



To: Chair and Members
Muskoka District Council

From: Renee Recoskie
Director, Waste Management and Environmental Services

Date: August 21, 2025

Subject: Solid Waste Master Plan – Phase 2 Update and Level of Ambition

Report: 12(2025)-1

Recommendation

WHEREAS the level of ambition pursued under the Solid Waste Master Plan will guide the continued development of Phase 2 and Phase 3, ensuring that the options consider this general direction;

AND WHEREAS the levels of ambition, and the approach for each can be described as by the following:

- Conservative – Steady improvements to existing practices, adopting improvements that are already well established in other comparable jurisdictions, focusing on planning for alternatives for Rosewarne
- Moderate – Take a progressive path, adopting best practices to address the District's needs and challenges and achieve meaningful improvements, deferring cost increases associated with alternative disposal options
- Aggressive – Take bold action, being a leader in waste management, focusing on implementing innovative actions and maximizing the Rosewarne lifespan, investing in the short and medium term for long-term cost control

NOW THEREFORE BE IT RESOLVED THAT staff **be directed** to set a moderate level of ambition to inform the development of the remaining phases of the Solid Waste Master Plan.

Executive Summary

The Solid Waste Master Plan (Master Plan) is a long-term strategy to guide how the District of Muskoka (District) will provide solid waste management services over the next 30 years. This three-phase project began in mid-2024 and is scheduled for

completion by mid-2026. Phase 1 was completed in March 2025, with Phase 2 currently underway.

Phase 1 focused on assessing the current state of the District's waste management system. It identified a critical challenge: much of the District's waste is being disposed of as garbage rather than being diverted through recycling or composting. If unaddressed, this trend will accelerate the filling of the District's only landfill, leading to significantly higher costs and increased service delivery risks. Key factors contributing to the low diversion rate are the low District density and high population fluctuation. This leads to complexity in deploying efficient and convenient collection systems, including the reliance on numerous drop-off locations where diversion is more difficult to achieve than with curbside collection.

Phase 2 is centered on evidence-based decision-making, long-term service planning, and the development of a fair and sustainable funding model. This phase projects future system needs, assesses the level of ambition supported by the community, and evaluates options to inform the final Master Plan. It also includes an in-depth review of funding approaches and alternative financial models. This phase is critical to ensure that outcomes align with District Council's Strategic Plan, particularly, it's goal of reducing how much garbage is being sent to landfill.

Phase 3 will deliver the final Solid Waste Master Plan, including a detailed implementation roadmap and a corresponding financial plan to support successful execution.

Origin

Engagement and consultation are foundational to the development of Muskoka's Solid Waste Master Plan. At the outset of the project, the Engineering and Public Works (EPW) Committee was appointed as the Council Sponsor Group to provide oversight and guidance. As the project progressed, there was a clear desire to ensure that all Members of Muskoka District Council (Council) are informed and have meaningful opportunities to provide input as the work advances.

As a result, Phase 2 of the Solid Waste Master Plan includes two key touchpoints with Council. This report represents the first opportunity for Council to provide input on the appropriate level of ambition for the Master Plan. This ambition is reflected in the targets set for the future. For example, varying levels of residential waste reduction could be pursued under conservative, moderate, or aggressive approaches.

The second opportunity for Council input will occur in Winter 2025. At that time, staff will present a range of options, along with their financial, environmental, and social implications, to support Council in selecting the preferred path forward for inclusion in the final Master Plan.

Both this initial touchpoint and the upcoming session in Winter 2025 will incorporate public feedback gathered through the engagement activities completed to date.

Background

The following are key points for consideration with respect to this report:

