered: 492 Skipped: 55



ANSWER CHOICES	RESPONSES	
No increase, keep services the same	53.66%	264
Up to $25 more per year	36.99%	182
Up to $50 more per year	8.94%	44
More than $50 per year	0.41%	2
TOTAL		492

Q19 Do you think Haldimand County should prioritize keeping waste from landfills over keeping tax rates low?

Answered: 497 Skipped: 50



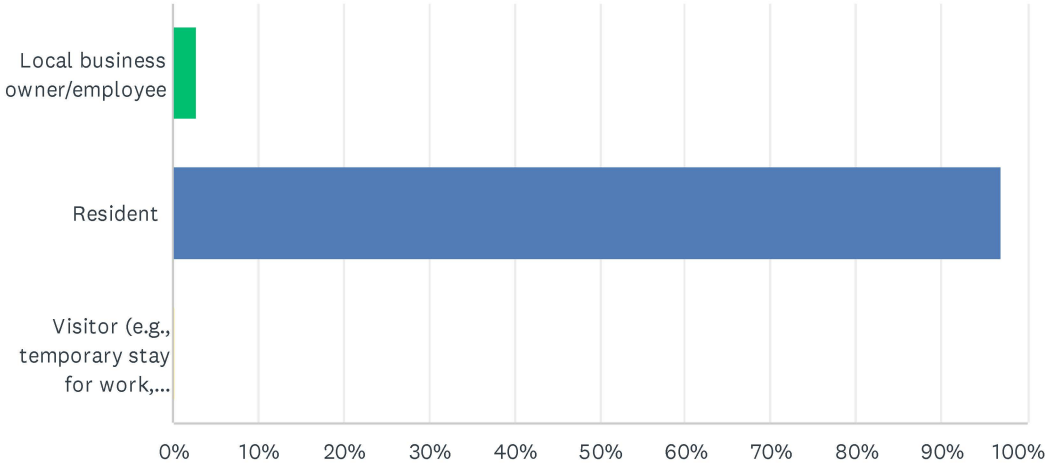
ANSWER CHOICES	RESPONSES	
Yes, waste diversion should be the priority	13.08%	65
No, keeping taxes low should be the priority	31.19%	155
A balance between the two is best	55.73%	277
TOTAL		497

Q20 Do you have any additional comments or suggestions on how Haldimand County should improve waste management services?

Answered: 168 Skipped: 379

Q21 Are you using the waste system as a:

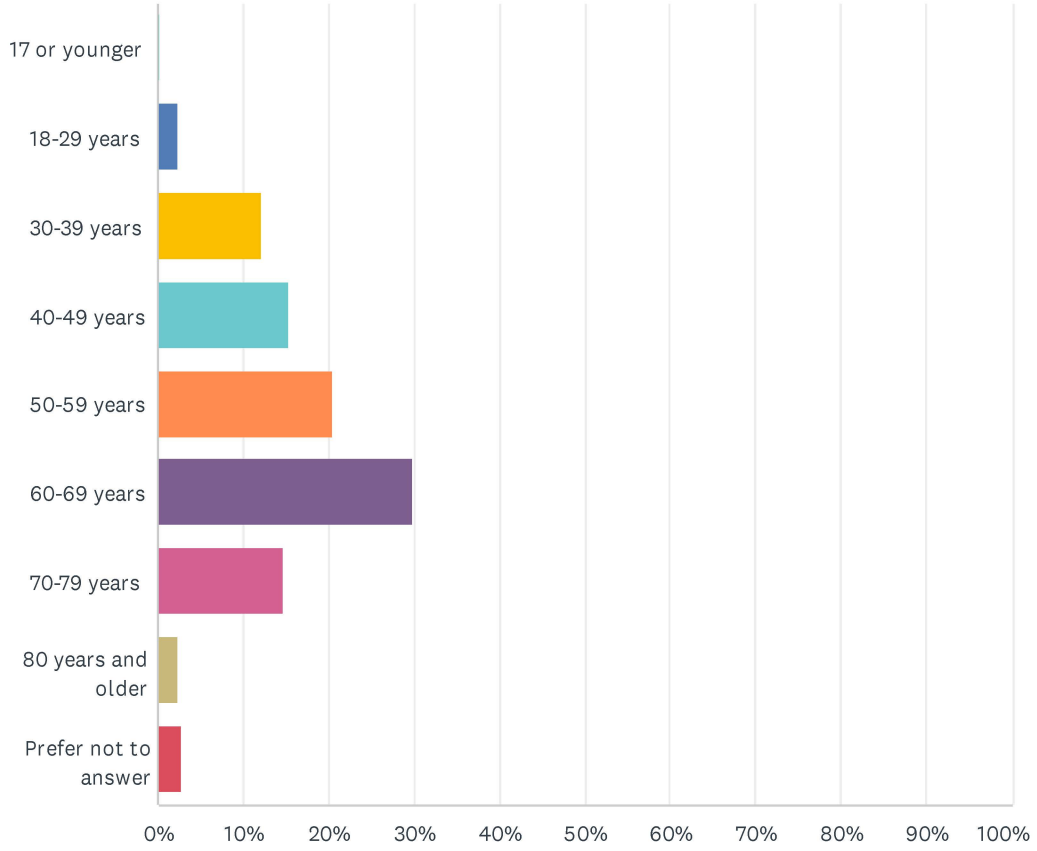
Answered: 481 Skipped: 66



ANSWER CHOICES	RESPONSES	
Local business owner/employee	2.70%	13
Resident	97.09%	467
Visitor (e.g., temporary stay for work, tourism, or visiting family/friends)	0.21%	1
TOTAL		481

Q22 What is your age?

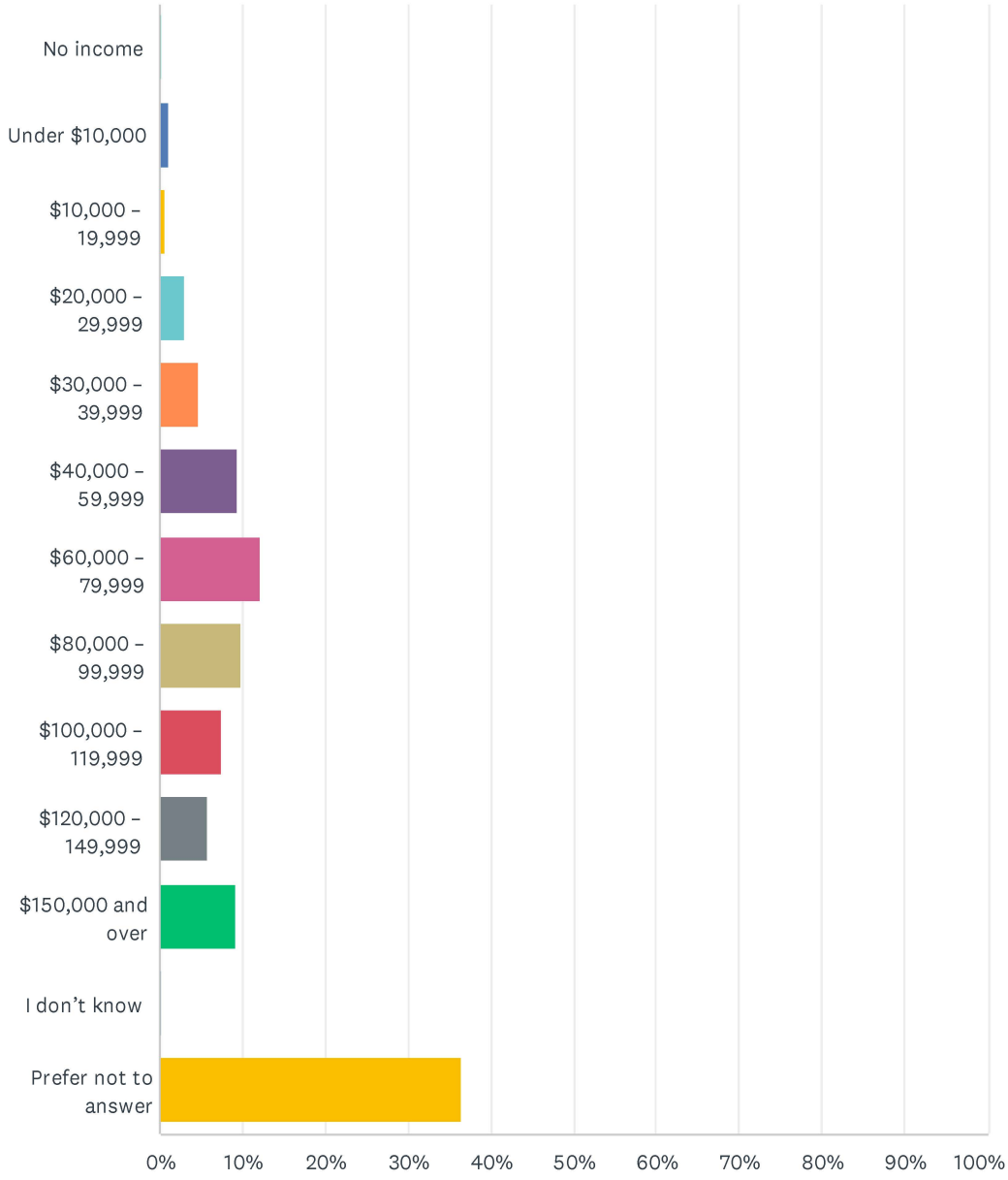
Answered: 486 Skipped: 61



ANSWER CHOICES	RESPONSES	
17 or younger	0.21%	1
18-29 years	2.26%	11
30-39 years	12.14%	59
40-49 years	15.43%	75
50-59 years	20.37%	99
60-69 years	29.84%	145
70-79 years	14.81%	72
80 years and older	2.26%	11
Prefer not to answer	2.67%	13
TOTAL		486

Q23 What is your total personal annual income before taxes from all sources?

