CIRCULAR INNOVATION COUNCIL

Investigating Barriers, Drivers, and Opportunities That Influence Diversion of Organic Waste in Canada's ICI Sector

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- Circular Innovation Council

EXECUTIVE SUMMARY

INTRODUCTION

In Canada, solid waste is the third-largest source of methane emissions and organic materials a significant contributor as the make up over 30% of the waste stream. The Industrial, Commercial, and Institutional (ICI) sector, which includes food-generating businesses and institutions (such as restaurants, hospitality, offices, grocery stores, food manufacturers and processors, hospitals, and schools), is Canada's largest generator of food and organic waste, producing an estimated 14 million tonnes annually (Gooch et al., 2024).

Canada's food economy and waste management systems are interdependent, yet operate as distinct networks involving government bodies, businesses, and industry stakeholders. Each stakeholder in the system has its own priorities and constraints, influencing how organics diversion solutions are implemented. Most municipalities in Canada that offer organics collective services only do so to the residential sector, despite the ICI sector being the largest generator. Collection and diversion services when offered to the ICI sector are predominately offered by private waste service providers on location by location and fee for service basis.

The high disposal rate of food and organics generated from the ICI sector can be mostly attributed to the low cost of disposal and the lack of regulatory requirements and incentives to shift stakeholder behavior toward diversion. The waste management industry, designed around low-cost disposal, requires premium fees to collect organics that include additional handling and specialized infrastructure, frequent pickups, and skilled labour, making it inherently more expensive. Additionally, the fragmented nature of ICI organic waste services across the country diminishes opportunities to scale services and build efficiencies. Without more comprehensive regulations, programs,

and/or financial incentives, disposal remains more economical and convenient for the ICI sector.

It is important to note that SMEs make up a large portion of the ICI sector and collectively contribute significant amounts of food and organic waste. The low diversion performance for SME's is largely attributed to both the high cost of organics programs as well as the lack of accessible services as private sector haulers often require minimum service levels well above what most generate.

Many jurisdictions across Canada are facing reduced disposal capacity and stagnant waste diversion rates, prompting some municipalities to explore expanding services to the ICI sector as part of their climate and waste diversion goals. While many municipalities consider their mandate to service residences they often do have the authority expand the scope of their services to include the ICI sector generators in their communities. Their decision to extend those services is often challenged by limited capacity and resources, jurisdictional constraints and competing priorities. Despite these challenges, municipalities play an important role in improving food and organics diversion performance in particular because of their ability to convene stakeholders, influence service availability, and support local infrastructure, programming and education. As many municipalities are making connections between their waste reduction and climate commitments and are facing diminishing disposal capacity, their interest in the expanding services to the ICI Sector is beginning to increase.

The Government of Canada is exploring opportunities to reduce greenhouse gas emissions, including interventions to enhance waste management and improve circularity of organic materials. Organics processing supports both waste diversion and methane emission reductions and as such supports objectives of all levels of government. Despite many governments having identified the importance of organics diversion as a multi-solve strategy, policy and regulatory interventions remain limited and uncoordinated. Regulatory gaps and inconsistences have hindered both public and private sector investments and ultimately diversion performance. Like other recycling programs, reliable and stable sources of high-quality feedstocks are needed to drive scale and attract collection and processing investment for services and infrastructure, facilitated often by regulation. Given the low cost of disposal, policy interventions are necessary to support circular systems for end-of-life organics. This is particularly true in the ICI sector where there are limited public sector services that often offer lower cost services.

This report explores the similarities and differences in ICI organic waste management across Canadian municipalities and ICI stakeholders, providing insight into the factors that either drive or limit action. The research attempts to offer clarity into the potential roles and responsibilities of different actors in the system and to identify opportunities for needed market or policy interventions. This research also offers insight into why progress remains uneven across the country, where misalignments exist, and what

systemic changes are needed to enable broader adoption of ICI organic waste diversion strategies.

METHODOLOGY

A mixed-method approach was used to assess the barriers, drivers, and opportunities for improving organic waste diversion in Canada's Industrial, Commercial, and Institutional (ICI) sector. The research included:

1. A jurisdictional scan of relevant current or pending organics diversion and management policies and regulations across provinces, territories, and municipalities.
2. Targeted stakeholder interviews and questionnaires with municipal representatives (14 respondents) and ICI stakeholders (8 respondents) across a range of localities and ICI sector types.
3. Analysis of ICI organic diversion pilot projects currently operated by the Circular Innovation Council (CIC).
4. A review of existing literature related to ICI organic waste management.

KEY FINDINGS

A jurisdictional scan revealed that Canada's regulatory environment for ICI organic waste diversion is fragmented, with no coordinated provincial or local level frameworks (refer to "3. Assessing Municipal Roles and Regulatory Approaches to ICI Organics Diversion in Canada" for detailed analysis). Key findings from the jurisdictional scan include:

- Municipalities have authority to implement ICI organic waste-related bylaws and mandates, but provincial and territorial laws may influence their scope, resulting in inconsistent application of policies
- Infrastructure, service availability, cost structures and capacities vary, with some municipalities offering their own collection services or in some cases partnering with private haulers.
- In many jurisdictions, municipalities rely on generators to invest in their own on-site solutions through the private sector.
- Municipalities' capacity to offer cost-effective service options, and financial incentives (i.e. cost breaks) often determine the level of ICI participation and performance resulting in wide localized variations.
- Some municipalities require waste management plans or conduct audits of ICI facilities, but limited municipal resources reduce oversight capacity to ensure compliance and performance.
- Education and capacity-building efforts differ, with some municipalities mandating ICI facilities to provide employee training, signage, and educational staff resources for source-separation while other do not.

- Additionally, the extent to which municipalities can incorporate public-private partnerships, intermunicipal coordination, and shared infrastructure use to manage waste vary across jurisdictions.

Stakeholder interviews, surveys and related reports revealed six main strategies to support high diversion performance in the ICI Sector (refer to "4. What We Heard: Perspectives of Municipalities and ICI Sector" for detailed analysis) :

1. **Regulatory alignment and policy support,**
2. **Infrastructure investments,**
3. **Financial incentives and cost reductions,**
4. **Data collection and reporting transparency,**
5. **Education and capacity building, and**
6. **Collaboration and engagement.**

The sections below provide an overview of the barriers, opportunities, and drivers for each strategy (as applicable) and concludes with proposed interventions that emerged from interviews and questionnaires with both municipal and ICI stakeholders.

REGULATORY ALIGNMENT & POLICY SUPPORT

Barriers

Municipalities reported that the general **lack of ICI-targeted regulatory interventions, either within climate change and/or waste diversion policy at provincial/territorial and federal levels** create significant barriers to motivating action to improve ICI organic waste diversion. Simultaneously, the lack of frameworks and targets reduce municipalities' motivation to prioritize ICI organics diversion solutions. Municipalities that have introduced policy reported **challenges with enforcement due to a lack of staff capacity**. Some municipalities reported that **businesses and haulers exploit regulatory gaps by transporting waste to regions with looser rules and cheap disposal**, including across provincial and national borders. M**unicipalities acknowledged have authority over enforcement outside their jurisdictional boundaries**, making it challenging to track the destination of materials.

ICI sector respondents also shared concerns of the effects of regulatory inconsistency, stating that **varying diversion compliance standards across jurisdictions create operational inefficiencies for national companies**. Some businesses reported that **misalignment between organics regulations and regional infrastructure makes compliance challenging**, especially in areas where little to no organics processing infrastructure exists. Additionally, **ambiguous and standardized definitions for organics waste add complexity for businesses**. This is particularly true for ICI generators with diverse waste streams, such as food service, where certain materials (e.g., coffee grounds, cooking oil) may or may not be classified as organic waste.

Findings from CIC pilot programs and existing research reports reinforced the barriers caused by the current regulatory gaps. Businesses in non-regulated areas lacked incentives to invest in organic waste diversion, and the lack of enforcement in regulated regions caused some businesses to meet only minimum compliance requirements.

Drivers

Regulations and compliance remain a primary driver of current organics diversion successes in the ICI sector. Municipalities in **regulated regions with management bylaws or landfill bans reported higher participation and performance rates**. Municipalities **with no regulations suggested the need to introduce higher-level government regulatory interventions (i.e. provincial landfill bans) to improve performance**. Several municipal respondents noted that **aligning municipal policies with provincial or national-level sustainability targets and goals** would strengthen internal support for implementing ICI organics diversion initiatives at a local level.

ICI stakeholder feedback also confirmed that **mandatory government diversion regulations were a key motivator for businesses** adopting organics diversion practices. Some businesses noted that landfill bans and mandatory waste audits help to motivate participation. Additionally, some respondents reported that even **anticipation of future regulations led businesses to adopt organics diversion programs early** to mitigate future financial or reputational risks.

Opportunities

Some municipalities reported that **landfill bans were only effective when paired with generator-level requirement**, as private landfills are challenging to oversee and therefore may create unlevel playing fields. Additionally, they acknowledged the important role of public awareness campaigns and financial penalties, such as **increased tipping fees for banned materials or disposal levies**, to improving compliance. Several municipal and ICI respondents highlighted that **coordinated action between municipal, provincial, and federal governments** could reduce regulatory confusion and drive participation in ICI diversion practices. Many ICI respondents suggested **clear, consistent regulations and phased implementation plans** as necessary for widespread compliance.

External research reports validated these findings by suggesting that policy advancements such as source-separation mandates, landfill bans, and disposal levies could improve ICI participation in organics diversion.

INFRASTRUCTURE INVESTMENTS

Barriers

Municipalities reported that **insufficient infrastructure** is currently a significant barrier to expanding ICI organic waste diversion. Many regions **lack adequate composting and**

anaerobic digestion facilities to process the volume of organic waste available for processing making it difficult to establish or enforce existing diversion requirements. Some municipalities noted that **ICI generators often lack onsite space for organics bins**, reducing compliance to source-separation requirements. **Geographic constraints, such as long transportation distances to processing facilities**, were particularly challenging in rural and northern areas, limiting access to processing facilities and/or increasing collection costs. Several municipalities stated that the **high cost of expanding waste infrastructure and the permitting hurdles associated with building new facilities**, including community opposition and regulatory approvals, negatively impact the development and implementation of ICI organics diversion programs.

ICI sector respondents also identified regional processing infrastructure limitations as a primary challenge. Businesses operating in rural and remote areas reported that the **absence of local processing facilities significantly increased collection service costs due to long transportation routes to find processing infrastructure**. Some ICI respondents expressed concern that **varied regional processing infrastructure availability made it difficult to standardize company-wide waste diversion practices,** particularly for national businesses with operations in multiple provinces or territories. Respondents in **grocery retail, food service, and universities reported** on site **space constraints as a barrier,** stating that store layouts and existing facility designs often do not accommodate separate organic waste storage or refrigeration for surplus food donations.

Findings from CIC pilot programs confirmed that infrastructure gaps such as on-site space limitations for bins or de-packaging equipment restricted business participation in diversion programs. Reports highlighted slow approval processes for building or expanding organic waste processing facilities, a general lack of existing food waste reduction and organics diversion infrastructure and high contamination rates as additional constraints.

Drivers

Municipalities identified **access to modern waste processing technologies and infrastructure investment as key drivers** for accelerating regulation and participation in ICI organic waste diversion. Some municipalities reported that **proximity to processing facilities** enabled internal decision to expand mandates to service the ICI sector. Rural and northern municipalities especially noted that **limited disposal capacity heightened the urgency for improved organic waste diversion adoption** across sectors, as landfills are costly to expand or build. Some municipalities also emphasized the **role of public interest and environmental awareness in driving council and industry investment** in organic waste infrastructure.

ICI sector respondents similarly identified expanded infrastructure as essential for increasing participation in organic waste diversion. Some businesses echoed opinions of local governments for the need to develop local composting and anaerobic digestion

facilities to reduce regional reliance on landfills, while other **businesses suggested that small-scale processing technologies, such as on-site biodigesters, could provide more cost-effective solutions**. Several ICI respondents recommended **financial incentives for meeting compliance and investing in on-site infrastructure**, such as grants for equipment (i.e. bins, bags, signage), subsidies for organic waste collection services, and lower tipping fees for diverting clean organics streams.

Opportunities

Some municipalities respondents, from a mix of regulated and unregulated regions, reported **delaying the implementation of ICI organics diversion bylaws until processing facilities were established.** Respondents suggested that **more public-private partnerships between municipalities and the waste service industry could improve public-private access to processing infrastructure** for all haulers, particularly in rural areas. Several municipalities also noted that **increasing landfill tipping fees for organic waste could incentivize investment in regional processing infrastructure**, creating economic incentives for both public and private sector participation. Some respondents highlighted that **mobile or modular composting units could provide flexible solutions for remote communities**, reducing transportation costs and increasing access to diversion services.

FINANCIAL INCENTIVES & COST REDUCTIONS

Barriers

Municipalities reported that **insufficient infrastructure is a significant barrier** to expanding ICI organic waste diversion. Many regions lack adequate composting and anaerobic digestion facilities to process the volume of organic waste that is available for collection, **making it difficult to establish or enforce diversion requirements**. Municipalities and ICI generators noted that **ICI facilities often lack onsite space for organics bins, reducing compliance** with source-separation requirements. **Geographic constraints, particularly in rural and northern areas**, were also identified as significant challenges, with **long transportation distances increasing collection costs** and limiting access to processing facilities. Several municipalities stated that the **high cost of expanding waste infrastructure and the logistical hurdles associated with building new facilities**, including community opposition and regulatory approvals, further limit the implementation of ICI organics diversion programs.

Further, businesses operating in **areas that lack local composting or anaerobic digestion facilities make procuring organics collection services economically and/or logistically unfeasible**. Some ICI respondents also expressed concern that the **disjointed availability of regional processing infrastructure made it difficult to standardize company-wide organics diversion practices**, particularly for national businesses with operations in multiple provinces or territories.

Findings from CIC pilot programs confirmed that infrastructure gaps, such as onsite space limitations for bins or de-packaging equipment, restricted business participation in organics diversion programs. Several research reports highlighted that a lack of adequate regional processing capacity for organics diversion, coupled with slow approval processes for building or expanding organic waste processing facilities, stimmed broad-scale ICI sector adoption of practices and municipal regulatory implementation.

Drivers

Municipalities and ICI respondents identified **access to modern waste processing technologies and infrastructure investment as key drivers** for accelerating regulation and participation in ICI organic waste diversion. Some municipalities reported that **proximity to processing facilities enabled smoother implementation of organics diversion bylaws**. Rural and northern municipalities noted that **limited landfill capacity in these regions was a driver for improving organics diversion** across sectors. Some municipalities also emphasized the **role of public interest and environmental awareness in driving municipal and industry investment** in organic waste infrastructure.

Opportunities

Some municipalities, from a mix of regulated and unregulated regions, reported **delaying the implementation of ICI organic waste diversion bylaws implementation and/or enforcement until processing facilities were well established.** This ensured there was no misalignment between regulation requirements and processing infrastructure access. Municipal and ICI respondents suggested that **enabling public-private partnerships of facility use** between municipalities and the waste industry could allow better access to processing infrastructure for both sectors. Several municipalities also noted that **increasing landfill tipping fees for organic waste could incentivize investment in regional processing infrastructure**, creating economic incentives for public and private sector participation. Some respondents highlighted that **mobile or modular composting units could provide flexible solutions** for remote communities, reducing transportation costs and increasing access to diversion services. Several ICI respondents recommended **financial incentives for onsite infrastructure and capacity development for their businesses**, such as grants for equipment (i.e. bins, bags, signage), subsidies for organic waste collection services, and lower tipping fees for diverting clean organics streams.

DATA COLLECTION & TRANSPARENCY

Barriers

Municipalities reported that the **lack of consistent and reliable data tracking poses a significant barrier to inform policy development and infrastructure needs**, and

tracking regional performance to benchmark against waste and climate targets. Many municipalities stated that they rely on private sector haulers for ICI waste data, but **the sector's reporting formats, measurement methods, and definitions of ICI organic waste often vary**, making it difficult to obtain consistent reporting. Also, **aggregated data from private haulers and processing facilities** does not allow municipalities to track variation in diversion rates between different ICI sector-types (ie. restaurants vs. event centers vs. grocery retailers), which is important to make informed decisions on which sector-types to target for diversion interventions. Other municipal respondents noted that **municipalities lack the authority to mandate data sharing from private haulers and businesses**. For service providers that do not voluntarily provide this data, this creates significant data gaps for municipalities.

ICI sector respondents identified several challenges related to organic waste data collection and reporting, particularly the **absence of standardized definitions, requirements, tools, or technologies**. Without clear reporting guidelines or digital tracking systems, businesses reported **difficulties measuring diversion progress, benchmarking across multiple locations, or meeting corporate sustainability and ESG targets**. Municipalities and businesses reported that the **lack of transparency and traceability in how haulers end-manage diverted materials**, combined with **limited in-house tracking capacity for businesses**, makes collecting and reporting organics diversion data labour-intensive and inefficient.

Findings from CIC pilot programs and existing research reports reinforced similar concerns, indicating that limited publicly available data on ICI organic waste diversion made it challenging to estimate potential collection volumes and infrastructure needs, making it difficult for municipalities and industry to estimate future regional servicing and processing capacity needs. Another study found that variances in generation rates between ICI sector-types make it challenging to standardize diversion program strategies and developing policy interventions.

Drivers

Municipal respondents identified several motivating factors driving the need for improved data tracking in ICI organics diversion. A key driver was the **growing pressure for municipalities to make evidence-based policy decisions, progress toward climate targets, and evaluate existing program effectiveness**, all requiring comprehensive and reliable diversion data. Some municipal representatives discussed their interest in standardizing reporting requirements and processes with private sector haulers, which could potentially reduce administrative burden for municipalities and businesses while enhancing data access. ICI respondents echoed the motivation to **effectively measure and track organics diversion outcomes for corporate sustainability commitments and reporting on ESG targets**.

Opportunities

Several ICI respondents suggested that a **centralized reporting system with clear guidelines for measurement and reporting**, accessible to both businesses and municipalities, could streamline compliance and improve overall data quantity and quality. Some ICI generators recommended **municipalities provide user-friendly online reporting platforms**, allowing businesses to submit waste diversion data more easily. Some were also interested in **using digital tracking technologies**, such as AI-powered waste monitoring systems, to provide real-time insights into waste generation and contamination levels.

A CIC pilot program participant stated that their business benefited from access to impact reports from their organics diversion data, which helped them refine internal waste management strategies, celebrate and gain recognition for their diversion efforts, and motivate staff to continue consistent organic diversion practices in their workflow.

EDUCATION & CAPACITY BUILDING

Barriers

Municipalities reported that **limited awareness of the importance of diverting organic waste in the ICI sector** is a significant barrier to performance. Many municipal respondents stated that ICI generators struggle to implement or prioritize organics diversion due to a lack of understanding of its benefits or cited an unwillingness to onboard additional or perceived administrative responsibilities. Some municipalities recognized that **high staff turnover in some ICI sectors** makes it difficult to maintain awareness, particularly in industries such as food service. Municipalities also indicated **low engagement from small-and-medium enterprises (SMEs)** as a barrier, as many **SMEs perceive their organic waste volumes to be too low** and associated tipping fees too expensive to justify participation in diversion practices. Additionally, in regions with low public sustainability awareness, ICI generators feel less pressure to adopt organics diversion practices and local governments are less pressured to invest in infrastructure or introduce regulations.

ICI sector respondents also identified operational challenges as barriers to improving organics diversion performance. Some affirmed that high employee turnover makes implementing and maintaining consistent waste separation training challenging. **Language barriers among staff sometimes complicate education** efforts, requiring multilingual training programs for organics diversion that add to operational costs. Others reported that **businesses' lack of internal sustainability knowledge** limits their ability to implement effective organic diversion programs, **particularly in SMEs without dedicated sustainability roles**. Some businesses also reported **high contamination rates in organic collection bins, usually in public-facing areas** (i.e., front-of-house) of food service establishments, attributing these challenges to a **lack of staff and public education.**

Past research reports confirmed the existence of a significant education gap, with many businesses reporting they are unaware of the benefits of organics diversion or unsure how to implement best practices.

Drivers

Both municipal and ICI respondents recognized **education and outreach to better understand the value of ICI organics diversion as important are key drivers.** A few municipalities reported that **clear guidelines and educational tools such as workshops, training sessions, and resource toolkits have been effective** in helping the ICI sector implement organics diversion practices. One municipality described success with a step-by-step enforcement approach that began with education and only escalated to penalties when necessary—ensuring ICI generators were educated and informed before introducing compliance actions.

Some ICI sector representatives confirmed that **frequent staff training on source-separation improved diversion compliance and reduced contamination rates**, and **access to educational tools helped standardize best practices** across multiple locations.

Opportunities

Several municipalities noted that **targeted awareness campaigns aimed at the ICI sector and the broader public could help foster a culture of sustainability** and make organics diversion practices more accessible. Some municipalities reported offering **clear guidelines and training provided by municipalities** significantly improved compliance when aligned with other regulatory activities. Additionally, other respondents viewed **collaborations with industry associations and community organizations** as a way to broaden the reach and amplify messaging directed at ICI generators to help drive organics diversion behaviour change.

Some ICI respondents **recommended that municipalities provide businesses with easy-to-use online resources and printable signage** and expressed a **need for sustainability advisory services**, helping them navigate compliance requirements more effectively when they do not have dedicated internal resources to do so. Some businesses suggested that **educating their customers about proper material sorting in food service** environments could help reduce contamination in front-of-house collection bins.

Industry reports and CIC pilot findings highlighted education and outreach as critical for increasing participation and sustaining low contamination rates. Standardized training and harmonized materials across municipalities were identified as ways to improve consistency and compliance, while direct support and guidance helped businesses adopt and maintain effective diversion practices.

COLLABORATION & ENGAGEMENT

Municipal and ICI respondents consistently identified **collaboration and public engagement as critical drivers for successful organic waste diversion**. Municipalities reported that **growing community expectations for sustainability and alignment with broader climate action goals** help secure council support to develop ICI waste policies and make infrastructure investments. **Partnerships with businesses, industry groups, non-profits, and haulers** were viewed as essential for leveraging shared expertise, improving service delivery, and addressing infrastructure or resource gaps, notably through public-private and inter-municipal collaborations. Municipalities also emphasized the value of **engaging private sector service providers in program planning**. They suggested haulers provide **financial incentives**, such as reduced tipping fees or preferential contracts, to increase their participation in ICI diversion efforts.

Similarly, ICI sector respondents highlighted collaboration as a key driver and opportunity for navigating regulations, implementing best practices, and aligning operations with local policies and infrastructure. **Businesses noted that partnerships with municipalities, industry associations, and food rescue organizations enhanced their program effectiveness and public reputation**, with some **reporting social and economic benefits** from food donation initiatives.

CIC pilot programs reinforced these insights, showing that **regional coordination among key stakeholder groups improved operational efficiencies, reduced business service costs, and improved regional ICI organics diversion participation outcomes.** Supporting research supported these findings, emphasizing that **multi-stakeholder collaboration and coordinated regional approaches can reduce logistical and financial barriers and improve long-term compliance** and program success.