- The District last completed a long-term planning exercise for solid waste in August 2007, as part of the Rosewarne Landfill expansion.
- In 2021, a Waste Strategy was developed and adopted in principle by Council, outlining a Roadmap to 60% Diversion. Since then, several changes and initiatives have advanced diversion efforts across the District.
- Changes to the legislative environment, remaining capacity at the Rosewarne Landfill site, complex resident waste management needs and use patterns, and inconsistent levels of service have contributed to the need for a comprehensive Master Plan.
- In 2024, Council endorsed a [Community Energy and Emissions Reduction Plan \(CEERP\)](#) that outlines net-zero targets for the community, including waste management systems. Evaluating future options following these targets and informing the community about their impact aligns with the Master Plan and with Council's strategic priorities.
- The Master Plan is exploring options for the reduction, reuse, diversion, recovery, and disposal of the District's waste over the next 30 years.
- In July 2024, staff presented the [Launch of EPW Master Planning Projects](#) to Council, including an overview of the project.
- Select updates on Phase 1 project communications and deliverables were presented to the Engineering and Public Works (EPW) Committee throughout 2025.
- Major changes and the need for updates to the District's Waste Management By-law were presented to the EPW Committee on January 19, 2025, through [Report PW-1-2025-4](#). [By-law 2025-4](#) was passed by Muskoka District Council on February 19, 2025, and came into effect March 3, 2025. This exercise was completed as part of Phase 1 of the Solid Waste Master Plan.
- In March 2025, Phase 1 of the Solid Waste Master Plan was received by the EPW Committee through Report [PW-3-2025-2](#), and work to progress Phase 2 and Phase 3 was initiated.
- The story of Phase 1 can be briefly summarized across three themes. Firstly, the current complexity of the waste management system stems from unique challenges the District faces in delivering services across a vast geography with fluctuating populations. Secondly, curbside collection demonstrates the highest diversion rate; however, prior to the launch of the Clear Bag Program, over half of the material set out as garbage didn't need to take up landfill space. Lastly, improving the diversion rate also impacts the community's greenhouse gas emissions associated with the waste management system. The majority of greenhouse gas emissions associated with the solid waste system stem from landfilling waste, both currently and historically.
- All technical deliverables produced to date for the project are publicly available on the project [Engage Muskoka](#) website.

- The final [Phase 1 Report](#) and supporting [Phase 1 Engagement and Communications Report](#) are also publicly available on Document Center.
- To date, 3,650 hours of consulting time and an estimated 800 hours of District staff time have been invested in this very important project and future planning exercise.

Analysis

What is a Master Plan and Why is it Valuable?

A 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 actual data 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 plans or initiatives such as the District Strategic Plan, the [Muskoka Community Energy and Emissions Reduction Plan](#), and asset management planning; and
- Create a sustainable funding model to pay for anticipated costs in the future.

Figure 1: Benefits of a Master Plan



A Master Plan for waste management is essential for the District in view of major pressures facing the sector in Ontario. The most critical one is shrinking landfill capacity. The Office of the Auditor General of Ontario reported in May 2023 that at current rates, only 10 to 13 years of landfill capacity remains across the province.

Phase 2 – Where Are We Going?

Phase 2 of the Master Plan is focused on identifying and evaluating future service needs and options. This phase is divided into two key components: the technical planning scope of work and the financial elements of the plan. This section outlines the technical work underway, while the financial elements are addressed separately in the Financial Considerations section of the report.

Technical Deliverables

Building on the current system assessment completed in Phase 1, Phase 2 will produce a series of technical memorandums that will inform the development of the final Master Plan in Phase 3. These deliverables are designed to support evidence-based decision-making and ensure that future waste management services balance the competing priorities of environmental sustainability, fiscal responsibility and service delivery. The four technical memorandums include:

1. Future Waste Management Needs
2. Short, Medium and Long-term Targets
3. Evaluation Tool, Identification and Evaluation
4. Short-listed Options

As technical memorandums are finalized, they will be publicly available on the project [Engage Muskoka Page](#).

Draft versions of technical memorandums 1 and 2 have been produced to date, and information gathered through these analyses are included in the sections below.

Future Waste Management Needs

This memorandum identifies key service gaps and opportunities in the District's waste management system, based on Phase 1 findings and projected waste generation over the next 30 years.