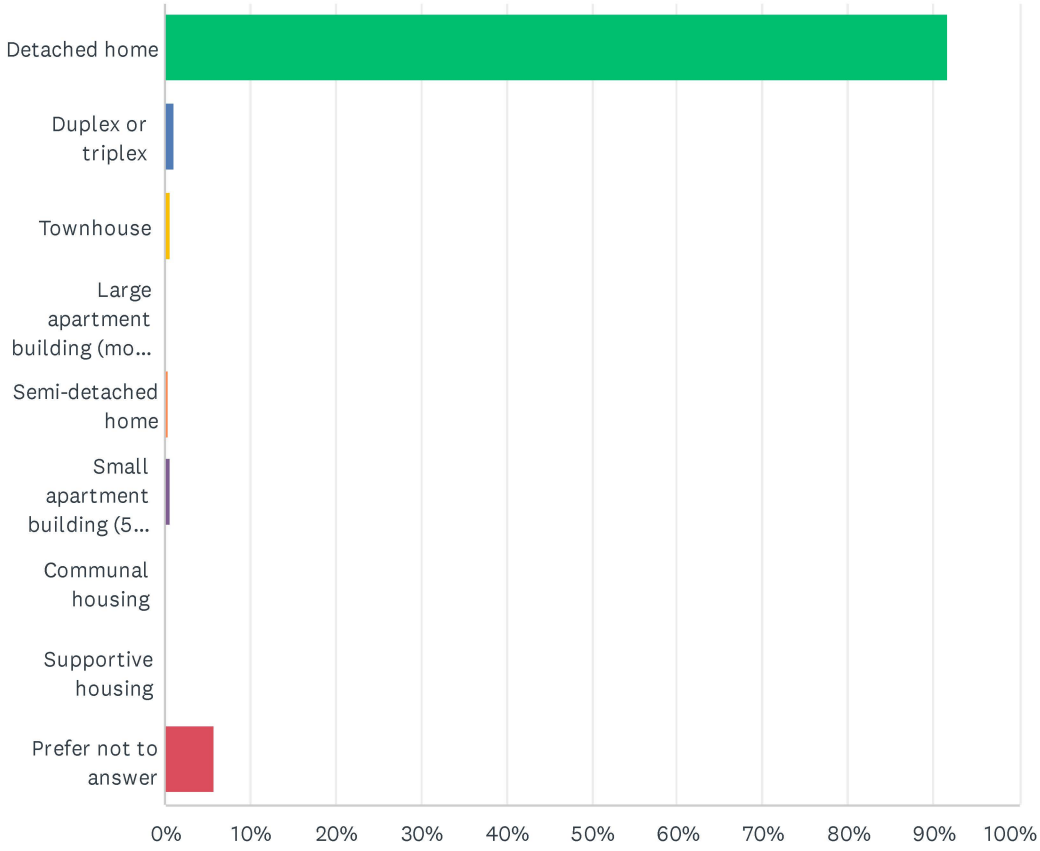
Answered: 482 Skipped: 65



ANSWER CHOICES	RESPONSES	
No income	0.21%	1
Under $10,000	1.04%	5
$10,000 – 19,999	0.62%	3
$20,000 – 29,999	2.90%	14
$30,000 – 39,999	4.77%	23
$40,000 – 59,999	9.34%	45
$60,000 – 79,999	12.24%	59
$80,000 – 99,999	9.75%	47
$100,000 – 119,999	7.47%	36
$120,000 – 149,999	5.81%	28
$150,000 and over	9.13%	44
I don’t know	0.21%	1
Prefer not to answer	36.51%	176
TOTAL		482

Q24 What type of residence do you live in?

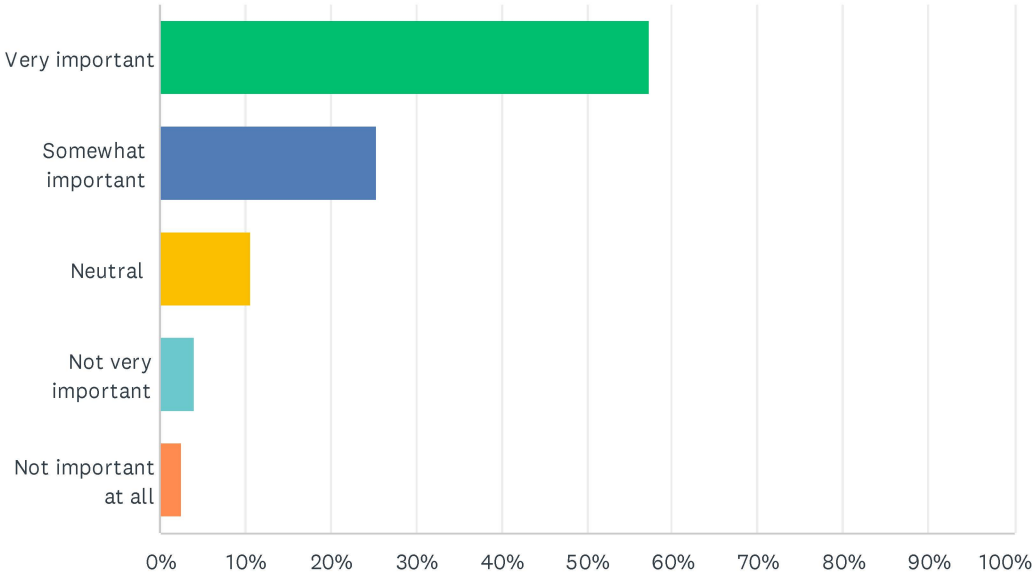
Answered: 487 Skipped: 60



ANSWER CHOICES	RESPONSES	
Detached home	91.58%	446
Duplex or triplex	1.03%	5
Townhouse	0.62%	3
Large apartment building (more than 5 floors)	0.00%	0
Semi-detached home	0.41%	2
Small apartment building (5 floors or less)	0.62%	3
Communal housing	0.00%	0
Supportive housing	0.00%	0
Prefer not to answer	5.75%	28
TOTAL		487

Q1 How important is increasing waste diversion (reducing landfill waste through recycling, composting, etc.) to you?

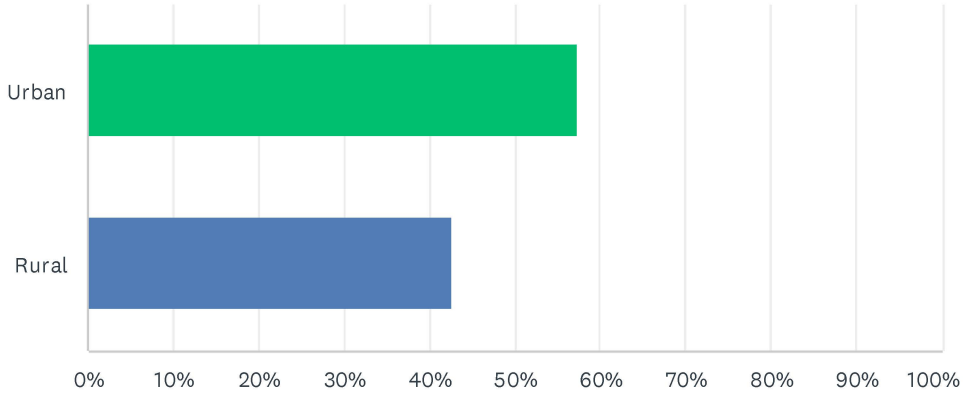
Answered: 1,304 Skipped: 5



ANSWER CHOICES	RESPONSES	
Very important	57.44%	749
Somewhat important	25.38%	331
Neutral	10.66%	139
Not very important	3.99%	52
Not important at all	2.53%	33
TOTAL		1,304

Q2 Are you responding for an URBAN or RURAL property? Please check one. If you are unsure of the answer, please click here to open a County map with those boundaries outlined.