OPPORTUNITIES FOR INTERVENTIONS IDENTIFIED BY STAKEHOLDERS

The summary table below outlines posed interventions by categories that were identified by research interview respondents critical to improving organics diversion in the ICI sector in Canada.

Categories	Identified Interventions
Regulatory Alignment & Policy Support	• **Establish national, provincial, and territorial policies and standards for ICI organic waste diversion** to create consistency across jurisdictions and encourage long-term investment from municipal, ICI, and industry stakeholders • **Develop phased implementation plans with clear compliance timelines and enforcement mechanisms**, providing businesses and municipalities with the time and resources to transition effectively • **Accelerate approval processes for new organics processing facilities** by streamlining permitting • **Strengthen coordination between municipal, provincial, and federal levels** to ensure policies are practical, scalable, and aligned with industry realities
Infrastructure Investments	• **Build and/or expand composting and anaerobic digestion facilities**, particularly in underserved rural and northern regions, to address capacity shortages and reduce reliance on landfill disposal • **Support innovative processing solutions**, such as on-site, mobile, or modular organic waste treatment systems, to improve accessibility and lower transportation costs • **Foster public-private partnerships to fund infrastructure development**, ensuring businesses and municipalities have the necessary facilities to enable implementation of ICI organics diversion regulations and meet ICI organics diversion requirements
Financial Incentives and Cost Reductions	• **Implement subsidies, grants, and cost-sharing programs to support infrastructure expansion** and other organics diversion initiatives, making it more affordable for businesses and municipalities • **Introduce economic incentives**, such as reduced tipping fees for contamination-free organic waste, tax breaks or rebates for businesses investing in diversion technologies, and financial assistance for small and medium-sized enterprises (SMEs) adopting sustainable practices • **Develop regional service models that leverage collective buying power** allowing all generators in particular SMEs, to access more cost-effective organic waste collection and processing services

Categories	Identified Interventions
Data Collection and Transparency	• **Standardize organic waste definitions, reporting frameworks, and tracking mechanisms** to monitor ICI organics diversion rates, contamination levels at the source, and program/policy effectiveness across different sectors. • **Advance digital tracking systems and smart waste technologies** to improve ICI organics diversion data accuracy, enable real-time monitoring, and justify further investments in processing infrastructure. • **Establish mandatory annual reporting requirements for private sector service providers and ICI generators** to enhance industry accountability. Collect sector-specific organics diversion data to inform data-driven policy and investment decisions. • **Incentivize private sector haulers to collect and share organic waste diversion data** by offering financial rewards for accurate reporting.
Education and Capacity Building	• **Provide businesses and municipalities with training programs, signage, and toolkits** to improve source separation practices and increase awareness of organic waste diversion importance and benefits • **Launch public awareness campaigns** to build consumer and industry engagement, highlighting the environmental, social, and economic advantages of ICI organics diversion initiatives • **Develop resource hubs for businesses and municipalities**, offering best practices, compliance guidelines, and step-by-step implementation strategies
Collaboration and Engagement	• **Incentivize multi-stakeholder collaboration**, ensuring that local government, businesses, policymakers, and waste service providers work together to develop and implement best practices for ICI organic waste management • **Recognize businesses/organizations for leadership in waste reduction** through municipal or industry-sponsored sustainability awards and public recognition programs • **Fund and test pilot programs** to explore innovative organics diversion strategies and scalable solutions for different ICI subsectors

1. INTRODUCTION

1.1 BACKGROUND

According to the *National Inventory Report: Greenhouse Gas Sources and Sinks in Canada* (2024) Canada's waste sector is the third largest emitter of methane the most powerful greenhouse gas. Organic waste, responsible for the majority of methane in landfills represents approximately 30% of the disposal stream. The Government of Canada continues to evaluate opportunities for reducing GHG emissions, including those generated by the solid waste sector.

Even though many Canadian municipalities and businesses have begun to take action to reduce and divert organics generated by both the residential and ICI sectors, significant amounts continue to be lost to disposal. According to Environment and Climate Change Canada's *National Waste Characterization Report* (2020), residential and ICI sectors each dispose of roughly equal amounts of organic waste in landfills and incinerators. Food waste alone is the single largest waste source, accounting for 25% of all ICI waste disposed (by weight).

The ICI sector is complex and comprises many different types of sub-sectors and facility types. For this reason, a deeper understanding that offers insights into the critical factors that influence reduction and diversion of organic waste generated in the ICI sector is needed to inform policy targeted to diversion performance. Improved data sources and better understanding of market activities as well as related service and management costs of organics diversion will offer important insights into possible interventions.

Measuring, monitoring, and understanding food loss and waste are essential steps in reducing food waste, recovering organic waste for higher-value use, and associated mitigating greenhouse gas emissions. While food loss and waste policy has gained increased attention in Canada with the introduction of the *Food Policy for Canada* (2019), accelerating food waste reduction and organic waste diversion in the ICI sector remains a persistent challenge.

Canada's food economy and waste management ecosystems operate as interdependent yet distinct systems, involving a diverse network of public agencies, government bodies, ICI sector actors, and waste industry stakeholders. Each stakeholder group brings its own operational frameworks, priorities, and constraints, shaping how food loss and waste solutions are designed and implemented. Because of these systemic interactions, decisions made within one part of the system can significantly influence outcomes across others. Therefore, addressing ICI organic waste challenges requires strategies and interventions that recognize the interconnected barriers, drivers, and opportunities unique to the relevant stakeholder groups, and how they systematically influence one another.

Canada's ICI food and organic waste generating sectors include businesses and organizations that produce, manage, or serve food, such as restaurants, grocery stores, hotels, food processors, hospitals, schools, and other institutions. Currently, the ICI sector is responsible for producing the majority of Canada's wasted food and organics. Retail and hospitality/restaurant/institutional (HRI) subsectors generate an estimated 4 million tonnes annually (Gooch et al., 2024). In addition, the processing/manufacturing subsectors, often categorized as ICI, generate an estimated 10 million tonnes annually (Gooch et al., 2024). According to the Association of Municipalities of Ontario the capacity of some Canadian landfills continues to diminish and no immediate regulatory intervention have been planned. For example, as of 2023, the Province of Ontario has just 10 years of disposal capacity, while waste generation rates increase with population growth

The high disposal rates of organics form the ICI sector is primarily driven by two key factors the cost disparity between disposal and organic waste diversion practices, and the absence of regulatory incentives to shift stakeholder behavior. While some Canadian municipalities have implemented bylaws and programs to curb ICI food waste disposal and support ICI organics diversion, most municipalities do not. As a result, most ICI generators must independently secure collection services, often at a substantial cost premium when compared to disposal. This financial burden discourages voluntary ICI participation in organics diversion in non-regulated regions and makes it more challenging for businesses and institutions to comply with existing government mandates in regulated regions.

The waste management industry was originally established on a business created for disposal, where materials were collected as a co-mingled stream requiring no separation and low tipping fees. In recent years, a shift towards more sustainable waste management practices through consumer demand and/or regulation has forced service providers to integrate source-separation systems and identify processing markets with costs for source-separation borne by generators or users of the system. Disposal costs remain lower in comparison, mitigated only where disposal levies have been introduced (i.e. Quebec, Manitoba).

Unlike disposal, **organics diversion is inherently more expensive** due to several factors:

- **Processing Costs** – Composting and anaerobic digestion facilities require specialized infrastructure, energy for processing, skilled labour, and higher tipping fees due to the contaminated nature of ICI organic feedstock, which all contribute to higher operational expenses.
- **Operational Challenges** – Unlike collection for disposal, organics collection often requires specialized vehicles, and more frequent pickups.

- **Limited Economies of Scale** – Disposal services benefit from large economies of scale, while organics diversion, especially for servicing SMEs, is often fragmented and inefficient in regions where organics diversion is not effectively mandated, making collection and processing costs significantly higher.

- **Market Competition & Collection Inefficiencies** – With growing demand for organic waste diversion, multiple haulers now compete for few large-volume generators. The disaggregated nature of services in the ICI sector renders high service costs for service providers and their customers.

Addressing this cost disparity is essential for making organics diversion more financially feasible. Without effective solutions to balance these costs, most ICI generators will continue to opt for disposal, perpetuating the **long-term costs of inaction across the system:**

- Landfills fill up faster, forcing unnecessary financial and land-use investment to expand capacity,
- Increasing carbon emissions and waste valuable resources

Closing this gap is necessary to move away from a fragmented market that wastes valuable organic resources, drive broader stakeholder participation and enable effective regulatory and policy implementation by local governments.

1.2 PURPOSE AND OBJECTIVES

The purpose of this research is to identify the factors that can influence diversion of organic waste and identify existing gaps and potential opportunities for enhanced diversion performance in Canada's ICI Sector.

Scope of Work

For the purposes of this research, organic waste includes food waste, soiled tissues and paper towels, and other commingled biodegradable materials generally accepted in source-separated organic (SSO) collection programs designed for the ICI sector. The scope does not include leaf and yard waste, whether collected separately or included as part of source-separated organics collection programs.

The terms "organic waste diversion" and "organics diversion" are used synonymous. Similarly, "organic waste" and "food waste", and "ICI generator" and "businesses" are sometimes used interchangeably in relevant contexts.

Stakeholder inputs included representatives from several Canadian municipalities, industries, businesses and institutions, related associations, and non-government organizations (NGOs) with related information, knowledge, perspectives and

recommendations on the opportunities, barriers and drivers to divert ICI organic waste.

These included:

- **Canadian municipalities** (including regional districts and two-tier municipalities)
- **Industry sectors** (e.g., food manufacturing and processing),
- **Commercial sectors** (e.g. malls, restaurants (food services), hotels (hospitality), and grocers) across Canada,
- **Institutional sectors** (e.g. hospitals, long-term care facilities, post-secondary institutions) across Canada,
- **Industry associations** (for food-generating ICI sectors)

The following types of ICI facilities are **outside the scope of the research:**

- Any industry and/or commercial facilities associated with the residential sector, construction, renovation and demolition sector, agriculture or agri-food sector; and,
- Solid waste management facilities (e.g., organics processing facilities, recycling facilities and waste disposal facilities).

It should be noted that the focus of this research is ICI food and organic waste *diversion*, and research into ICI food waste *reduction* at the source was not covered within this work. This is not due to lack of importance in the topic, but because 'diversion' and 'reduction' of food and organic waste are often requiring different activities for both municipal and ICI stakeholders. Both topics deserve in-depth exploration.

2. METHODS

2.1 OVERVIEW

To complete the research objectives, a mixed-methods approach was used to identify the barriers, drivers, and opportunities for organic waste diversion in Canada's ICI sector. Data and information sources included stakeholder interviews, questionnaires, a review of existing related literature and legislation, as well as a jurisdictional scan of provincial/territorial and municipal waste management regulations. These methods provided a comprehensive analysis of the current challenges, regulatory frameworks, and opportunities for potential strategies to enhance ICI organic waste diversion in Canada.

Interviewees were identified based on their involvement and/or knowledge of the ICI organic waste sector, including representatives from municipalities, public and private ICI businesses and institutions, and relevant industry associations. Selection criteria aimed to prioritize representation from across stakeholder

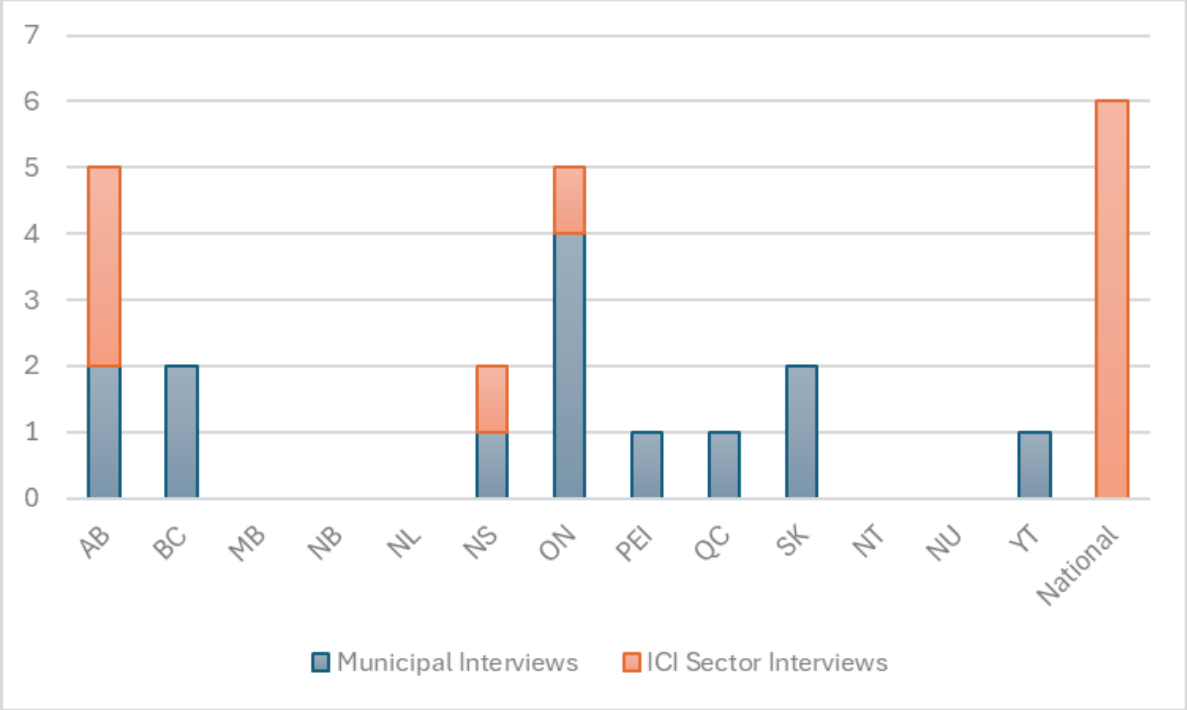
perspectives, including regulatory contexts, geographic representation, and major ICI sector stakeholders from across the country.

ICI industry associations were also included in the interview phase of the research with their insights gathered through an online write-in questionnaire tailored to solicit their viewpoint and the experiences and perspectives of their food-generating ICI members.

Desktop research was conducted to review key and current industry research for existing data on ICI organic waste diversion regulations, practices, challenges, and drivers. This data was analyzed alongside municipal and ICI stakeholder insights from the conducted interviews to compare reported experiences with documented trends and existing interventions.

Additionally, learnings from municipal and ICI sector barriers, opportunities, and drivers from Circular Innovation Council's three related pilots were included to provide in market, regional experiences across different jurisdictional and regulatory contexts for comparison to insights documented from the interviews.

Figure 2.1: Number of interviews by stakeholder type and jurisdiction



2.1.1 MUNICIPAL INTERVIEWS

The selection of municipal representatives aimed to capture a broad spectrum of perspectives and experiences regarding ICI organic waste diversion. Interviewees included representatives from a variety of municipalities varying in size, geographic location, and regulatory environments from all regions of the country (western, central, northern, and eastern). **Figure 2.1 above** provides a breakdown of the number of municipalities that participated in each province and territory.

To gather preliminary information, a pre-interview online survey (**Appendix 1**) was distributed via Google Forms to municipal interview participants. The survey collected contextualized data on ICI organic waste regulations in their jurisdictions, the scope and nature of waste services provided, and key challenges and successes in organic waste management. These responses informed the development of an interview guide tailored to each municipality's geographic and regulatory context.

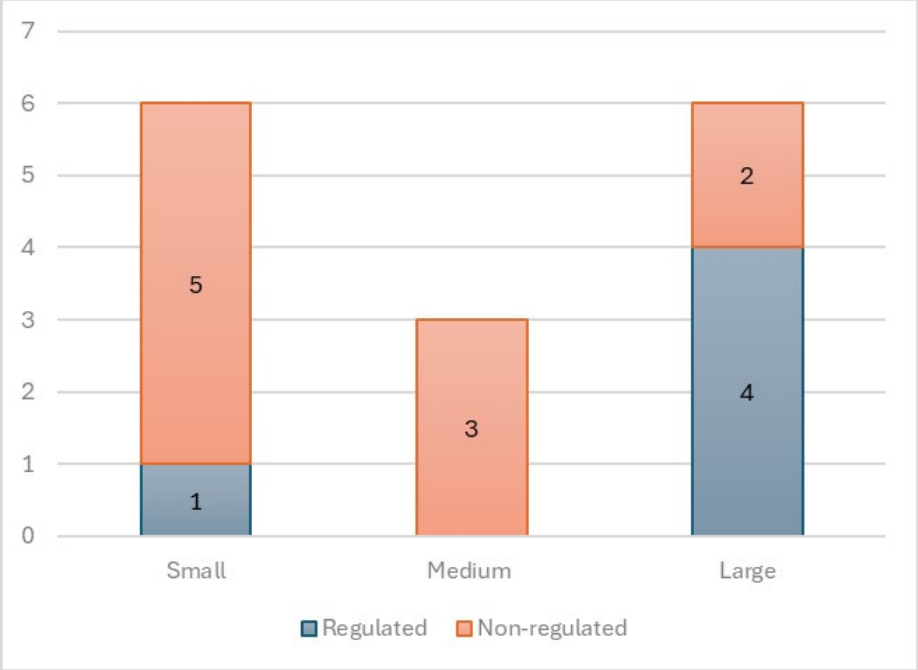
The interview guide (sample provided in **Appendix 2**) focused on three key areas:

1. Barriers to ICI organic waste diversion
2. Drivers influencing changes in ICI organic waste management practices
3. Opportunities for enhancing ICI organic waste diversion

A total of 14 municipal interviews were conducted, representing a wide range of localities, population sizes, and ICI organic waste regulatory approaches, including one regional district. Most municipal representatives expressed a preference for both personal and municipal anonymity, with the exception of existing publicly available information. Of the municipalities interviewed, 5 had ICI organic waste targeted regulations in place, 2 of which were in provinces that also had an organics landfill ban (1 medium and 1 large municipality). The other 10 representatives did not have any ICI organic waste regulations in place. **Figure 2.2** below provides a breakdown of the number of municipalities interviewed based on whether or not they had an organics diversion regulation, categorized by the population size of the municipality.

Qualitative analysis techniques were used to code and analyze the interview data. Findings were presented as recurring themes and unique insights and were categorized under the three key research objectives: "barriers," "drivers," and "opportunities".

Figure 2.2: Municipal interviews by size and existing ICI-specific organic waste regulatory frameworks



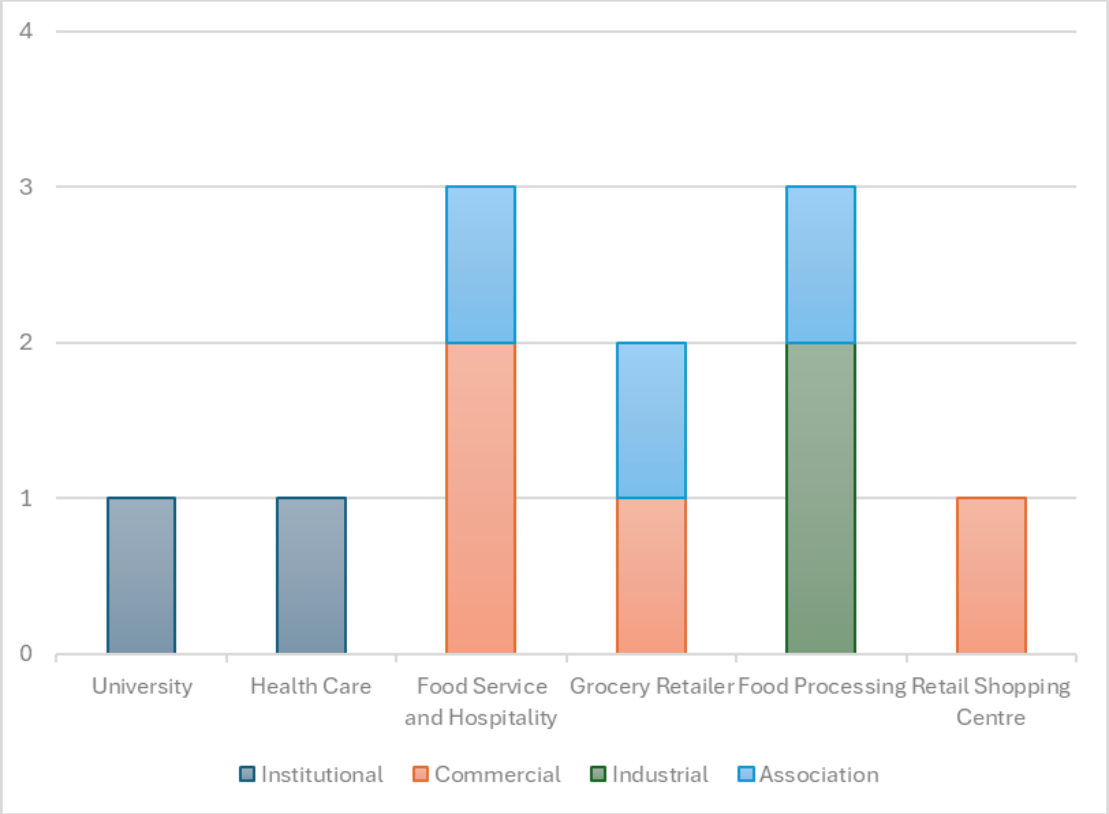
2.12 ICI INTERVIEWS

Interviewees from the ICI sector were selected to represent various organics-generating asset types, including university and health care institutions, food service (quick-service restaurants) and hospitality (hotels), grocery retail, large-scale food processing, and shopping centres that have food vendors. Each respondent had organic diversion programs in place and operated in both regulated and non-regulated regions. Most interviewees were large national corporations that operated multiple facilities across several provinces and territories (e.g. restaurants, grocery, and hotel chains). In addition to those interviewed, two additional restaurants, large food processors (from dairy and fruit industries). One large and one small Ontario event centre, were contacted but did not respond to the request. Due to time constraints for the interview phase, no further ICI stakeholders were contacted.

As with municipalities, a semi-structured interview guide (sample included in **Appendix 3**) was developed for ICI interviewees and tailored to each sector and jurisdictional context, focusing on the same three key areas of ICI organic waste diversion: barriers, drivers, and opportunities. In total, 8 interviews were completed with ICI stakeholders from various food-generating subsectors (**Figure 2.3**).

A separate long-form questionnaire was developed and distributed to three major national industry associations representing food service, retail, and food manufacturing to provide insights from the experiences of their member businesses (**Appendix 4**). All ICI interview and questionnaire respondents requested to remain anonymous.

Figure 2.3: Number of ICI interviewees by ICI sector and stakeholder type



3. ASSESSING MUNICIPAL ROLES AND REGULATORY APPROACHES TO ICI ORGANICS DIVERSION IN CANADA

A jurisdictional scan was conducted to better understand the regulatory authorities overseeing waste management in each province and territory. This scan identified the specific roles and responsibilities of provincial/territorial governments and municipal authorities focusing on the possible limitations of those authorities ability to introduce relevant by-laws. Key and relevant legislative documents, including provincial/territorial acts, municipal acts and bylaws, were reviewed to identify sections conferring law-making powers related to waste management and/or waste diversion to local governments. A comprehensive table was compiled, listing the relevant acts, sections, and their implications for ICI organic waste diversion policies, including possible limitations (**Appendix 5**).

