THE DISTRICT MUNICIPALITY OF MUSKOKA

Solid Waste Master Plan



Solid Waste Master Plan

Final Master Plan

June 2026

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Muskoka is our home, a place known for its natural beauty. But keeping it beautiful is everyone's responsibility, especially when it comes to managing our waste.

Acronyms, Abbreviations, Definitions

AI	Artificial Intelligence
Area Municipalities	The Towns of Gravenhurst, Bracebridge, Huntsville, and the Townships of Lake of Bays, Georgian Bay, and Muskoka Lakes
$CAD	$ Canadian Dollar
CBSC	Community Based Steering Committee
COLA	Cost-of-living adjustments
CRD	Construction, Renovation and Demolition
DDM	Disaster Debris Management
Dillon	Dillon Consulting Limited
District	District Municipality of Muskoka
Drop-off Facility	Refers to both Transfer Stations and Depots
EfW	Energy-from-Waste
E-Waste	Electronic Waste
EPR	Extended Producer Responsibility
GHG(s)	Greenhouse Gas(es)
HHW	Household Hazardous Waste
ICI	Industrial, Commercial, and Institutional
kg	Kilogram(s)
KPI	Key Performance Indicator
LFG	Landfill Gas
LYW	Leaf and Yard Waste
Master Plan	Solid Waste Master Plan
N/A	Not Applicable
PE	Promotion and Education
Second Home	Properties in which the owners consistently reside in a Second Home in Muskoka for a cumulative period of time between 30 and 180 days in a typical year



Executive Summary

This report summarizes the third and final phase of the Solid Waste Master Plan (Master Plan) for the District Municipality of Muskoka (District). The Master Plan provides a 30-year framework for an optimal waste management system, which will be implemented through the proposed implementation plan.

The District's only active landfill, the Rosewarne Landfill, has approximately 16 years of remaining capacity and is projected to reach capacity by 2042 based on current landfill compaction density estimates, diversion rates, and per capita waste disposal rates.

"Diversion" is the percentage of waste that is recovered through processes such as recycling or composting instead of burying waste in the landfill. In 2023, the District diverted 37% of residential waste. To extend the life of the landfill and defer the capital costs of a new disposal solution, the District's target is to increase diversion and reduce the current residential generation rate from 275 kilograms (kg) per person to between 50 kg and 100 kg per person annually over the next ten years.

Public and stakeholder feedback directed the Master Plan approach. Engagement confirmed public and Council support for a moderate to aggressive approach to waste management. Priorities identified by the community engagement include making waste management and diversion programs more convenient, protecting the natural environment, reducing greenhouse gas (GHG) emissions, and supporting fiscal responsibility.

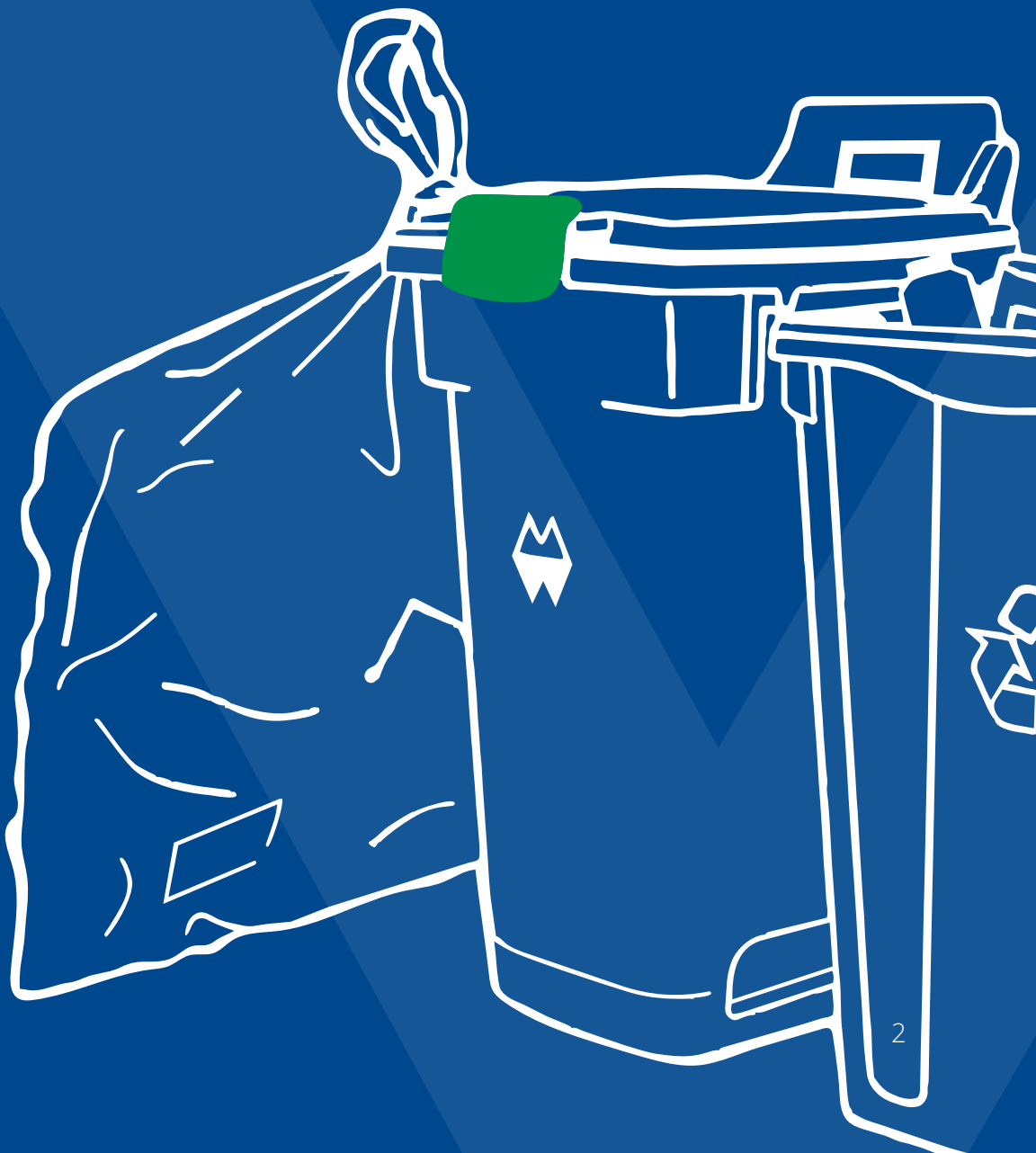
To achieve these objectives, the Master Plan outlines recommended actions across multiple operational areas. These actions include:

- Expanding organic waste processing and developing strategies for reuse and construction, renovation, and demolition (CRD) materials;
- Updating internal policies, such as exemption programs, disaster debris management, and strategies to reduce litter and illegal dumping;
- Enhancing communication tools through school outreach programs and visitor packages;
- Improving collection services by evaluating curbside collection in the Township of Lake of Bays, expanding curbside diversion programs, and establishing drop-off network service level standards; and
- Maximizing landfill lifespan through alternative daily cover, space optimization technologies, and exploring Energy-from-Waste (EfW) opportunities.

To fund system improvements and encourage waste reduction, the District will use a hybrid funding model. This means the system will be partly funded by property taxes, but the way the curbside garbage limits work will change. Instead of a weekly limit, households will receive a set number of freely issued tags for the entire year. This allows residents to use the tags to put out as many tagged bags they need to on collection day, giving residents the flexibility to manage their waste in the way that works best for them. Additional tags must be purchased for any garbage placed out for curbside collection that is over the yearly limit.

The initial five-year implementation plan prioritizes immediate actions between mid-2026 and 2031, such as enhancing communication tools, conducting organics processing feasibility studies, and remediating the closed Rosewarne East Landfill. Progress will be measured using a data-driven continuous improvement system to track key performance indicators (KPIs), including tonnes landfilled per person, landfill lifespan, GHG emissions, and financial savings.

Part 1: Introduction

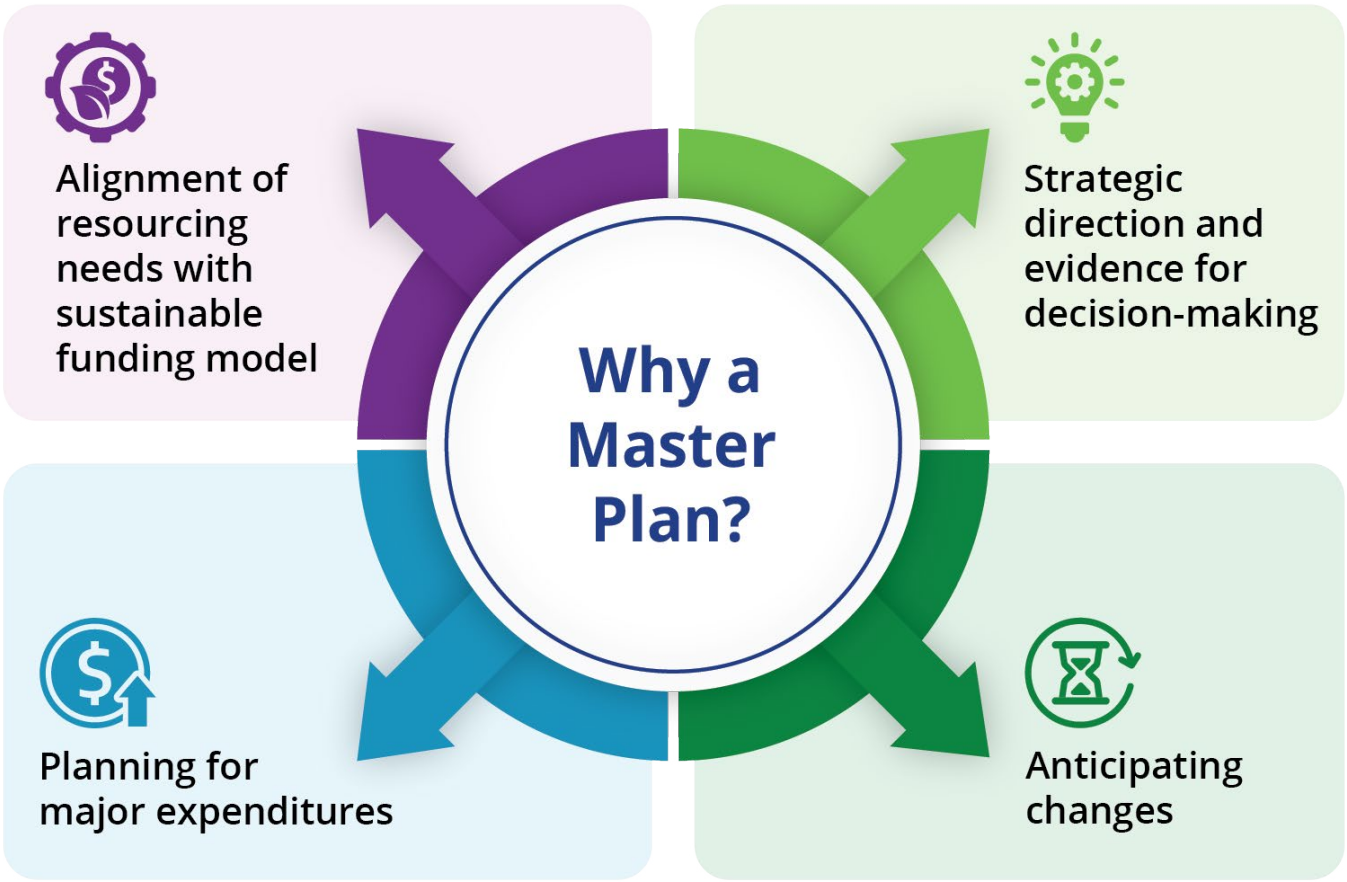


1.1 What is a Master Plan and Why is it Valuable?

A Solid Waste Master Plan (Master Plan) uses in-depth knowledge of a municipal service to guide decisions and make the best use of resources in the long term. It is based on both evidence and forecasts about future needs. As shown in **Figure 1**, a Master Plan helps decision makers:

- Care properly for existing assets and plan for major capital projects;
- Better anticipate and adapt to changes, reducing system shocks and surprises;
- Coordinate with other key direction such as the District Strategic Plan, the Muskoka Community Energy and Emissions Reduction Plan, and asset management planning; and
- Ensure expected costs are adequately funded.