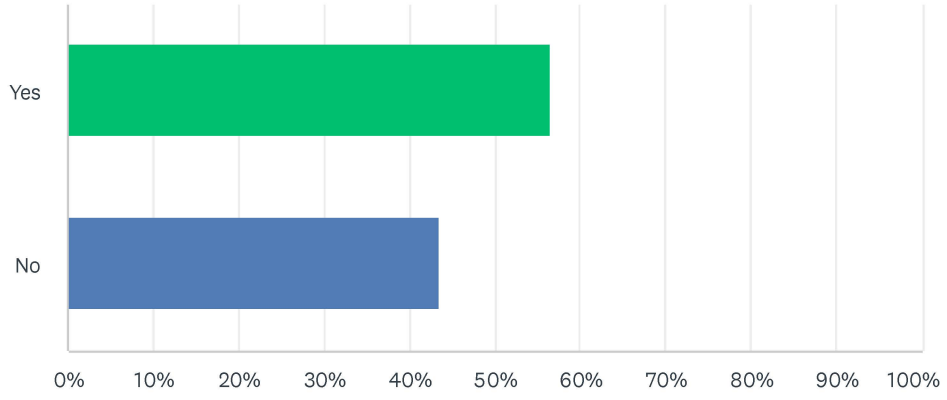
Answered: 1,285 Skipped: 24



ANSWER CHOICES	RESPONSES	
Urban	57.43%	738
Rural	42.57%	547
TOTAL		1,285

Q3 If curbside yard waste collection were expanded to rural areas, would you use it?

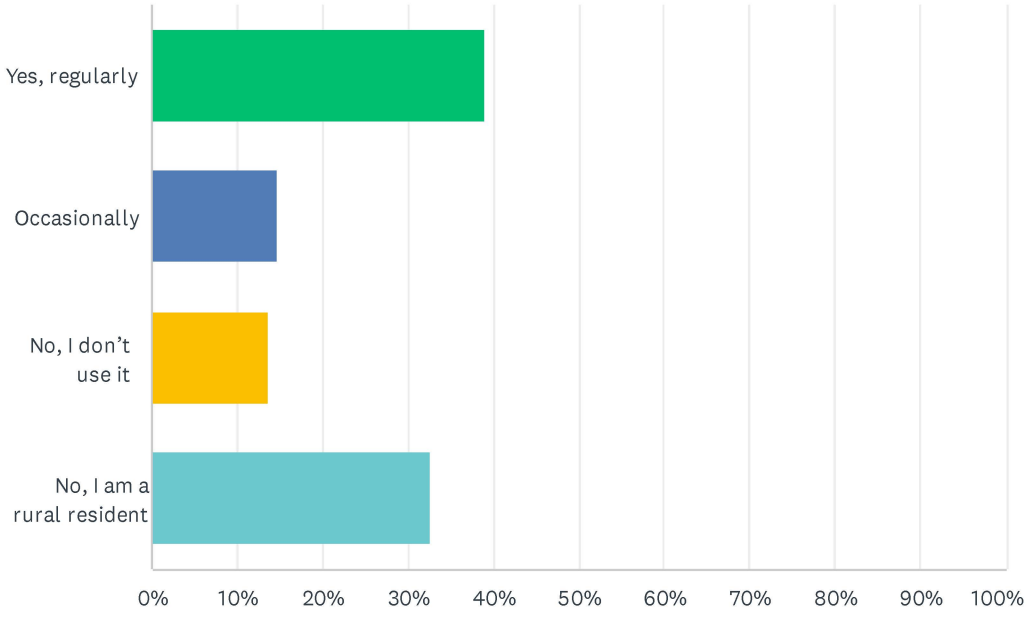
Answered: 548 Skipped: 761



ANSWER CHOICES	RESPONSES	
Yes	56.57%	310
No	43.43%	238
TOTAL		548

Q4 Do you use the current 11-week curbside yard waste collection program available in urban areas?

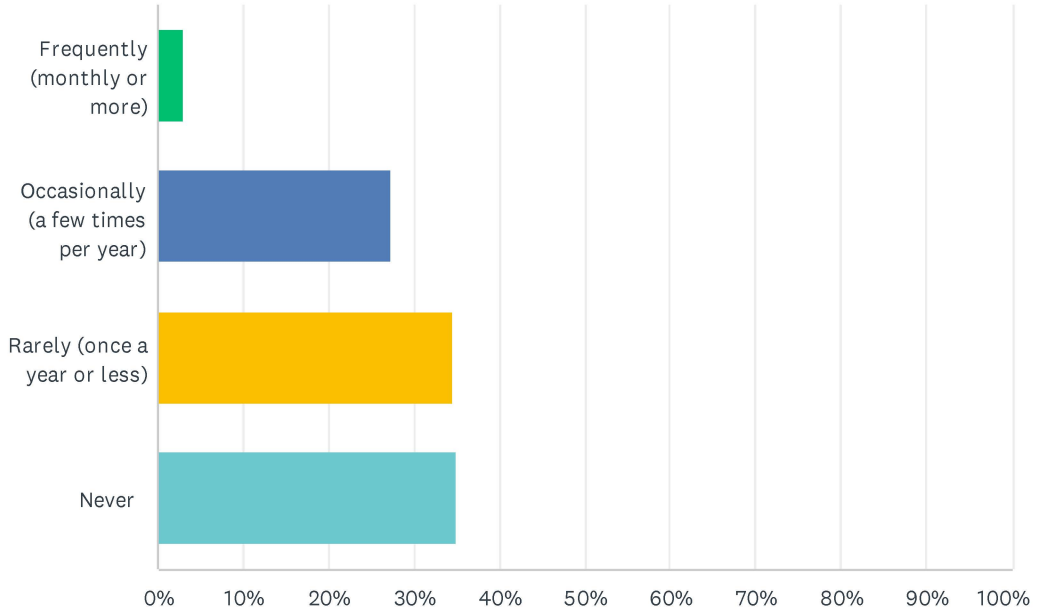
Answered: 1,262 Skipped: 47



ANSWER CHOICES	RESPONSES	
Yes, regularly	39.06%	493
Occasionally	14.66%	185
No, I don't use it	13.71%	173
No, I am a rural resident	32.57%	411
TOTAL		1,262

Q5 How often do you use the Canborough Waste Management Facility at 499 James Rd in Dunnville?

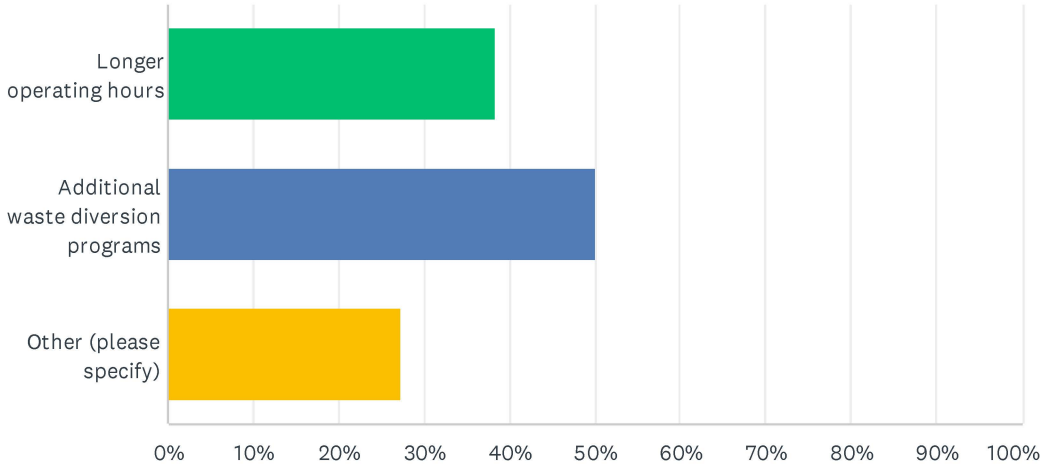
Answered: 1,245 Skipped: 64



ANSWER CHOICES	RESPONSES	
Frequently (monthly or more)	3.05%	38
Occasionally (a few times per year)	27.31%	340
Rarely (once a year or less)	34.62%	431
Never	35.02%	436
TOTAL		1,245

Q6 Are there any services you would like to see improved or expanded at Canborough Waste Management Facility? (Select all that apply)