Municipalities were chosen as the target level of government to examine these regulatory authorities as local governments are generally responsible for implementing solid waste management programs within their jurisdictions. These programs are often influenced by the frameworks directions and/or mandates set by their respective provinces and territorial governments. The role of local government is crucial in ICI organic waste management, as they translate provincial and territorial mandates into regional and local services while maintaining direct relationships with key stakeholders, including the ICI sector and the waste management industry. Local governments are often at the forefront of addressing evolving community needs, including increasing demands for environmental solutions that support climate action and responsible resource management. Therefore they are critical in shaping regional policy interventions and influencing industry investment in ICI organics diversion initiatives that drive broader change in the system.

Research conducted for this report revealed that all municipalities across Canada possess the authority to implement bylaws, mandates, and enforcement mechanisms to regulate organic waste management in the ICI sector. This conclusion is based on a review of provincial and territorial legislation that delegate legal authorities to municipalities across Canada. As they pertain to solid waste management, legal authorities conveyed to municipalities tend to be flexible (versus restrictive). Given this, all municipalities in Canada appear to possess sufficient powers to establish bylaws requiring ICI organic waste diversion and that such bylaws could potentially target any type or size of ICI facility within their respective jurisdiction. This suggests that municipal action—or inaction—may also be shaped by other systemic challenges rather than solely by legal authority.

While municipalities have the regulatory authority to implement ICI organics diversion policies, their role in this space is often shaped by resource limitations, jurisdictional constraints, and competing priorities. Despite this, local governments remain key actors in ICI organics diversion due to their ability to convene stakeholders, influence regional service availability, and support the development of local diversion infrastructure. They are also directly impacted by diminishing landfill capacity, creating an incentive to explore cost-effective diversion strategies that alleviate long-term waste management pressures.

To understand why municipal action in ICI organics diversion varies, it is essential to examine how different regulatory environments, market conditions, and stakeholder dynamics shape municipal decision-making. However, municipal policies and programs do not operate in isolation—ICI generators also navigate diverse geographic, sectoral, and regulatory landscapes that influence their ability and willingness to participate in organics diversion. Businesses and institutions

face varying cost structures, service availability, and operational constraints, all of which impact their waste management decisions.

Exploring the similarities and differences across Canadian municipalities and ICI stakeholders provides insight into the factors that either drive or hinder action, clarifies the roles and responsibilities of both groups, and helps identify opportunities for intervention. By analyzing these influences from both the municipal and ICI perspectives, this research highlights why progress remains uneven, where misalignments exist, and what systemic changes are needed to enable broader adoption of ICI organics diversion strategies. As landfill capacity diminishes and climate change objectives become more pressing, more municipalities are expanding their efforts to address the ICI sector, recognizing both the challenges and opportunities associated with taking on a more active role in organic waste diversion.

3.1 CURRENT LANDSCAPE OF CANADIAN ICI ORGANIC WASTE DIVERSION

Canada's ICI organic waste diversion landscape varies widely by province and territory. Some jurisdictions mandate diversion through landfill bans, while others rely on voluntary programs or municipal initiatives. For example, **Nova Scotia and a few jurisdictions in British Columbia** have enacted landfill bans on organic waste. While **Prince Edward Island** does not officially have a province-wide organics disposal ban, the Island only has one landfill at the East Prince Waste Management Facility. Island Waste Management Corporation manages all waste on the Island and does not accept organic material for disposal. All ICI facilities must participate in the PEI Waste Watch program (e.g. using private contracts with commercial waste haulers for sorted materials). **Quebec (since 2006) and Manitoba (since 2009)** impose levies ($30 to $10/tonne) on all residential and non-residential solid waste disposed of at landfills to discourage disposal and generate financial support for waste reduction and diversion initiatives. Currently, the other provinces and territories do not enforce landfill bans or mandatory organics diversion policies.

Some provinces and territories have established targets that include the diversion of ICI organic waste:

- **Ontario**: Introduced the *Food and Organic Waste Framework*, which outlines strategic commitments to reduce food and organic waste, recover resources, support resource recovery infrastructure, and promote beneficial uses of recovered organic materials. The target is 50-70% reduction in food and organic waste by 2023 or 2025 (depending on sector type).
- **British Columbia**: Through *CleanBC program*, set a target to divert 95% of organic waste from agricultural, industrial, and municipal sources.

- **Quebec**: Introduced the *Organic Materials Reclamation Strategy (Stratégie de valorisation de la matière organique)* in 2020 to implement management of organics in 100% of the ICI sector by 2025, recover 70% of organic material by 2030, and reduce GHG emissions by 270,000 t CO2 eq per year by 2030.
- **Nova Scotia**: Currently developing a *Circular Economy and Waste* plan that targets a 25% waste reduction rate and aims to limit waste disposal to no more than 300 kg per person annually by 2030.
- **Northwest Territories (NWT):** The 2019 *Northwest Territories Waste Resource Management Strategy And Implementation Plan* aims to reduce the current amount of waste disposed (946 kg per capita) to 662 kg per capita by 2030; and 473 kg per capita by 2040.

In the absence of (or in conjunction with) provincial or territorial mandates, some municipalities are proactively implementing policies targeted to ICI organic waste management to extend landfill lifespan, mitigate methane emissions, and adopt circular economy solutions regionally. When implemented, these municipal policies most commonly take the form of ICI organic waste diversion by-laws, requiring businesses and institutions to source-separate organic waste from general waste and divert from landfill (often via composting or anaerobic digestion). These bylaws, though varied, often mandate ICI organics diversion through private organics collection systems or require certain ICI facilities—such as specified (often small-sized) businesses, schools, and public institutions—to participate in municipal organics collection programs where available.

In a couple of cases, municipalities have opted for landfill bans at their municipal-owned landfill site, preventing organic waste disposal and to incentivize re-direction of the materials to municipal-owned or privately-owned organics processing facilities nearby. However, most municipalities in Canada do not currently have regulations, programs, or comprehensive solutions in place for organics diversion in their ICI sectors.

For a summary of municipalities actively targeting ICI organic waste via regulatory approaches refer to **Table 3.1** and **Table 3.2** below in "3.3 Assessment of Municipal By-Laws for ICI Organic Waste Management").

For ICI generators, the patchwork of requirements varies widely depending on location. In regions with landfill bans, haulers are not permitted to dispose of organic materials at landfill sites, which often prompts complimentary municipal enforcement of ICI source-separation and diversion of organic waste to avoid haulers incurring fines. However, not all municipalities implement these requirements for the ICI sector, meaning haulers may increase waste collection costs to offset landfill fines, or ship the organic materials to other jurisdictions (i.e. Canadian or US) with less stringent requirements and cheaper disposal.

In provinces and territories with diversion targets and landfill levies, enforcement is not as strict. Many ICI businesses choose to participate in organics diversion practices based on cost, operational feasibility, and sustainability goals rather than legal obligation. However, In the absence of regulatory requirements, voluntary adoption of organics diversion practices within Canada's ICI sector is low.

In some cases, certain ICI sectors, such as large food processors, must comply with additional waste-related regulations. For example, large meat processors must adhere to Canadian Food Inspection Agency (CFIA) requirements concerning the disposal of biohazardous waste, including animal carcasses, to ensure environmental and public health safety (e.g. stringent disposal procedures of tissues in cattle that could harbor Bovine Spongiform Encephalopathy). Also, large ICI establishments (including businesses part of chains with >10 locations) must prepare annual ministry standardized reports of comprehensive waste audits of their establishment and an annual 'waste reduction work plan' based on those audits, under Ontario's 3R's regulation (O. Reg. 102/94 - Waste Audits and Waste Reduction Work Plans). The annual waste audits, waste audit reports, and 'waste reduction work plan' must outline the internal policies related to different streams of waste production, waste amounts, composition and source, and end-management strategies on how they will reduce, reuse, and recycle materials, including organic waste. These audit and management reports are required to be kept on-site for requested inspection and compliance checks by the province.

3.2 ASSESSMENT OF MUNICIPAL AUTHORITY FOR ICI ORGANIC WASTE MANAGEMENT

Based on our review and interpretation of provincial and territorial laws, municipalities across Canada have full authority to impose legal requirements (e.g., via municipal bylaws and other instruments and tools) to address ICI organic waste if they choose to do so. Canadian municipalities operate under powers delegated to them by their respective provincial or territorial governments, as they are not autonomous entities under the Constitution. These delegated authorities enable municipalities to govern and manage local affairs effectively through bylaws within the provincial and territorial legislation framework, such as Municipal Acts and City Charters.

However, while municipalities have significant delegated powers, they remain under provincial and territorial jurisdiction and must comply with related provincial and territorial legislation. Provinces and territories also reserve the right to amend or revoke delegated authorities and can require municipal compliance with specific provincial/territorial policies and standards.

Municipal Acts refer to legislation enacted by provincial and territorial governments that establish the framework within which municipalities operate.

Each province and territory in Canada have its own unique Municipal Act (or equivalent legislation) that outlines the powers, responsibilities, and governance structures of municipalities. They define the purpose of municipalities, which often include providing services and fostering economic, social and environmental well-being.

City Charters refer to specialized legislation (or agreements) that define the governance framework, powers, and responsibilities of specific (and typically larger) cities. Where they exist, these charters often provide cities with unique or enhanced powers beyond what is typically granted to municipalities under the general provincial/territorial Municipal Acts. Through these, provincial and territorial governments grant authority to cities over areas that directly impact the lives of residents. A City Charter recognizes the unique challenges and opportunities a large city may face and the major contributions it provides to the province where it resides that differs from other smaller cities, towns, or communities that operate under the Municipal Act. City Charters offer them the flexibility and ability to respond to local needs with local solutions.

Under these provincial/territorial Municipal Acts and City Charters, municipal by-laws are one of the primary tools used by local governments to execute waste management initiatives because they allow municipalities to establish rules and penalties that are legally binding within their jurisdiction.

Provincial and territorial laws also give municipalities authority to provide, or contract waste management services to third parties, within their jurisdiction or beyond it if specific conditions are met (e.g., agreements are in place). If they are providing those services themselves, they have the authority to establish and impose fees accordingly to cover costs. Provisions often include flexibility for local adaptation and encourage inter-municipal partnerships to address regional challenges.

The delegated authority provided to municipalities by provinces and territories do not explicitly restrict or otherwise limit the ability of municipalities to impose mandatory requirements and controls regarding the management of ICI waste, including organic waste. As such, municipalities can target all types and sizes of ICI waste generators, organic wastes, disposal and diversion activities within their respective jurisdiction.

In some specific cases, provincial and territorial laws may limit municipalities' *ability* to effectively and efficiently develop and/or execute on by-laws that are targeted to ICI organic waste, even if the local governments have the technical *authority*. These potential limitations include:

- Prescriptive legislation: Some Provincial Governments have laws that adopt a specific and directive approach to conferring waste management

authority to municipalities compared to other Municipal Acts across Canada. For example, New Brunswick's *Local Governance Act* explicitly grants municipalities the power to regulate and manage various aspects of waste management, such as the collection, removal, and disposal of waste, as well as the regulation of disposal site locations and the placement of waste storage facilities through land-use planning and site-plan approvals. This specificity helps prevent ambiguity but may limit flexibility compared to jurisdictions with broader, more discretionary frameworks. Furthermore, prescriptive legislation could limit flexibility by imposing specific rules that municipalities must follow, rather than allowing them to adapt to local needs and evolving circumstances.

- **Enforcement gaps**: Some laws restrict municipalities from inspecting specific areas which could limit their ability to investigate certain waste-related activities or enforce compliance to related by-laws. For example, Ontario's *Municipal Act, 2001* explicitly prohibits municipalities from entering buildings for enforcement purposes. Municipal Acts across Canada also vary in terms of how they treat by-law infractions. In Quebec and Newfoundland and Labrador, infractions are treated as civil matters requiring legal proceedings to enforce compliance, which limits municipalities' ability to impose penalties and ensure compliance.
- **Procedural requirements:** Procedural requirements for enacting by-laws across Canada are designed to ensure transparency, accountability, and public participation. These procedures can impact municipalities' ability to efficiently implement waste management measures. Common requirements include public notice, multiple readings of the by-law, and accessibility of draft versions to residents. While these processes foster democratic governance, they can delay waste management initiatives, create inflexibility during urgent situations, and place additional burdens on smaller municipalities with limited administrative capacity.
- **Jurisdictional challenges:** Waste management authority is not always granted directly to individual municipalities by the provinces and territories. In some cases, authority over specific activities (e.g., waste collection) are granted to regions, or upper tier regional governments instead of individual municipalities. In Quebec's *Municipal Powers Act,* regional governments have the authority to delegate enforcement to other municipalities. These varying degrees of authority may lead to confusion over responsibilities for different waste management activities, inconsistent practices or priorities from both municipalities and ICI generators, and add administrative complexity to manage collaborative agreements.

Despite these potential constraints, municipalities have authority and flexibility to introduce mandatory requirements, establish collection service fees, and

collaborate with regional governments to address waste diversion goals. Understanding and navigating these regulatory environments is essential for municipalities seeking to enhance ICI organics diversion and implement sustainable regional waste management strategies.

Refer to Appendix 5 for a high-level summary of relevant provincial and territorial laws including a description of the types of authorities they convey and key provisions for ICI waste management in particular.

3.3 ASSESSMENT OF MUNICIPAL BY-LAWS FOR ICI ORGANIC WASTE MANAGEMENT

The cities of Calgary, Lethbridge, Toronto and Halifax have waste bylaws with provisions specific to ICI organic waste and were chosen to be further analyzed for the purposes of this research. Their bylaw provisions include clear guidelines on how ICI organic waste generators must manage organic waste to ensure proper sorting, collection, and diversion. These bylaws are outlined in more detail in Table 3.1, and their features are summarized below:

- **Source Separation and Bins:** Nearly all municipalities require ICI property owners to provide containers for source-separated waste, including organics, recyclables, and garbage, except Toronto, which only requires source-separated containers for ICI facilities receiving city collections. These containers must meet standards for durability, labelling, and accessibility. Municipalities also require owners to post clear signage on containers indicating waste types. Calgary, Lethbridge, and Toronto bylaws also include staff training and education requirements to ensure proper source separation.
- **Collection:** Three municipalities provide collection services to the ICI sector. Halifax is the only municipality that relies solely on private haulers, and Calgary offers collection services competitively alongside private haulers for the ICI sector. Toronto provides collection services but has specific criteria that properties must meet (e.g., based on size). It also has an all-or-nothing policy, whereby if an entity chooses to participate in the city's ICI waste management program, it must comply with all available (organics, recycling, and disposal) waste streams.
- **Enforcement:** All of these aforementioned municipalities can assign fines to owners for violations of their bylaws, including non-compliance with sorting and storage requirements. Fines range in value, and nonpayment can lead to imprisonment in some municipalities. Toronto and Calgary mentioned using a progressive enforcement approach that starts with education, monitoring, and/or warnings before issuing fines. Toronto employs proactive waste audits and spot inspections to ensure compliance with ICI organic waste bylaws.

- **Reporting:** Two municipalities have reporting requirements for ICI organic waste. Halifax requires owners or occupants to develop and maintain waste management plans that identify the types of waste generated and the storage, recycling, and disposal methods. Lethbridge requires owners to report compliance with bylaw obligations, including acknowledging their awareness and adherence to the requirements and confirming compliance with storage and signage standards.

Table 3.1: Examples of Municipalities with Bylaws in Place to Address ICI Organic Waste

Municipality	By-law & Authority	Current and/or future provisions for ICI organic waste
City of Calgary	• BYLAW 4M2020 - A bylaw of the City of Calgary to regulate and manage waste • The Municipal Government Act, R.S.A. 2000, c. M-26, empowers Council to pass bylaws for municipal purposes respecting the safety, health and welfare of people, the protection of people and property, nuisances, services provided by or on behalf of the municipality, and the enforcement of bylaws	<u>Current provisions</u> • **Section 15**: Owners of non-residential parcels must provide adequate containers for the separate storage of garbage, recyclables, and food/yard waste generated on-site. Occupants must use these containers for proper waste separation. o Containers must be in good condition, sufficient in number and capacity, and conveniently located. • Owners are responsible for ensuring containers are emptied as needed, with garbage taken to a waste disposal site, recyclables to a material recovery facility, and food/yard waste to an appropriate recovery facility. • On-site composting of food and yard waste is allowed. • Owners must also post clear signage on containers indicating waste types and provide annual waste sorting and preparation information to occupants, including at the start of new tenancies. • **Section 16:** Owners or occupants of non-residential parcels can apply for an exemption from waste separation requirements for recyclables, food, and yard waste. The Director of Waste & Recycling Services may grant the exemption if satisfied that the parcel does not routinely generate the specified waste materials. • **Part 8 - Enforcement:** If an Officer believes a person has violated the bylaw, they may issue an order to remedy the contravention, a violation ticket, or both. Failure to comply with an order results in an offense, and the City may take necessary actions to address the violation, with costs charged to the offender. Offenders face penalties, including fines outlined in Schedule "A," with doubled fines for repeat offenses within 24 months. <u>Future provisions</u> • The municipality is exploring adding requirements for front-of-house organic waste separation and adding more oversight and responsibility for waste haulers.

City of Lethbridge	• BYLAW 6146 – The Waste Bylaw is a consolidated bylaw of the city of Lethbridge for the provision of waste services in the city • The City of Lethbridge, under the authority of Sections 3 and 7(g) of the Municipal Government Act (MGA), is empowered to provide necessary or desirable services, including public utilities, for the municipality. The City deems it desirable to establish waste management services and to outline the terms, conditions, rates, and charges for these services.	Current provisions • **Section 54.1**: Non-residential customers and mobile food vendors must provide well-maintained, appropriately sized containers for recyclable and organic materials to prevent litter and deterioration. • **Section 54.2**: Recyclable and organic materials must be stored separately from garbage in designated containers. • **Section 54.3**: These materials must be processed by transporting to an authorized facility, contracting a licensed service provider, or using an Engineer-approved method. • **Section 54.4**: Customers and vendors must ensure accessible, clearly labeled containers, train employees on proper use, and report compliance as required. • **Division 5 - Enforcement:** The enforcement provisions of the bylaw state that any person who contravenes its rules commits an offense and may face fines ranging from $250 to $10,000, or imprisonment for up to six months if fines are unpaid. Each day of a continuing offense constitutes a separate violation. Offenses by employees, agents, corporations, or partnerships may result in liability for individuals who authorized or participated in the offense.
City of Toronto	• Toronto Municipal Code Chapter 841 - Commercial Collection • This by-law was passed under the authority of section 208.2, section 208.6, paragraph 82 of section 210 and section 220.1 of the Municipal Act, R.S.O. 1990, c. M.45.	Current provisions • **Section 841-3**: The City provides collection services to eligible commercial and non-residential properties, excluding industrial properties, based on size and zoning criteria. Organics services are available for RUAC properties with adequate storage, as determined by the General Manager. Recycling and organics instructions must be posted as directed. • **Section 841-4**: The City collects garbage, recyclables, and organics weekly. In select areas, such as business improvement zones and night-time routes, collection may occur twice weekly. Organic materials may be collected up to seven times per week with General Manager approval. • **Section 841-6**: Owners with organics collection more than once per week must pay an annual fee per Chapter 441. Spot waste inspections and/or waste audits determine compliance with requirements set out in the Code; noncompliance may lead to removal from the program. • **Section 841-9**: Owners must use approved containers for organic materials, including a 120-litre cart or alternatives designated by

		the General Manager. Curbside collection users may use City-provided carts. • **Section 841-10.2**: The City provides 95-gallon garbage and recycling carts and offers organic carts in 13- or 35-gallon sizes. The General Manager determines cart quantities and additional cart requests. • **Section 841-11**: Owners must ensure waste is generated on-site, placed near the roadway without obstruction, free of contamination, and stored in clean, regulation containers. Weight limits vary by cart size, and sidewalks must remain clean and unobstructed. • **Section 841-14**: Organic materials must be set out in designated containers and free of liquids, plastics, twist ties, and other contaminants.
City of Halifax	• Halifax Regional Municipality Solid Waste Resource Collection and Disposal By-Law No. S – 600	Current Provisions: • **Section 12:** Property owners and occupants of industrial, commercial, institutional (ICI), or construction premises must manage their waste according to the bylaw and applicable laws. Owners are responsible for: ○ Promptly disposing of ICI waste, construction waste, and demolition waste not eligible for municipal collection. ○ Developing a waste management plan on notice from the municipality, detailing waste identification, storage, recycling, disposal methods, and litter management. ○ Providing adequate space for source-separated containers for ICI waste, organics, and recyclables (blue bag, paper, and cardboard). ○ Posting signage near containers to guide proper sorting and, where applicable, near chutes or waste areas. ○ Source-separating waste into designated categories (ICI waste, organics, blue bag recyclables, paper, cardboard) for recycling or disposal in line with provincial bans and municipal systems. ○ Placing separated waste in appropriate containers designated by property owners.

		○ For public spaces in commercial premises (e.g., malls, food courts, arenas), owners must provide labeled, accessible common-area containers for proper waste disposal. ○ Ensuring sufficient and accessible waste containers are available for drive-thru users. • **Section 13:** Requires commercial containers to be weatherproof, animal-proof, and equipped with tight-fitting lids, clearly labeled with waste types, and regularly cleaned and emptied. Containers must be placed on hard, level surfaces, kept behind or beside buildings when possible, and not create nuisances or obstruct public streets. They must accommodate source-separated waste, remain accessible, and be maintained free of litter. Only authorized users may deposit waste, and owners are responsible for compliance with these standards. • **Section 20:** Any person who violates, permits violations, fails to comply with, or obstructs enforcement of this bylaw is guilty of an offense. Fines range from $200 to $10,000, with a minimum fine of $500 for specific violations, and imprisonment of up to 60 days for non-payment. Each day a violation continues counts as a separate offense. Courts may also order offenders to pay for costs incurred in addressing the violation and any related damages. The Administrator may issue written directions requiring the contravention to be remedied within a specified timeframe.

The is following is a list of municipalities in Canada actively targeting ICI organic waste via regulatory approaches (including municipal landfill bans) by province or territory:

Table 3.2: Municipalities Identified with Bylaws in Place to Address ICI Organic Waste

Province/Territory	Mandatory Separation and Diversion	Landfill Ban
British Columbia	Abbotsford, Burnaby, Chilliwack, Langley Township, Metro Vancouver, North Vancouver District, Surrey, City of Vancouver (*under Metro Vancouver*), White Rock	Capital Region District (CRD), Cowichan Valley Regional District (CVRD), Metro Vancouver, Regional District of Nanaimo (RDN), Regional District of North Okanagan (RDNO), White Rock
Alberta	Airdrie, Calgary, Lethbridge	
Saskatchewan	Saskatoon, Regina (*in development*)	
Ontario	Markham (*partial – source-separation required for ICI receiving city collection*), Toronto (*partial – source-separation required for ICI receiving city collection*)	
Quebec	Laval (*in development*), Montreal (*partial – requires source-separated containers for ICI receiving city collections*), Marguerite-D'Youville Regional County Municipality MRC (*enacted but not yet enforced est. Jan 2026*), Trois-Rivières (*partial – source-separation required for ICI establishments receiving city collection*)	
Nova Scotia	East Hants, Pictou County, Halifax (*partial – only facilities serviced by municipal collections*)	All municipalities in Nova Scotia are under Provincial landfill ban.
Yukon	Whitehorse	

Municipal bylaws are critical in shaping ICI organic waste management by establishing regional mandatory separation requirements, enforcement mechanisms, and landfill bans. While some municipalities have implemented comprehensive regulatory frameworks, enforcement and reporting requirements vary across jurisdictions.