Figure 1: Benefits of a Master Plan



1.2 Why Do We Need a Plan Now?

The District's only active landfill, the Rosewarne Landfill, is running out of space and, at current rates, is expected to be full in approximately 16 years, as detailed in **Figure 2**. Landfills in Ontario are filling up and building a new landfill is expensive and can take over a decade to plan and permit. This Master Plan acts as a guide to help extend the life of the Rosewarne Landfill by improving how the District will reduce, reuse, and recycle today.

Figure 2: 30-year Master Plan Implementation



1.3 Our Three-Step Journey to 2056

The District retained Dillon Consulting Limited (Dillon) and KPMG in the spring of 2024 to begin the Master Plan project. The Master Plan has been developed in three phases as seen in **Figure 3**, including:

- **Phase 1, Where are we?** describes the current system and the context in which it operates and sets out key themes and challenges;
- **Phase 2, Where are we going?** identifies the District's future needs, opportunities and risks, and sets out actions for improvement; and
- **Phase 3, How do we get there?** provides a long-term framework for an optimal system, which will be acted on through a series of short-term (e.g., five year) plans.

Figure 3: Master Plan Development Phases



1.4 A Plan Built with the Community

Waste management affects the daily life of all community members in the District. For this reason, public feedback helped choose the best path forward. By looking at thousands of survey responses, hosting community events, and working with a Community Based Steering Committee (CBSC), the District learned what permanent and Second Home residents (the owners consistently reside in a Second Home in Muskoka for a cumulative period of time between 30 and 180 days in a typical year), business owners, and visitors value most.

The CBSC was formed to provide diverse perspectives and community-focused input throughout the development of the Master Plan. The CBSC serves as an advisory body, fostering in-depth discussions on key issues, concerns, and solutions. There are currently 14 members of the CBSC, including:

- Muskoka Lakes Association;
- Lake of Bays Association;
- Muskoka Watershed Council;
- Muskoka Ratepayers' Association;
- Rosewarne Public Liaison Committee;
- Fowler Construction;
- GFL Environmental Inc.; and
- Student Representatives.

Moose Deer Point First Nation and the Wahta Mohawks Administration are also included in the CBSC distribution list and are staying informed as their capacity allows.

Discussed further in **Part 4**, community priorities incorporated into this Master Plan include:

- **Convenience:** Making waste services easy to use for all residents;
- **Environmental Protection:** Protecting the natural beauty of the District and reducing GHG emissions;
- **Fairness:** Meeting the needs of year-round, Second Home, and water-access residents in a balanced way; and
- **Innovation:** Finding bold, new ways to turn waste into useful resources.



Part 2: Understanding Muskoka's Solid Waste Management System Today



2.1 The District's Unique Beauty

The District has a distinct landscape that differs from more urban areas. These geographic features make collecting waste a challenge. The District covers an area of 4,774 square kilometres, and 36% of that is water and wetlands, as detailed in **Figure 4**.

To serve this area effectively, District staff must consider:

- Thousands of kilometres of winding roads;
- Water-access-only properties; and
- Communities that are spread far apart by lakes and rock.

Figure 4: Muskoka Water/Wetland Area

The District covers
4,774 km²
in area of which
36% is water and wetlands

Total Population in 2021:
151,074
Of which **44% live in the District** year-round population



47%
of all households are Second Homes of which only **35% are on public roadways**

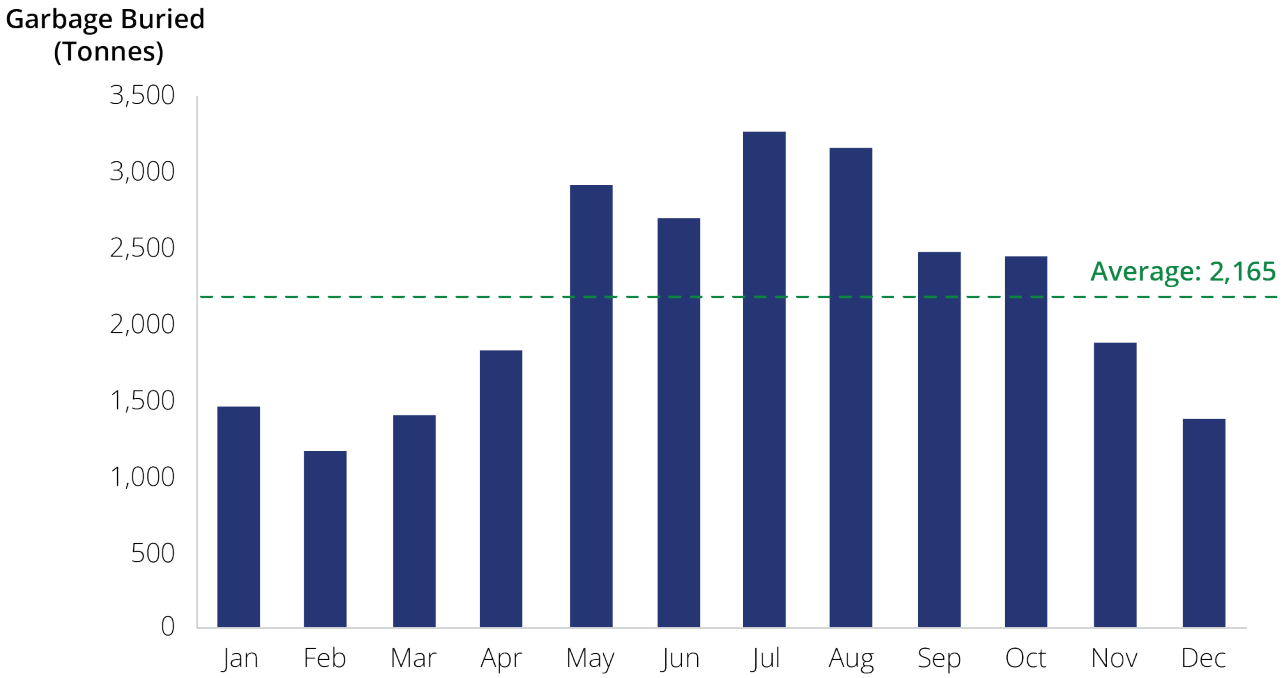
2.2 The Seasonal Shift: Second Homes Make the District System Unique

The District's waste system needs to be flexible due to population changes with the seasons. The District serves two different communities: a quieter winter community and a busy summer destination.

- **Year-Round Residents:** Less than half of the population lives in the District all year;
- **Cottage Country:** Nearly half of all households are Second Homes. Many of these are closed up during the winter; and
- **The Summer Surge:** When summer arrives, the amount of waste collected triples. This increase puts pressure on staff, trucks, and the landfill site during the warmest months.

The direct impact of this seasonal population growth is visible in the District's disposal data. As shown in **Figure 5**, waste levels begin to rise in May as seasonal properties are opened and peak in July in August, when the population is at its highest. Waste quantities drop during the winter months when the population is made up of mostly permanent residents.

Figure 5: Monthly Rosewarne Landfill Waste Quantities (2023)



2.3 Why We Can't Wait

The most urgent reason for this Master Plan is simple: landfill space is running out and there are few alternatives available once that happens. The Rosewarne Landfill in Bracebridge is the District's only active site for garbage disposal.

The reality of the Rosewarne Landfill:

- **Time Left:** Approximately 16 years of space remaining based on current waste habits;
- **The Deadline:** If recycling and composting habits do not change, the landfill could be full by 2042; and
- **The Risk:** Building a new landfill or finding a new solution is expensive and can take over a decade to approve and build. Diverting waste now extends the landfill's lifespan which delays the significant capital costs needed to secure a future disposal solution.

2.4 Our Current System

The District operates a waste network designed to handle the local landscape. Unlike many cities where trucks pick up almost everything at the curb, the District relies on a mix of collection trucks and drop-off sites. Data shows that more than half of all household garbage in the District is dropped off at a depot or transfer station rather than picked up at the curb.

2.4.1 Our Facilities and Services

The District currently has the following facilities and services for managing waste:

- **10 Transfer Stations:** These facilities serve as primary drop-off points for garbage, Blue Box recycling, and Green Bin organics. Depending on the specific location, many stations also provide other diversion streams, including:
    - Leaf and Yard Waste (LYW);
    - Bulky items (e.g., mattresses);
    - Electronic waste (E-Waste) and other items managed under Extended Producer Responsibility (EPR) programs, including tires and Household Hazardous Waste (HHW). The District currently subsidizes these programs to provide more opportunities for residents to dispose of materials safely and responsibly; and
    - Specialized reuse areas.
- **Three Drop-off Depots:** These are smaller sites for household garbage and recycling (Housey's Rapids Depot and South Gibson Depot currently accept organics), two additional drop-off depots are anticipated to open in spring 2026; and
- **Curbside Collection:** Less than half of the waste in the District is collected at the curb. This service expands in the summer to reach Second Home residents in accessible areas.



"Diversion" is the percentage of waste that is recovered through processes such as recycling or composting instead of burying waste in the landfill.

2.4.2 How Well Are We Recovering Resources?

- In 2023, the District diverted 37% of residential waste; and
- The District is behind the provincial average of 49%, and well below top-performing municipalities that reach 60% or higher.

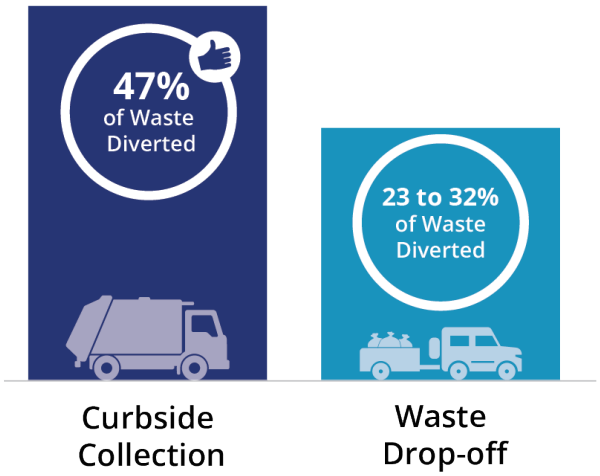
While diversion was an important tracking tool historically, our Master Plan focuses on reduction first. The District is moving toward a model where success is measured not just by what we keep out of the landfill, but by how little waste is created in the first place.