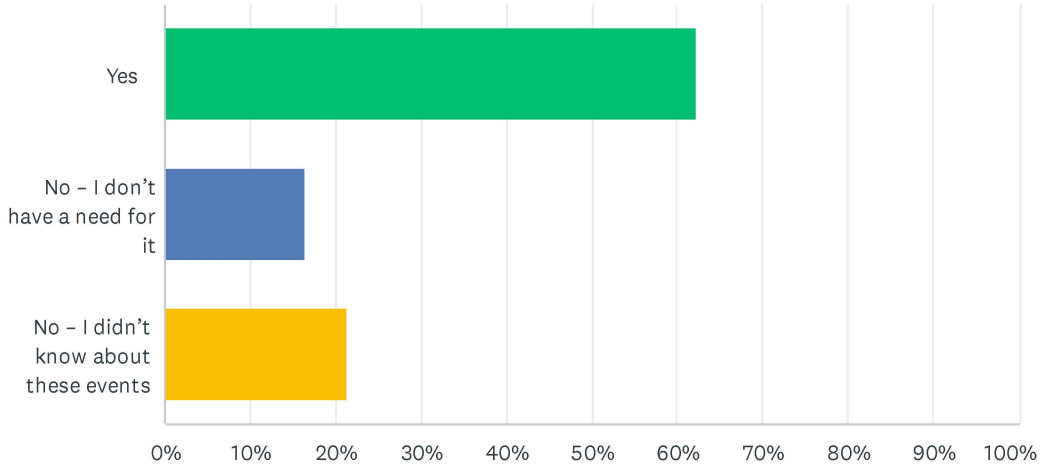
Answered: 713 Skipped: 596



ANSWER CHOICES	RESPONSES	
Longer operating hours	38.43%	274
Additional waste diversion programs	50.07%	357
Other (please specify)	27.21%	194
Total Respondents: 713		

Q7 Currently, hazardous waste is collected through four event days per year. Have you used this service?

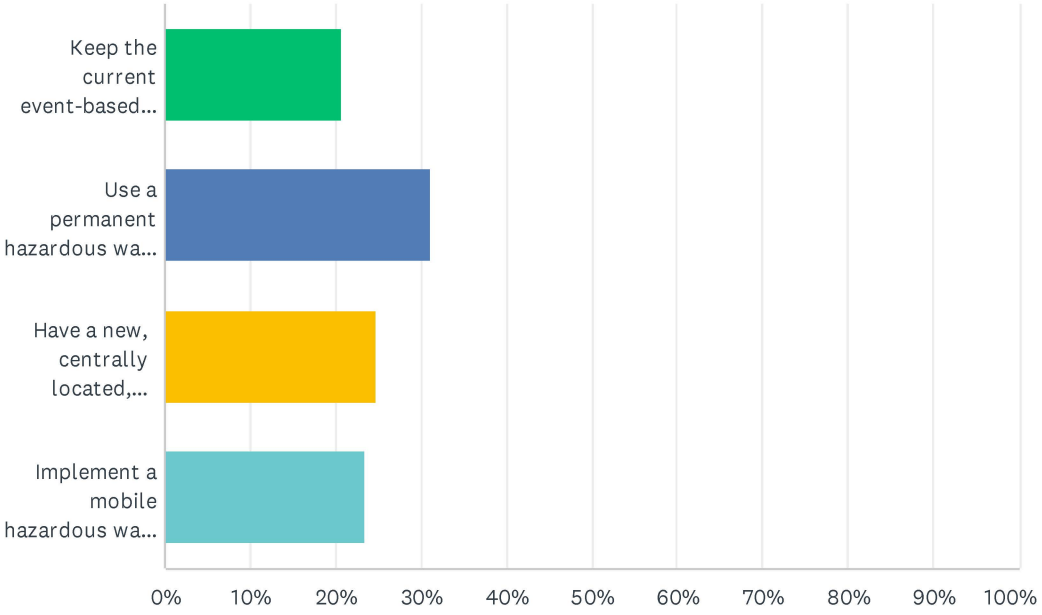
Answered: 1,230 Skipped: 79



ANSWER CHOICES	RESPONSES	
Yes	62.28%	766
No – I don't have a need for it	16.42%	202
No – I didn't know about these events	21.30%	262
TOTAL		1,230

Q8 How would you prefer to dispose of household hazardous waste?

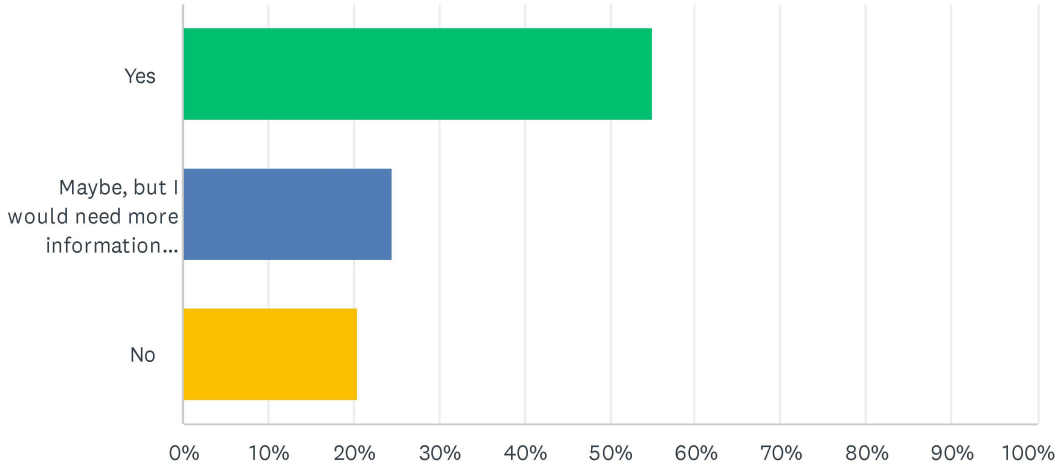
Answered: 1,216 Skipped: 93



ANSWER CHOICES	RESPONSES	
Keep the current event-based system.	20.64%	251
Use a permanent hazardous waste depot open year-round at the Canborough Waste Management Facility.	31.17%	379
Have a new, centrally located, year-round hazardous waste depot in Haldimand County.	24.67%	300
Implement a mobile hazardous waste collection program that visits different areas more frequently.	23.52%	286
TOTAL		1,216

Q9 Would you support an organics collection program (e.g., green bin for food waste) if it helped extend the life of local landfills and improve environmental sustainability?

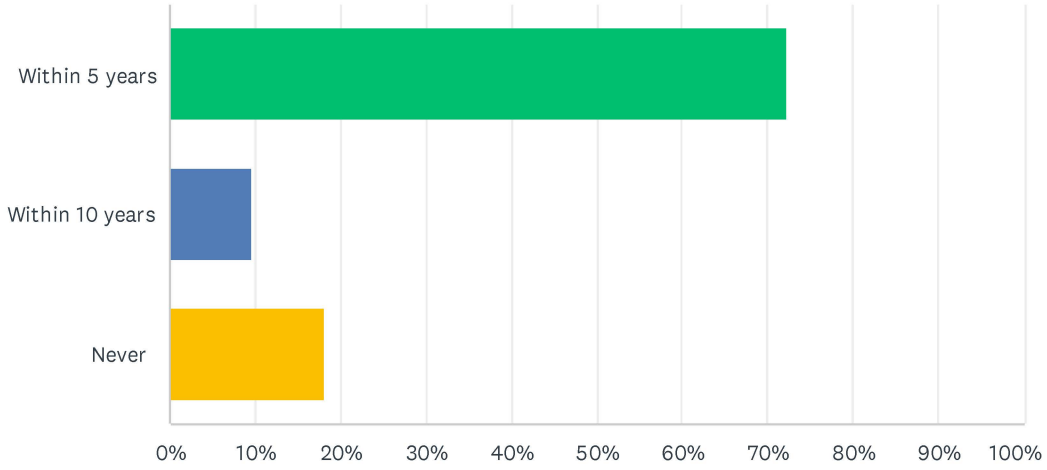
Answered: 1,220 Skipped: 89



ANSWER CHOICES	RESPONSES	
Yes	54.92%	670
Maybe, but I would need more information about the program	24.51%	299
No	20.57%	251
TOTAL		1,220

Q10 How soon do you think Haldimand County should implement an organics collection program?