The municipalities highlighted above demonstrate a range of approaches, from landfill bans and source-separation mandates to progressive enforcement strategies and compliance reporting. As more municipalities introduce and refine their policies, these bylaws contribute to a broader shift toward increased ICI organic waste diversion, aligning organic waste management practices with environmental sustainability and climate change mitigation goals. Continued efforts to innovate, expand, and harmonize municipal regulations can drive more significant participation in organics diversion across the ICI sector.

4. WHAT WE HEARD: PERSPECTIVES OF MUNICIPALITIES AND ICI SECTOR

This section summarizes municipal and ICI sector perspectives and experiences gathered from interviews and questionnaires organized by the **opportunities, barriers, and drivers for ICI organics diversion** in Canada. It also provides a comprehensive overview of the shared and unique challenges cited by respondents that participated in this research. To ensure confidentiality, identifying details such as names and locations have been removed or generalized.

4.1 BARRIERS

Municipalities and ICI respondents cited several common challenges to advancing ICI organics diversion, including regulatory inconsistencies, financial constraints, infrastructure and operational limitations, and contamination issues. However, while several perspectives were similar, their experiences differed regarding specific challenges with enforcement, awareness, operational challenges, data and reporting, reflecting distinct roles in the circular food system. There was a consensus that overcoming these barriers requires a coordinated approach that integrates regulatory alignment, standards, financial support, infrastructure investment, and tailored education and engagement strategies.

The table below offers a summary of the key barriers from both the ICI and municipal sectors.

Table 4.1: Key Barriers to ICI Organics diversion Identified by Municipalities and ICI Stakeholders

Category	Municipal Perspectives	ICI Perspectives
Regulatory Challenges	• Fragmented regulations between levels of government and inconsistent definitions of organic waste	• Inconsistent regulations across jurisdictions • Mismatch between regulations and infrastructure

Category	Municipal Perspectives	ICI Perspectives
	• Limited authority and efficacy of local bylaws • Jurisdictional enforcement gap; Inconsistent and limited municipal enforcement	• Ambiguity in organic waste definitions
Financial Limitations	• Limited budget to offer financial incentives • Limited budget for infrastructure and resources • Financial burden of managing contamination • Limited budgets for education & enforcement • Lack of effective options for SMEs	• High costs of organics diversion compared to disposal • Lack of financial incentives
Infrastructure and Operational Constraints	• Lack of organics processing infrastructure • Logistical ICI limitations impacting compliance • Wildlife safety concerns in rural regions	• Space constraints for organic materials source separation & storage • Challenges with sorting & DE packaging for mitigating contamination • Regional infrastructure limitations
Education and Awareness	• Resistance from the sector & low awareness • High employee and tenant turnover • Lack of incentive for small-and-medium enterprises (SMEs) • Lack of local market options for services • Lack of public awareness or pressure for change. • Limited capacity for education programs in smaller municipalities	• Staffing challenges & high turnover • Lack of/low consumer awareness • Lack of internal sustainability expertise
Data and Reporting Gaps	• Lack of standardized reporting tools and protocols	• Unreliable data and limited traceability from service providers

Category	Municipal Perspectives	ICI Perspectives
	• Lack of reliable and/or standardized data • Lack of data availability or aggregated data from service providers • Challenges with residential/ICI co-collection practices & aggregated ICI organic waste data	• Lack of systems available to track and report data • Challenges with aggregated data

4.1.1 BARRIERS - MUNICIPALITIES

Interviews with municipalities across Canada revealed a range of interconnected barriers to improving ICI organics diversion performance. These findings highlighted common themes such as the need for coordinated approaches to regulation design and deployment, harmonized regulations across higher authority/level (provincial and territorial, federal governments), expanded collection and processing infrastructure, targeted financial incentives (for municipalities, ICI facilities, and the waste industry), and improved data collection and reporting to improve transparency. Municipalities also emphasized some shared regulatory and geographic context-specific challenges, such as compliance difficulties, and lack of this infrastructure in rural and northern communities.

Regulatory Challenges

- **Inconsistent regulations & definitions of organic waste**: Most municipalities identified inconsistent regulations and a lack of definitions for organic waste as a major barrier to improve diversion. While provincial and territorial targets for organics diversion exist, they are often aspirational and lack mechanisms for implementation and enforcement (such as mandatory organics separation bylaws, landfill disposal bans or mandatory audits and inspections). This inconsistency results in uneven action and compliance across jurisdictions. Additionally, municipalities reported a lack of consistent definitions for ICI waste in provincial/territorial and municipal regulations in general which prevents strategic alignments and limits enforcement mechanisms. For instance, variations in whether multi-residential buildings are categorized under ICI waste regulations create confusion and policy gaps.

- **Limited authority & impact of bylaws:** Although municipal bylaws were viewed as valuable policy tools to improve ICI organics diversion, respondents also cited their limitations. Municipal respondents in Ontario,

Alberta, and the Yukon noted that inconsistencies between bylaws, such as waste management and zoning regulations (which are often developed in isolation), often create confusion for businesses and enforcement challenges for municipalities. For example, a multi-unit residential property might be classified as a commercial business under a waste management bylaw, requiring compliance with organics diversion rules, while the zoning bylaw categorizes it differently, creating uncertainty regarding compliance requirements. These mismatches can lead to confusion, compliance management difficulties for municipalities.

- **Jurisdictional enforcement gap:** Both municipalities with and without bylaws noted that businesses often have their waste streams collected and transported to facilities outside the geographic boundaries of their jurisdiction, away from urban centers and used by many different municipalities in a region, making it challenging for oversight of ICI organics diversion practices. Additionally, some municipalities reported difficulties with businesses purposefully circumventing municipal diversion requirements by transporting their organic materials to facilities in neighbouring jurisdictions or across the U.S. border to regions with less stringent disposal requirements and less expensive tipping fees. These barriers limit visibility into ICI organic materials management, which limits the municipalities' ability to oversee compliance. This also leads to incomplete ICI organics diversion data, hindering future municipal policy development and benchmarking for ICI organic waste management and climate targets.

- **Inconsistent & limited municipal enforcement:** Lack of resources or capacity to enforce regulations was identified as another significant challenge by most municipalities. A lack of enforcement mechanisms are sometimes perceived by ICI generators as something that allows businesses to delay compliance until stricter penalties are imposed, or to circumvent the actual diversion of organic waste by only complying with the requirement to have a green bin on-site but not ensure the materials are composted.

Infrastructure and Operational Constraints

- **Lack of organics processing infrastructure**: Many municipalities across Canada, both regulated and non-regulated, whether rural or urban, have identified a significant inadequacy in the infrastructure needed to support large-scale organics diversion from the ICI sector. Numerous regions lack sufficient composting or anaerobic digestion facilities to handle the volume of organic waste generated by the ICI sector. This limitation restricts the ability of municipalities to expand their diversion programs or even consider implementing an ICI diversion mandate. Additionally, attempts to expand

capacity at existing facilities often encounter logistical and permitting challenges, high costs for both municipalities and industries, and opposition from local residential or agricultural communities.

- **Logistical Limitations Affecting Compliance:** Some ICI food generators reported that their facilities often lack the necessary space to collect and store organics. This makes it challenging for them to implement effective source-separation activities on-site, leading to reduced compliance when such separation is mandated.

- **Wildlife Safety Concerns in Rural Areas**: Some rural and remote regions reported safety concerns related to an increase in human-wildlife interactions due to aggregated organic waste. Respondents from northern Ontario and the Yukon mentioned that wildlife (e.g., bears, vermin) being attracted to organic waste bins and materials creates additional challenges in successfully implementing waste diversion programs, particularly at tipping sites for organic processing.

Financial Limitations

Challenges Faced by Municipalities in Implementing ICI Organics Collection

- **Limited Budget for Financial Incentives**: Many municipalities offering, or showing interest in offering, organics collection services to the ICI sector reported the high costs associated with establishing and maintaining diversion programs. Operating under full-cost recovery (user-pay) models restricts their ability to provide financial incentives for participation from the ICI sector given the cheaper choice of disposal.

- **Limited Budget for Infrastructure and Resources**: Municipalities have indicated that substantial upfront investments are necessary for infrastructure development. This includes purchasing specialized trucks, providing separate organics bins, and building or expanding processing facilities and collection routes. In provinces and territories without specific regulations, municipalities often encounter difficulties in obtaining council approval for these expenses.

- **Financial Burden of Contamination:** Many respondents highlighted that contaminated organic waste significantly increases municipal processing costs. For example, one municipality noted that its cost-recovery model for ICI organics collection services relies on the successful sale of produced compost which is significantly compromised by contamination from non-decomposable materials, such as plastics. When organic waste streams become overly contaminated, municipalities may have no choice but to landfill unusable materials, leading to further losses in staff time and

resources. Landfilling collected materials also erodes the trust of businesses and the public regarding the effectiveness of their services and reduces participation.

- **Limited Budget for Education and Enforcement:** Most respondents reported a lack of funding for education and awareness campaigns designed to guide ICI generators in adopting new organics diversion practices. Additionally, for municipalities with existing or potential ICI organics diversion mandates, limited budgets hinder their ability to hire adequate staff for monitoring and enforcing these mandates. This can result in low compliance rates or in some cases, prevent municipalities from implementing necessary regulations altogether.

Education and Awareness

- **ICI resistance & low awareness:** Most municipalities identified business resistance to change and low awareness of the importance of diverting organic waste as significant barriers to both mandatory diversion compliance and voluntary diversion efforts. Respondents noted that businesses are often resistant to local government setting additional waste management requirements because of the potential administrative burden or additional work to implement new diversion practices.

- **High employee & tenant turnover in the ICI sector:** A few municipalities reported that high employee turnover in the ICI sector and among commercial tenants creates ongoing challenges for municipalities trying to create consistent and long-term education and buy-in in their ICI community.

- **Lack of incentive for small-and-medium enterprises (SMEs):** Some municipalities also explained that ICI who generate low volumes of organic waste, particularly SMEs, often perceive little value in participating in formal collection programs or pilot initiatives, resulting in low engagement levels in the sector. This is especially true in non-regulated regions or areas where diversion is not mandated for low-volume generators, as the perceived costs and logistical challenges may outweigh the benefits of participation and their access to private collection services.

- **Lack of local market & public demand influence:** Municipalities with ICI and/or residential organics collection programs already in place reported that local public and business awareness and demand for sustainable practices in the community significantly influences their ability to prioritize programming and enforce ICI organics diversion. Respondents noted that the absence of significant local market drivers or public demand for organics diversion diminishes the urgency of implementing robust programs

and regulations, especially for the ICI sector. Respondents from northern regions mentioned that public and ICI community interest in organics diversion remains low due to other competing social and economic priorities unless convenient and cost-effective services, such as municipal curbside pickup, are readily available.

- **Limited capacity for education programs in smaller municipalities:** Smaller municipalities reported to be further constrained by limited staff capacity and financial resources, which hinders their ability to establish and sustain comprehensive organic waste programs. Insufficient educational outreach exacerbates the issue, making it harder to engage businesses and residents to participate in organics diversion practices.

Data and Reporting Gaps

- **Unreliable & unstandardized data from service providers:** Most noted that municipalities often rely on private haulers for data collection, which, according to respondents in Ontario, Saskatchewan, and Yukon territory, results in receiving inconsistent reporting formats and metrics of organic waste data. Haulers also tend to have inconsistent ICI definitions, a lack of expertise on diversion measurement methods for reporting, the lack of systematic data collection and reporting standards makes it difficult for them to assess existing program or policy effectiveness, identify areas for improvement or inform policy development, or understand the regional needs for processing capacity.

- **Lack of data availability or aggregated data from waste sector:** Many municipalities indicate that although they receive some data from a few private service providers on a voluntary basis. Respondents reported that local governments lack both the resources or authority to mandate data sharing from private haulers and processors. Additionally, data is offered, is often aggregated making it challenging to identified ICI sector-specific information.

- **Challenges with residential/ICI co-collection practices & aggregated ICI organic waste data**: Municipalities also reported common challenges with co-collection practices, where organic waste streams from different ICI subsectors (or residential and ICI) are mixed, limiting the municipality's ability to tracking ICI sector-specific waste (e.g., average organics diversion rates from the 'restaurant' vs. the 'food manufacturing' subsectors). Without this generator specific tracking, a municipality cannot accurately assess the organics diversion patterns or efforts of different ICI generator types.

  Shared bin usage between residential and commercial properties in mixed-use properties further complicates accountability and compliance. High

source-separation contamination rates in publicly accessible bins (e.g., mixed-use residential and commercial curbside bins) creates additional challenges in planning targeted organic waste management strategies or compliance with goals for specific ICI subsectors.

4.1.2 BARRIERS - ICI SECTOR

Interviews with respondents across the ICI sector revealed a range of interconnected barriers to organics diversion. Common themes included inconsistent regulations across jurisdictions, high financial costs, logistical and operational challenges, insufficient infrastructure, market-driven limitations, and compliance challenges perpetuated by these issues that make diversion efforts difficult to implement and sustain.

Regulatory Challenges

- **Inconsistent regulations across jurisdictions:** A recurring theme among ICI respondents was the inconsistency in regulatory frameworks across municipalities and provinces/territories. All ICI respondents operate across multiple jurisdictions and expressed frustration over the lack of harmonized compliance standards, which complicates the implementation and enforcement of uniform waste diversion practices across their facilities. One respondent highlighted these challenges posed by regulatory inconsistencies, explaining, "Inconsistent municipal regulations across locations create inefficiencies and hinder uniform practices."

- **A mismatch between regulations & infrastructure:** Where regulations exist, some respondents highlighted that they often fail to align with the availability of supporting processing infrastructure across jurisdictions. This misalignment often leaves food generating businesses unable to comply with organics diversion mandates effectively, particularly in regions where infrastructure for organic waste processing is limited.

- **Ambiguity in organic waste definitions**: One food service association highlighted that regulatory inconsistencies become especially evident when considering different operating models, such as quick service versus full-service restaurants. For quick-service establishments, much of the food is consumed and disposed of off-site, often resulting in less edible food waste and more inedible waste left for the restaurant to manage, such as coffee grounds, used cooking oil, or paper towel. If regulations have not made it clear what specifically is constituted as organic waste or there are differences across jurisdictions, those less obvious materials may not be included in facilities' diversion operations, accidentally impacting compliance.

Financial Limitations

- **High costs of organics diversion compared to disposal:** All respondents reported high costs associated with organics diversion for all types of ICI generators compared to disposal costs making it difficult to financially access organic waste collection services for both voluntary participation and regulatory compliance. Respondents from large ICI facilities noted that while source-separating organic waste into other streams can sometimes reduce garbage volume and associated disposal collection costs, the high cost of organics collections still often negates these savings.

  One national ICI food association reported that, in April 2024, over half (47%) of member restaurant companies were operating at a loss or just breaking even, while only 9% were earning a profit of 10% or more. This is a stark contrast to pre-COVID-19 profitability where 36% had a profit of 10% or more, and only 12% were operating at a loss or breaking even. Member SMEs, in particular, struggle to justify the financial investment of organics diversion solutions, as they often struggle the most with tight profit margins and are charged an additional collection premium from haulers because of the low volumes SMEs typically produce for organics collection.

- **Lack of financial incentives:** Grocery retailers and food service providers highlighted that there is little support provided by governments or programs to offset the additional investments in equipment (e.g. bins, BPI bags, employee training programs, source-separation posters, etc.) and collection service expenses for participating in organics diversion practices. This impacts their motivation and ability to voluntarily be able to adopt these practices, and their ability to legally comply with government diversion and landfill ban mandates.

Infrastructure and Operational Constraints

- **Space constraints for waste separation & storage**: Respondents from grocery, retail, university, and food service sub-sectors stated that limited space for organic waste bins and refrigeration units hinders source-separation of inedible organic waste and participation in surplus edible food rescue efforts, even if they want to incorporate these solutions. The grocery retailer went on to explain that their store layouts are not designed for extensive waste separation or additional storage, creating logistical challenges for adopting new waste diversion practices.

  An ICI association indicated that lack of storage can become a health and safety issue for both organic waste and surplus food donations, and depending on the jurisdiction, there may be specific requirements when it comes to storing prepared food for donation or organic waste for collection,

particularly if collection services are infrequent or dependent on the end destination (e.g., human consumption vs. animal feed).

- **Challenges with sorting & de-packaging for mitigating contamination**: University and food service respondents noted that physical contamination (e.g. non-organic food service ware packaging materials being placed in organic bins) is a key challenge that they face in diverting organic waste. A national grocery retailer also reported how difficult it is for their stores to effectively divert organic waste because of lack of access to de-packaging technology, waste storage space, and staff time contribute to high contamination in their organics stream, and complicate their ability to procure affordable services.

- **Regional processing infrastructure limitations:** Like municipal respondents, some ICI respondents highlighted insufficient processing infrastructure as a critical issue in the regions where they operate. For example, in rural and remote areas, the absence of local composting or anaerobic digestion facilities significantly increases transportation costs, and therefore organic waste collection costs, for facilities in those regions. One participant specifically noted that the limited availability of such facilities in western Canada is a major constraint to advancing ICI organics diversion efforts. Respondents from ICI organizations with national operations also indicated that the variability of available processing infrastructure across Canada can make it more complicated for them to predict region-dependent operational costs for ICI organics diversion and can create disjointedness when trying to harmonize company-wide organic waste management practices.

Education and Awareness

- **Staffing challenges & high employee turnover:** Staff-related barriers emerged as a significant challenge, as labour models often prioritize core operations over investing in sustainable waste management practices. Several participants highlighted that staff resistance to change and a lack of awareness about the benefits of organics diversion are particularly problematic in industries with high staff turnover rates, which further complicate business efforts to maintain consistent training and employee engagement. Additionally, they shared that providing continuous training is not only expensive but even more challenging in cases where most of their staff are not fluent in English, requiring them to fund and deliver multilingual training programs.

- **Low consumer awareness:** Low consumer awareness further exacerbates contamination challenges in source-separated organics bins, particularly in front-of-house and public-facing operations. Foodservice and hospitality

respondents highlighted the challenges posed by limited public education or motivation for proper waste sorting practice, making it difficult to implement effective organics diversion programs for meeting sustainability targets or regulatory mandates.

- **Lack of internal sustainability expertise:** Another respondent noted that businesses wanting to implement better organic waste management practices often lack the expertise or capacity to prioritize sustainability, as they sometimes do not have dedicated sustainability roles or teams to take on the additional operational burden of planning and implementing programs.

Data and Reporting Gaps

- **Unreliable data and limited traceability from haulers:** Similar to municipal respondents, a large national shopping centre brand noted that the data they receive from private haulers is often inconsistent in report format and error-prone from manual input. This impacts their ability to consistently understand their organics generation in a meaningful way and contributes to ineffective waste management and reporting by the facility. This respondent also reported that limited traceability from haulers of the end-management of their waste makes it difficult to measure organics diversion outcomes and impacts and disrupts the motivation and trust between businesses and haulers on the effectiveness of source-separation practices.

- **Lack of systems available to track and report data:** A national food processor and health care facility brand noted that, as large facilities, the lack of efficient standardized food waste tracking and reporting systems impacts makes any attempt at large scale tracking and reporting of their organic waste generation and diversion practices extremely labour intensive. Additionally, this also impacts their ability to effectively track organics generation baselines and outcomes of new policies or programs they put in place that attempt to mitigate food waste.

- **Challenges with aggregated data**: A university reported challenges with collecting and tracking aggregated data across the campuses' multiple food-generating facilities. Without this granular tracking, the university cannot accurately assess the organics diversion patterns across its campus to pinpoint where improvements can be made.

4.2 DRIVERS

Table 4.2: Key Drivers to ICI Organic Waste Diversion Identified by Municipalities and ICI Stakeholders

Category	Municipal Perspectives	ICI Perspectives
Environmental Sustainability and Climate Action	• Reducing greenhouse gas (GHG) emissions • Meeting provincial waste reduction & climate targets • Preserving landfill capacity	• Corporate commitments to sustainability and climate action targets
Regulations & Compliance	• Provincial and territorial mandates/targets as a baseline for local action & compliance	• Provincial and territorial mandates as a baseline for local action & compliance • Proactive approach to prepare for future regulations
Public & Stakeholder Expectations	• Growing community expectations of sustainability & climate awareness	• Enhancing brand image • Customer demand & employee expectations of sustainable practices • Social impact through surplus food donations
Economic and Operational Benefits and Incentives	• Potential revenue streams from recovered resources • Local economic development & attracting investment	• Long-term financial and operational benefits of diverting organic waste • Potential revenue streams from recovered resources
Technology and Infrastructure Readiness	• Established processing facilities & technologies to enable adoption • Need for innovation & expansion to accommodate growing ICI organics diversion demands	

4.2.1 DRIVERS - MUNICIPALITIES

Municipalities across various regions of Canada have highlighted several key drivers for ICI organic waste diversion. Despite some variations in local contexts, most municipalities had shared themes and motivations for driving ICI organic waste diversion. Municipalities recognize that environmental, regulatory, economic, and social factors converge to drive ICI organics diversion efforts. Economic benefits, waste and climate targets, technological readiness, and stakeholder collaboration further enhanced the feasibility and appeal of these programs.

Environmental Sustainability and Climate Action

- **Reducing greenhouse gas (GHG) emissions:** All municipalities emphasized the role of organics diversion in reducing greenhouse gas (GHG) emissions from landfills, where organic waste decomposition contributes significantly to methane production. These perspectives align with existing municipal, provincial/territorial, and national climate action plans.

- **Meeting provincial waste reduction and climate targets:** Some municipalities highlighted how ICI organics diversion complements residential waste diversion programs, supporting overall waste reduction goals. A municipality in Alberta, with organics regulation and collection programs, provided insights into how their ICI mandate and program gained Council support. They noted that a key driver for implementing organics programs was the motivation to achieve climate targets from the provincial level—particularly the 50% diversion goal by 2030—which required robust organic processing. The council recognized that without expanding their municipal-owned organics processing facility to include capacity for ICI organics, they would not meet their goals. This understanding led to the approval of municipal strategies supporting ICI organic waste diversion mandates and implementing collection programs to meet future diversion targets by 2030.