2.4.3 The Convenience Gap

Data indicates that when diversion programs are easy, people do it more, as depicted in **Figure 6**.

- **Curbside Pickup:** When residents can place waste at the curb or roadside, they divert 47% of their waste; and
- **Driving to a Site:** When residents have to drive their waste to a facility, diversion drops to 32% at Transfer Stations and just 23% diversion at depots / former bin sites.

Figure 6: Waste Drop-off versus Curbside Collection Diversion Rates



2.5 Discovering Room for Improvement

Phase 1 of the Master Plan highlighted where the District can improve. Focusing on these areas offers the best chance to keep the Rosewarne Landfill open longer and manage costs effectively.

- **The Organics Opportunity (Food Waste):** The best way to lower the amount of garbage we create is to throw away less food and put food scraps into the Green Bin. Recent checks of garbage bags reveal that food waste makes up between a quarter and up to half of the garbage currently sent to the landfill, as depicted in **Figure 7**. The implementation of the Clear Bag program has started to help reduce organics in the garbage. Keeping this material out of the garbage would save space, create compost, and reduce harmful GHG emissions;
- **Making Diversion Easier:** Data confirms that if sorting waste is difficult, people are less likely to do it. Improving the experience at facilities or expanding curbside services represents a key area for improvement;
- **Serving Cottage Country:** Reaching Second Home residents and visitors is a unique challenge. Since 96% of cottages are on the water and many are boat-access only, standard waste collection trucks cannot reach them. Finding standard and practical ways to help these residents is a priority; and
- **Adapting to New Rules:** The District must also update how success is tracked. The Province has changed the rules for Blue Box recycling, handing full responsibility to the companies that produce the packaging. This means that the District is no longer responsible for the residential Blue Box program in Muskoka. The District must develop new ways to measure progress to keep the system accountable.

As of January 1, 2026, full, Province wide responsibility of the residential Blue Box recycling program shifted from municipalities to companies that create the packaging.

Figure 7: Visual of Organics in Garbage




THE DISTRICT
MUNICIPALITY
Managing Our Legacy Together
OF MUSKOKA

Part 3:
Our Vision for 2056



3.1 The Vision: Building the District's Future Together

To guide the District through the development of the Master Plan, a vision statement was created based on feedback received during Phase 1 engagement. This statement helps guide the District with decision-making about costs and service levels to stay on the right track.

Our Vision: Together, we will build a community-oriented, sustainable waste system that protects Muskoka's natural beauty – today and for future generations.

3.2 Guiding Principles

The guiding principles complement the vision and are used to check if the proposed options are aligned with community values. These principles balance the need for environmental protection with fiscal responsibility and are as follows:



1. **Environmental Sustainability:** Protect Muskoka's environment by reducing waste, emissions, litter, and reliance on landfill.



2. **Fiscal Responsibility:** Deliver value for money through efficient, cost-effective service delivery, and sustainable infrastructure.



3. **Service Delivery and Accessibility:** Deliver waste services that are customer centered, easy to understand, and optimized to meet the diverse needs of the community.



4. **Education and Awareness:** Equip residents, businesses, and visitors with the knowledge and tools to manage and reduce waste effectively.



5. **Balanced Decision-Making:** Make informed choices that reflect community values, technical advice, and long-term needs.

3.3 Our Targets

During Phase 2 engagement, residents, the CBSC, and District Council made it clear – they want the District to be ambitious about reducing waste. This feedback helped set specific goals for the next 30 years.

3.3.1 What Happens If We Do Nothing?

To understand why this Master Plan is needed, the District looked at the results of keeping the current system exactly as it is today:

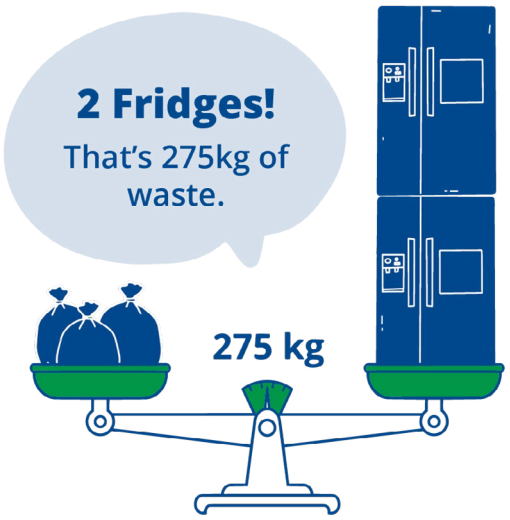
- **The Landfill Fills Up:** The Rosewarne Landfill will be full by 2042, leaving approximately 16 years of remaining space;
- **Costs Go Up:** As space runs out, managing the remaining area becomes much more expensive. Eventually, the District would face the expense of finding an entirely new place or way to manage garbage; and
- **Wasted Resources:** Materials that could be reused, like food waste and building supplies, would be buried forever instead of being recycled or repurposed.

3.3.2 The Goal

A useful way to track the success of the Master Plan is to look at how much garbage the average person throws away.

Currently, the estimated average waste generation rate is 275 kg per capita per year (2024 data), as depicted in **Figure 8**, this weight is roughly equivalent to two refrigerators. This rate was developed using the assumed average population of 123,577 (this estimated effective population was calculated by adjusting the seasonal population for 12 months instead of eight). The District's goal is to bring the average waste generation rate down to between **50 kg and 100 kg** over the next ten years. Reaching this target would remove most of the waste currently going to the landfill, preserving that space for the items that truly cannot be recycled or composted.

Figure 8: Visual of Average Waste Generation Rate



Part 4:
What We Heard





4.1 Engaging the District: How We Built This Together

A successful Master Plan reflects the values and needs of the community. The District opened the door for all members of the community to contribute to this Master Plan, including year-round and Second Home residents, business owners, and visitors.

The project followed a three-phase journey to gather input at every major step:

- **Phase 1 (Where are we?):** This stage focused on understanding current habits, challenges, and the community's vision for the future;
- **Phase 2 (Where is the District going?):** This stage shared potential options and asked for feedback on the "level of ambition" for the Master Plan; and
- **Phase 3 (How does the District get there?):** This stage presented the recommendations to gather thoughts on the timeline and how to track progress.

The District used several ways to share information and gather ideas:

- **Online Surveys:** These allowed thousands of people to participate at a time convenient for them;
- **Open Houses:** In person public meetings and virtual lunch and learns provided a space to review details and answer questions in person or digitally;
- **Engage Muskoka:** The website hosted how to get involved, links to the online surveys, key reports, and recordings of the virtual lunch and learns;
- **CBSC:** A dedicated group of local volunteers met regularly to help guide the process;
- **Community Pop-Ups:** Staff attended local farmers' markets, community festivals, and events to speak with residents; and
- **Advertisements:** Social media, posters, and signs invited the public to take part.



4.2 Your Priorities

Through Phase 1, respondents identified what matters most. Environmental sustainability and cost-effectiveness consistently emerged as the top two priorities.

In Phase 2, the District asked the community on the desired level of ambition for the Master Plan. The approaches were:

- **Conservative:** Focusing on maintaining current practices with small, steady improvements;
- **Moderate:** Aiming for consistent and meaningful enhancements in waste management; and
- **Aggressive:** Taking bold action, seeking significant changes and innovative solutions for major improvements.

When asked if the Master Plan should take a conservative, moderate, or aggressive approach, there was a desire among the public to adopt a "moderate" to "aggressive" approach to waste management.

This direction means aiming for consistent and meaningful enhancements to waste management and/or implementing significant changes and using innovative solutions to bring about major improvements. In the long term, participants expressed that their waste system should be both convenient and sustainable.

District Council shares this high level of ambition. When asked to envision the future of waste in Muskoka, the majority of Council members indicated that by 2050, the District should aim to send little to no waste to the landfill and that the Master Plan should take a "moderate" to "aggressive" approach. This response confirms that Council and public interests are aligned in the pursuit of bold waste reduction targets.

4.3 How Feedback Shaped the Options

Public feedback helped the District decide which recommendations to include in the Master Plan. Input from surveys and the CBSC influenced which ideas the District prioritized, and which ones need more thought to match community values.

- **Popular Ideas:** Strong support from the public fast-tracked several programs into the Master Plan. These include more education programs, finding more ways to reuse items and picking up large items (bulky waste). Furthermore, the District will maintain the public's desire for continued advocacy for producer-led waste reduction to address the environmental impact of product packaging;
- **Ideas Needing More Study:** Feedback on some of the proposed options resulted in a need for further research and/or more information for residents. As some initial concepts were presented broadly, the resulting public feedback varied. The project team incorporated this diverse input, alongside data from other sources, to further refine and develop the details of these options. These responses indicate that the District must provide more detail on costs and environmental impacts when presented as long-term strategies; and
- **A Focus on Community:** The feedback helped verify that the community values a Master Plan that is environmentally sound and fiscally responsible. This feedback will help the Master Plan achieve the goal of helping residents build better waste habits and providing benefits to the District, businesses, residents, and visitors.

4.4 Key Themes

Throughout the engagement process, several recurring themes emerged providing insight into the daily experiences of residents and helping shape the final recommendations.

- **Waste Less, Divert More:** A desire exists to keep waste out of the landfill. This includes interest in expanding what goes into the Green Bin Organics program and finding better ways to divert construction materials;
- **Convenience and Accessibility:** A "convenience gap" exists for those without curbside collection. For diversion programs to be successful, they must be clear and easy for everyone to understand and participate;
- **Protecting Nature:** Protecting the District's natural beauty is a top concern. Residents worry about litter and illegal dumping and support education and enforcement to prevent these issues; and
- **Fiscal Responsibility:** While residents want better services, costs must remain manageable for the different users. The District needs a funding model that balances affordability with the need to pay for system improvements.



Part 5: Our Recommended Path Forward


DONATE

The recommended actions within this Master Plan were developed through an evaluation of potential waste management solutions. This process focused on identifying future needs and assessing options based on the following criteria:

- **Five Guiding Principles:** Strategic alignment with the District's core values (as detailed in **Section 3.2**);
- **Public and Stakeholder Feedback:** Insights gathered through community engagement (as described in **Part 4**); and
- **Technical and Financial Feasibility:** An assessment of the practical requirements and long-term costs associated with each option.

By filtering a broad range of possibilities through these lenses, the District identified the specific actions that best balance environmental ambition with operational reality.

5.1 Diversion, Processing, and Reuse Options

To increase the diversion rate from the 2023 level of 37%, the District's recommended options for this category (Diversion, Processing, and Reuse) target materials currently found in the garbage stream. This includes reusing more materials, expanding the Green Bin program and diverting other types of waste like textiles and construction waste.



Reuse Strategy: A strategy will be developed to improve reuse efforts. Actions may include partnering with non-profit organizations for mobile event days to collect gently used household goods and textiles to facilitate reuse and diversion;



Future Organic Waste Processing – Expand Organic Waste Processing at Facility(ies): A feasibility study will assess physically expanding District-owned composting facilities at Rosewarne and / or Beiers;



Future Organic Waste Processing – Third Party Processor: Evaluate the option of hauling Green Bin organics to a third-party facility. This could include processing facilities that accept a wider range of materials, such as pet waste and diapers; and



Construction, Renovation, and Demolition Strategy: With housing growth anticipated, the District will develop a plan to divert CRD materials from the landfill. This could include working with local service providers to identify opportunities for salvaged materials and educating residents and contractors on sustainable building practices.