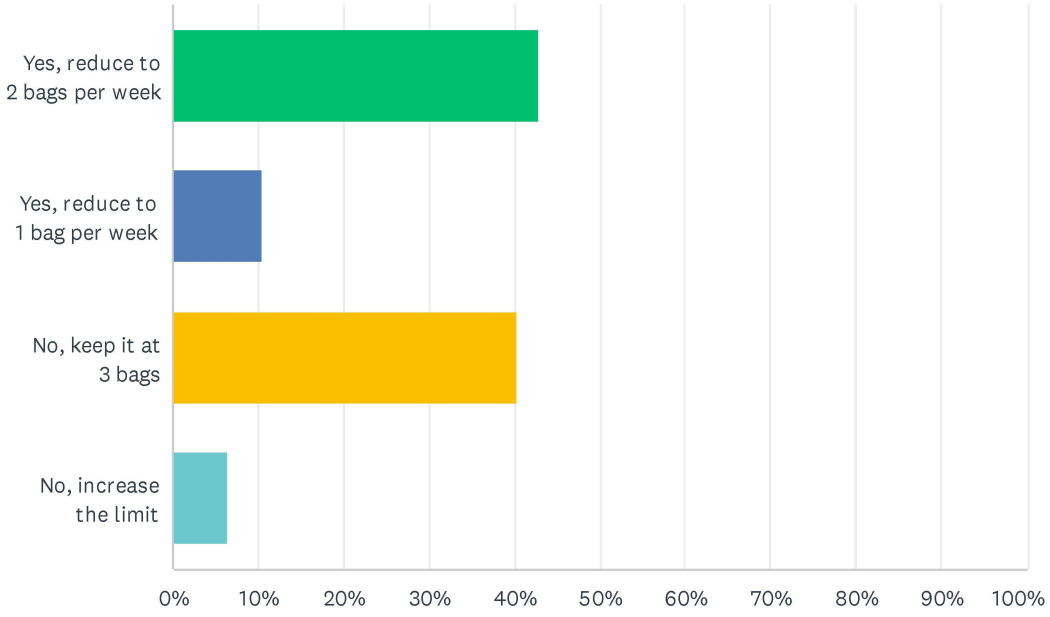
Answered: 1,202 Skipped: 107



ANSWER CHOICES	RESPONSES	
Within 5 years	72.30%	869
Within 10 years	9.57%	115
Never	18.14%	218
TOTAL		1,202

Q11 The current bag limit for residential curbside garbage collection is three bags per week. Would you support a reduction in the bag limit if an organics collection program were introduced?

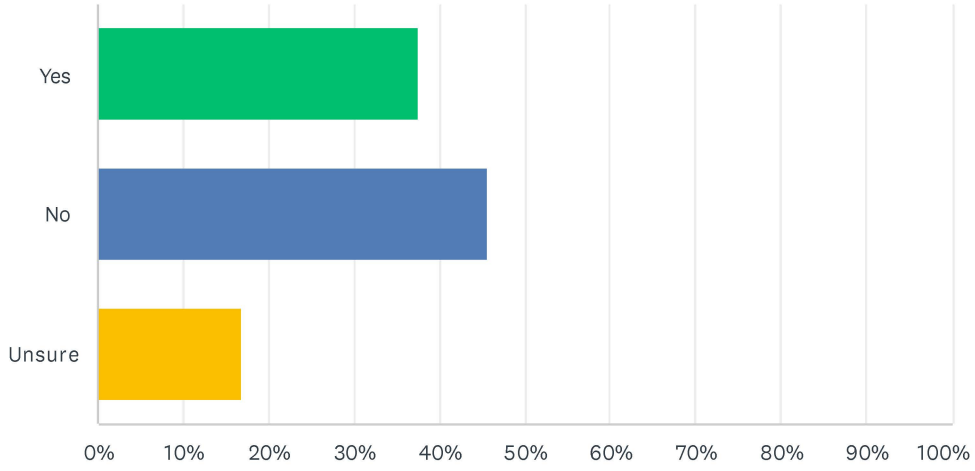
Answered: 1,213 Skipped: 96



ANSWER CHOICES	RESPONSES	
Yes, reduce to 2 bags per week	42.87%	520
Yes, reduce to 1 bag per week	10.39%	126
No, keep it at 3 bags	40.31%	489
No, increase the limit	6.43%	78
TOTAL		1,213

Q12 If waste diversion efforts are increased through the implementation of organics collection, thereby reducing the amount of garbage set out each week, would you support a system where residents are charged a fee for any additional garbage bags that exceed the established limit?

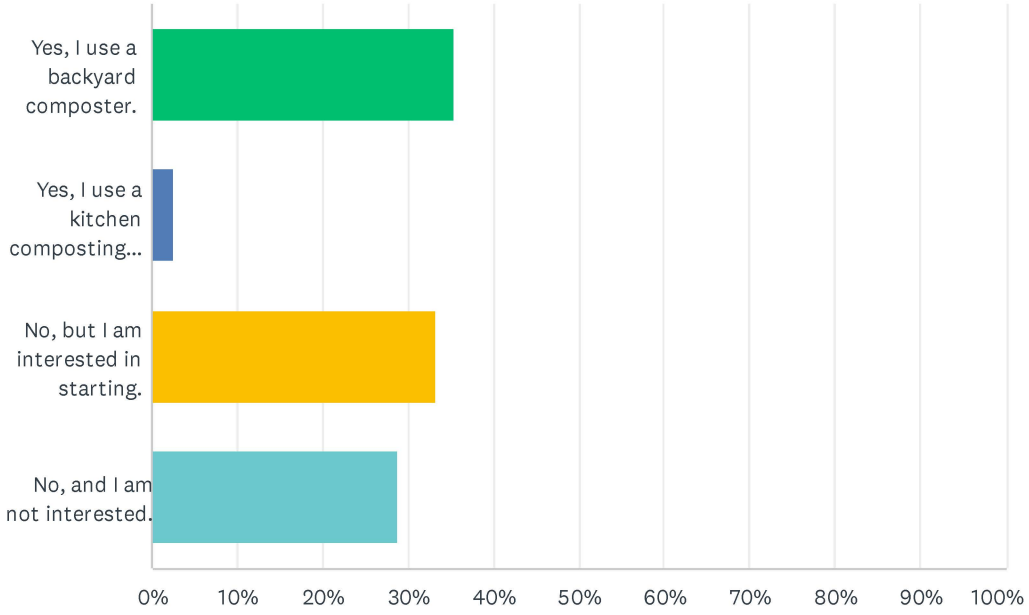
Answered: 1,217 Skipped: 92



ANSWER CHOICES	RESPONSES	
Yes	37.47%	456
No	45.69%	556
Unsure	16.84%	205
TOTAL		1,217

Q13 Do you currently compost food waste at home?

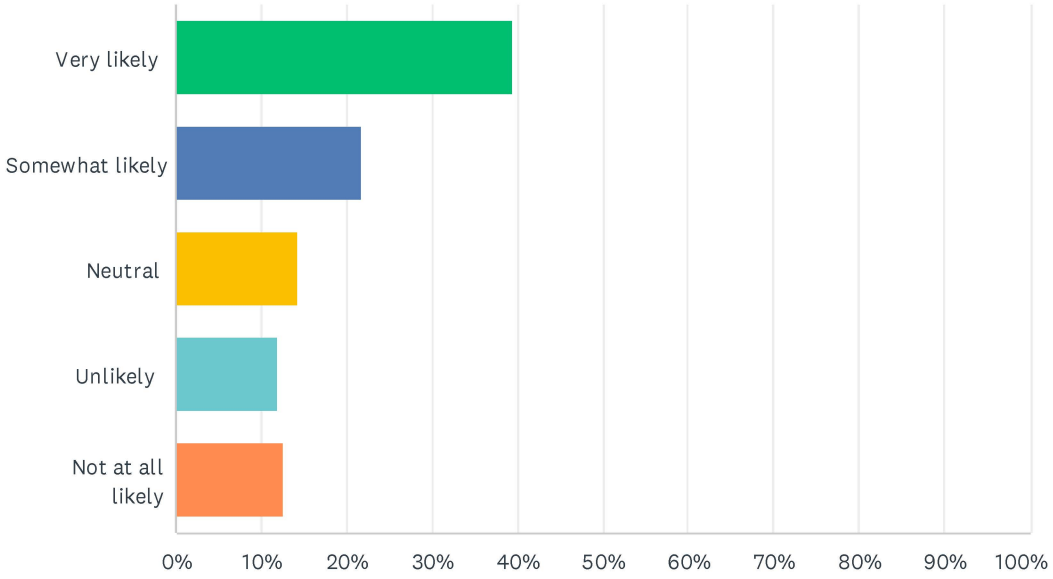
Answered: 1,220 Skipped: 89



ANSWER CHOICES	RESPONSES	
Yes, I use a backyard composter.	35.33%	431
Yes, I use a kitchen composting appliance (e.g., dehydrator, electric composter).	2.62%	32
No, but I am interested in starting.	33.28%	406
No, and I am not interested.	28.77%	351
TOTAL		1,220

Q14 If a program were enhanced to support at-home composting or introduced to provide a kitchen food waste reduction appliance (e.g., dehydrator, electric composter), how likely would you be to participate?