- **Preserving landfill capacity:** Preventing organic waste from being disposed of in landfills was cited as a critical motivator by most municipalities, particularly stressed by smaller and rural municipalities, where the financial and logistical challenges of establishing new landfills make extending the lifespan of existing landfills a priority. For example, a rural municipality in Ontario stated its landfill had only 35 years of capacity remaining and that building a new landfill would be prohibitively expensive.

Regulations & Compliance

- **Provincial and territorial mandates/targets as a baseline for local action & compliance**: Most municipalities in regulated (or soon-to-be-regulated) areas identified that regulatory implementation is a primary driver of their ICI sector's diversion practices. In contrast, municipalities in non-regulated regions pointed to potential higher-authority regulatory measures—such as provincial landfill bans or provincially/territorially mandated waste and climate targets—are key factors influencing their interest in ICI organics diversion. One non-regulated municipality explained that provincial and federal mandates, like landfill bans and waste reduction targets, create clear expectations for compliance and environmental responsibility for the municipality, providing a foundation for driving forward local public and council support, which in turn drives investment in required processing infrastructure.

Public & Stakeholder Expectations

- **Growing community expectations of sustainability & climate awareness:** Municipalities noted the importance of growing community support and expectations for organics programs, often driven by shifting demographics and increased environmental and climate awareness. Those with existing collection programs highlighted that strong engagement—particularly interest from residents, businesses, and organizations in food waste reduction and organics diversion—was essential in securing initial council approval. Additionally, two rural municipalities emphasized the importance of gaining council recognition and endorsement to build broader support for eventual diversion initiatives.

Economic and Operational Benefits and Incentives

- **Potential revenue streams from recovered resources:** Most municipal participants noted that generating marketable by-products, such as high-quality compost or energy, provides a valuable revenue stream from the recovered resources, supporting the local economy and also has the potential to generate revenue to fund municipal organics collection models.

- **Local economic development & attracting investment:** According to respondents, this can also drive further regional commercial and industry investment in these markets and the creation of more innovative diversion solutions, which contribute to economic resilience by creating local jobs in waste collection, processing, upcycling, circularity and other industries in related market innovation.

Technology and Processing Infrastructure Readiness

- **Established processing facilities & technologies enable adoption**: These interviewees noted, that proximity to composting and anaerobic digestion facilities was a decisive factor for them to move forward with mandates as it enabled smoother ICI adoption of diversion practices. Regions with established composting facilities, anaerobic digesters, or other advanced technologies overall experienced fewer barriers to scaling up diversion efforts. Technological readiness also reduces organic feedstock contamination, improving the quality of recovered products and enhancing the efficiency of waste separation processes which is more cost-effective.

- **Need for innovation & expansion to accommodate growing ICI organics diversion demands:** In some instances, municipalities cited the need for innovation in their existing compost processing technologies to increase efficiency, remove contamination, and ensure high-quality end-product to take on the expanding demand and specific needs of the ICI sector.

4.2.2 DRIVERS - ICI SECTOR

Interviews with respondents across the ICI sector revealed a range of motivators and drives to accelerating ICI organic waste diversion. This section provides a comprehensive overview of these drivers, categorized by major themes that emerged during interviews with ICI respondents. These include environmental and climate action, regulations and compliance, public and stakeholder experiences, and economic and operational benefits.

Environmental, Sustainability and Climate Action

- **Corporate commitments to sustainability and climate action targets:** Sustainability goals were confirmed to drive many corporate organics diversion efforts. Ambitious targets, such as reducing food waste by 50% by 2030 or achieving carbon neutrality, were repeatedly cited by ICI respondents as motivators for driving food and organics diversion practices. For example, two respondents, one university and one large food processor, emphasized its corporate commitment to halving food waste, tying it directly to its broader environmental strategy. Another respondent further noted that these internal commitments are not just about compliance but about aligning with global environmental targets and ensuring sustainability is built into long-term operations. ICI participation in organics diversion practices by large brands is often perpetuated by internal performance metrics, creating a clear link between organics diversion and organizational success.

Regulations & Compliance

- **Provincial and territorial mandates as a baseline for action & compliance:** Multiple respondents from national brands and associations highlighted how landfill bans, mandatory waste audits, and municipal organics diversion by-laws have created an environment where compliance is not optional but a necessity for ICI generators to manage their organic waste. For instance, interviewees with operations in regulated regions like British Columbia noted the influence of provincial mandates and municipal diversion requirements in driving action for implementing organics diversion practices within their businesses and brand. Respondents noted that mandatory regulations help provide businesses with shared and clear starting points for how to begin managing organics.

- **Proactive approach to prepare for future regulations**: The anticipation of stricter regulations in the country was highlighted as motivation by large businesses to adopt sustainable practices now, avoiding future penalties or reputational risks.

Public & Stakeholder Expectations

- **Enhancing brand image**: Many interviewees from different sub-sectors highlighted how sustainability initiatives enhance brand image, fostering trust among customers, employees, and investors. Investor relations, public scrutiny, and positive media attention also serve as catalysts for action, as businesses recognize the risks of negative feedback related to unsustainable waste management. Some respondents are driven to introduce programs and adopt practices to achieve higher rankings in sustainability assessment benchmarks and certifications.

- **Customer demand & employee expectations of sustainable practices:** Many interviewees mentioned customer demand as a key driver. A large shopping centre brand that was interviewed explained that customer feedback often focuses on sustainability practices, with waste management being a primary concern. Visible initiatives, such as sorting stations in commercial spaces or apps promoting food rescue, were cited as examples of how businesses align with evolving consumer preferences. Another interviewee noted that consumers are placing greater value on eco-friendly business practices, and companies that do not adapt risk damaging their brand image. This interviewee highlighted its organics diversion program to appeal to environmentally conscious tenants, consumers, and employees, reinforcing its reputation as a sustainability leader. Additionally, a few respondents reported that employees appreciate contributing to meaningful environmental goals.

- **Social impact through surplus food donations**: Many respondents reported the social and community benefits of donating surplus edible food as a way of diverting organic waste that supports community food security. One national quick-service restaurant brand that voluntarily diverts surplus food mentioned that participating in food rescue programs fosters employee engagement. National grocery retailer and university interviewees also reported partnerships with large food rescue organizations, like Second Harvest, are important for demonstrating how surplus food donation can reduce avoidable food waste and simultaneously support made-vulnerable populations, which resonates deeply with both employees and customers.

Economic and Operational Benefits and Incentives

- **Long-term financial and operational benefits of diverting organic waste:** Cost savings from improved inventory management were reported by a national grocery retailer and quick-service restaurant chain that explained how implementing food and organic waste management practices also led to better scheduling, and that inventory tools minimize overstock and reduce food waste over time. In addition, they reported that better managing the volume of their organic waste generated, also helped reduce disposal and organics collection costs.

- **Potential revenue streams from recovered resources:** Some respondents were also interested in the potential for additional revenue generation through the re-sale of compost or bioenergy derived from their organic waste, or interested in collecting organics diversion data to understand where gaps in their own food-related workflow could be improved made more efficient, which may reduce costs to ordering and frequency of waste collections.

4.3 OPPORTUNITIES

Table 4.3: Key Opportunities to ICI Organic Waste Diversion Identified by Municipalities and ICI Stakeholders

Category	Municipal Perspectives	ICI Perspectives
Policy and Regulatory Alignment	• Standardized definitions of 'ICI sector' classification • Provincial/territorially enacted landfill disposal bans and levies • More policy coordination among all levels of government	• Create consistent regulations across government jurisdictions • Ensure government regulations align with ICI operational realities and

Category	Municipal Perspectives	ICI Perspectives
	• High organic waste reduction targets at the provincial/territorial or federal level • Develop collaborative regulatory frameworks between neighbouring municipalities to prevent industry circumvention of proper diversion practices • Introducing more municipal ICI source-separation mandates	provide clear policy objectives • Implementing organics disposal bans to drive ICI diversion practices
Infrastructure Development	• Expansion of processing capacity in underserved regions • Innovative processing infrastructure solutions and alternatives (e.g. mobile organics processing units, on-site processing machines, organic waste dehydration systems, on-site biodigesters)	• Improving regional access to processing infrastructure to improve ICI compliance with organics diversion requirements • Investing in on-site processing and diversion of surplus food for accessible infrastructure and cost recovery
Community Engagement and Education	• Public Awareness campaigns to foster sustainability and compliance • Provincial/territorial governments' educational support • Enforcement combined with education to ensure ICI engagement with a mandate • Collaboration with industry associations and community organizations • Aligning ICI food waste diversion with broader environmental goals	• More accessible municipal and provincial diversion resources for businesses • In-depth educational campaigns on food waste links to emissions, landfill scarcity, and food insecurity for the public and businesses to improve understanding and motivation • Aligning ICI food waste diversion with broader environmental goals
Building Collaborative Partnerships	• Partnering with other municipalities and organizations for expertise and resources • Investments in multi-stakeholder pilot projects for scalable solutions • Partnerships with haulers for data collection and shared	• Investments in multi-stakeholder pilot projects for testing scalable ICI organic waste management solutions

Category	Municipal Perspectives	ICI Perspectives
	collection and processing infrastructure	
Creating Incentives for ICI Organics Diversion	• Subsidies, grants, and tax breaks for businesses investing in diversion infrastructure (e.g. bins, bags, signage) • Provincial funding models and producer responsibility models • ICI recognition and financial rewards programs	• Rebates for generating clean organic streams • Grants for equipment upgrades • Recognition programs to enhance businesses' reputations and encourage high diversion rates
Improved Data Tracking and Reporting	• Improved municipal access to reliable and granular ICI organic waste diversion data • Advanced data collection and tracking technologies for more accurate organics data (i.e. waste audits and digital tracking) • Federal or provincial/territorial guidance for ICI organic waste measurement and reporting • Consistent reporting practices for haulers and ICI facilities	• Developing accessible diversion tracking and reporting tools for businesses • Investing in technology for more automated and accurate tracking systems (i.e. AI for quicker source separation and measuring accurate contamination and composition of diverted organics)

4.3.1 OPPORTUNITIES - MUNICIPALITIES

Municipalities across Canada highlighted various opportunities to improve organic waste diversion within the ICI sector. The following section provides a comprehensive overview of these opportunities categorized by major themes that emerged during interviews, including higher-level regulatory intervention, infrastructure development, community engagement and education, collaboration and partnerships, incentives to diversion, data collection and reporting, and accelerating circular economies.

Policy and Regulatory Alignment

- **Standardized definitions of 'ICI Sector' classification**: All municipalities interviewed noted that a common and standardized definition of the sectors included within the broader 'ICI sector' classification could improve coordination and enforcement within and between jurisdictions. For instance, the classification of multi-residential sector waste within the ICI sector varies across provinces and territories: in Ontario, organic waste

from multi-residential buildings is classified under ICI waste and subject to ICI diversion regulations; however, in other provinces, this waste may be categorized as residential and excluded from ICI regulations. Municipal respondents from Alberta, Saskatchewan, and Quebec suggested a combination of a unified organics landfill ban at the provincial or territorial level and standardized national definitions of what designates the 'ICI sector'.

- **Provincial/territorially enacted landfill disposal bans and levies:** Several municipal respondents underlined the importance of landfill disposal bans and landfill levies as tools for driving investment and advancements in ICI organic waste management. Where municipalities already have sufficient capacity to manage diverted organics materials, province-wide organics disposal bans and levies would help create incentive to divert organic materials and generate additional revenue for municipal waste programs through the re-sale of compost, bioenergy, and levy fees. On the other hand, municipalities that still lack essential processing infrastructure underline how investment in new infrastructure can be supported by both provincial/territorial landfill bans and regional municipal coordination of interest in regulatory implementation.

- **More policy coordination among all levels of government:** While many respondents emphasized the need for policy coordination between provincial/territorial and federal as an opportunity to drive regional interests and coordination of municipal ICI organics regulations, they stressed that the success of such policies would depend on the specifics of implementation and enforcement. A respondent from a municipality with provincially based organics diversion targets also noted that while ambitious goals are set, municipalities often bear the burden of compliance with SMEs and large corporations, even though municipalities are only legally required to manage the waste. This view was supported by another respondent who recommended that any new mandates would need to align and coordinate with current municipal systems and infrastructure, and clearly define enforcement responsibilities to avoid further complicating local efforts. Overall, respondents highlighted that municipalities across Canada seek a more coordinated and collaborative effort from provincial/territorial and federal governments to support and enhance the success of the strategies they plan and implement, and this coordination should be a collaborative effort between provinces/territories and municipalities to avoid issues of regulatory circumvention or ineffective regional management of ICI organic waste.

- **High organic waste reduction targets at the provincial/territorial or federal level:** Several municipal respondents identified province/territorial

and federal action in setting high organic waste reduction targets for municipalities as critical to strengthening municipal efforts and gaining council approval for implementing ICI organics diversion policy, collection and processing infrastructure, and programs. For example, respondents from Alberta and Saskatchewan noted that high-level organic waste reduction and climate mitigation targets motivated council support for ICI organics diversion programs, as they provided direction and added urgency. Respondents stated that obtaining council approval to prioritize ICI organic waste diversion regulations or programs can be challenging with other competing priorities, so other levels of government need to provide these targets and/or introduce penalties for municipal non-compliance with targets to communicate to local government that ICI organic waste diversion is a priority.

- Introducing more municipal ICI source-separation mandates: Municipal mandates for ICI source separation were supported by most respondents, in both regulated and non-regulated regions, as a key opportunity to improve ICI organics diversion rates. One municipality which is currently in the process of introducing a municipal bylaw stated that mandating source separation for businesses would ensure cleaner streams of organic materials, reducing contamination and improving processing efficiency. For example, businesses like restaurants and grocery stores could be required to implement dedicated bins for food scraps, compostable materials, and general waste, with proper staff training to ensure compliance. According to some respondents, with source-separation mandates for the ICI sector, the likelihood that these food-generating businesses will send organic materials to higher-value resource recovery systems, such as compost or biogas, would increase. This respondent went on to explain how ICI source-separation mandates can also be an opportunity to help reduce feedstock contamination and improve processing efficiency and cost - items like plastic wrappers, glass bottles, and metal containers frequently end up mixed with food scraps, making organic feedstock unsuitable for organics processing into compost or biogas. In one municipality, after implementing the source-separation mandate across all streams, businesses seemed more incentivized to clearly label bins, educate staff, and adopt best practices for organic materials management. As a result, the organic waste stream became cleaner, improving the efficiency of the municipal processing facility, reducing the cost of removing contamination from feedstock, and increasing the yield of quality compost. As some respondents noted, this can also translate into an opportunity to benefit the local economy through resource recovery of value-add products and/or municipal energy offsets from biogas production.

Infrastructure Development

- **Expansion of processing capacity in underserved regions:** Enhanced regional infrastructure would allow municipalities to handle higher volumes of organics while reducing transportation costs, a significant challenge in underserved regions (e.g., municipalities with little or no local processing, including rural and northern regions). Municipalities in these regions confirmed that implementing new regulations is often seen as burdensome until sufficient diversion and processing capacity is either guaranteed or established. For example, a respondent from a municipality in Alberta explained how the local government delayed the implementation of by-laws for mandatory organic waste diversion in the ICI sector until an adequate municipally owned processing facility was built. To ensure equitable access for non-residential users, the facility was designed to reserve half of its capacity for ICI sector feedstock. At the time, a residential organics collection system was already in place, which had further generated public and council interest in aligning with Alberta's 2030 emissions reduction targets. However, the municipality recognized that including ICI sector feedstock was essential to meeting these goals. Therefore, the combination of provincial targets and growing public support for organic waste reduction helped secure council support for the expansion of municipal processing infrastructure. This expansion then enabled the introduction of ICI organics diversion mandates to ensure the needed reliable feedstock supply for the new facility's capacity. This municipality also shared that increasing municipally owned landfill tipping rates incentivized the use of the organics processing infrastructure and even encouraged more business-to-business (B2B) solutions.

- **Innovative processing infrastructure solutions and alternatives:** Modular or mobile organics processing units, on-site processing machines, organic waste dehydration systems, and on-site biodigesters were highlighted by some respondents as promising ideas for alternatives to traditional compost collection and processing, not only for rural and geographically isolated areas with processing capacity constraints but even to increase the efficiency of processing and collection in urban areas. However, most municipalities stated that they face resistance from businesses due to added costs and space requirements, as well as limited municipal budgets to provide direct funding for these solutions.

Community Engagement and Education

- **Public awareness campaigns to foster sustainability and compliance:** Most municipalities stressed the need for a comprehensive awareness campaign targeting both businesses and the public to foster a culture of sustainability. Clear guidelines and ongoing support would empower ICI

stakeholders to adopt best practices in organic waste reduction and diversion. One municipality that has already implemented an ICI organics diversion bylaw, emphasized the importance of raising awareness and ensuring people understand how to participate as a critical first step before making organics diversion mandatory. They also highlighted the need for clear, well-integrated guidelines to support the implementation of such bylaws, ensuring stakeholders can comply effectively.

- **Provincial/territorial governments educational support:** Some municipalities that currently possess organics processing facilities highlighted the role that provincial/territorial governments should play in providing educational support for both municipalities and the ICI sector through resources, such as clear concise technical documents detailing the environmental and social benefits, GHG reduction potential, and business case for adopting more circular economy practices. They felt that providing these resources at the provincial and territorial level improved municipal and ICI generators' interest in increasing ICI organic waste reduction and diversion practices.

- **Enforcement combined with education to ensure ICI engagement with mandate:** One respondent highlighted the importance of education to ensure compliance and emphasized that warnings and fines are more effective when paired with practical guidance. Their municipality uses a step-by-step "door knocker" system to address non-compliance. The process begins with an educational notice left on the property, explaining the issue and providing instructions to correct it. If non-compliance persists, subsequent notices escalate, to personal visits from bylaw officers for repeated offences and potentially resulting in fines. The approach prioritizes education and correction over immediate penalties, ensuring most residents and businesses comply once they understand the requirements.

- **Collaboration with industry associations and community organizations:** Municipalities currently examining options to introduce ICI organics diversion regulations and collection programs also highlighted the potential of collaborative efforts with industry associations and community organizations to amplify messaging and drive behavioural change. One respondent underlined that engaging the industrial, commercial, and institutional (ICI) sectors through education on environmental and economic benefits is crucial to inform them of available opportunities and support behaviour change. Whether these educational resources were offered by municipalities, codesigned by universities/NFPs, or supported through provincial/territorial funding, they were found to be essential. One rural Ontario respondent conducted surveys that indicated community interest in

enhanced waste services which were used as a basis for launching education campaigns and driving municipal and public support for gradual program adoption. Education was seen as critical to laying the groundwork for achieving buy-in and support from the council, the public, and industry to ensure success. Another respondent suggested that harmonized educational materials and training programs would help align messaging across municipalities.

- **Aligning ICI food waste diversion with broader environmental goals:** As one municipality explained, framing ICI organics diversion as a key component of climate action could attract more funding and public support. Many municipalities agreed that organic waste diversion is part of the transition toward a circular economy, offering opportunities to develop markets for compost and other organic by-products while generating economic and environmental benefits. By investing in renewable natural gas production, municipalities can both reduce emissions and create a valuable energy source. Additionally, some local governments suggested incentivizing innovation in product design and packaging to reduce waste at the source, aligning with broader sustainability objectives. In several cases, ICI organic waste diversion is already being integrated into municipal climate action plans, circular economy frameworks, and national or international sustainability networks to strengthen circular economy models.

Building Collaborative Partnerships

- **Partnering with other municipalities and organizations for expertise and resources**: A few respondents suggested partnering with other local governments and non-profit organizations to share expertise and resources for developing and implementing new policies and programming. One respondent in Alberta shared that fostering regional collaboration between municipalities allowed their local government to learn from other municipalities' experiences in the same province when developing their own ICI organic waste policies and programs. This respondent identified municipal collaboration as a way to share resources, and expertise, and achieve economies of scale across neighbouring regions. Other respondents provided examples of food rescue and redistribution initiatives involving local social impact organizations (e.g. food banks and community pantries), leveraging existing resources and educational campaigns from existing networks (e.g. National Zero Waste Council), and procuring advisory services for project support and implementation.

- **Investments in multi-stakeholder pilot projects for scalable solutions:** Beyond these high-level strategies, municipalities also identified pilot projects as an important tool for testing innovative solutions and building

stakeholder buy-in. One respondent noted that pilots allow the municipality to experiment with new approaches to ICI organic waste diversion solutions and showcase their benefits to the community and local government before scaling up further regionally. While mentioned less frequently, these targeted approaches highlight the importance of tailoring diversion strategies to local contexts and leveraging pilot programs to refine best practices before broader implementation.

- **Partnerships with haulers for data collection and shared infrastructure:** Municipalities emphasized the importance of engaging haulers as key stakeholders, with one respondent stating that haulers are the bridge between waste generators and processors; their buy-in is critical for seamless operations. Subsidies or reduced tipping fees for organic loads were suggested as financial mechanisms to encourage haulers to share data. Lastly, municipalities stressed the importance of fostering stronger partnerships with haulers to develop shared strategies, improve communication, and address operational challenges, ultimately strengthening collaboration in advancing ICI organics diversion.
    - *Data collection:* A key opportunity identified was leveraging haulers for data collection since they already manage much of the ICI organic waste data within their service areas. One respondent suggested that haulers could share this information with municipalities, reducing the need for additional data collection costs. To encourage reporting, one municipality proposed giving contracting preference to haulers that provide diversion data. However, a couple of municipalities cautioned that clear hauler-specific responsibilities should be introduced to ensure organic waste is properly processed and diverted.
    - *Investments in equipment/infrastructure:* Investing in modernized fleets was also seen as a way to enhance efficiency. One respondent noted that haulers equipped with multi-compartment trucks could streamline the collection and reduce contamination. Additionally, municipalities highlighted the potential for haulers to adopt digital tracking systems, which could provide real-time data collection and improve reporting and municipal understanding of waste flows for policy development.

Creating Incentives for ICI Organics Diversion

- **Subsidies, grants, and tax breaks for businesses investing in diversion infrastructure:** Most Municipalities recognized the potential of subsidies, grants, tax-breaks and cost-sharing programs to offset the upfront costs of collection/processing infrastructure upgrades and service expansions.

- **Provincial funding models and producer responsibility models:** Two respondents suggested provincial funding models, similar to existing blue box programs, would help support more municipally run ICI organics diversion. As a general theme, respondents shared that funding supports like these determined whether they expanded their services to the ICI sector. Another respondent noted that provincial policy interventions, like extended producer responsibility (EPR), could be interesting models to explore for incentivizing large-scale food waste diversion, but acknowledged it would not be without its unique challenges. As a general theme, respondents shared that funding support determined whether they expanded their services to the ICI sector in general or specifically for organics management.

- **ICI recognition and financial rewards programs**: When asked about future opportunities and improvements to existing programs, one respondent noted that establishing financial rewards for businesses that achieve high diversion rates or recognition programs could incentivize broader compliance.