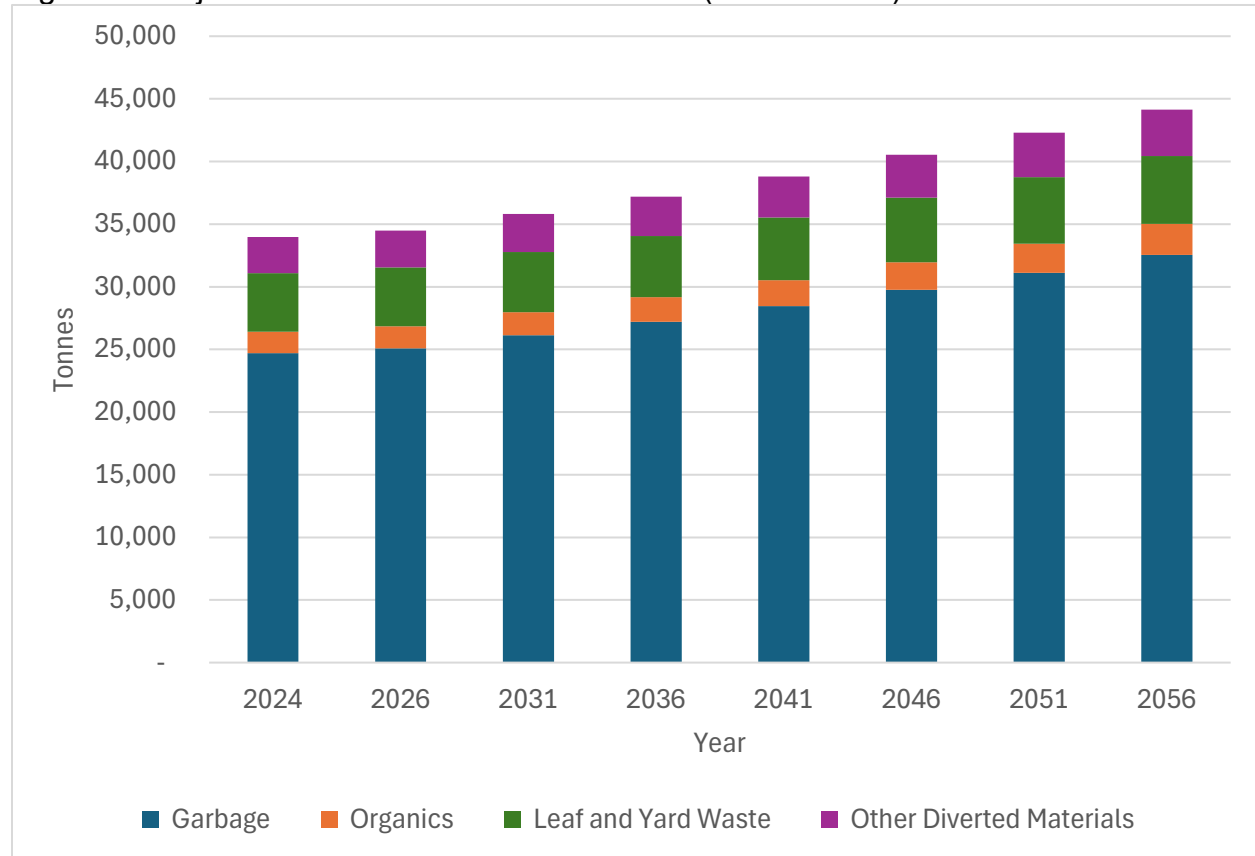
Population projections were developed using data from the most recent [Second Home Study](#) and the [District of Muskoka Growth Strategy](#). These projections account for both permanent and seasonal populations, providing a comprehensive view of future service demands.

A steady increase in the permanent population is anticipated over the next 25 to 30 years, while the seasonal population is expected to grow at a slower pace. This trend is largely driven by the ongoing conversion of second homes into permanent residences. While the seasonal population currently exceeds the permanent population, the two are expected to reach parity by approximately 2042, with the permanent population becoming the larger group thereafter.

Using these population trends, waste generation rates were applied to estimate the total volume of waste requiring management in the future. These rates were informed by

actual waste quantities collected and managed by the District in 2024. This analysis forms the basis of a “business-as-usual” scenario, which assumes no significant changes to current waste management practices. The results of this analysis are captured in Figure 2, below.

Figure 2: Projected Tonnes of Waste Generated (2024 – 2056)



The business-as-usual projection and the Phase 1 findings informed a comprehensive needs assessment. The needs assessment captures changes that are within the District’s sphere of control. The final memorandum will outline findings to identify gaps, constraints and opportunities to enhance waste management across the following focus areas:

1. Collection and drop-off services
2. Waste reduction and circular economy
3. Waste diversion
4. Residual waste management
5. Litter management
6. GHG emissions
7. District waste facility management

Of particular importance to note at this stage of the project, the District’s organics processing capacity is expected to be exceeded in the short-term based on tonnage data for green bin organic waste and early results from the Clear Bag Program.