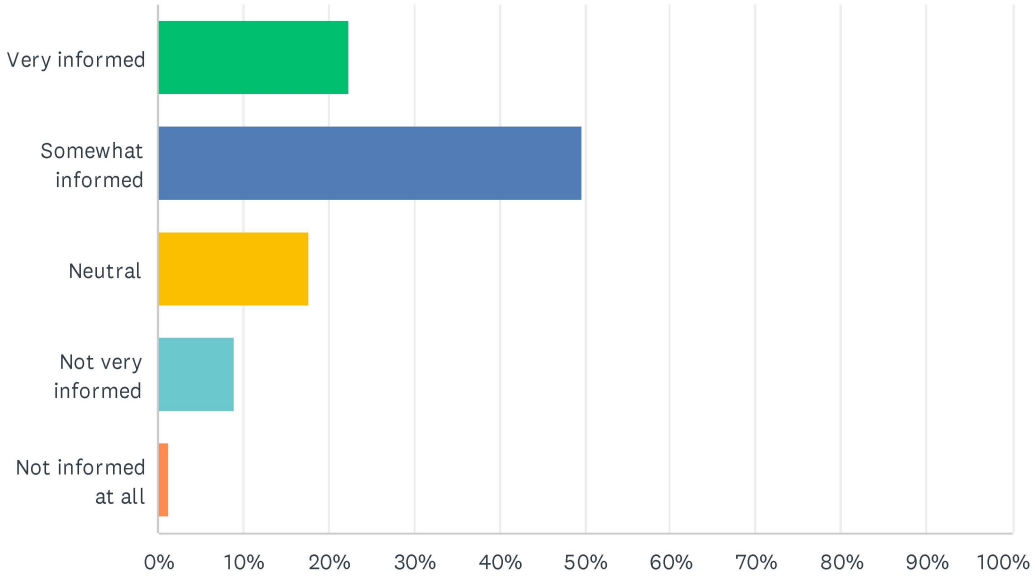
Answered: 1,218 Skipped: 91



ANSWER CHOICES	RESPONSES	
Very likely	39.49%	481
Somewhat likely	21.76%	265
Neutral	14.29%	174
Unlikely	11.90%	145
Not at all likely	12.56%	153
TOTAL		1,218

Q15 How informed do you feel about Haldimand County's waste management programs and services?

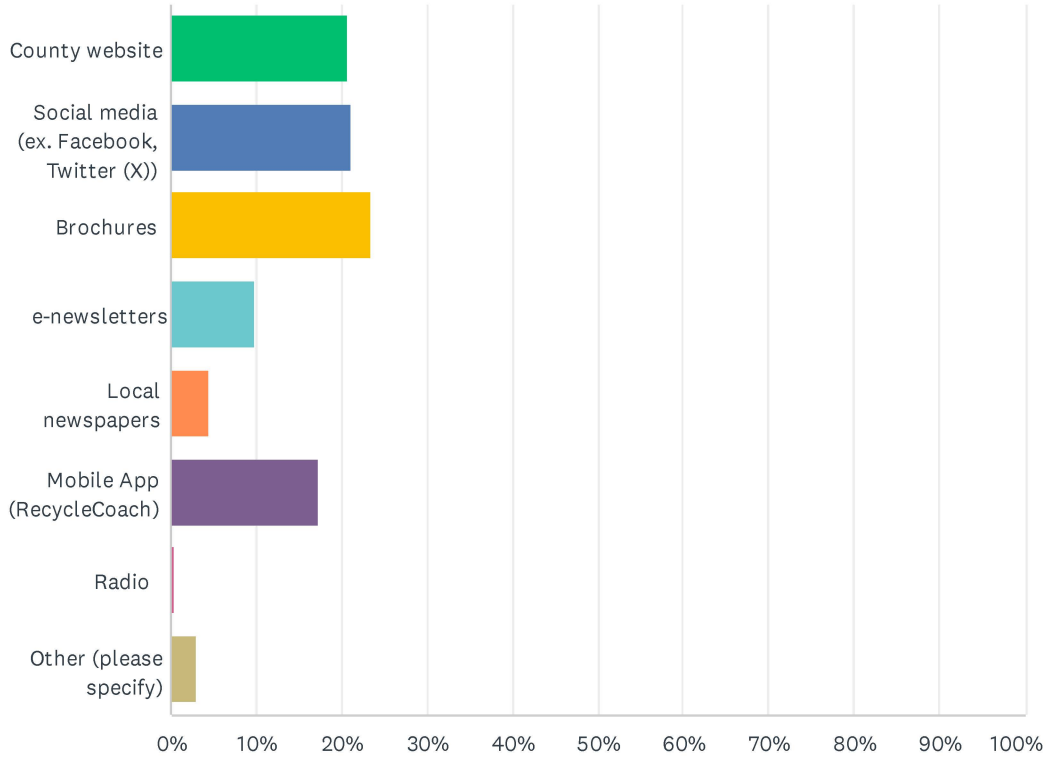
Answered: 1,210 Skipped: 99



ANSWER CHOICES	RESPONSES	
Very informed	22.31%	270
Somewhat informed	49.67%	601
Neutral	17.77%	215
Not very informed	8.93%	108
Not informed at all	1.32%	16
TOTAL		1,210

Q16 What is your preferred method for receiving information about waste management programs?

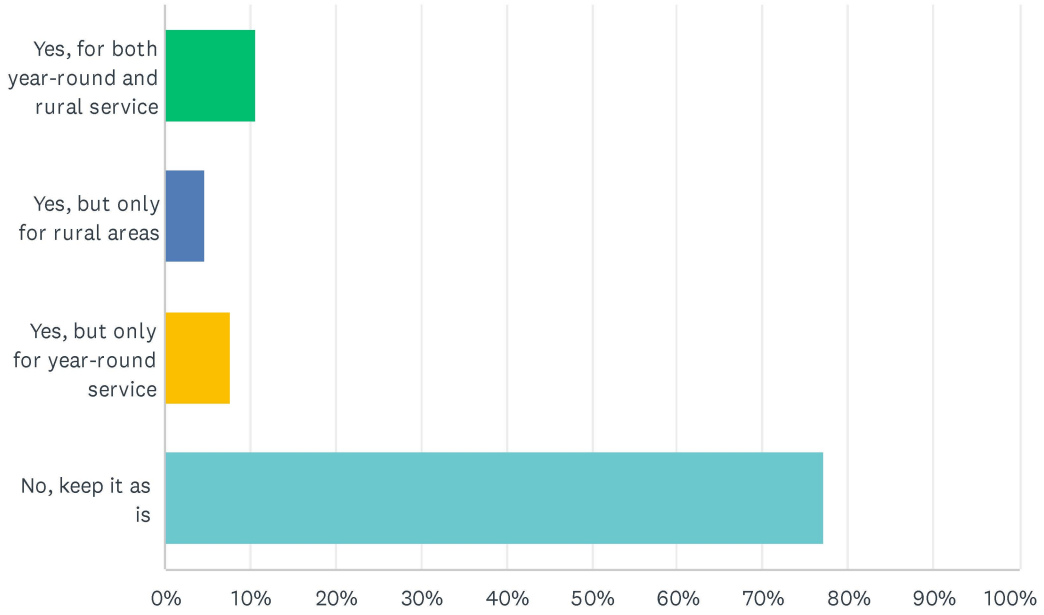
Answered: 1,204 Skipped: 105



ANSWER CHOICES	RESPONSES	
County website	20.60%	248
Social media (ex. Facebook, Twitter (X))	21.01%	253
Brochures	23.42%	282
e-newsletters	9.80%	118
Local newspapers	4.57%	55
Mobile App (RecycleCoach)	17.28%	208
Radio	0.42%	5
Other (please specify)	2.91%	35
TOTAL		1,204

Q17 Would you support a tax increase to expand the yard waste collection program (e.g., extending the service year-round or to rural areas)?