  A municipality in Saskatchewan, preparing to launch a full ICI organics diversion program in advance of mandating ICI organics diversion, recently introduced the Early Adopter Incentive Program (EAIP) to encourage participation. This program reimburses 10% of capital investments in waste bins or diversion technologies, up to $15,000 per facility, for businesses, institutions, and organizations. With a total budget of $1 million, reimbursements are distributed on a first-come, first-served basis. According to the municipality, EAIP has been effective in generating ICI interest and is already increasing diversion participation. When asked about future opportunities for ICI generators past the EAIP program, the respondent mentioned municipal interest in introducing tax incentives and public recognition programs to further support ICI engagement.

  Three respondents who agreed on the potential of reward programs noted that their municipalities would benefit from some kind of financial support from their provinces to implement these recognition and incentive programs, as financial incentives for businesses are often beyond their municipality's current budgetary capabilities. For instance, one northern municipality that mandates ICI organics diversion noted that it cannot recognize high achievers. Another municipality in Alberta that has an ICI organics diversion mandate, but also does not have the capacity for financial incentives, offers businesses education and training to try and make the process easier for them: they send educators in for lunch-and-learns and workshops, provide free signage and resources, and help make connections with regional haulers and processors.

Improved Data Tracking and Reporting

- **Improved municipal access to reliable and granular ICI organic waste diversion data**: A key issue raised was that municipalities often lack direct access to organic waste diversion data from privately managed waste facilities, making it difficult to obtain reliable baseline performance information on ICI sector organics diversion. Even municipalities that own their own landfills and processing facilities, reported other challenges with reliable data because they use the aggregated data from the facility, as opposed to measuring individual generator diversion at the source.

- **Advanced data collection and tracking technologies for more accurate data**: All municipalities mentioned the need to implement advanced data collection methods and technologies, such as facility-based waste audits and digital tracking systems, to enhance transparency and accountability and inform performance against targets in waste or greenhouse gas emissions. In the absence of comprehensive and accurate data, municipalities report struggles to track progress toward diversion targets (e.g., 30% or 50% reduction goals), develop effective policies, or align with broader climate objectives.

  More accurate data would allow municipalities to optimize programs, benchmark performance, and share success stories to increase participation in the ICI sector. One respondent exploring ICI waste data reporting suggested simplifying the process by introducing a fillable online form on the municipality's website, allowing ICI stakeholders to provide standardized information more easily.

- **Federal or provincial/territorial guidance for ICI organic waste measurement and reporting:** A respondent suggested that higher authorities, such as Environment and Climate Change Canada (ECCC) or Statistics Canada, could provide guidance and frameworks to help municipalities track data effectively and ensure standardized reporting methods are being used. Another respondent in Saskatchewan proposed introducing provincial requirements for ICI facilities to measure, track, and report organic waste diversion to drive the development of systems to measure and report.

- **Consistent reporting practices for haulers and ICI facilities:** Annual reporting requirements were suggested by respondents to create a clear snapshot of data each year while tracking multi-year ICI organics generation and diversion trends was highlighted as essential for shaping effective municipal programs. One respondent recommended introducing regulatory requirements for haulers and the ICI sector to track and report waste generation, diversion, and disposal annually to the municipality.

4.3.2 OPPORTUNITIES - ICI SECTOR

Respondents from various ICI subsectors and industry associations across Canada identified key opportunities to enhance organic waste diversion, highlighting both shared priorities and sector-specific strategies to advance diversion initiatives.

The following section provides a comprehensive overview of these opportunities, categorized by major themes that emerged during interviews with ICI respondents. These include infrastructure development, regulatory support, pilot programs and technological innovation, building collaborative partnerships, financial incentives, data collection and reporting, and circular economy integration as key opportunities for accelerating ICI organic waste diversion.

Policy and Regulatory Alignment

- **Create consistent regulations across government jurisdictions:** A national food service association highlighted the complexity of navigating diverse ICI organic waste diversion requirements across jurisdictions reported by their member businesses, where definitions, accepted methodologies, and timelines often vary. Harmonizing policies across municipalities and provinces/territories could simplify compliance and reduce operational complexity, according to multiple respondents. For example, a national grocery retailer emphasized that consistent regulations enable operational efficiency, allowing businesses to implement unified waste diversion programs across all locations. In their case, even stores not covered by municipal mandates adopted organics programs because it made sense from both a contractual and best-practice perspective, reducing confusion and ensuring procedural clarity across stores.

- **Ensure government regulations align with ICI operational realities and provide clear policy objectives:** Respondents also urged governments to engage more closely with the food service industry to ensure regulations align with operational realities, avoiding arbitrary deadlines or unclear guidance. While supportive of regulatory measures, some respondents cautioned that bans must be paired with adequate regional processing, diversion infrastructure (e.g. bins, bags, signage) for businesses, and financial considerations to avoid unintended cost burdens on businesses.

  A food service association recommended implementing multi-year timelines for planning, budgeting, and execution to ensure businesses have time to adapt effectively. Additionally, a few respondents discussed the need for clear communication and guidance from their governments about the policy objectives of ICI organics diversion mandates. Whether aimed at reducing

climate impacts or addressing landfill capacity issues, this communication was identified as critical for industry and public support.

- **Implementing organics disposal bans to drive ICI diversion practices:** The introduction of landfill bans on organic waste was widely recognized as a powerful driver of compliance and innovation. Several participants supported these measures, emphasizing that provincial/territorial or municipal organics disposal bans could accelerate the adoption of ICI organics diversion practices. However, they stressed that such bans must be accompanied by appropriate regional infrastructure investments, phased implementation plans, and enforcement mechanisms to ensure accessibility and prevent unintended challenges for ICI facilities.

Infrastructure Development

- **Improving regional access to processing infrastructure to improve ICI compliance with organics diversion requirements:** A major, national grocery retailer emphasized that while most of their stores have organic collection bins to meet bylaw requirements, remote areas often lack access to organics processing facilities, leaving landfilling as the only option. Additional respondents suggested that any ICI organics diversion requirements should be accompanied by the region's investing in organic waste processing infrastructure to reduce barriers to the ICI facilities trying to comply by diverting organic waste and reducing ICI sector reliance on landfills.

- **Investing in on-site processing and diversion of surplus food for accessible processing infrastructure and cost recovery**: A few respondents highlighted the transformative potential of advanced smaller-scale technologies like on-site compost processing machines, organic waste dehydrators, and biodigesters. A major grocery retailer suggested developing scalable systems, such as compactors and bins tailored to footprint constraints, to improve efficiency. A grocery retailer highlighted online food rescue apps as a valuable tool for both waste diversion and cost recovery. If food items nearing their best-before dates remain unsold in stores, they can be uploaded to an app offering customers another opportunity to purchase them at a reduced price while the store diverts food waste away from landfills and still recovers some of the monetary value of the product.

Community Engagement and Education

- **More accessible municipal and provincial diversion resources for businesses:** One respondent who operates nationally in regulated and non-regulated areas suggested that regulated areas should provide businesses

with municipal or provincial resources for managing and diverting organic waste. Businesses should have access to websites and educational supports (e.g. printable signage, employee training, advisory support) where they can easily navigate the information that they need to comply with diversion requirements. According to some respondents, receiving one-on-one advisory support on how to effectively manage and divert their organics would improve their in-house organics management practices and would help them understand how to effectively divert organics, so they can properly train and ensure their employees are also effectively diverting organics.

- **In-depth educational campaigns on food waste links to emissions, landfill scarcity, and food insecurity for public and businesses to improve understanding and motivation:** A large, national shopping centre brand and grocery retail brand highlighted the urgent need for government to raise more public and business awareness about the problems of food waste and its links to methane emissions, landfill scarcity, and food insecurity. They also suggested more awareness and education for businesses about the advantages and benefits of diversion may improve both business and customer participation in adopting effective organics diversion practices on-site. Respondents explained that understanding the practical reasons behind measures like extended producer responsibility (EPR), landfill bans, and organics diversion—rather than relying solely on general references to climate change—may encourage greater participation and support from businesses.

- **Aligning ICI food waste diversion with broader environmental goals:** Interviewees from all subsectors also stressed the importance of aligning food waste diversion efforts with broader environmental goals, such as reducing greenhouse gas emissions and supporting the circular economy. Programs that integrate organic waste diversion with community-focused initiatives, such as food rescue programs, were reported as particularly impactful for continued ICI diversion practices. As one quick-service restaurant chain mentioned, food rescue partnerships like Second Harvest create value for them by addressing community food insecurity while diverting organic waste and promoting their restaurants' social and environmental impacts like supporting community food security, reducing GHG emissions, and participating in circular business practices.

Building Collaborative Partnerships

- **Investments in multi-stakeholder pilot projects for testing scalable ICI organic waste management solutions:** Several respondents pointed to cross-sector collaborative pilot programs as opportunities to test and refine organic waste management models in the ICI sector. A national ICI

association emphasized that multi-stakeholder pilot projects are particularly effective for identifying and testing scalable solutions, with large ICI food-generating facilities being ideal candidates for such initiatives. This association also showed interest in showcasing new technologies through pilot programs to build confidence and demonstrate feasibility in member restaurant kitchen workflows and operations. The ICI association noted that some of its members have participated in existing pilots, such as Circular Innovation Council's Commercial Food Waste Diversion Programs, and actively share opportunities and learnings from these projects within their networks. This sharing helps raise awareness and educate their ICI members on effective and available organic waste diversion solutions.

Incentives for ICI Organics Diversion

- **Rebates for generating clean organic streams:** A grocery retailer suggested that rebates for generating clean organic streams would lower collection rates and further improve ICI participation in organics diversion. These incentives would not only offset the costs of compliance but also encourage companies to invest in long-term organic waste diversion strategies.

- **Grants for equipment upgrades:** Two interviewees noted that while municipal bylaws or provincial/territorial mandates may drive compliance, they also lead to increased costs for businesses. One national food association mentioned that their member businesses often reported cost as a barrier and recommended access to grants to help restaurants upgrade their equipment and infrastructure for effective organic waste diversion and collection. A Saskatchewan has recently put an 'Early Adopter Incentive Program' (EAIP) in place for ICI facilities that offer them up to $15,000 back on 10% of their capital investments (e.g. bins, signage, bags, waste diversion enclosures) for organic waste reduction and diversion. More municipalities offering grants like these could help offset the financial burden and encourage greater participation across the ICI sector.

- **Recognition programs to enhance businesses' reputation and encourage high diversion rates**: All associations reported that many ICI members framed organic waste diversion as part of a broader commitment to sustainability. Two other respondents reported that embracing organics diversion practices in their businesses had a positive impact on their reputation, employee engagement, and customer loyalty. This dual benefit of operational efficiency and enhanced brand value was highlighted as a key benefit for businesses to prioritize organic waste diversion.

Improved Data Tracking and Reporting

- **Developing accessible diversion tracking and reporting tools for businesses**: One ICI association noted the importance of organic waste diversion data for members when it comes to determining food, operational, and waste management baselines, setting targets and reducing organic waste. Other respondents confirmed that adding comprehensive data measurement, collection, and reporting systems for organics diversion would be beneficial for companies when tracking and demonstrating emission reductions from organics diversion given many national companies have voluntary climate commitments. For the association, tracking industry trends, challenges and best practices helps the association better understand ICI member needs and develop relevant and timely educational resources (e.g., webinars, written materials, etc.).

- **Investing in technology for more automated and accurate tracking systems:** When asked about technology as a tool to improve efficiency and data tracking in waste diversion programs, interviewees across ICI subsectors expressed strong interest in several innovations. Advanced tracking systems, such as weighing technologies and digital platforms, were recommended to monitor organic waste generation and contamination levels more accurately. Additionally, automated, AI-powered waste management systems and smart sorting technologies were identified as valuable opportunities to reduce manual labour in waste auditing and improve overall diversion efficiency.

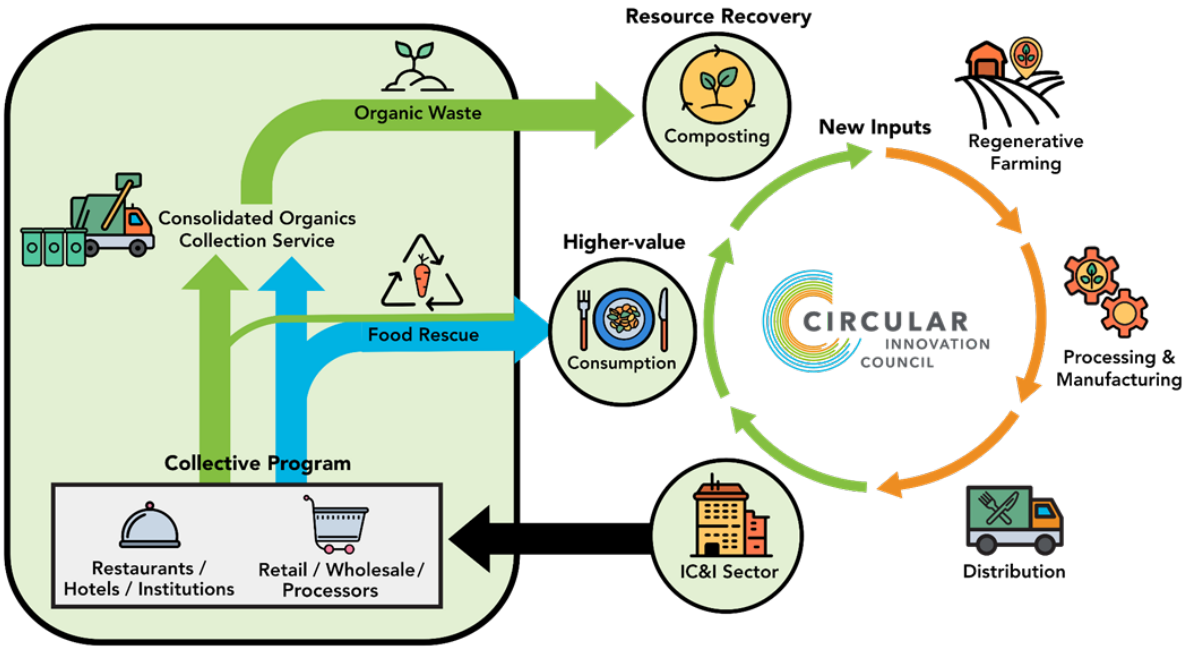
5. RELATED OBSERVATIONS AND LEARNINGS BASED ON CIC ICI ORGANIC WASTE PILOT PROJECTS

5.1 OVERVIEW OF CIC'S ICI ORGANIC WASTE DIVERSION PILOTS - REGIONAL CASE STUDIES

The majority of the ICI sector manages their food and organics materials independently and individually, limiting opportunities for scale and associated cost efficiencies and standardization of service currently found in residential programs. Businesses and institutions typically have to source their own organics collection service provider, and with many lacking scales to negotiate price, often pay significant premiums. In the case of many small ICI generators, they do not create the necessary minimum volumes of organic materials that service providers require for services or are effectively priced out of the market with only premium services being offered. Their small size also often means they cannot investigate their options nor find the resources or know-how to set up facility source separation programs. The resulting disorganized and disaggregated approach to services causes collection inefficiencies and cost increases.

Circular Innovation Council's 'ICI Food and Organic Waste Diversion Pilot' programs aim to make surplus edible food recovery accessible and organic waste diversion services affordable for businesses of all sizes and types within the ICI sector, including SMEs. Using a regional collective model that mimics the efficiencies of consolidated residential collection programs, the pilot model seeks to improve the implementation and reduce costs of food waste diversion services, by facilitating co-shared and collective procurement of services. This approach reduces service costs and related GHG emissions caused by the current inefficient collection transportation routes and those generated by disposal of organics.

Figure 5.1 Flowchart depicts the process of ICI pilot providing consolidated regional organic waste collection to ICI pilot generators while promoting surplus edible food recovery.



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their options nor find the resources or know-how to set up facility source separation programs. The resulting disorganized and disaggregated approach to services causes collection inefficiencies and cost increases.

CIC's pilots also foster collaborative partnerships among key stakeholder groups: municipalities, ICI food generators, waste haulers, organic waste processors, organizations, and academic institutions. Weight-based data collection also provides insights into organics diversion rates for each participant ICI subsector. Data includes important performance indicator feedback points, including associated GHG reductions, with participating businesses receiving individualized data, details on service costs, and resources and information to implement on-site practices. The host municipalities gain valuable data on ICI diversion potential, which is critical for understanding the service needs of their ICI sector based on the organics they generate, which is essential to inform related policy developments.

In 2018, the Circular Innovation Council conducted a preliminary pilot program in partnership with The Region of Durham Ontario, which laid the foundation for launching three subsequent scaled-up organics waste diversion pilots targeting the Industrial, Commercial, and Institutional (ICI) sector:

- Guelph-Wellington, Ontario (2021-Present)
- Calgary, Alberta (2023)
- Strathcona County-Westlock, Alberta (2024)

Pilot models across all locations were initially designed to encourage ICI sector participation by offering free or subsidized organic waste collection, reducing financial barriers for businesses trialling the service. Once the participation threshold was reached, CIC gradually phased out these financial supports while maintaining the lower, collectively negotiated, regional service rate. To ensure long-term program viability, the pilot transitioned to a cost-recovery model through municipal partnerships or a full user-pay system, allowing additional ICI facilities to access the service sustainably.

CIC's on-ground experience with the development, implementation, and learnings from these pilots provided valuable insights into the topics explored in this report: local government and ICI sector perspectives and experiences with key barriers, drivers, and opportunities for ICI organic waste reduction and diversion and the potential roles and responsibilities of upper-level governments to improve performance. This section will provide a brief overview of the pilots in each region and the key learnings about the barriers, opportunities, and drivers outlined in stakeholder interviews.

Guelph-Wellington, Ontario

Launched in 2021, CIC's first large-scale pilot project set out to evaluate the feasibility of a shared regional ICI organics diversion service and its ability to reduce organics collection service costs while streamlining the process of donating surplus edible food. Since its launch, the project has attracted 60 businesses from the City of Guelph and Wellington County. ICI participants represent a diverse range of subsectors, including restaurants, grocery retailers, hotels and event centres, multi-residential buildings, plazas, offices, long-term care facilities/hospitals, childcare centers, and manufacturers. Before the program, over 90% of the participating businesses had neither implemented organics diversion strategies nor donated surplus food.

The pilot is currently transitioning to a full regional 'user-pay' cost recovery model, continuing under the management of a local not-for-profit organization in collaboration with regional waste hauling and municipal partners. As part of its expansion, the program will extend to the nearby Region of Waterloo while offering collection costs below average commercial costs while maintaining features such as valuable one-on-one advisory services, data collection, and impact reporting on ICI organics diversion.

Calgary, Alberta

Calgary was chosen to test CIC's model in a regulated environment, as the city introduced ICI organic waste diversion bylaws in 2017. While the bylaw improved market competition and ICI organic waste diversion rates, compliance remained inconsistent. Large businesses, such as grocery chains and hotels, had high compliance with municipal audits, whereas SMEs struggled to comply due to financial and logistical barriers to adopting organics diversion practices.

CIC's pilot aimed to enhance SME compliance by providing subsidized diversion services and gathering qualitative and empirical data. However, engagement was low due to limited business awareness, economic challenges from COVID-19, and spatial constraints in Business Improvement Areas (BIAs). Ultimately, the pilot was relocated to Strathcona County and Westlock, highlighting the need for preemptive support and stakeholder engagement before policy implementation. Calgary's experience underscores the difficulty of enforcing organic waste diversion mandates without adequate municipal resources to support businesses in regulatory transition and enforce compliance in SMEs.

Strathcona County-Westlock, Alberta

The Regions of Westlock and Strathcona County in Alberta were seeking proactive solutions to improve ICI food waste reduction and organics diversion practices to support nearby processing infrastructure investment and building

approaches to support ICI generators in anticipation of introducing diversion requirements in the sector. The Town of Westlock, a rural municipality north of Edmonton, aimed to use the pilot data to assess ICI interest and collection needs and attract further economic investment, while Strathcona County sought data and pilot learnings to inform the development of a future ICI organic waste by-law. The pilot served as an opportunity to establish a strong foundation for municipal and industry collaboration before regulatory measures were introduced.

The municipalities wanted to divert their ICI organics to a local composting facility, AltRoot, in Westlock, AB that prioritizes the creation of high-quality soil amendment products that are sold to farms to support regenerative agriculture practices and improve soil health. The Town of Westlock is a small rural town 100 km north of Edmonton where the composting facility, AltRoot, is located (sharing a site with the local landfill). Strathcona County is a town near Edmonton and was the main host location for the pilot.

Participation varied across the two locations. In Westlock, initial interest from institutions (mainly schools) and some commercial generators did not translate into significant participation. In Sherwood Park (Strathcona County), recruitment was more successful, with 15 consistent ICI participants, including restaurants, offices, a national grocery chain, a food manufacturer, and two non-food manufacturers.

Unlike Calgary, Strathcona County has not yet mandated ICI organics diversion but has used the pilot to proactively engage businesses and waste service providers in pro-actively adopting organics diversion practices and regulations. This approach aimed to prevent the compliance challenges Calgary faced by pre-emptively ensuring policy alignment with ICI sector capabilities and motivation.

5.2 SUMMARY OF BARRIERS, DRIVERS, AND OPPORTUNITIES

The alignment between municipal and ICI stakeholder interview findings and the real-world experiences from CIC's pilot programs reinforces the validity and reliability of this report's insights on ICI organics diversion. Both findings in this report and learnings from past CIC pilots reveal similar barriers, drivers, and opportunities which indicates the issues are systemic and broadly shared across ICI sector stakeholder and jurisdictions. This cross-context consistency highlights the need for coordinated, systems-level solutions across public and private sectors.

Table 5.2 below offers a summary of the key barriers, drivers, and opportunities identified from ICI stakeholder and partner experiences and feedback surveys across the pilots. Details of key barriers and drivers relevant in each pilot are

summarized after the table below, including a more detailed summary of opportunities which are relevant across all pilots.

Table 5.2: Summary of key barriers, drivers, and opportunities identified for ICI organics diversion across CIC-operated pilots.

Barriers	Drivers	Opportunities
• Financial barriers for ICI collection costs • Logistical barriers of storage space for bins • Infrastructure barriers of access to regional processing with de-packaging services • Lack of regulatory interventions for motivation • Gaps in compliance with municipal by-laws • Lack of awareness among SMEs • Staffing shortages and high turnover • SMEs producing organics volumes too small for justifying collection costs	• Reduction of greenhouse gas emissions • Preservation of local landfill capacity • Corporate sustainability commitments and ESG performance • Potential disposal collection cost-saving opportunities for businesses diverting high-volumes or donating food • Rescue of edible food to support community food security • Anticipation of future mandatory diversion requirements	• Cooperative or regional collection models for businesses • Tracking of ICI diversion data for business impact reporting and municipal policy development • Prioritizing cross-collaboration between nonprofits, municipalities, haulers, ICI sector, and food rescue organizations to create effective regional diversion solutions that serve all stakeholders • Collaborative approach helps align municipal priorities, industry partnerships, and ICI generators' needs

Guelph-Wellington

Significant barriers for ICI participation in organics diversion (and food rescue) included:

- **Financial barriers to collection costs**, as even optimized pilot routing did not fully bridge the financial gap between disposal and organics collection, with collection costs still remaining 50–100% higher than disposal for participants in the pilot.
- **Logistical and infrastructure challenges** such as on-site space limitations and regional processing infrastructure gaps (e.g., lack of de-packaging technology) restricted participation for some businesses with higher volumes, such as grocery retail.