5.2 Policy, Strategy, and Internal Operation Options

These recommendations focus on the administrative and operational frameworks required to manage the waste management system effectively and respond to changes.



Exemption Programs: Update or create programs to offer relief to households producing extra waste due to medical needs or child-care requirements, supporting fairness as bag limits decrease;



Disaster Debris Management (DDM) Strategy: Establish a strategy to proactively manage the sudden, high volumes of waste created by disasters such as floods or storms. This prepares the system to reduce service disruptions and control emergency management costs;



Implementation of a Data-Driven Continuous Improvement System: Create a framework to improve services, monitor progress and make evidence-based decisions through data collection. This can include auditing what is in the garbage bag and tracking Green Bin participation;



Reducing Litter and Illegal Dumping: Create a plan to address illegal dumping and litter through a review of enforcement (i.e., how enforcement is currently happening, what enforcement tools the District has, enforcement roles within the District, etc.) and education, identify opportunities for enhanced signage, and explore monitoring in problem areas to protect the natural beauty of Muskoka; and



Improvements at District-Owned Facilities: Standardize waste management practices across District buildings (e.g., Municipal administrative building, long-term care homes, etc.) through installation of new waste bins and signage to improve consistency, increase safety for collection staff, and increase diversion. Staff will also help develop site-specific waste operations plans.

5.3 Communication and Public Education Options

Clear and accessible information is required to drive behavioural changes and system compliance.



School Outreach Program: Collaborate with school boards to integrate waste education into the curriculum. Students will learn proper sorting habits to bring home to their families;



Enhanced Communication Tools – Innovation: Provide 24/7 access to information by exploring Artificial Intelligence (AI) powered resident support features, social media, and updates to the Waste App. These tools may provide immediate answers to common sorting questions and reduces the administrative burden on staff; and



Enhanced Communication Tools – Visitors' Package: Create targeted materials such as posters and simple sorting guides for Second Home residents and short-term visitors. These packages help temporary populations understand local rules and reduce contamination in waste streams.

5.4 Collection and Service Delivery Options

These recommendations address how waste physically moves from the source to processing and disposal facilities.



Introduction of Curbside Collection in Lake of Bays: Assess the feasibility of introducing curbside collection to the Township of Lake of Bays. Replacing the current reliance on transfer stations with curbside service increases diversion due to the convenience of being able to sort waste at home and place waste curbside rather than bringing to a depot;



Servicing Industrial, Commercial, and Institutional (ICI) Properties: Maintain current limited-service levels for ICI properties while awaiting results from recommended organics and construction waste studies. Upon review of those results, update as necessary;



Expansion of Curbside Collection Programs: Prioritize adding new materials to curbside collection, such as batteries and textiles. A pay-per-use curbside program for large bulky items will also be evaluated;



Drop-off Network Service Level Standard: Establish standard travel-times (including by water or by road) for residents to access Drop-off Facilities. This standard will identify where new infrastructure or site improvements are needed to provide consistent service; and



Bag Tag Administration and Distribution: Require a tag for every garbage bag. Households will receive an annual allotment of freely issued tags to cover the standard limits, with additional bag tags available for purchase to incentivize waste reduction and diversion.

5.5 Residual Waste Management Options

Maximizing the remaining capacity at the Rosewarne Landfill requires new technologies and operational strategies for garbage that cannot be diverted.



Alternative Leachate Treatment Methods: Investigate on-site or other transportation solutions for managing leachate (liquid that filters through landfill waste) to reduce the costs and emissions associated with trucking it to wastewater plants. Potential technologies include phytoremediation (using specialized trees to absorb liquid), evaporation systems, directional boring, or a dedicated on-site treatment facility;



Landfill Space Optimization (Use of Shredder): Analyze the costs and benefits to use a shredder on large, bulky items to reduce their size and allow garbage to pack more tightly in the landfill. If implemented, this would preserve valuable space and extends the landfill's lifespan;



Alternative Daily Cover: Analyze the costs and benefits to replace sand with reusable tarps or spray foams as daily cover to preserve the volume that sand would otherwise occupy in the landfill. If implemented, this change has the potential to extend the landfill's lifespan;



Use of Energy-from-Waste: Explore sending a portion of garbage to an existing EfW facility to be incinerated for energy. This would reduce the total quantity of waste landfilled and preserve long-term disposal capacity;



Remediation of Rosewarne East: Repair the closed landfill to better control Landfill Gas (LFG) emissions. Capturing LFG reduces GHG emissions and maintains environmental compliance; and



Closed Landfill Optimization Strategy: Study closed landfill sites in the District to see if any can be reopened or mined for new disposal space.

Part 6:
What This Means for Muskoka



6.1 Impact on Rosewarne Landfill Lifespan and Asset Management

At the 2023 residential generation rate of 275 kg per person, the District's only active landfill, Rosewarne, is projected to reach capacity by 2042. Implementation of the options above supports the preservation of this District asset and provides the following benefits:

- **Environmental Benefits:** Options that reduce the amount of space taken up in the landfill helps to preserve Muskoka's natural landscapes and delays the need for new landfill development. Additionally, these actions, along with diverting resources from garbage, helps lower GHG emissions by reducing the volume of decomposing organic material buried in the ground; and
- **Community and Social Benefits:** Diverting waste away from the landfill creates a fair and more sustainable system for all residents. By extending the lifespan of the Rosewarne Landfill, the District reduces the social and economic burden of finding new disposal solutions. These efforts, paired with enhanced education and convenient reuse programs, promote social equity and maintain a waste system that is accessible and responsible for the District.

Preserving local landfill lifespan reduces the immediate need for expensive alternatives, such as building a new landfill site, and would provide more time for the District to evaluate and develop long-term disposal solutions.

6.2 Environmental Benefits

The recommended actions contribute to local and provincial environmental goals by reducing the ecological footprint of the waste system.

6.2.1 Greenhouse Gas Reduction

Organic materials decomposing without oxygen, due to materials being packed tightly in landfills, produce methane, a potent GHG. Actions to reduce these emissions include:

- The **Future Organic Waste Processing** options support the diversion of food and other organic waste from the landfill with the potential to extend the Green Bin program to more customers and/or add more acceptable materials to the program like pet waste;
- The **Remediation of Rosewarne East** identifies methods to capture and control LFG movement; and
- Increasing convenience by the **Introduction of Curbside Collection in Lake of Bays** can increase diversion including greater participation in the Green Bin program which will reduce the methane produced by landfilling organics.

6.2.2 Protection of Natural Spaces

The recommended actions **Disaster Debris Management Strategy** and **Reducing Litter and Illegal Dumping** focus on keeping waste out of the natural environment. These efforts support the protection of water quality and soil health by preventing litter and the unauthorized disposal of materials along rural roads and in natural areas.

6.3 Community and Social Benefits

The Master Plan recommendations aim to improve the user experience for year-round residents, Second Home residents, businesses, and visitors while promoting fairness across the system.

6.3.1 Fairness and Equity

New policies help the District adapt to the needs of the community:

- **Exemption Programs** provide support for households with medical needs or child-care requirements that produce more garbage;
- The **Bag Tag Administration and Distribution** system uses an annual allotment of freely issued tags. This approach encourages waste reduction while offering greater flexibility for the community. By moving away from a strict weekly bag limit, residents can use their annual allotment as they wish, including Second Home residents using more tags during the summer months. This approach maintains a high level of service across the District; and
- Establishing a **Drop-off Network Service Level Standard** supports consistent access to facilities for residents who are not served by curbside collection.

6.3.2 Convenience and Education

Modernizing how information is shared helps residents and visitors follow waste rules:

- The **Introduction of Curbside Collection in Lake of Bays** increases convenience by allowing residents to sort waste at home rather than driving to a transfer station;
- **Enhanced Communication Tools – Innovation** provides the community with 24/7 access to sorting information; and
- The **School Outreach Program** and **Enhanced Communication Tools – Visitors' Package** provide targeted knowledge to help students and short-term visitors participate correctly in District programs.

Implementing these actions supports the community aspiration to reduce waste generation from 275 kg to between 50 kg and 100 kg per person per year.

Part 7:
How We Fund the Future





7.1 Our Starting Point

Historically, the largest portion of waste management revenue in the District is sourced from property taxes and is allocated based on property assessments. A financial model known as the special area levy system is applied annually to each property based on the allocation methodology and types of services received.

Under the current model, the District manages roughly 26,000 tonnes of garbage annually. Residents can bring up to two bags of garbage per week in clear bags at drop-off facilities for free. This service is available to all residents, including those with curbside collection.

While this model provides baseline service, it does not fully account for the quantity of waste generated per property or the unique needs of Second Home residents who occupy their properties for a fraction of the year. The Master Plan identifies the need to move toward a different funding model.

7.2 The Bag Tag Strategy

A core component of the future funding model is the **Bag Tag Administration and Distribution**. This strategy aims to incentivize waste reduction and create a fairer system for all users.

- **System Overview:** A tag will be required for every garbage bag set out at the curb or delivered to a Drop-off Facility;
- **Annual Allotment:** Starting with an equal baseline, each household will get a set number of freely issued bag tags annually to cover standard disposal needs;
- **User-Pay Incentive:** Residents will purchase additional tags only if garbage generation exceeds the annual allotment; and
- **Equity Measures:** The **Exemption Programs** will work alongside this strategy to provide financial support or extra tag allotments for households with specific medical or child-care needs.

Implementing this system requires coordination with the Area Municipalities (The Towns of Gravenhurst, Bracebridge, Huntsville, and the Townships of Lake of Bays, Georgian Bay, and Muskoka Lakes) to access property tax mailing data for tag distribution.

7.3 Long-Term Fiscal Benefits

While the Master Plan requires investment, failing to act would lead to higher long-term costs.

7.3.1 Extending Asset Lifespan

The Rosewarne Landfill is a valuable asset to the District. Preserving this space through options like the **Landfill Space Optimization (Use of Shredder)** and **Alternative Daily Cover** delays the massive capital expenditures required to develop new disposal infrastructure, such as the City of Ottawa's recent $95 million acquisition of an existing private landfill site, or the high operational costs of hauling all District waste to other jurisdictions.

7.3.2 Managing Future Liabilities

Proactive measures, such as the **Disaster Debris Management Strategy**, reduce the risk of price spikes and service disruptions during emergencies. Similarly, the **Remediation of Rosewarne East** allows the District to maintain environmental compliance standards. By addressing these needs now, the District minimizes long-term risk of future environmental liabilities or costly emergency cleanups.

7.3.3 Financial Accountability

By implementing a **Data-Driven Continuous Improvement System**, the District can use performance metrics to review that resources are targeted effectively. This system provides the necessary data to identify trends and make proactive adjustments, confirming that program delivery remains efficient and continues to meet its intended financial and environmental goals.

Part 8: Proposed Implementation Plan

The proposed implementation plan, including "short-term" (mid-2026 through the end of 2030) and "mid-term" (2031 through the end of 2036) outcomes, is illustrated in Table 2. The timing of these actions is based on a logical sequence where specific planning periods, including development of strategies, feasibility studies, internal research, reviews and development, liaison, contract timing, etc., must be completed before the implementation phase begins. This sequential approach confirms that actions such as updating by-laws and/or municipal documentation, submitting applications, rolling out new programs, etc., are supported by data and do not overextend the District. Furthermore, by spacing out these changes, the District can communicate more effectively with residents, so that the community is not overwhelmed by too many service changes at once.