Additional compliance approvals are already underway at existing sites to increase the capacity to accommodate residential organics. Should future options consider the ability for organics to be accepted from other sources, additional facilities and/or capacity will be required to support these options.

Outside of the focus areas above, the technical memorandum also recognizes there are many external factors that the District does not influence which will shape the future of waste management. Major changes in these factors can have a significant impact on the amount of waste to be managed. These external factors include: lifestyle, consumption trends, markets for recovered products and materials, extended producer responsibility, etc. As part of the SWMP implementation, the monitoring of key trends and a 5-year update to forecasts will be recommended.

Level of Ambition

This technical memorandum is a foundational step in Phase 2, designed to inform the selection of evaluation criteria that will be applied to options for improving the District's waste management system. Its primary focus is on establishing key performance indicators (KPIs) and considering how performance should evolve over the next 30 years to achieve the District's future vision for solid waste management.

The following KPIs are proposed as core indicators for monitoring system performance:

- Residential disposal rate
- Total waste landfilled annually
- Greenhouse gas (GHG) emissions

These indicators will enable the District to track progress toward strategic goals. In particular, the GHG emissions indicator aligns with the District's CEERP targets, providing a mechanism to assess reductions in emissions associated with waste disposal and management activities.

Staff have developed potential levels of ambition (when compared to other Ontario Municipalities). Council will still have further opportunities to refine the final product but setting this general target or aspirational goal will guide the work through the remaining phases. The proposed levels are as follows:

- Conservative – Steady improvements to existing practices, adopting improvements that are already well established in other comparable jurisdictions, focusing on planning for alternatives for Rosewarne
- Moderate – Take a progressive path, adopting best practices to address the District's needs and challenges and achieve meaningful improvements, deferring cost increases associated with alternative disposal options
- Aggressive – Take bold action, being a leader in waste management, focusing on implementing innovative actions and maximizing the Rosewarne lifespan, investing in the short and medium term for long-term cost control

Staff recommend following a moderate level of ambition. This approach balances the desire for meaningful progress with the practical realities of system complexity and community readiness and is informed by public input, current residential disposal rates, and comparative data from other Ontario municipalities.

Public engagement activities that contributed to this recommendation are summarized in the Communications section of this report.

Next Steps

The purpose of Phase 2 of the Master Plan is to develop options for improvements to the waste management system in the District, and to refine and validate the list of options through an evaluation process.

Of utmost importance in long term waste management planning, will be the evaluation of future waste disposal options by asking the following question through this work:

Will we bury, burn or banish our waste in the future?

Next steps in the Master Plan include creating a long list of options for improvement and refining it to a short list. This list of options will form the basis of the SWMP's recommended actions. The options will be evaluated based on an initial screening and then evaluated using social, economic, and environmental factors, providing further detail of the potential impacts (e.g. contribution to reducing waste and GHG emissions) and implementation costs. This will be completed alongside a review of the District's financial model and development of a sustainable funding model for future waste management activities.

Public engagement as part of the options development portion of Phase 2, and updates to Council are detailed within the Communications section of this report.

Financial Considerations

The financial components of Phase 2 include a review of the current state financial model for the solid waste system, and the identification of alternative funding models and revenue opportunities. Two technical memorandums are being finalized to document this work.

To ensure the successful implementation of the Solid Waste Master Plan and the financial sustainability of future waste management services, adjustments to the existing funding model are being considered. This includes identifying new or enhanced revenue streams that align with the District's service goals and community expectations.

An overview of the District's current approach to funding solid waste services will be established as a baseline. This will provide the framework for assessing the suitability of potential alternative funding models, including user-pay systems, service-based fees, and other revenue-generating mechanisms.

These financial considerations will be integrated with the technical planning work to ensure that the final Master Plan is both operationally and financially feasible.