- **Staffing shortages** exacerbated by the COVID-19 pandemic that was occurring during program implementation and limited time/resources for staff training.
- **Not producing enough food waste to justify continued participation** (with some participants choosing to engage in alternative diversion practices like donating to farmers for animal feed).
- **Lack of regulatory ICI diversion mandates** meant that there were no requirements for ICI generators in these regions to separate or divert organic materials or solve for existing additional financial and logistical limitations. In the absence of regulatory requirements, most ICI generators could not justify the extra costs of collection and management time. This was especially true for food industries that were already experiencing increased costs of food and high staff turnover.

Drivers for ICI participation in voluntary organics diversion (and food rescue) included:

- **Reducing greenhouse gas emissions** and helping to mitigate regional **landfill capacity** issues.
- **Potential cost savings from decreased disposal** costs by reducing the volume of organic waste in their disposal stream.
- **Brand-image and corporate sustainability** commitments and ESG performance.
- **Rescuing surplus edible food** to address food insecurity in their community, which in turn reduced the volume of organic waste requiring management.
- **Impact reports on diversion and GHG emissions** avoided are essential for justifying businesses' participation in the diversion pilot to head offices and administration.
- **Impact reports also serve as a continuous motivational tool**, helping to sustain staff engagement and commitment to incorporating diversion efforts into their workflow.

Calgary

The Calgary pilot was driven by the need to address gaps in compliance with the city's 2017 ICI diversion by-law by providing affordable organic waste diversion services to SMEs.

This pilot faced **significant barriers** similar to Guelph-Wellington that ultimately hindered its implementation, including:

- **Financial collection cost-related challenges**, exacerbated by COVID-19 at the time, reduced ICI generators' willingness to participate in the pilot, even with subsidized services and a city by-law.
- **Logistical challenges and limited hauling infrastructure**, such as space constraints in back alleys and difficulties in servicing SMEs in those areas with large trucks, further limited engagement.
- **A lack of awareness among SMEs to adopt better diversion practices** also persisted, particularly **when businesses perceived minimal enforcement** of the by-law.
- **The most significant barrier was some SMEs already meeting the technical municipal compliance requirements** without actually source-separating organic materials (visible bin without actual diversion practices).

This highlights the challenges municipalities experience in improving ICI organics diversion compliance post-mandate. It also highlights the need for compliance oversight and supportive, coordinated policies to ensure the successful implementation of the mandate across all sizes of ICI establishments. By engaging with stakeholders and regional service providers in advance, cities can better understand and address barriers like cost, space limitations, logistical constraints, and motivations for compliance. However, adequate municipal resources to engage SMEs, provide support, and enforce new diversion practices is also essential for SME participation and could better enable SMEs to comply effectively from the outset. Coordination between municipal ability to enforce and support the on-the-ground realities of all types of and sizes of ICI establishments could improve longer-term adoption of ICI organics diversion practices.

Strathcona County-Westlock

Despite its success in structuring an efficient collection system, the pilot still faced **several barriers** in both regions similar to previous pilots, including **financial constraints related to collection costs, logistical concerns of bin storage space, and low awareness** of diversion implementation, benefits, and importance remained significant barriers to participation, particularly among SMEs. An additional barrier of high diversion volumes from the **grocery retail sector was highlighted, where the cart collection system was too limiting and costly for them due to high volumes**, but the local hauler did not offer a larger dumpster-style bin for collections, ultimately leading to the large grocery retailer having to withdraw.

The County plans to continue engaging their ICI sector and build a case to present to the council to expand and continue the pilot model as an 'early adopters' program for ICI diversion, improving regional collection route efficiency to keep collection costs low for ICI generators ahead of a potential regulatory transition to

an ICI organics diversion mandate. **For drivers**, participating businesses reported that the inclusion of **education, training, impact reporting, and awareness of potential future regulations** further encouraged engagement and facilitated practical implementation within businesses.

The Strathcona County-Westlock pilot underscores the value of engaging stakeholders early to facilitate a smoother transition into future ICI waste diversion mandates. By proactively supporting ICI generators and working closely with regional service providers, municipalities can address key barriers such as cost, logistical challenges, and industry engagement and use these learnings to inform the design of policy before implementing regulations.

The pilot demonstrated how municipalities can play an active role in fostering diversion programs by structuring cost-effective collection models, providing education and advisory support, and leveraging data collection to inform waste policy. Strathcona County's further commitment to expanding the pilot into a municipal program highlights a case study example for municipalities seeking to build long-term, inclusive ICI organic waste solutions.

Key Opportunities Identified Across Pilots

Overall success with the Guelph-Wellington and Strathcona County-Westlock pilots have since influenced five additional municipalities across British Columbia, Alberta, Ontario, Saskatchewan, and Quebec to seek advisory support from CIC for similar cost-effective ICI diversion solutions. These pilots highlight several **opportunities** to advance ICI organics diversion:

- **Cooperative or regional collection models** where businesses (especially SMEs) in a region are brought together under a broader contract to leverage buying power to negotiate private sector collection rates - facilitate competitive pricing through collective bargaining and procurement. Examples, like the pilots, use regional consolidated waste collection routes as a mechanism to create this buying power and operational efficiency.
- **Tracking diversion data and reporting impact metrics** provides businesses with valuable information on internal food and waste management operations, metrics for corporate ESG reporting, and promotional materials on program impacts that they would not otherwise be able to access. Educational campaigns and recognition of business efforts in food waste diversion developed from the data were opportunities to raise awareness and improve ongoing participation rates. Additionally, host municipalities gain access to ICI generator data and can scale the data regionally to understand ICI capacity needs for diversion infrastructure, such as collections and processing.

- **Cross-sector collaboration and implementation** aligns municipal priorities, industry partnerships, and waste generators' needs—provides a replicable model for cities looking to advance ICI organic waste solutions. Coordinating efforts between nonprofits (such as CIC), municipalities, service providers, ICI sector, and food rescue organizations helped streamline operations and improve outcomes of businesses' organics diversion practices in pilot regions.
- **Pro-active cross-sector collaboration** is important for setting up the market ahead of larger scale regulations or interventions to pre-emptively address regional gaps, uncover market limitations, and tailor the service model to the realities of geographic and ICI sector contexts and operational realities.

6. COMPARISON OF FINDINGS FROM RELATED RESEARCH

The findings in this report were compared with the results of two large-scale studies commissioned by government bodies at various levels (ECCC, 2021; and CCME, 2018), which used broad national surveys and audit data to gather perspectives and experiences on ICI organic waste diversion across Canada. While those studies differed somewhat in method, scope, and reach from this research report, they arrived at similar conclusions as this report's findings.

The CCME (2018) study reviewed relied on broad-scale high-level surveys to a broad range of ICI stakeholder types and public and private sector stakeholders across Canada regarding barriers and drivers to ICI organic waste diversion. The ECCC (2021) study relied on ICI facility waste audit data from several sector types and regions across the country. Both studies had a national reach, including regulated and nonregulated jurisdictions, similar to this research.

The similarities between those studies and this research reinforce the validity of this report's findings, regardless of using a more targeted, interview-based approach to exploring stakeholders' perspectives and experiences. Further, neither of these larger-scale studies appeared to contribute any relevant additional or novel findings compared to the conclusions echoed in this research, regardless of having a broader scope and different methodology. These studies reach back 8 years and 5 years ago, highlighting that although there has been progress in many areas of food and organics diversion efforts, the same challenges continue to be present for many municipalities and ICI stakeholders, emphasizing how essential coordinated cross-sector overhaul of many regulatory, financial, infrastructure and social systems are needed, not just siloed localized approaches. The continued challenges still being present reflect how we are currently prioritizing and valuing our food and resource recovery systems. **Table**

6.1 below provides a high-level summary of the findings from the CCME and ECCC studies that are similar to this research.

Additionally, a study was conducted by the University of Guelph (Alexander et al., 2023) on the first year of the Guelph-Wellington (Ontario) CIC-operated pilot was reviewed to identify similarities to this research and additional insights where

relevant. As mentioned in the previous section, this pilot study was conducted in a non-regulated municipality in Ontario, meaning ICI organics diversion was voluntary. Similar to the CCME and ECCC studies, this research revealed many of the same challenges, drivers, and opportunities for ICI stakeholder participation in organics diversion (listed in Table 6.1 below, designated as 'CIC'). Due to the very targeted nature of the study investigated participating pilot ICI generators, this study revealed a few additional details that differ from CCME and ECCC studies. These are ***bolded** in **Table 6.1** and described in more detail below the table.

Table 6.1: Summary of Comparable Opportunities, Barriers, and Drivers for ICI Organics Diversion from Reviewed Research

Barriers	Drivers	Opportunities
• Lack of regulatory requirements and inconsistent provincial/municipal frameworks (CCME, ECCC, CIC) • Financial barriers: high cost of diversion services, lack of affordability (CCME, ECCC, CIC) • Insufficient infrastructure: gaps in access to processing facilities (CCME, ECCC, CIC) • Space limitations in ICI facilities for source separation bins or collection infrastructure (ECCC, CIC) • Operational constraints such as staff turnover, language barriers, and lack of training (ECCC, CIC) • Contamination of organic waste due to improper sorting and lack of staff/customer awareness (CCME, ECCC, CIC)	• Regulatory mandates: landfill bans, source-separation requirements, waste audits (CCME, ECCC, CIC) • Anticipation of future regulation motivates voluntary participation (ECCC, CIC) • Clear definitions, phased implementation, and enforcement increase ICI compliance (CCME, ECCC, CIC) • Internal sustainability goals and ESG commitments by ICI generators (CCME, ECCC) • Education and training programs for staff, especially in food service (ECCC, CIC) • Improved data tracking/reporting to guide policy development (CCME, ECCC, CIC) • Public pressure and alignment with climate goals drive municipal support (CCME, ECCC)	• Strengthening regulations with enforcement mechanisms and phased timelines (CCME, ECCC, CIC) • Collaboration with haulers and industry associations to improve participation and education (ECCC, CIC) • Expanding access to infrastructure, including shared services and mobile units (CCME, ECCC, CIC) • Developing national standards for data reporting and definitions (CCME, ECCC) • Providing financial incentives or cost-sharing programs for SMEs (ECCC, CIC) • Leveraging ICI pilots to gather empirical data and test scalable solutions (ECCC, CIC) • Integrating waste diversion into climate and circular economy strategies (CCME, ECCC, CIC)

• Inconsistent definitions of ICI waste and organics across jurisdictions (CCME, ECCC) • Limited or inconsistent data tracking/reporting from private haulers and ICI generators (CCME, ECCC, CIC) • Lack of enforcement for existing mandates and the ability of businesses to circumvent municipal regulations (ECCC, CIC) • Low participation or motivation from ICI generators in non-regulated regions (ECCC, CIC) • ***ICI sector-specific operational Challenges (i.e. liquid waste disposal, depackaging for grocery retail) (CIC)** • ***Transition from Free to user-fee collection models result in decreased ICI diversion participation (CIC)** • ***Free collection service still had low voluntary ICI diversion rate in non-regulated regions – needs to be paired with regulations (CIC)** • ***Impact of COVID-19 had immediate and long-term effects of financial barriers for ICI affording collection costs (CIC)**		

Details of **additional barriers** bolded in **Table 6.1** above identified from CIC pilot study (Alexander et al., 2023):

- **ICI Sector-Specific Operational Challenges**: Some ICI sectors produced volumes of organic waste too large for shared cart collection services (e.g. large grocery retail), while others generated liquid wastes that could not be accommodated within the pilot framework (i.e. dairy processors) or needed de-packaging services that the OW processor could not provide (i.e. grocery retail).
- **Transition from Free to Fee-Based Collection in Pilot**: Moving from a free collection model to a paid service lead to participant turnover, impacting program sustainability. Even with a subsidized fee-for-service pilot model, 30% of participants left the program.
- **Free collection service still had low voluntary ICI diversion rate – needs to be paired with regulations**: During the initial pilot phase, collections were offered for free to any ICI facility that joined the program. Despite cost not being a barrier during this phase, voluntary ICI diversion participation was still very low for the region, indicating the need for collection services to be paired with other mechanisms (e.g. regulations) to improve ICI motivation to divert.
- **Impact of COVID-19 on ICI participation**: The pilot's first year (November 2021 – October 2022) coincided with pandemic-related disruptions in the food industry, which may have affected initial ICI participation, waste generation patterns, and longer-term financial barriers due to tight margins.

The following are impacts from the first 12 months of the CIC pilot in the non-regulated region of Guelph-Wellington, ON (Alexander et al., 2023), highlighting that regional pilots to drive ICI organics diversion can be impactful:

- **Increased ICI Organics Diversion from Landfill**: In its first year, the pilot successfully diverted 230,637 kg of food and organic waste from landfill from just 53 participating ICI generators, most being SMEs.
- **Increased Regional ICI Participation in Diversion Through Pilot Program:** Even though voluntary pilot participation was still low for the region, the existence of the improved financial and logistical access to these services for SMEs and other ICI generators seeking organics diversion services. 97% of participating pilot generators did not have organic waste management practices or collection services in place prior to joining the program.
- **Reduction in Greenhouse Gas Emissions**: Using Environment and Climate Change Canada's 2023 Organic Waste GHG Calculator, at 1-year, the pilot was estimated to have averted 182 tonnes of emissions through surplus edible food donations form participants and 1,491 tonnes of CO_2e emissions by diverting organic waste to composting and anaerobic digestion. This demonstrates the

potential for targeted food recovery and organics collection programs to support methane emission reduction targets.

- **Economic Benefits of Food Waste Diversion**: One large generator from the pilot reported cost-savings on their disposal frequencies and infrastructure by diverting organic waste, and a grocery retailer reported savings on their collection costs from donating their surplus edible food. Other pilot participants reported that source-separating organic waste increased awareness of their waste generation habits in operations workflows, leading to reduced overall waste production in the business.
- **Improved Knowledge of Surplus Food Rescue Practices**: One participant noted that their organic waste volume significantly decreased after realizing they could donate a broader range of food items than they previously had.
- **Importance of ICI Organics Diversion Data:** The pilot intentionally built-in data tracking systems for capturing ICI organics diversion data for participating ICI subsectors (and on a site-by-site basis) and provided pilot participants impact data on their organic waste diversion efforts, provided host municipalities more information on their ICI sector food rescue and organic waste diversion rates, and started filling publicly available data gaps for broader scaling of ICI organics diversion potential across Canada.

7. CONCLUSIONS

All sources that contributed to this research coalesced around similar barriers, drivers, and opportunities that were core to improving organics diversion performance in Canada's ICI. These can be summarized as:

1. **Regulatory alignment and policy support:** Central to achieving high national ICI organics waste diversion standards that enable consistent government policy advancements and encourage public and private investment in program, service, and infrastructure growth. A strong link between organics waste diversion and climate objectives is generally lacking at all levels of policy making.
2. **Infrastructure investments:** Support expanding regional ICI organics diversion by closing capacity gaps, reducing transportation costs, enabling compliance with ICI organics diversion mandates, and making processing more accessible and cost-effective through innovative technologies and public-private partnerships.
3. **Financial incentives and cost reductions:** Essential for aligning priorities and abilities of municipal, ICI, and industry stakeholders by supporting accessible ICI organics diversion solutions and encouraging compliant diversion practices across all sectors.
4. **Data collection and transparency:** Helps optimize programs, inform policy, enhance accountability, and support investment decisions by enabling municipalities, industry, and the ICI sector to benchmark progress, assess impacts, and improve the effectiveness of targeted organics diversion efforts.

5. **Education and capacity building:** Equip municipalities and ICI stakeholders with the tools, knowledge, and public support needed to improve organics source-separation, foster a culture of sustainability locally, and strengthen long-term ICI engagement through consistent messaging, hands-on support, and clear communication of environmental and economic benefits.

6. **Collaboration and engagement:** Coordinated efforts and shared best practices among municipalities, ICI stakeholders, policymakers, and service providers enable scalable solutions, improve service efficiency, foster cross-sector innovation, and drive longer-term ICI engagement in organics diversion.

Research conducted for this report also revealed that municipalities across Canada possess the authority to implement bylaws, mandates, and enforcement mechanisms to regulate organic waste management in the ICI sector. However, their decision to do so is often determined by capacity, costs, political interest, and other competing priorities. Despite this, local governments remain key actors in ICI organics diversion due to their ability to convene stakeholders, influence regional service availability, and support or coordinate the development of local diversion infrastructure.

In conclusion, this research found that advancing ICI organic waste diversion in Canada will require a coordinated, systems-based approach that aligns regulatory action, infrastructure, private and public partnerships and education.

Broadly, this research revealed a cycle of interdependence between key stakeholders, where governments, ICI generators, and industry service providers each hesitate to act waiting on the other, creating a feedback loop:

- Municipalities are reluctant to mandate ICI organics diversion without specific direction form their province or higher order of government;

- Provinces and territories hesitate to enforce waste and climate targets or implement landfill bans without clear municipal and industry readiness or federal-level intervention;

- All levels of government do not make strong linkages between organics diversion and climate change

- ICI generators delay participation without regulatory requirements or improved affordability and

- Private sector service providers are unwilling to lower costs or invest in processing infrastructure without guaranteed regional feedstock volumes and long-term agreements.

Despite the current status, many municipal, ICI, and industry stakeholders are actively working to advance organics diversion performance by introducing local ICI diversion

regulations, building cross-sector partnerships and programs, and voluntarily adopting organics diversion practices. These efforts demonstrate that progress is possible and offer valuable lessons and models for broader systems change. Building on our current progress for further advancement will depend on collaborative leadership, shared accountability, and strategic cross-sector interventions that unlock broader participation and sustained investment in ICI organics diversion efforts across Canada.

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APPENDICES

APPENDIX 1: Pre-Interview Questionnaire: Perspectives on ICI Organic Waste Diversion

Thank you for taking the time to participate in this research to understand the current landscape of ICI organics diversion across Canada.

The goal of this short Pre-interview Questionnaire is to efficiently collect contextual information about the municipalities participating in this research, and what their regulatory and service landscape looks like. The survey in combo with a high-level understanding of the landscape will help the research team effectively tailor the appropriate questions to interviewees.

The survey should take approximately 10-minutes to complete. Please fill out to the best of your ability.

Please note: The term 'organic waste' used in this research includes food waste, soiled tissues and paper towels, and other co-mingled biodegradable materials generally accepted in source-separated organic (SSO) collection programs for the ICI sector. This work will exclude leaf and yard waste, whether collected separately or included as part of source-separated organics collection programs.

- CIC's Food Waste Team

Please provide your contact details below:
Municipality (or municipal group):
Your name:
Title within your municipality and department, if applicable:
Email Address:

Municipal ICI Organics Diversion Practices
Please fill out to the best of your ability. This is meant to collect information on your municipality's current ICI waste management practices and regulations (if applicable). Answers in this section will help the research team effectively tailor the appropriate questions to interview participants.

Is ICI organics diversion mandated provincially/territorially, by your municipality, or both?

Q1. Does your municipality have delegated general law-making authority (power) over ICI waste, including ICI organic waste? E.g.: Does your province or territory allow your municipality the authority to create by-laws related to organic waste management in the ICI sector?

If so, please indicate which act/ section confers this authority to your municipality

Q2. Does your municipality have any of the following regulation types in place? (check all that apply):

- Any provincial/territorial mandate or regulation requiring ICI facilities to divert organic waste?
- Any provincial/territorial mandate or regulation requiring your municipality to meet organic waste diversion targets?
- Any by-law related to the ICI sector reducing or diverting organic waste? Any by-law that affects how ICI sector manages its organic waste?
- Any by-law requiring ICI facilities to report metrics for tracking organic waste generation or diversion?
- Any by-law requiring ICI facilities to comply (or prove compliance) with organic waste diversion management?
- Any by-law requiring ICI facilities to donate food for charity?
- No regulations or by-laws are in place

If yes to any of the above, what types of ICI facilities fall under your jurisdiction for regulating organic waste? (e.g. only < 3 bins, all facility types and sizes, only those attached to residential dwellings, etc.)

Please briefly describe what the municipal by-law requires for ICI facilities to comply (or prove compliance) of organic waste management, if applicable.

Are there any specific targets that your jurisdiction is trying to meet through municipal by-law of ICI organic waste management?

If no to Q2, are there any other ways your municipality addresses organic waste in the Industrial, Commercial, and Institutional (ICI) sector for businesses, organizations, and institutions?

Q4. Does your province or territory require your municipality to report ICI organics diversion metrics?

- Yes
- No
- Unsure

If yes, what metrics do they require to be reported?

Q5. Does your municipality provide any organics collection or other food waste diversion services to the ICI sector?

- Yes
- No
- Not anymore

If yes to the question above, please provide a short description of services.

Thank you for taking the time to fill out the questionnaire!

If there is anything additional you would like the team to know prior to the interview, please fill out the space below.

APPENDIX 2: Municipal Interview Guide Example

Circular Innovation Council – ICI Perspectives INTERVIEW GUIDELINES

Note: Information will be collected on Provincial or Territorial regulation/mandate and service provision practices in relation to your city. Organic waste of interest includes food waste, soiled tissues and paper towels, and other commingled biodegradable materials generally accepted in source-separated organic (SSO) collection programs for the ICI sector. This work will exclude leaf and yard waste, whether collected separately or included as part of source-separated organics collection programs.

1. INTRODUCTION

1.1 Can you tell me a bit about your role in your municipality?

1.2 What general requirements does your municipal by-law impose on ICI facilities with respect to managing organic waste?

(Prompt): Source-separate their organics? Reducing organic waste by a certain amount? Donating surplus food to charity?

- Is the by-law enforced? **If yes,** how is municipal by-law compliance for ICI food waste diversion currently monitored and enforced?
- What penalties for non-compliance or incentives for high diversion rates exist (if any)? What factors contribute to ICI sector non-compliance?
- What challenges exist to ensure ICI sector compliance with the current municipal ICI organic waste by-law?
- Are there any specific targets that your jurisdiction is trying to meet through municipal by-law compliance? **If yes,** how does your municipality track reduction or diversion rates to meet the targets?

1.3 What types of ICI facilities do you offer SSO collection and processing services to and how often? Do your municipality own facilities that process these ICI organic wastes?

- Do by-law requirements apply to all types and sizes of ICI facilities? Do ICI facilities have to exceed a minimum threshold for organic waste generated before the by-law requirements apply to them?

1.4 How does the cost-recovery mechanism work for the municipality delivered ICI organic waste service model?

- E.g., Do you use a fee-for-service model where only those who use it pay for it? Is the service subsidized by the municipality? Is it fully funded by the municipality? Does it come from property or business taxes?
- Do you face any challenges in achieving full cost recovery for delivering ICI organic waste collection services, or are there instances where the municipality subsidizes part of these services?

- Are there any financial models in place, such as public-private partnerships, to help cover the costs of ICI organic waste management?