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Table 1: mplementation Timeline, mid-2026 to 2035

Legend: P: Planning | I: Implementation | P&I: Planning & Implementation

Category	Option	mid-2026	2027	2028
Diversion, Processing, and Reuse Options	Reuse Strategy	-	-	P
	Expand Organic Processing Sites	-	P	P
	Third Party Organics Processor	-	P	I
	CRD Strategy	-	-	P
Policy, Strategy, and Internal Operation Options	Exemption Programs	-	P&I	-
	DDM Strategy	-	P	I
	Data-Driven System	P	I	-
	Litter and Illegal Dumping	P&I	I	-
	Improve District-Owned Facilities	-	-	P
Communication and Public Education Options	School Outreach Program	P	I	-
	Innovative Tools	-	P&I	-
	Visitors Package	P	P&I	-
Collection and Service Delivery Options	Curbside Collection Lake of Bays	-	-	P
	Servicing ICI Properties	-	-	-
	Expand Curbside Programs	-	P	P
	Drop-off Network Service Level Standard	-	P	P
	Bag Tag Admin and Distribution	P	P	P&I
Residual Waste Management Options	Alternative Leachate Treatment	P&I	-	-
	Landfill Shredder	P	P	P
	Alternative Daily Cover	-	-	-
	Energy-from-Waste	-	-	P
	Remediate Rosewarne East	P	P	P
	Closed Landfill Optimization	-	-	-

2029	2030	2031	2032	2033	2034	2035
P	P	I	-	-	-	-
I	-	-	-	-	-	-
-	-	-	-	-	-	-
I	-	-	-	-	-	-
-	-	-	-	-	-	-
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-	-	-	-	-	-	-
P	P	I	-	-	-	-
P	P	I	-	-	-	-
P	P	I	-	-	-	-
I	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
I	-	-	-	-	-	-
P	P	P	I	-	-	-
P	P	I	-	-	-	-
P	I	-	-	-	-	-
-	-	-	-	-	-	I

8.1 Immediate Priorities

By executing immediate priorities, the implementation timeline balances the District's guiding principles while establishing the data framework necessary for future infrastructure investments. The following options are considered immediate priorities, with planning and/or implementation occurring in 2026 or 2027:

Implement in 2026:

- **Reduce Litter and Illegal Dumping:** A short-term action that can improve protection of natural spaces through communication and enforcement; and
- **Alternative Leachate Treatment Methods:** To decide on the new Rosewarne Landfill Leachate Haulage contract in December 2026.

Implement in 2027:

- **Implementation of a Data-Driven Continuous Improvement System:** To allow for the earliest possible baseline and provide as much data as possible for future decisions;
- **School Outreach Program and Enhanced Communication Tools:** Low cost options that can be implemented to improve diversion in the short-term; and
- **Exemption Programs:** To support equitable implementation of bag tag program.

Begin planning in 2026 or 2027:

- **Bag Tag Administration and Distribution:** An option that can increase diversion and reduce costs in the short-term;
- **Landfill Space Optimization (Use of Shredder):** Action to immediately extend the landfill's lifespan;
- **Remediation of Rosewarne East:** Immediate landfill investigation to determine mitigation strategies for LFG migration;
- **Future Organic Waste Processing:** To help decide details for the Green Bin organics Haulage Contract in December 2027;
- **Disaster Debris Management Strategy**: To prepare for potential future disasters;
- **Expand Curbside Programs:** To increase diversion through expansion of curbside collection programs; and
- **Drop-Off Network Service Level Standard**: To understand where changes to the drop-off network may be required.

8.2 Short-term and Mid-term Outcomes

"Short-term" (mid-2026 through the end of 2030) and "mid-term" (2031 through the end of 2036) outcomes are outlined in **Table 2**.

Table 2: Short-Term and Mid-Term Outcomes

Option Name	Short-term outcomes (mid-2026 through end of 2030)	Mid-term outcomes (start of 2031 to end of 2035)
Reuse Strategy	Development of a comprehensive strategy to enhance reuse efforts by transitioning the current Reuse Sheds into a more effective, community-based program.	Implementation of strategy recommendations (mid-term and/or long-term).
Future Organic Waste Processing – Expand Organic Waste Processing at Facility(ies)	Investigate feasibility of expanding a facility at Rosewarne or Beiers and decide if the District will continue their windrow composting facility.	Dependent on the outcome(s) of the feasibility study.
Future Organic Waste Processing – Third Party Processor	Investigate feasibility of using a third-party processor for organic waste.	Dependent on outcome(s) of the feasibility study.
Construction, Renovation, and Demolition Strategy	Development of a strategy for addressing CRD wastes.	Dependent on the District's priorities and ability to implement changes.
Exemption Programs	Preparation of a program plan. By-law and public communications updates, and exploration of partnerships.	Ongoing modifications, as needed.
Disaster Debris Management Strategy	Looking into funding options and aligning with other District emergency preparedness initiatives. Determining logistics (e.g., handling and storage of disaster debris, negotiation with a collection contractor).	Ongoing review and continuous improvement.
Implementation of a Data-Driven Continuous Improvement System	Determining key performance indicators, thresholds and actions, roles, responsibilities and accountability. Automating the compilation of data. Conducting participation and waste audits, developing long-term trends and updating key performance indicators and metrics as part of a five-year strategic review.	Ongoing data collection, including participation and waste audits. Ongoing review and continuous improvement.

Option Name	Short-term outcomes (mid-2026 through end of 2030)	Mid-term outcomes (start of 2031 to end of 2035)
Reducing Litter and Illegal Dumping	Review existing approach and develop a collaborative approach on public communication, litter management and enforcement, promotion and education (PE) campaign roll-out, and install signage and expand programming as needed.	Ongoing review and continuous improvement.
Improvements at District-Owned Facilities	Conduct an assessment of existing infrastructure. Develop site-specific waste operations plans, initiate procurement process, purchase and install bins.	Ongoing review and continuous improvement.
School Outreach Program	Liaise with the school boards to develop the outreach plan and if the school boards are in agreement, development of educational activities.	Ongoing review and continuous improvement.
Enhanced Communication Tools – Innovation	Identification of District Waste Management communication enhancements.	Ongoing review and continuous improvement.
Enhanced Communication Tools – Visitors' Package	Create visitors' package.	Ongoing review and continuous improvement.
Introduction of Curbside Collection in Lake of Bays	Financial Business Case Review and Council approval. Amend collection contract and plan for transition of roadside stops.	Implement curbside collection including update to Waste App, PE and support for residents during transition.
Servicing ICI Properties	Following results from recommended organics and construction waste studies, update servicing as necessary and develop standardized criteria for ICI servicing and a revenue model.	Implement changes as necessary.

Option Name	Short-term outcomes (mid-2026 through end of 2030)	Mid-term outcomes (start of 2031 to end of 2035)
Expansion of Curbside Collection Programs	Determining materials to prioritize to increase diversion. Update the applicable Waste Management By-law (e.g., General User Fees), initiate contract(s) for the expanded areas and go through the required procurement process.	Implement expanded curbside collection programs, including PE.
Drop-off Network Service Level Standard	Identification of level of service across the drop-off network for weekly garbage, organic, Blue Box recycling, and potentially more drop-off.	Ongoing review and continuous improvement.
Bag Tag Administration and Distribution	Developing the administration and distribution processes required to implement a revised bag tag system. Implementation of bag tag program.	Ongoing review and continuous improvement.
Alternative Leachate Treatment Methods	Model and analyze projected leachate volumes and identify changes to landfill operational practices. Explore alternative leachate management and disposal approaches and assess the feasibility and costs.	Ongoing review and continuous improvement.
Landfill Space Optimization (Use of Shredder)	Conduct a cost benefit analysis. Select and implement shredder technology at Rosewarne landfill.	Ongoing review and continuous improvement.
Alternative Daily Cover	Conduct a cost benefit analysis.	Select alternative daily cover system, contingency cover and initiate procurement process.
Use of Energy-from-Waste	Develop a high-level business case to assess the financial and environmental feasibility of use of EfW facilities.	Dependent on District priorities and ability to implement changes. Finalize disposal contracts and infrastructure requirements based on the feasibility results.
Remediation of Rosewarne East	Landfill investigation and remediation.	Ongoing review and continuous improvement.
Closed Landfill Optimization Strategy	No short-term changes.	Feasibility study.

Part 9: Master Plan Financial Impacts



With implementing the Master Plan, the District is advancing options aimed at improving waste management outcomes through a combination of programs, policy changes, operational enhancements, and targeted investments in infrastructure and enabling tools.

These options will affect the District's budget. There will be incremental capital and operating cost pressures over the forecast period. The timing of these impacts will vary, as different options will start in different years, driving changes in annual cost requirements. At the same time, some of these measures may provide benefits through revenue generation, avoiding future costs, and making the waste system more efficient.

The following subsections present a structured, year-by-year view of the evolution of operating expenditures and capital requirements across the forecast period related to these initiatives, and the associated financial implications.

9.1 Capital Cost Impacts

This section assesses the capital cost implications associated with the implementation of the Master Plan options over the 2026 to 2035 period. As these options are introduced at different points in time, capital investments are expected to be phased, reflecting the timing and scale of each initiative.

Table 3 presents the capital cost estimates and associated implementation timelines, based on currently available information.

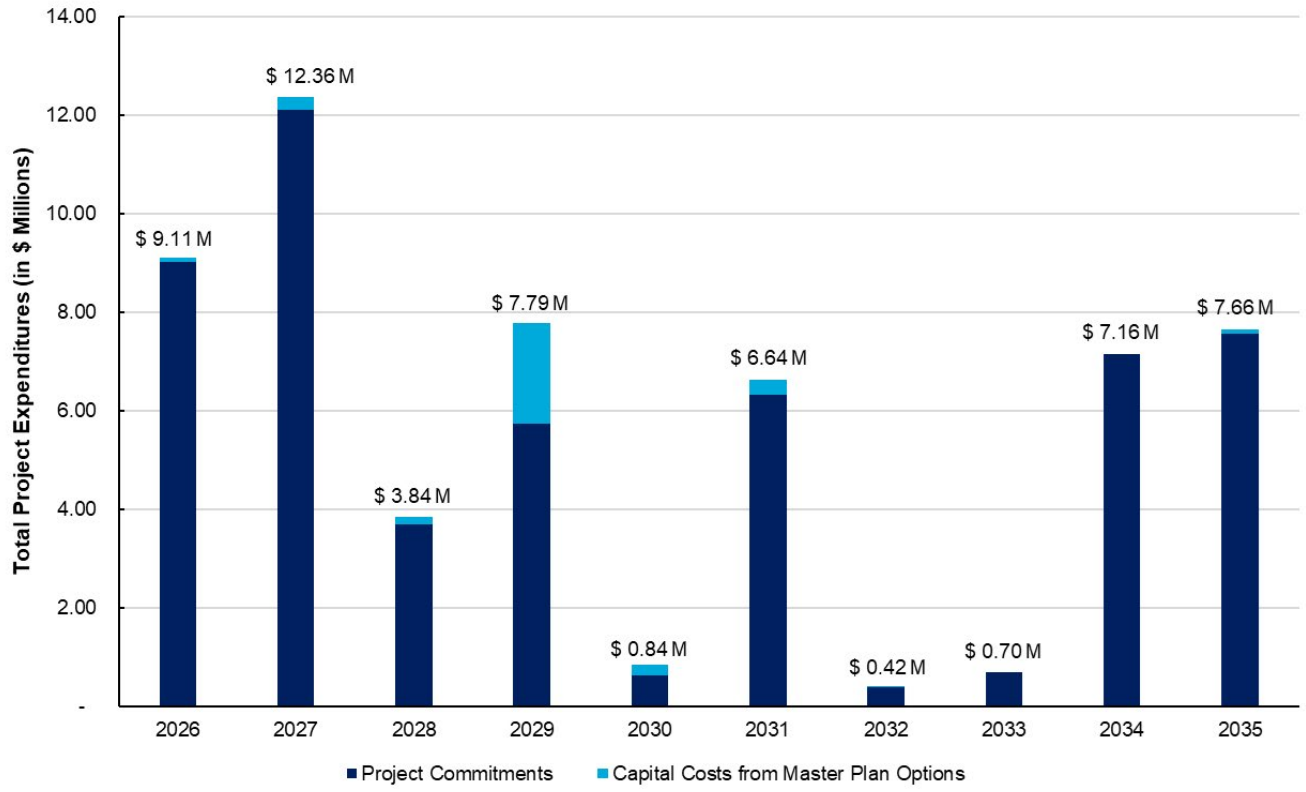
Table 3: Capital Costs Incurred from Master Plan Options