Key Considerations – Current Costs and Funding Model

Several structural and contextual factors unique to the District reinforce the need to refine the current funding and operating model. These challenges reflect the District's diverse geography, population profile, and service access realities:

1. **Types of Service Delivery and Tonnage:** The District delivers waste services through a mix of curbside collection, drop-off depots, transfer stations, and specialized programs such as the Lakeside Waste Collection Program. This layered approach is necessary to meet varied service needs but results in operational complexity and cost variability.
2. **Seasonal Variation in Demand:** The District's population fluctuates significantly throughout the year. These seasonal shifts drive variable service demand and peak system pressures in the summer, requiring a more flexible and scalable service model.
3. **Characteristics of Second Homes:** District-wide, 35% of Second Homes are located on roads which are publicly maintained year-round. Additionally, when examining Second Homes, in some area municipalities nearly 60% of the properties are classified as water access only. These access limitations increase costs and constrain the viability of traditional curbside collection in many parts of the District.
4. **Service Access Conditions:** Based on the above, a large portion of Second Homes are not accessible by publicly maintained roads (65% of Second Homes), and as a result, are often located on narrow, or unmaintained roads. This creates safety, cost, and logistical challenges for collection vehicles. Approximately half of Second Home residents rely on depots or designated drop-off points, resulting in inconsistent access and service experiences across the District.
5. **Master Plan Technical Memorandums:** As part of the project, the District has reviewed leading practices from other Ontario municipalities, including Ottawa, Toronto, and Kawartha Lakes, to assess alternative funding models and service strategies. These insights are guiding the consideration of options such as “pay-as-you-throw” to improve cost recovery, incentivized diversion, and alignment of user costs with actual service levels.
6. **Infrastructure and Policy Modification from Evolving Expectations:** Public feedback and recent EPW Committee discussion on free bag tags and modifications to bag limits, reflect growing pressure to reallocate costs through a customer-based funding model, which could reduce the financial contribution of Second Home residents but may shift costs to lower income residents. These evolving expectations are driving demand for a more transparent, consistent, and needs-based approach to service design and funding.

Alternative Funding Models for Solid Waste

As part of Phase 2, three primary funding models are being considered to support the future delivery of solid waste management services in the District. Each model offers distinct advantages and challenges in terms of cost recovery, transparency, and alignment with service usage.

1. **Rate-Based Funding Model:** This model involves charging customers based on the services they receive. Fees may be structured as single rates, multiple flat fees, or variable charges depending on usage. The goal is to achieve full cost recovery by aligning rates with the actual cost of service delivery. This approach is similar to utility billing models used for water or electricity, where higher consumption results in higher charges. Rate-based models offer flexibility and transparency, making them well-suited for pricing strategies such as pay-as-you-throw (PAYT) or subscription-based services.
2. **Property Tax Funding Model:** Under this model, the cost of waste services is recovered through property taxes. Customers contribute based on the assessed value of their property, rather than the level of service used. The District allocates a portion of the annual budget to solid waste services through a dedicated levy. While this model simplifies administration and ensures broad cost distribution, it may not reflect actual service usage, and customers may not be paying a fee commensurate with the services they receive.
3. **Hybrid Funding Model:** A hybrid model combines elements of both rate-based and property tax funding. The District's current approach is considered a hybrid, primarily supported by a dedicated solid waste levy, supplemented by user fees, provincial grants, and other revenue sources. Hybrid models allow municipalities to balance equity and efficiency by using property taxes for base services and applying targeted user fees for specific activities or enhanced services.

While certain rate structures can be implemented regardless of the chosen model, they are generally more flexible and effective under a rate-based system. Rate-based models better support pricing transparency and cost accountability, which can be more difficult to achieve when costs are embedded in property taxes. Many municipalities adopt hybrid approaches to leverage the strengths of both models and tailor funding strategies to local needs.

Understanding Financial Impacts Across Resident Profiles

Alternative funding models, and especially introducing changes compared to current state, can impact residents and users of the waste system differently. To communicate the different levels of impact, presentation materials prepared as part of Phase 2 will include results of a financial analysis completed across three different residential archetype profiles:

1. Low-income family, recipients of Ontario Works

2. Middle-income family, first-time home buyers spending 50% of their annual income on housing costs
3. Second-home family, with a water-access cottage.

Supporting information is captured as part of the presentation slides accompanying this report.

Climate Change Implications

The District assesses climate implications in all staff reports using the Clean Air Partnership's '[Municipal Climate Lens Tool](#)' to consider climate impacts or benefits associated with any project, program or initiative.

While the Master Plan project is outside the parameters of the tool, it is crucial to balance environmental considerations, service delivery, and fiscal responsibility when planning for the future of waste management in Muskoka. A key environmental priority is to keep waste out of the environment, prevent soil and water contamination, recover and reuse valuable materials, and reduce greenhouse gas (GHG) emissions from waste disposal.