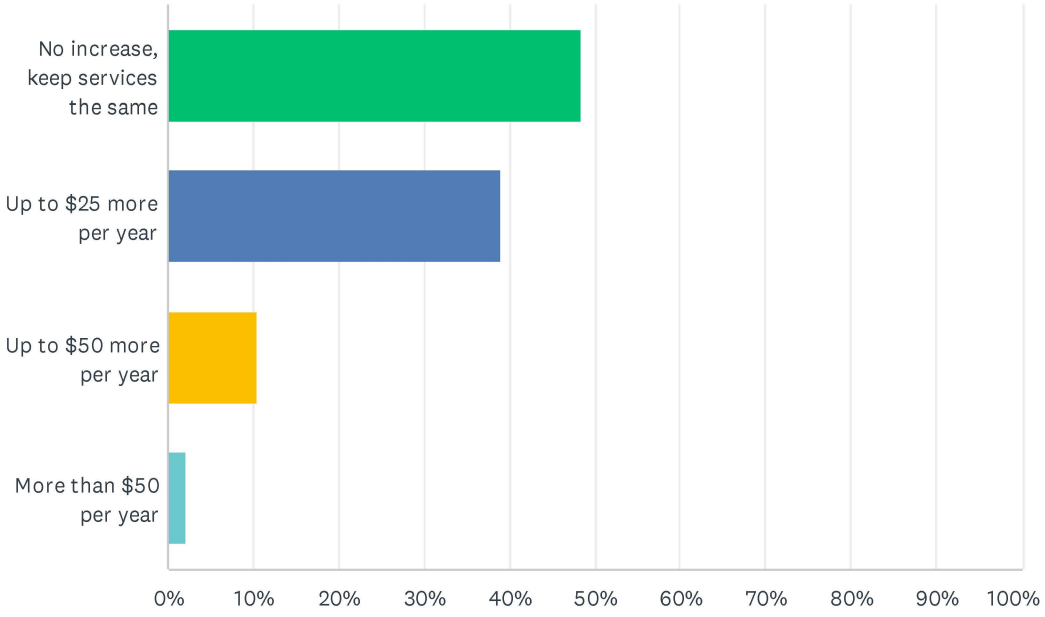
Answered: 1,186 Skipped: 123



ANSWER CHOICES	RESPONSES	
Yes, for both year-round and rural service	10.62%	126
Yes, but only for rural areas	4.64%	55
Yes, but only for year-round service	7.59%	90
No, keep it as is	77.15%	915
TOTAL		1,186

Q18 If enhanced waste diversion programs (e.g., organics collection, increased yard waste collection, more frequent hazardous waste disposal) required a tax increase, how much would you be willing to pay?

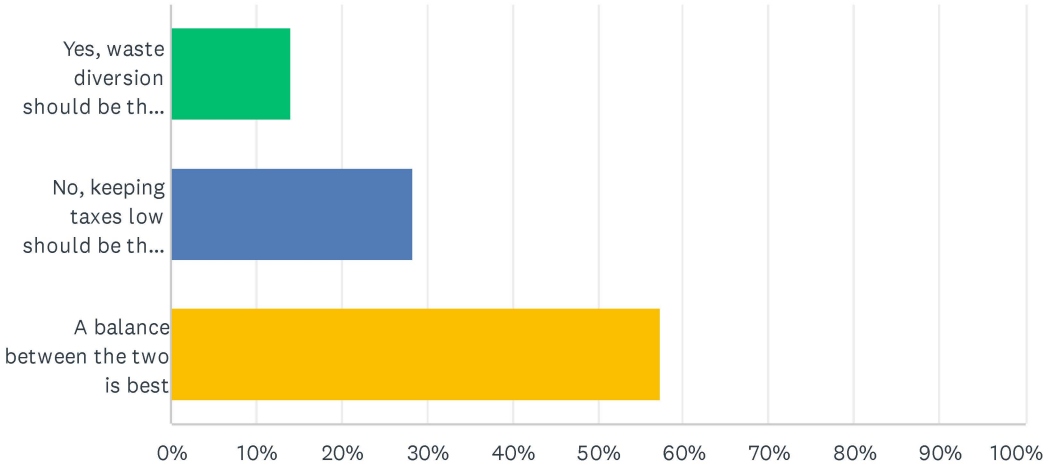
Answered: 1,184 Skipped: 125



ANSWER CHOICES	RESPONSES	
No increase, keep services the same	48.40%	573
Up to $25 more per year	39.10%	463
Up to $50 more per year	10.39%	123
More than $50 per year	2.11%	25
TOTAL		1,184

Q19 Do you think Haldimand County should prioritize keeping waste from landfills over keeping tax rates low?

Answered: 1,193 Skipped: 116



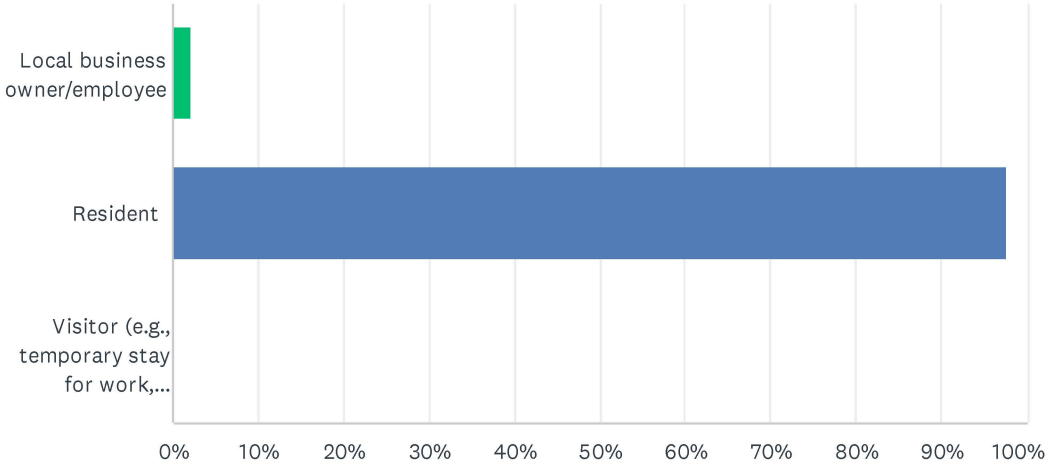
ANSWER CHOICES	RESPONSES	
Yes, waste diversion should be the priority	14.17%	169
No, keeping taxes low should be the priority	28.42%	339
A balance between the two is best	57.42%	685
TOTAL		1,193

Q20 Do you have any additional comments or suggestions on how Haldimand County should improve waste management services?

Answered: 407 Skipped: 902

Q21 Are you using the waste system as a:

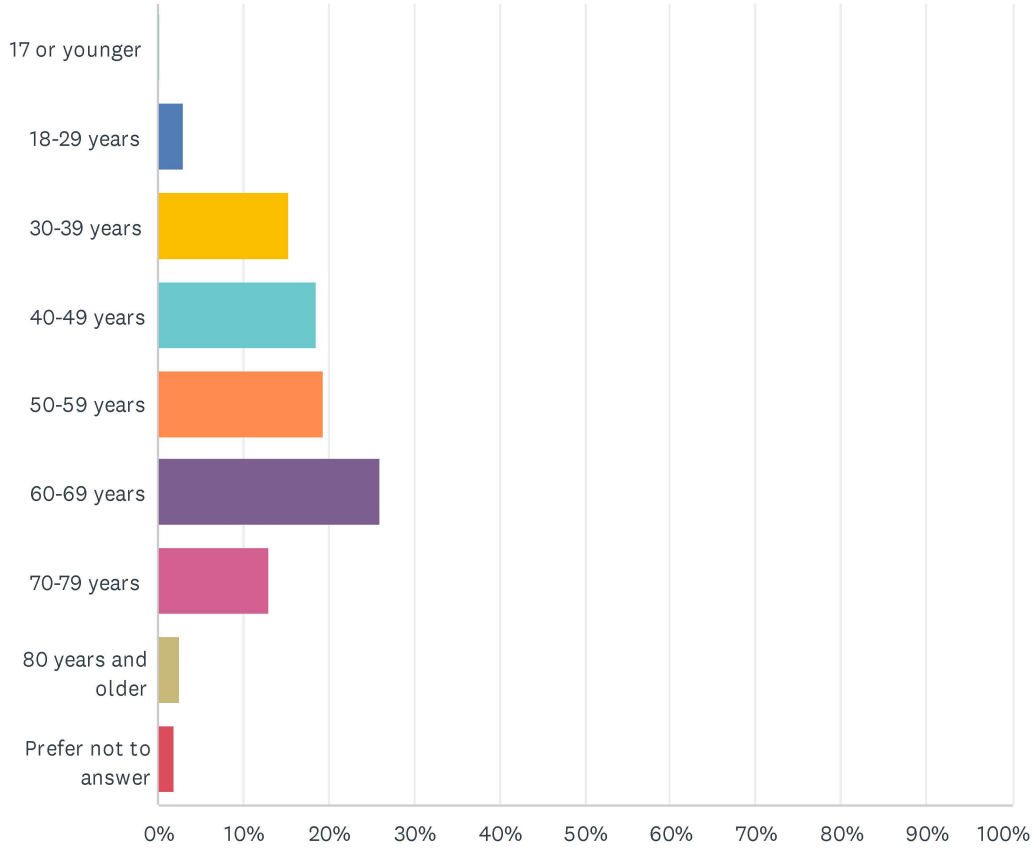
Answered: 1,172 Skipped: 137



ANSWER CHOICES	RESPONSES	
Local business owner/employee	2.22%	26
Resident	97.70%	1,145
Visitor (e.g., temporary stay for work, tourism, or visiting family/friends)	0.09%	1
TOTAL		1,172

Q22 What is your age?