	Options	Capital Cost Estimate ($2026)	Year of Implementation
Diversion, Processing, and Reuse			
1	Reuse Strategy	$75,000	2031
2	Future Organic Waste Processing – Expand Organic Waste Processing at Facilities	$200,000	2029
3	Future Organic Waste Processing – Third Party Processor	Not Available	2028
4	Construction, Renovation, and Demolition Strategy	$150,000	2029
Policy, Strategy, and Internal Operations			
5	Exemption Programs	Not Available	2027
6	Disaster Debris Management Strategy	$150,000	2028
7	Implementation of a Data-Driven Continuous Improvement System	$100,000	2027
8	Reducing Litter and Illegal Dumping	$50,000	2027
9	Improvements at District-Owned Facilities	$200,000	2029

	Options	Capital Cost Estimate ($2026)	Year of Implementation
Communication and Public Education			
10	School Outreach Program	Not Available	2027
11	Enhanced Communication Tools – Innovation	$50,000	2027
12	Enhanced Communication Tools – Visitors' Package	Not Available	2027
Collection and Service Delivery			
13	Introduction of Curbside Collection in Lake of Bays	$225,000	2031
14	Servicing Industrial, Commercial, and Institutional Properties	Not Available	2031
15	Expansion of Curbside Collection Programs	$20,000	2031
16	Drop-off Network Service Level Standard	$250,000	2029
17	Bag Tag Administration and Distribution	$50,000	2027
Residual Waste Management			
18	Alternative Leachate Treatment Methods	$75,000	2026
19	Landfill Space Optimization (Use of Shredder)	$1,250,000	2029
20	Alternative Daily Cover	$30,000	2032
21	Use of Energy-from-Waste	Not Available	2031
22	Remediation of Rosewarne East	$200,000	2030
23	Closed Landfill Optimization Strategy	$100,000	2035
Total		**$3,175,000**	-

Figure 9 shows how total capital cost requirements will change as the Master Plan options are implemented. It combines already planned capital commitments (i.e., without the Master Plan, these were already forecasted by the District), with the additional costs of the Master Plan options. This gives a complete picture of future capital expenditures across the planning horizon.

Figure 9: Total Project Commitments and Capital Master Plan Costs



Based on the revised capital cost profile, **Table 4** summarizes how these costs are funded over the 2026–2035 period, including the primary use of the Solid Waste Reserve, resulting closing balances, and any associated financing requirements.

The District's financial forecast for planned project commitments and funding only goes to 2034. To align with the timing of Master Plan-related capital expenditures, KPMG projected the 2035 commitments and the funding needed based on the estimates. This was done by using specific assumptions for key inputs to maintain continuity.[1]

[1] Specifically, reserve contributions for 2035 were projected using a compound annual growth rate (CAGR) of 5.0%, based on historical trends. Investment income, which has exhibited variability in prior years, was also forecasted at a growth rate of 5.0% for consistency.


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Table 4: Solid Waste Reserve 10-Year Forecast

	2026	2027	2028	2029
Capital Expenditures (Commitments + Master Plan options)				
Total Capital Expenditures	$9,105,285	$12,358,620	$3,841,580	$7,793,400
Solid Waste Reserve [2]				
Opening Balance	$4,465,259	$5,814,982	$838,827	$4,495,423
Capital Project Commitments	($2,744,025)	($9,298,620)	($781,580)	($7,793,400)
Contributions from Rev. Fund	$4,004,443	$4,204,665	$4,414,899	$4,635,644
Investment Income	$89,305	$117,800	$23,277	$99,408
Closing Balance	$5,814,982	$838,827	$4,495,423	$1,437,075
Project Financing (Net Funding Requirement) [3]				
Total Project Financing	-	-	-	-

[2] In addition to the Solid Waste Reserve, other reserves also support capital funding, including the Climate Change Reserve and the Environmental Reserve. For example, $42,360 of 2026 capital costs related to development of the Solid Waste Master Plan are financed through the Climate Change Reserve, while $6,318,900 of 2026 capital costs related to the remediation of closed landfills are financed through the Environmental Reserve. Similarly, in both 2027 and 2028, $3,060,000 of capital costs related to the remediation of closed landfills are financed through the Environmental Reserve.

[3] Project Financing is calculated by deducting the total capital expenditures from the Solid Waste Reserve (Capital Project Commitments), Climate Change Reserve and Environmental Reserve.

2030	2031	2032	2033	2034	2035
$840,640	$6,641,460	$421,700	$697,520	$7,161,740	$7,661,578
$1,437,075	$5,543,102	$4,177,801	$9,266,894	$14,450,866	$13,556,028
($840,640)	($6,641,460)	($421,700)	($697,520)	($7,161,740)	($7,661,578)
$4,867,426	$5,110,797	$5,366,337	$5,634,654	$5,916,385	$6,212,204
$79,241	$165,362	$144,456	$246,838	$350,517	$368,043
$5,543,102	$4,177,801	$9,266,894	$14,450,866	$13,556,028	$12,474,697
-	-	-	-	-	-

Overall, when including the Master Plan actions, the related capital costs will require an additional $3.18 million over the next 10 years. The Solid Waste Reserve contains enough funds for these identified expenditures and maintain positive closing balances throughout the forecast period. Therefore, based on current capital cost estimates and implementation assumptions, no additional financing is required.

However, it is important to note that several of the Master Plan options identified in **Table 4** represent the costs to complete feasibility studies or strategy-level assessments with the purpose of identifying preferred paths forward. The costs for the different recommendations that will come out of those studies and assessments are not included at this time. Therefore, the capital cost estimates presented may change significantly as the studies, assessments, additional technical analysis, design work, and implementation decisions are undertaken.

For example, the Expand Organic Waste Processing at Facilities option includes a capital cost estimate of $200,000 in 2029 to complete a feasibility study to confirm the recommended path forward for processing organic waste (which could also include sending to a different facility). Depending on the outcome of that feasibility study, the capital costs could increase significantly. In such a scenario, the projected 2029 Solid Waste Reserve closing balance of $1.4 million may be insufficient, requiring additional funding resources.

Accordingly, should the District ultimately proceed with capital intensive initiatives that are not currently included in the base case Master Plan, significant additional capital investment may be required, potentially requiring additional funding through increased reserve fund contributions (through the Solid Waste Levy), external financing and/or grant funding from other levels of government.



9.2 Operating Cost Impacts

Further to the expenditure categories (i.e., direct operating costs, finance charges and reserves, and net internal service charges), implementing the Master Plan options adds more recurring operating expenditures over the forecast period. These costs are assumed to begin once the related projects are up and running.

Baseline (status quo) operating costs were forecasted using a defined set of assumptions. A blended annual escalation rate of 2.5% was applied across most operating cost line items; however, select categories were treated differently to reflect their underlying cost drivers. For example, staff costs are escalated at 7.7% between 2026 and 2027 to reflect the new collective agreement, with escalation decreasing to 5.0% between 2027 and 2028 to account for continued wage and benefits adjustments before stabilizing at 2.0% in subsequent years in line with anticipated cost-of-living adjustments (COLA).

The addition of Master Plan related operating costs results in a phased increase in total operating expenditures, reflecting the timing and scale of implementation across the recommended initiatives. While certain initiatives may generate future revenue and savings potential, these benefits should be considered in the context of the District's broader long-term funding requirements. Several initiatives currently include funding for feasibility studies and business cases, the outcomes of which may identify additional capital and operating requirements beyond those currently forecast. As such, any future revenue generation or cost savings may help offset emerging system costs and support the long-term financial sustainability of the solid waste program.

Table 5 presents the preliminary Master Plan operating cost estimates based on currently available information and underlying assumptions.

Table 5: Operational Costs Incurred from Master Plan Options

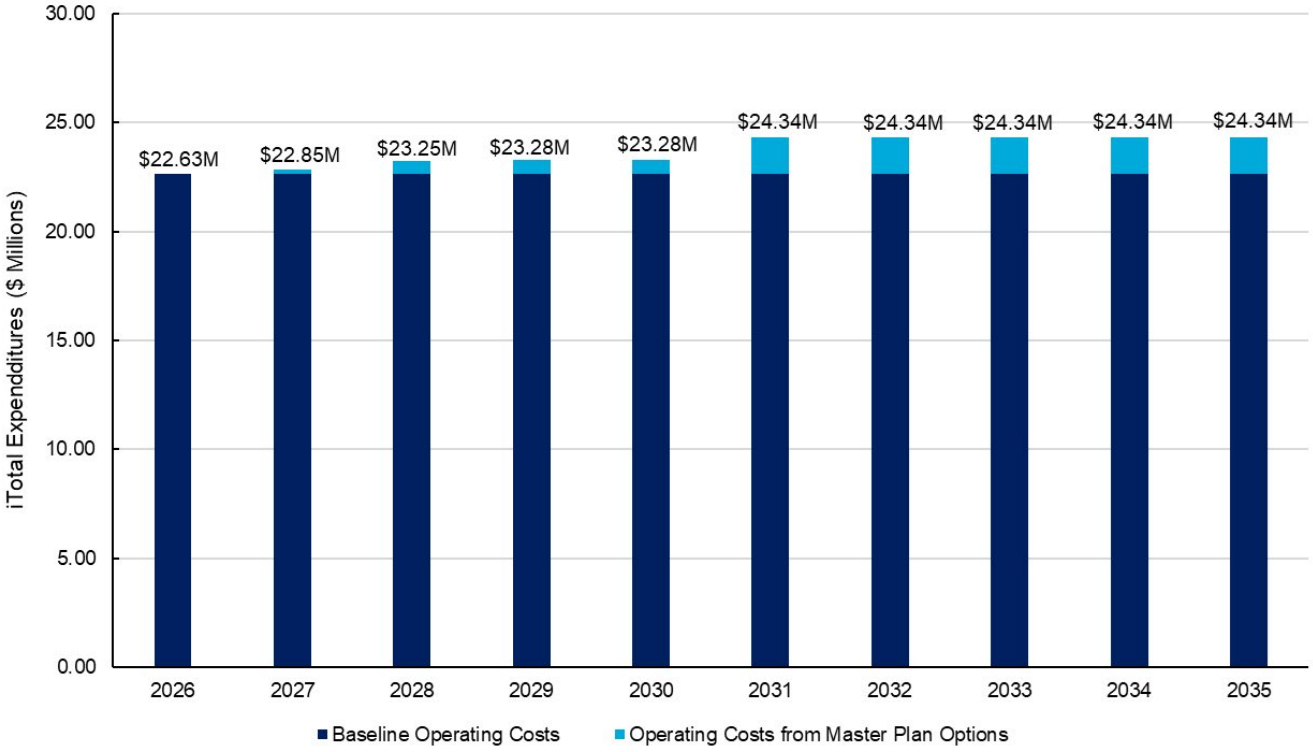
Options		Operating Cost Estimate ($2026)	Year of Implementation
Diversion, Processing, and Reuse			
1	Reuse Strategy	Not Available	2031
2	Future Organic Waste Processing – Expand Organic Waste Processing at Facilities	Not Available	2029
3	Future Organic Waste Processing – Third Party Processor	Not Available	2028
4	Construction, Renovation, and Demolition Strategy	Not Available	2029
Policy, Strategy, and Internal Operations			
5	Exemption Programs	$10,000	2027
6	Disaster Debris Management Strategy	Not Available	2028