In Phase 1 of the Master Plan, a detailed technical memorandum was produced to document the Baseline Greenhouse Gas Emissions of the Waste Management System. This memorandum, available publicly on the project's [Engage Muskoka Page](#), focuses on direct GHG emissions including carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), associated with waste collection, processing, disposal, and energy use. The primary sources of GHG emissions are the collection, processing and/or disposal of organic materials, as well as landfill operations. The project integrates emissions from both community and corporate sources to provide a comprehensive view of GHG emissions across Muskoka's entire solid waste management system.

In the baseline year of 2023, landfilled waste accounted for over 99% of total waste system emissions, including emissions from closed landfills. To take meaningful climate action within the District's solid waste management system, efforts must focus on reducing the amount of waste sent to landfills, particularly food waste and organics, and increasing the diversion of materials to composting and other programs. The District is already working towards this goal through initiatives such as the Clear Bag Program, the curbside Green Bin expansion project, and other measures to keep more waste out of the landfill.

As part of Phase 2 work, one of the evaluation criteria will focus on assessing the impact to GHG emissions.

Communications

Public participation is a cornerstone of the Solid Waste Master Plan. Community input is essential to shaping a waste management system that reflects the values, needs, and ambitions of Muskoka residents and waste system users. The District is committed to a

transparent and inclusive process, with multiple opportunities for engagement built into each phase of the project.

A dedicated [Engagement and Communications Plan](#) was developed during Phase 1, with input from the Community-Based Steering Committee prior to its finalization. This plan outlines a multi-channel approach to engagement, including in-person events, online tools, and targeted outreach to ensure broad and meaningful participation.

Phase 2 engagement began in Spring 2025 and has included:

- A series of community open houses in early June, offered both in-person and through a virtual “Lunch and Learn” format.
- A Phase 2 engagement survey hosted on the Engage Muskoka platform, open for feedback following the events.
- District staff attendance at local events (e.g., festivals, farmers' markets, etc.) to raise awareness and gather input.
- Over 100 in-person conversations with residents and more than 100 participants/viewers for the virtual open house.

Feedback from these activities, along with insights from the Community Based Steering Committee and staff, indicates support for a moderate level of ambition in setting diversion and performance targets. This input directly informs the development of long-term goals and performance indicators for the Master Plan.

This Council report and accompanying presentation represent another key opportunity to expand awareness of the project. Members of District Council are invited to review progress to date, consider what has been heard from the community, and provide input on the appropriate level of ambition to guide the final plan.

Looking ahead, a second round of public open houses is scheduled for September 2025, with both in-person and virtual options. Promotion for these events will begin shortly and will focus on public input around future options development. After engagement has occurred a similar update to Council will occur, and opportunity for further Council feedback will be provided to finalize options.

In response to feedback about better capturing the needs of the Industrial, Commercial, and Institutional (ICI) sector, a dedicated focus group will be convened in fall 2025. This session will provide a customized opportunity to engage directly with ICI representatives, gain insights into current waste management practices, and validate the District’s waste supply chain map. The focus group will also help identify sector-specific challenges, long-term risks, and opportunities, ensuring that the final Master Plan reflects the unique needs and contributions of this user group.

All upcoming engagement opportunities will be communicated through the Engage Muskoka platform, shared with the EPW Committee, and promoted following the project’s Engagement and Communications Plan.

Strategic Plan

The District assesses the impact or influence of the information or recommendations included in staff reports toward achieving Council's [Strategic Plan objectives](#).

This report includes information or recommendations that impact or influence the following Strategic Plan Objectives:

- [Objective 1 Taking action together](#) – Preserve and protect our natural environment, take climate action and be more resilient to its impacts.
- [Objective 6 Service alignment](#) – Modernize municipal services and deliver them in the way that makes most sense – best value, efficiency, and outcomes for residents.
- [Objective 8 Future thinking](#) – Plan and invest so that we have the services and infrastructure our residents and communities need – now and in the future.

The District Strategic Plan provides overall direction while developing the Solid Waste Master Plan, a strong framework that balances environmental, resident, and financial needs. The priority areas and objectives outlined as part of the District's Strategic Plan will help determine the best options for striking the right balance and addressing challenges as the project moves through Phases 2 and 3.

Respectfully submitted,

Renee Recoskie, P.Geo., PMP, Director, Waste Management and Environmental Services; and
James Steele, P.Eng., Commissioner of Engineering and Public Works