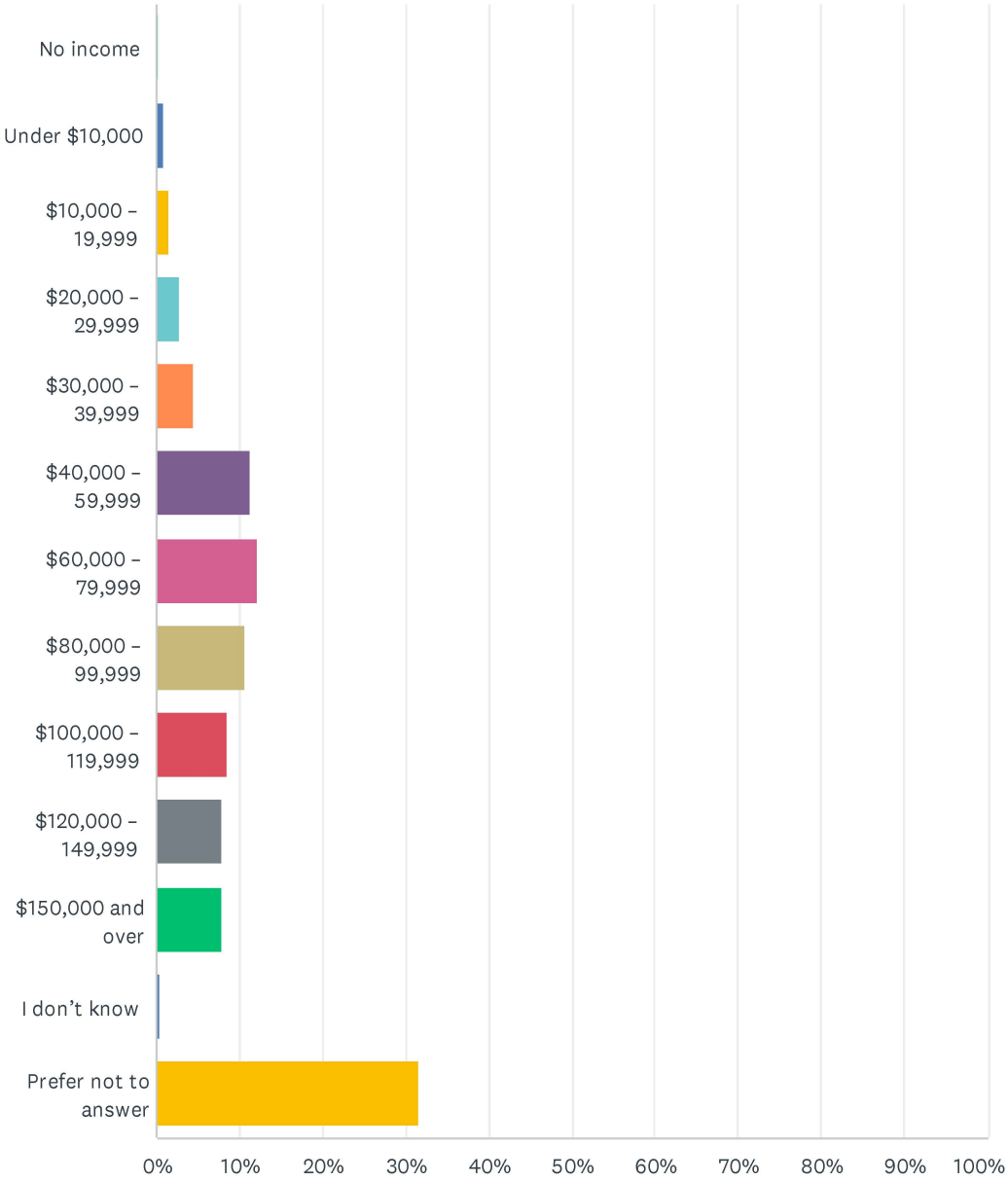
Answered: 1,179 Skipped: 130



ANSWER CHOICES	RESPONSES	
17 or younger	0.17%	2
18-29 years	2.97%	35
30-39 years	15.35%	181
40-49 years	18.49%	218
50-59 years	19.51%	230
60-69 years	26.04%	307
70-79 years	12.98%	153
80 years and older	2.63%	31
Prefer not to answer	1.87%	22
TOTAL		1,179

Q23 What is your total personal annual income before taxes from all sources?

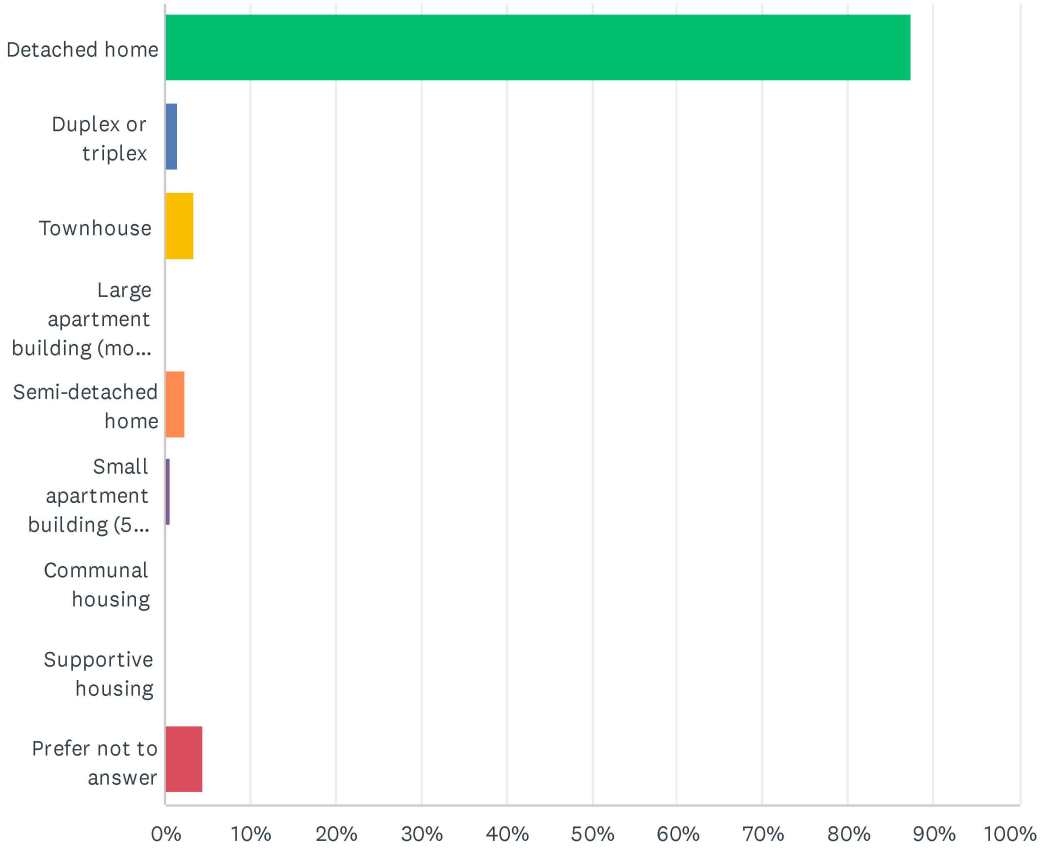
Answered: 1,169 Skipped: 140



ANSWER CHOICES	RESPONSES	
No income	0.26%	3
Under $10,000	0.86%	10
$10,000 – 19,999	1.45%	17
$20,000 – 29,999	2.74%	32
$30,000 – 39,999	4.53%	53
$40,000 – 59,999	11.38%	133
$60,000 – 79,999	12.06%	141
$80,000 – 99,999	10.61%	124
$100,000 – 119,999	8.55%	100
$120,000 – 149,999	7.78%	91
$150,000 and over	7.87%	92
I don’t know	0.43%	5
Prefer not to answer	31.48%	368
TOTAL		1,169

Q24 What type of residence do you live in?

Answered: 1,176 Skipped: 133



ANSWER CHOICES	RESPONSES	
Detached home	87.41%	1,028
Duplex or triplex	1.53%	18
Townhouse	3.40%	40
Large apartment building (more than 5 floors)	0.00%	0
Semi-detached home	2.30%	27
Small apartment building (5 floors or less)	0.68%	8
Communal housing	0.09%	1
Supportive housing	0.09%	1
Prefer not to answer	4.51%	53
TOTAL		1,176