Options		Operating Cost Estimate ($2026)	Year of Implementation
7	Implementation of a Data-Driven Continuous Improvement System	$150,000	2027
8	Reducing Litter and Illegal Dumping	Not Available	2027
9	Improvements at District-Owned Facilities	Not Available	2029
Communication and Public Education			
10	School Outreach Program	$30,000	2027
11	Enhanced Communication Tools – Innovation	$10,000	2027
12	Enhanced Communication Tools – Visitors' Package	$20,000	2027
Collection and Service Delivery			
13	Introduction of Curbside Collection in Lake of Bays	$660,000	2031
14	Servicing Industrial, Commercial, and Institutional Properties	Not Available	2031
15	Expansion of Curbside Collection Programs	$350,000	2031
16	Drop-off Network Service Level Standard	Not Available	2029
17	Bag Tag Administration and Distribution	$400,000	2028
Residual Waste Management			
18	Alternative Leachate Treatment Methods	Not Available	2026
19	Landfill Space Optimization (Use of Shredder)	$30,000	2029
20	Alternative Daily Cover	Not Available	2032
21	Use of Energy-from-Waste	$50,000	2031
22	Remediation of Rosewarne East	Not Available	2030
23	Closed Landfill Optimization Strategy	Not Available	2035
Total		**$1,710,000**	-

Building on **Table 5**, **Figure 10** illustrates the evolution of operating costs from 2026 to 2035 period, combining baseline expenditures with the incremental costs associated with Master Plan options to present the revised total operating cost profile.

Costs are incurred annually once initiated, beginning in the year they are triggered.

Figure 10: Total Expenditures with Baseline Operating Costs and Operating Master Plan Costs[4]



As seen in **Figure 10**, the addition of Master Plan related operating costs results in a phased and incremental increase but does not have a significant impact on the overall cost trajectory.

9.3 Total System Cost Recovery

The District generates revenue in several ways, including the Solid Waste Levy, user fees, supplementary taxes, and provincial grants. The Solid Waste Levy represents the residual funding requirement, calculated as total expenditures less non-levy revenues (i.e., user fees, supplementary taxes, and grants).

The Master Plan related expenditures add costs to the overall system, which in turn drives an increase in the residual funding requirement to be funded through the Solid Waste Levy. Non-levy revenue streams have been forecasted using a blended annual escalation rate of 2.5% based on historical trends.

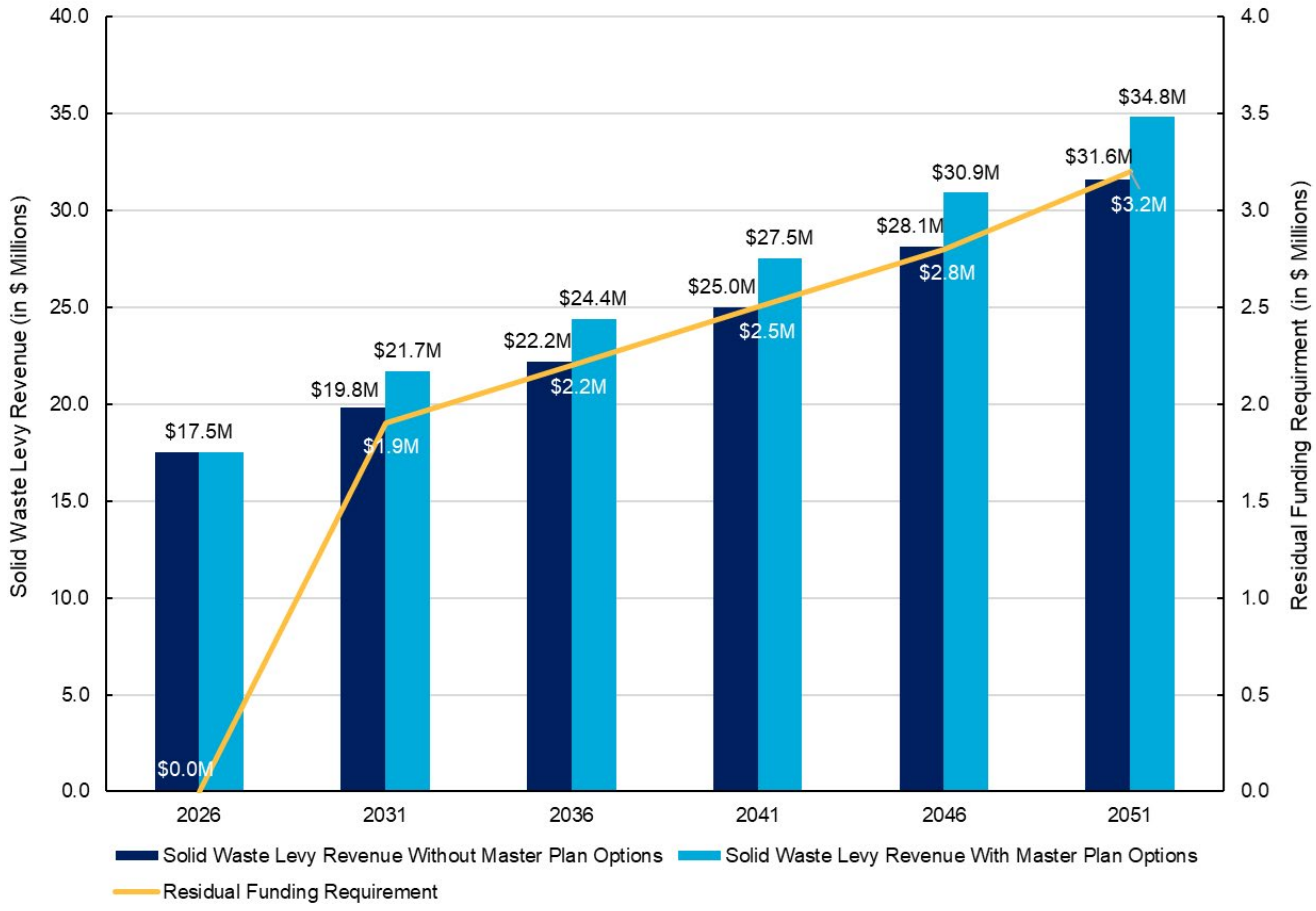
The Solid Waste Levy is projected to increase each year to help address funding gaps in the District's operating budget, so that that total funding requirements continue to align with projected operating

[4] 2026 reflects only baseline operating costs, as no operating costs associated with the SWMP options are incurred in that year.

expenditures. **Figure 11** compares two scenarios: (1) the projected levy burden under the status quo (excluding Master Plan options), and (2) the revised forecasted levy burden reflecting the incremental costs associated with Master Plan implementation.[5] The figure presents nominal figures to demonstrate the cost and revenue escalation over time.

Additionally, **Figure 11** illustrates the incremental residual funding requirement associated with implementing the Master Plan options compared to the status quo scenario. This "residual funding requirement" represents the additional levy funding that would need to be recovered from ratepayers to support implementation of the Master Plan options after accounting for projected non-levy revenues. As shown in the figure, the residual funding requirement is expected to increase over time as additional Master Plan related operating costs are phased into the system.

Figure 11: Impact of Master Plan Options on Solid Waste Levy Revenue on 5-year intervals



[5] The Solid Waste Levy in 2026 is consistent across both scenarios, as no Master Plan options are assumed to be implemented in that year.

To understand how the Master Plan options may impact households across the District, KPMG projected total household units and estimated an annual cost per unit as a proxy to assess how changes in the Solid Waste Levy requirement would impact households.[6]

Household unit data by area municipality was provided by the District, including baseline values for 2026 and District-projected values for 2027. To support the long-term forecast, the District also provided the historical five-year average annual growth rate (%) for each area municipality. KPMG used these growth rates to project household units on a per area municipality basis across the forecast period (2028–2056).

Table 6 below illustrates the projected growth rates and corresponding unit growth over the first five years of the forecast period.

Table 6: Household Unit Projection by Area Municipality

Municipality	5-year average change (%)	2026 (baseline)	2027 (District projected)	2028	2029	2030	2031
Bracebridge	1.22%	12,849	13,109	13,269	13,430	13,594	13,759
Gravenhurst	1.01%	11,281	11,694	11,812	11,931	12,051	12,172
Huntsville	1.42%	14,344	15,349	15,567	15,789	16,014	16,241
Georgian Bay	0.52%	8,343	8,184	8,227	8,270	8,313	8,357
Lake of Bays	0.75%	7,559	7,529	7,585	7,642	7,700	7,757
Muskoka Lakes	0.51%	14,719	15,075	15,152	15,229	15,306	15,384
Total	**-**	**69,095**	**70,940**	**71,612**	**72,290**	**72,977**	**73,670**

The yearly cost per unit across the District was estimated by dividing the Solid Waste Levy requirement under each scenario by the projected number of household units. This analysis was completed for two scenarios: (i) the status quo scenario (current operations, excluding Master Plan options), and (ii) the revised scenario (incorporating Master Plan-related costs).

Table 7 presents the annual cost per unit under both the status quo and the Master Plan scenario for the period from 2026 to 2035. This comparison highlights the annual percentage differences between the two scenarios showing how implementing the Master Plan options will affect rates in the short- and medium-term.

[6] It is important to note that this metric does not represent the actual levy charged to individual households. In practice, the solid waste levy is determined based on the assessed value of each property. However, the average cost per unit provides a useful benchmark to assess and compare cost burden across Area Municipality s.

The results presented should not be interpreted as a recommended levy implementation strategy. The District retains flexibility in how these costs are incorporated into future budgets and levy adjustments. As part of future budget planning processes, the District may choose to phase in levy increases differently than illustrated in this analysis, including through the timing of levy adjustments or the modest use of available operating reserves to smooth impacts over time. Such decisions would be evaluated based on the District's financial position, reserve balances, and funding requirements at the time.

Table 7: Annual Cost Per Unit Comparison – Status Quo vs Master Plan Scenario (2026–2035)

Cost Per unit ($/Unit)										
Scenario	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Status Quo	253.11	253.70	257.27	260.88	264.55	268.26	272.03	275.84	279.71	283.63
With Master Plan Options	253.11	256.88	266.36	270.57	274.38	294.53	298.69	302.92	307.20	311.54
Percentage Difference	**0.00%**	**1.25%**	**3.54%**	**3.71%**	**3.72%**	**9.79%**	**9.80%**	**9.81%**	**9.83%**	**9.84%**
Average Percentage Difference										**6.47%**

Table 7 shows that the District will face financial pressures over the next 10 years as most of the Master Plan-related operating costs are introduced between 2026 and 2035. To fully cover these costs, the Solid Waste Levy and associated rates will need to increase.

Under the status quo scenario, solid waste rates are projected to increase by an average of approximately 1.30% each year over the next 10 years to keep up with inflation. In comparison, under the scenario incorporating the Master Plan options, rates are projected to increase by an average of approximately 2.18% each year over the same period.

Overall, the Master Plan scenario will result in an average yearly cost per household that is about 6.47% higher than if the status quo is maintained between 2026 and 2035.

Comparing the yearly differences between the two scenarios shows how the timing of specific Master Plan options contributes to increases in the annual cost per unit throughout the forecast period.

In 2026, the percentage difference stays at 0%, as no additional Master Plan related operating costs are expected during that year (i.e., new Master Plan options do not start until after 2027). More notable increases occur in 2028 and 2031 as additional Master Plan operating costs are added to the system.

The increase in 2028, where the difference rises to 3.54%, is mainly due to the start of bag-tag administration and distribution costs, estimated at about $400,000. These costs make up approximately 23.4% of total Master Plan related operating costs in that year.

A larger increase happens in 2031, when the difference rises to 9.79%. This reflects the start of several major Master Plan related operating costs totalling approximately $1.06 million, including curbside collection in Lake of Bays ($660,000), expansion of curbside collection programs ($350,000), and energy-from-waste-related costs ($50,000). Together, these costs account for about 62.0% of total Master Plan related operating costs in 2031.

The District retains flexibility in how future levy increases are implemented. As part of future budget planning processes, modest use of available operating reserves could be considered to phase in larger levy increases that may occur in the later years of the forecast period. This approach could help smooth year-over-year impacts on taxpayers while maintaining progress toward the long-term funding requirements identified in the Master Plan.

The need for, and extent of, any reserve utilization would be evaluated as part of future budget deliberations and is not a recommendation of this Master Plan. However, the District's operating reserve balance provides flexibility to support a more gradual implementation approach, should this be deemed appropriate in future years.

9.4 Refinements to Solid Waste Levy

As part of the Master Plan, KPMG reviewed how the District allocates the Solid Waste Levy to identify opportunities to make it more transparent, better match costs and service levels, and enhance the overall fairness of costs across Area Municipalities. While the proposed updates do not change the District's overall funding requirement, they could change how much each Area Municipality pays based on new calculation methods and local service levels.

The review looked at how the current levy is calculated, the data used, and what drives costs. The goal was to see if costs are being shared fairly based on where households are located and how much services are actually used across the District. The review identified several opportunities to improve the process, including:

- Using updated data to better reflect who is actively using the services;
- Relying less on outdated factors that no longer match how services are delivered today; and,
- Simplifying parts of the methodology to make the process more transparent and easier to explain.

Building on these findings, KPMG developed and assessed 14 alternative options for updating the Solid Waste Levy framework. Following an initial review, the District shortlisted five scenarios that best matched the goals of transparency, communication, equity, and affordability. These scenarios were also selected for their practicality within current operations and addressed key feedback from the District, Area Municipalities, and the public.

While each shortlisted scenario supports the District's objectives in some way, no single scenario fully addresses all issues. However, the scenarios demonstrate how specific changes to the allocation methodology can better match costs and service delivery, share expenses more fairly among Area Municipalities, and keep the overall Solid Waste Levy system steady.

Recognizing the strengths and limitations of each scenario, KPMG developed a hybrid approach that merges key elements from the shortlisted options into a single framework. This combined method provides a more balanced, transparent, and fair way to divide solid waste costs across the District.

Table 8 shows how this hybrid approach impacts the total cost per unit. The results show moderate shifts across municipalities, with some seeing increases and others seeing decreases based on their specific services and housing mix. Some Area Municipalities will see costs go up slightly. For example, Lake of Bays will see an increase of approximately 4.53%. Other Area Municipalities will see cost reductions. For example, Georgian Bay will see a decrease of approximately 8.00%. These shifts rebalance the system so that costs better align with service demand and use.

Table 8: Cost per Unit Comparison by Area Municipality (Status Quo vs Hybrid Approach)

Area Municipality	Previous Cost per Unit	New Cost per Unit	Delta	% Difference
Bracebridge	$252.80	$246.24	($6.56)	(2.60%)
Gravenhurst	$245.82	$241.51	($4.30)	(1.75%)
Huntsville	$237.76	$246.62	$8.85	3.72%
Georgian Bay	$220.73	$203.08	($17.66)	(8.00%)
Lake of Bays	$172.50	$180.31	$7.81	4.53%
Muskoka Lakes	$231.27	$237.24	$5.98	2.58%
Total Cost per Unit	**$231.50**	**$231.50**	**-**	**-**
Total Levy	**$17,539,890**	**$17,539,890**	**-**	**-**



Part 10: Measuring Progress



10.1 How We Track Success

The District will systematically check how well the waste programs work and find ways to keep getting better. This process allows the District to adjust if federal and/or provincial rules change over time. Measuring progress happens in three stages:

- **Short-term (mid-2026 to end of 2030):** Selecting specific numbers to track and identifying where to find that information to match District goals;
- **Mid-term (start of 2031 to end of 2036):** Performing regular checks of garbage bags and monitoring how many people use diversion programs; and
- **Long-term (start 2037 to end of 2056):** Collecting and reviewing data over time to help update District policies, infrastructure investments, and long-range financial planning.

10.2 Our Key Performance Indicators

The District will use specific numbers or targets to check if goals and savings are being reached. These targets will act as a guide for the 30-year plan and could include indicators such as:

- **Tonnes Landfilled per Person:** This measurement looks at the weight of garbage thrown away by each resident. The District will refine the methodology used to calculate this that aligns with other jurisdictions and is adjusted for the impact of Second Home residents;
- **Landfill Lifespan:** The District will watch how much room is left in the Rosewarne Landfill. Success means keeping the landfill open longer by diverting more and using the available space wisely;
- **GHG Emissions:** The District will track the drop in harmful GHGs caused by waste. This focuses specifically on methane, which is a gas produced when food and other organic materials rot in a landfill; and
- **Financial Savings:** The District will track how much money is saved both in terms of capital and operational costs.

To support transparency and keep the community engaged, the District intends to report on these targets using public-facing dashboards. Using data visualization tools can help residents easily see how their efforts contribute to the District's collective goals.

Although the diversion rate has been the historical and most common metric used by municipalities, the District (and all municipalities in Ontario) no longer have access to how much Blue Box recyclables are being diverted in Muskoka. Given this metric is calculated as a percentage of waste that is diverted (reused, reduced, recycled, or composted) instead of buried in the landfill, it will be hard to accurately calculate and compare this metric year over year. The District will rely on the metrics listed above to determine overall progress.

10.3 Looking Inside the Bag: Waste and Participation Audits

Waste and participation audits are a tool for measuring progress toward diversion goals. By periodically examining the contents of garbage bags, the District gains valuable insights that waste disposal quantity data alone cannot provide. Studying participation rates can also help the District understand what behaviours are contributing to what they are seeing inside garbage bags.

- **Identifying Opportunities:** Recent audits (prior to implementation of the Clear Bag Program) show that approximately a quarter to half of the weight in curbside garbage consists of food waste. This data confirms the need for more education on reducing food waste, getting more people to participate in the Green Bin program and expanding what goes into the Green Bin program;
- **Measuring Program Effectiveness:** Regular audits at the curb and at Drop-off Facilities help determine if new initiatives, such as the Clear Bag Program, are successfully encouraging residents to sort waste properly; and
- **Reducing Contamination:** Audits identify materials that do not belong in the garbage, such as Blue Box recyclables or hazardous items like batteries, which allows the District to target educational campaigns more effectively.
- **Seasonal Variation:** Carrying out audits in different seasons allows the District to monitor seasonal differences in participation and composition of waste. This helps understand how Second Home residents and visitors impact the waste system and allows for the targeting of educational campaigns.

10.4 Transparency and Public Trust

Building public trust is essential for the long-term success of the Master Plan. Residents and visitors need to understand how their actions contribute to the goals of the District.

- **Reporting Results:** The District plans to produce an annual report card that would highlight key statistics on the status of the Master Plan implementation. This report card would complement a public-facing dashboard that tracks progress towards the Master Plan targets;
- **Evidence-Based Decisions:** Transparent financial and environmental analysis of complex options, such as EfW, allows the community to be informed about the reasons behind major system changes; and
- **Collaborative Monitoring:** The District will continue to advocate for a provincial framework that allows for consistent data sharing and performance comparisons against peer municipalities.

By making performance data accessible and clear, the District demonstrates accountability and encourages continued participation in waste reduction efforts.

Part 11: Conclusion



The Master Plan establishes a clear and ambitious roadmap to transform its waste management system over the next 30 years. With the Rosewarne Landfill, the District's only active site, projected to reach capacity in about 16 years, the findings of this report underscore that maintaining the status quo is not a viable option. By prioritizing waste reduction and diversion and aiming to lower the average annual generation rate from 275 kg per person to between 50 kg and 100 kg, the District can extend the lifespan of its existing assets and defer the substantial capital costs associated with developing new disposal infrastructure.

The recommended path forward is built upon a foundation of environmental sustainability, fiscal responsibility, and community-driven priorities. Key findings from our engagement process show a strong public and Council desire for a "moderate" to "aggressive" approach to waste management, with a focus on wasting less and diverting more, enhancing convenience and accessibility, protecting Muskoka's natural beauty, and maintaining manageable costs. The District has identified recommended actions across the waste system, including options related to the following:

- Diversion, Processing, and Reuse;
- Policy, Strategy, and Internal Operation Options;
- Communication and Public Education Options;
- Collection and Service Delivery; and
- Residual Waste Management.

Collectively these actions are designed to meet the unique needs of both year-round and Second Home residents and drive lower generation rates per capita.

As the District moves to implement this Master Plan, the immediate focus shifts to the five-year period beginning in mid-2026. Next steps include conducting feasibility studies for organics processing, changes to curbside collection and landfill operations, refining the data-driven system for tracking KPIs, and launching enhanced communication tools to support community behavioural changes. While high-level financial estimates have been provided, the District will continue to refine detailed costing and funding models to ensure the long-term fiscal health of the system.

Taking a data-driven approach, the District will monitor and report on progress through identified KPIs, including tonnes landfilled per person, landfill lifespan, GHG emissions and financial savings. The District is committed to transparency and publicly reporting on these KPIs through annual report cards and a public-facing dashboard. This transparency and data-driven approach to continuous improvement prepare the District to build a sustainable waste system for future generations.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Solid Waste Master Plan