2. GENERAL OPPORTUNITIES / DRIVERS / BARRIERS

2.1 Why did your municipality decide to provide ICI organic waste services rather than requiring ICI facilities to establish and fund their own organic waste diversion programs?

2.2 How does the level of local demand for sustainable waste management practices influence municipal motivation?

(Prompt): Does the level of community awareness or support for organics diversion programs affect municipal motivation to focus on the ICI sector?

2.3 How does your municipality benefit from ICI organics diversion (e.g., reduced landfill pressure, lower methane emissions, alignment with sustainability goals)?

2.4 Have other benefits or market opportunities emerged since your municipality started diverting ICI organics? **(Prompt):** E.g., job creation, marketable end-products like renewable natural gas or compost, new circular food/waste upcycling businesses?

3. CHALLENGES AND SUCCESSES

3.1 From your experience, what are:

- The key elements of an effective ICI organic waste by-law?
- The main limitations or shortcomings of the current municipal by-law for ICI organic waste?

3.2 Processing and Infrastructure: What challenges exist related to processing capacity and/or collection infrastructure for ICI organic waste, and how do these affect implementation of the ICI organic waste by-law?

3.3 Management and Oversight: What operational challenges could be faced in managing the by-law, especially regarding resource allocation or administrative capacity?

3.4 Tracking and Reporting: What are the main barriers to effective tracking or data collection? If you're tracking, what are the best practices you would recommend?

3.6 Does your municipality provide incentives or resources (e.g., financial, technical or management assistance) for ICI waste generators to motivate or support them to reduce food waste or divert organic materials?

3.7 What kinds of new incentives could be introduced to support ICI waste generators in reducing their organic waste, and what would those incentives look like?

3.8 Are there any local resources or programs for businesses to donate surplus food to charities or other food waste reduction options besides green bin collections?

3.9 Are there ways to make landfill bans or other policy interventions for organic waste more effective for **municipalities** to regulate and enforce?

4. FUTURE OPPORTUNITIES AND IMPROVEMENTS

4.1 Based on lessons learned, what changes to your existing municipal by-law for ICI organic waste would you recommend (if any) to improve its effectiveness?

(Prompt): Would you consider revising the rules on how organic waste is collected or processed?

(Prompt): Would you strengthen or adjust reporting requirements regarding diversion?

4.2 What kind of additional resources and support (e.g., research, guidance, tools, training, knowledge transfer, policies, funding) could benefit your municipality in addressing ICI organic waste?

- What specific types of resources and support do you think would be most beneficial to significantly enhance diversion of ICI organic waste?
- What kinds of technological innovations could be adopted to enhance reduction and diversion of ICI food waste, and reduce the costs of managing ICI organic waste?
- Are you aware of other existing domestic or international resources, tools, or regulations available that may help municipalities to measure, reduce or divert organic waste?

Outro: Is there anything else that you'd like to mention regarding ICI organic waste, or do you have any questions for us?

APPENDIX 3: ICI Interview Guide Example

Circular Innovation Council – ICI Perspectives INTERVIEW GUIDELINES

Note: Organic waste of interest includes food waste, soiled tissues and paper towels, and other commingled biodegradable materials generally accepted in source-separated organic (SSO) collection programs for the ICI sector. This work will exclude leaf and yard waste, whether collected separately or included as part of source-separated organics collection programs.

INTRODUCTION

Can you tell me a bit about your role in your company?

1. ORGANIC WASTE REDUCTION AND DIVERSION PRACTICES

1.1. What types of organic waste do your facilities typically generate?

1.2. Are there requirements in-place for your facilities to take actions to reduce their food waste?

- **(Prompt):** Organic waste diversion through green bins?
- **(Prompt):** Donating to community service agencies? Donating to food rescue brand partnerships?
- **(Prompt):** Is this for all facilities or just in certain regions?

1.3. Are there any other specific kinds of actions or programs across the board that your facilities use to reduce food waste?

2. REGULATORY ENVIRONMENT AND COMPLIANCE

2.1. How well do you feel your facilities' organic waste diversion efforts align with current regulations?

2.2. What does your facility need to do to comply with the mandatory ICI organic waste diversion requirements in your area, and are ICI facilities in your area periodically audited to demonstrate compliance?

  - To what extent do municipalities or provinces/territories visit ICI facilities in your area to ensure that they conform with applicable mandatory requirements for ICI organic waste?

2.3. Was your facility already reducing and diverting organic waste before mandatory ICI organic waste diversion requirements took effect?

- **(If yes):** Did you use a different method or service provider before the mandatory ICI organic waste diversion requirements took effect than you use now?
- **(If no):** Were mandatory ICI organic waste diversion requirements the main motivator to start diverting organic waste at your facility?

2.4. Do your facilities need to track and report food waste reduction or organic waste diversion to the city or province/territory?

- **(If yes):** How does your facility measure and report diversion rates?
- **(If yes):** Have you found tracking your food waste challenging? How? Has your facility/business experienced any benefits to measuring and tracking?
- **(If no):** Do you use any tracking methods anyway? If yes, what are they?
- **(If no):** Is this something you'd be interested in anyway? What would you need in order to do this?

2.5. Do you think the current regulatory framework in your municipality supports or hinders your ability to effectively divert organic waste? Why or why not?

2.6. Do you think that a municipal or provincial/territorial organic waste landfill ban could further motivate the ICI sector to enhance diversion of its organic waste, and if so how?

3. MOTIVATORS & CHALLENGES FOR ORGANIC WASTE REDUCTION & DIVERSION

3.1. What motivated your facility to start diverting organic waste?

- **(Prompt):** Was it primarily due to mandatory requirements, cost savings, brand recognition, environmental responsibility, customer demand, or other factors?

3.2. Have you noticed any benefits to your facility from diverting organic waste, such as cost reductions, improved sustainability reputation, or employee satisfaction?

3.3. What challenges or barriers has your facility faced in implementing organics diversion practices?

- **(Prompt):** Are there technical challenges, space constraints, need for education/training, or financial limitations?
- **(Prompt):** Have you had any challenges accessing proper infrastructure for organic waste collection or diversion?
- **(Prompt):** Are there challenges with staff training or engagement?

3.4. **(For Facilities with Front-of-House and Back-of-House Services)** Do you divert organic waste from **both** front-of-house services (i.e., where employees deal with customers) and back-of-house services (i.e., restricted to employees such as kitchen food preparation)?

- **(If yes):** Is there a difference between the effectiveness of organic waste separation by customers versus employees/staff, including percentages of physical contaminants?
- **(If yes):** What kinds of approaches did your facility adopt to raise-awareness and educate customers and employees/staff, how did these approaches differ, and what challenges were experienced?

- **(If no):** Why does your facility not divert organic waste from front-of-house services and/or back-of-house services? What specific challenges exist to do so?

3.5. Were any specific resources or support available to your facility to help it to start diverting organic waste?

- **(If yes):** Did your facility use any of these resources and support? Can you list some examples?
- **(If no):** What would help you better access ICI organic waste collection services or be able to effectively reduce food waste?

3.6. How have employees/staff and customers responded to your organic waste diversion efforts?

3.7. Based on your experience, what advice would you give to other ICI facilities trying to implement organics diversion practices?

3.8. Do limitations exist with respect to the types of organic waste collection services that waste haulers offer that affect the ability of your facility to divert organic waste, and if so what kind of limitations?

- **(Prompt):** Do waste haulers make the organics diversion challenging for ICI facilities to opt into? Are there issues with respect to costing or collection frequency, especially for smaller scale ICI organic waste generators?
- **(Prompt):** Do waste haulers offer special support or incentives as part of the organic waste collection services that they offer (e.g., facility training resources, or special rebates for "full waste service" packages for garbage, recycling and organic waste)?

4. FUTURE OPPORTUNITIES AND IMPROVEMENTS

4.1. What kind of additional resources and support (e.g., research, guidance, tools, training, knowledge transfer, policies, funding) could help your facility to better manage its organic waste?

- What specific types of resources and support do you think would be most beneficial to significantly enhance diversion of ICI organic waste?
- What kinds of technological innovations could be adopted to enhance reduction and diversion of ICI food waste, and reduce the costs of managing ICI organic waste?
- Are you aware of existing domestic or international guidance, tools or other resources available that may help ICI facilities to establish business cases, measure and/or adopt approaches to reduce food waste and divert organic waste?

Outro: Is there anything else that you'd like to mention regarding ICI organic waste, or do you have any questions for us?

APPENDIX 4: ICI Association Write-In Questionnaire

Circular Innovation Council – ICI Association Questions

Note: Organic waste of interest includes food waste, soiled tissues and paper towels, and other commingled biodegradable materials generally accepted in source-separated organic (SSO) collection programs. This work excludes leaf and yard waste.

Organizational Role and Context

1. What role does your organization play for your municipal partners?
2. What role does your organization play in supporting municipal partners with organic waste management and food waste reduction?
3. How do you engage with your municipal partners on sustainability or organic waste reduction and diversion initiatives?
4. Can you provide us with more details on your specific role in ICI organic waste diversion?

Policy and Regulatory Environment

5. How familiar is your organization with existing provincial/territorial or municipal policies regarding ICI organic waste diversion?
6. How do you perceive the current regulatory environment (federal, provincial/territorial, or municipal) for organic waste diversion in the ICI sector?
7. Do you feel regulations sufficiently address the challenges faced by your municipal partners? Why or why not?
8. What type of regulatory changes or mandates would your organization support to improve organic waste diversion in the ICI sector?
    a. Are there examples of effective regulations, policy, or programs in other jurisdictions or countries that you would recommend?

Barriers and Challenges in the ICI Sector

9. What are the main barriers your municipal partners face in reducing food waste or diverting organic waste (e.g., costs, infrastructure, logistics, or education)?
10. Are there specific challenges for smaller organizations compared to larger ones, or between different subsectors within your municipal partners base? If yes, can you provide examples?
11. How do market conditions (e.g., costs of organic waste services, demand for compost or anaerobic digestion outputs) influence your municipal partners' willingness to divert organic waste or implement food waste reduction solutions?

Opportunities and Support

12. What tools and resources, or incentives (e.g., financial assistance, technical guidance) do you think would most benefit your municipal partners in effectively managing organic waste?

APPENDIX 5: Provincial And Territorial Laws Conferring Authority To Municipalities For Waste Management[1]

Law & Authority	Key Provisions for Waste Management
British Columbia	
Community Charter • Municipalities have regulatory powers to create bylaws affecting people, property, and activities. The **Community Charter** grants authority in broad areas, while other provincial laws cover specific topics. These powers enable municipalities to restrict, prohibit, or require certain actions within their jurisdiction.	• **Section 8**: Municipalities can provide services and regulate various matters through bylaws, subject to legal conditions. They cannot override specific planning or heritage laws and must disclose reasons for bylaws upon request. Service provision does not include regulatory authority. • **Section 9**: Municipal bylaws on public health, environment, wildlife, or soil require alignment with provincial interests through regulations, agreements, or ministerial approval. Existing bylaws remain valid despite regulatory changes. • **Section 11**: Municipal powers are generally limited to their boundaries but may extend beyond for natural person powers or to regulate municipal services established outside their area. • **Sections 13, 13.1, and 14**: Municipalities can provide services outside their boundaries with consent or agreements, including in treaty lands. Intermunicipal schemes allow collaboration on shared services, regulations, and governance, including cross-boundary powers and delegation. • **Section 15**: Councils can establish licensing and permitting systems, set terms and conditions, and suspend or cancel permits for noncompliance. They can adopt and modify standards from recognized bodies to set regulatory benchmarks. • **Section 53**: Council authority over buildings is limited to accessibility, energy and water conservation, reducing greenhouse gases, and protecting health, safety, or property. • **Section 59**: Councils may require waste disposal by bylaws, with prior public notice and an opportunity for affected individuals to provide input. Notices must be issued reasonably.

[1] This table is based on CIC's interpretation of the laws and may not necessarily encompass all the sections that are relevant for waste management. It aims to give readers an idea of municipalities' general authority to develop and enforce by-laws, which were identified as key mechanisms for executing waste management initiatives.

Law & Authority	Key Provisions for Waste Management
Local Government Act • The Act establishes a legal framework for local governments, grants them the necessary powers and responsibilities, and ensures they have the flexibility to address the diverse and changing needs of their communities.	• **Section 315**: Boards can regulate, store, and manage solid waste and recyclables by bylaw, following the **Environmental Management Act**. • **Section 316**: Boards can mandate waste disposal or recycling use, require property waste removal, and enforce cleaning and disposal of refuse. • **Section 332**: Regional districts can operate services inside or outside their boundaries, regulate facilities, and share resources via mutual aid agreements. • **Section 335**: Boards can establish flexible bylaws for non-regulatory services, including licensing, permits, and appeals processes. • **Sections 338-339**: Establishing bylaws are required for most services, detailing service descriptions, areas, participants, cost recovery, and exceptions like regulatory or emergency services. • **Section 342**: Establishing bylaws need inspector and participant approval via electoral assent, alternative approval, or representative consent, with exceptions for specific services. • **Section 378**: Service costs can be recovered through taxes, fees, grants, or agreements, with bylaws specifying methods for cost recovery. • **Sections 413-419**: Boards can enforce bylaws through fines, imprisonment, and inspections to ensure compliance.
Vancouver Charter • The **City of Vancouver**, including the Vancouver Park Board, operates under the **Vancouver Charter**, a provincial statute enacted in 1953. The Charter governs how the City functions, including bylaw creation, budget setting, and authority over areas like noise, land use, property transactions, taxes, expenditures, debt, grants, and staffing. It replaces the Vancouver Incorporation Act and provides the City with powers distinct from those granted to other communities under the **Local Government Act**.	• **Section 303**: The Council can manage solid waste systems, compel usage, set terms, impose levies and fees, regulate private waste businesses, create exemptions, delegate authority, and contract private services. • **Section 306**: The Council can regulate buildings, conduct inspections, and require reporting on greenhouse gas emissions, energy, and water use. • **Section 323**: The Council can address nuisances, regulate junk and waste storage or disposal, require property cleanup, and compel businesses to manage waste as specified by bylaw.
Alberta	

Law & Authority	Key Provisions for Waste Management
Municipal Government Act • The **Municipal Government Act (MGA)** governs all Alberta municipalities, from small villages to major cities like Edmonton and Calgary. It empowers municipalities to shape their communities, regulates their funding, and guides local governance and planning for growth.	• **Section 7:** Councils can pass bylaws for municipal purposes, including public utilities, health and safety, nuisances, public spaces, and municipal services. Bylaws may regulate, prohibit, create offences, impose fines up to $10,000 or one-year imprisonment, require licenses or permits, and enforce compliance through inspections and remedies. • **Section 8:** Municipalities can enforce bylaws using inspection officers and take corrective actions at the owner's expense if violations persist. • **Section 9:** Councils have broad authority to pass bylaws to govern municipalities and address current and future issues within their jurisdiction. • **Section 54:** Municipalities may provide services outside their boundaries through agreements with other municipalities, Indian bands, Métis settlements, or relevant authorities.
City of Calgary Charter & City of Edmonton Charters • These City Charters are special agreements between the Government of Alberta and its two largest cities, Calgary and Edmonton. While the **Municipal Government Act (MGA)** still governs their daily operations, the Charters address their unique needs, large populations, and specific challenges. They focus on key policies, align funding with responsibilities, and provide flexibility to ensure these cities remain accountable and adapt to future challenges and opportunities.	• For both City Charters, they have additional provisions to develop bylaws for the purposes of reducing or mitigating various types of environmental impact, including waste reduction, diversion, recycling, and management.
Saskatchewan	
The Municipalities Act, 2005 • Saskatchewan's The Municipalities Act, The Cities Act, and The Northern Municipalities Act, 2010 provide the legislative framework for all municipalities in the province. These Acts grant	• **Section 8:** Municipalities can pass bylaws for public utilities, including waste management, to regulate, prohibit, manage developments and activities, and establish systems for licenses, inspections, and permits, with fees aligned to actual costs. • **Section 373/337:** Municipalities can impose fines and penalties for bylaw violations through enforcement officers. • **General Power:** Cities can pass bylaws for municipal purposes, including waste management as part of public utilities.

Law & Authority	Key Provisions for Waste Management
municipalities general powers to pass bylaws within their areas of jurisdiction.	
The Cities Act • This act allows cities to make amendments to certain other acts and pass bylaws within the boundaries of cities.	• **Section 8:** Municipalities can pass bylaws for public utilities, including waste management, to regulate, prohibit, manage developments and activities, and establish systems for licenses, inspections, and permits, with fees aligned to actual costs. • **Section 373/337:** Municipalities can impose fines and penalties for bylaw violations through enforcement officers. • **General Power:** Cities can pass bylaws for municipal purposes, including waste management as part of public utilities.
The Northern Municipalities Act • This act allows local governments in Northern Saskatchewan to make amendments to certain other acts and pass bylaws within their jurisdictions.	• **Section 8:** Northern municipalities can pass by-laws for public utilities, which by their definition includes waste management. By-laws can regulate or prohibit, deal with developments, activities, industries, and businesses, and provide a system for licenses, inspections, permits, or approvals • **Section 10:** Municipal bylaws apply within their boundaries and to municipal property outside, unless specified otherwise. In conflicts with another municipality's bylaws, the latter prevails. • **Section 24:** Municipalities can provide utility services directly, through corporations, or by agreements, with rights granted for up to 30 years. Rates and penalties require approval by the Saskatchewan Municipal Board, which can adjust them as needed. Councils can also set terms and conditions for these services.
Manitoba	
The Municipal Act • Governs all municipalities in Manitoba and defines key purposes of municipalities, including providing services, facilities or other things that are necessary or desirable them	• **Section 232:** Municipalities can pass bylaws for public utilities, public safety, health, and property protection. Bylaws can regulate, prohibit, adopt codes or standards, manage developments and activities, set fees, and establish systems for licenses, permits, or approvals. • **Enforcement (Sections 239-249):** Bylaws can include enforcement measures such as inspections and penalties for violations.

Law & Authority	Key Provisions for Waste Management
The City of Winnipeg Charter Act • The City of Winnipeg Charter is tailored specifically to Winnipeg, granting it enhanced powers and responsibilities due to its size and complexity. In cases of overlap or conflict, the Charter takes precedence within Winnipeg, ensuring autonomy in areas like planning, development, and waste management.	• **Municipal Act vs. Charter Act:** Both Acts support safe communities and local governance, but the Charter provides specific provisions like Section 161 for Winnipeg's waste management authority. • **Supplementary Guidance:** When the Charter is silent on an issue, the Municipal Act ensures consistent governance. • **Charter Act Detail:** The Charter outlines more specific waste management bylaw types and provisions.
Ontario	
The Municipal Act, 2001 • All municipalities in Ontario, with the exception of the City of Toronto, are given powers and duties under this Act for the purpose of providing good government with respect to matters within their jurisdiction. • The Act distinguishes between single-tier, lower-tier, and upper tier municipalities[2]	• **Section 8:** Municipalities can pass bylaws to regulate, prohibit, and establish licensing systems, with specific powers varying by municipal type (single, lower, or upper tier). • **Section 10:** Grants broad bylaw-making authority, including waste management. Upper-tier municipalities like Durham, Halton, and others have exclusive jurisdiction over waste management services, except waste collection. • **Section 11:** Defines lower- and upper-tier authority over bylaws for economic, social, environmental well-being (including waste management). Municipalities cannot regulate third-party waste services unless needed for municipal systems or compliance with provincial standards. Exclusive waste management authority (excluding collection) applies to specific regions. • **Sections 74-76:** Municipalities can manage waste beyond their boundaries, designate waste services as utilities, and enforce bylaws with entry and inspection rights, excluding buildings.

[2] In Ontario, municipalities are organized into single-tier, lower-tier, and upper-tier structures, as outlined in the Municipal Act, 2001. Single-tier municipalities, such as Toronto and Ottawa, operate independently, handling all local services like transit, waste management, and policing. Lower-tier municipalities, like Oakville and Whitby, are part of a two-tier system and focus on local services (e.g., parks, zoning), while deferring regional services to their upper-tier counterpart. Upper-tier municipalities, such as Halton and Peel Regions, oversee broader responsibilities like regional roads, water treatment, and health services, coordinating efforts across multiple lower-tier municipalities. This structure ensures efficient governance tailored to local and regional needs. Part II of the Municipal Act to clarifies roles, responsibilities, and governance structures for Ontario's municipalities.

Law & Authority	Key Provisions for Waste Management
City of Toronto Act • The purpose of this Act is to create a framework of broad powers for the City which balances the interests of the Province and the City and which recognizes that the City must be able to do various things in order to provide good government. • This act confers broad authority on the City to enable the City to govern its affairs as it considers appropriate and to enhance the City's ability to respond to municipal issues.	• **Section 8:** Authorizes the City to pass bylaws for economic, social, and environmental well-being, public health and safety, and authorized services, including licensing, requiring, and prohibiting actions. • **Section 15(2):** Allows the City to provide municipal services in other municipalities or unorganized territories if specific conditions are met.
Quebec	
Municipal Powers Act • This Act applies to local and regional county municipalities in Quebec, with the exception of Northern, Cree, and Naskapi villages.	• **Sections 4 & 5:** Grant municipalities jurisdiction over areas like the environment, sanitation, nuisances, and safety, allowing them to establish mandatory and general rules through bylaws. • **Section 6:** Empowers municipalities to regulate activities by imposing prohibitions, permits with conditions, and security deposits, creating classes with distinct rules, and adopting third-party standards with public notice. • **Sections 19 & 34:** Authorize municipalities to pass environmental bylaws and delegate waste disposal and reclamation systems to third parties, with financing provisions exempt from the Municipal Works Act. • **Section 108:** Allows regional county municipalities (RCMs) to delegate bylaw enforcement, claims recovery, and work management to local municipalities via agreements.
Municipal Code of Quebec • This Code applies to all municipalities in Quebec, except those governed by the *Cities and Towns Act* or designated as northern, Cree, or Naskapi villages, unless specific provisions of the Code or other laws explicitly apply to them. It is also subject to any inconsistencies with a municipality's charter.	• **Section 445:** Quebec municipalities must follow procedural rules to pass bylaws, including a notice of motion, filing a draft, public access, and a minimum two-day gap before passage. Changes to drafts cannot alter their purpose, and financing details must accompany expenditure bylaws. Non-compliance may invalidate the bylaw, with special rules for regional county municipalities. • **Section 455:** Municipal councils can impose fines for bylaw violations within specified ranges unless penalties are set by law. • **Section 492:** Municipalities can authorize officers to inspect properties, including buildings, between 7:00 a.m. and 7:00 p.m., to ensure bylaw compliance, collect information, and verify permits or permissions, with mandatory access and cooperation from property occupants.

Law & Authority	Key Provisions for Waste Management
Cities and Towns Act • The *Cities and Towns Act* of Quebec provides a legal framework for the organization, administration, and governance of cities and towns in the province that are not subject to the *Municipal Code of Quebec*. It outlines the powers, duties, and operational procedures for municipal councils.	**Note:** Key provisions relating to waste management and by-law authority under this act did not differ significantly from Quebec's 'Municipal Powers Act'.
Charter of Ville de Montréal, metropolis of Québec • The Charter serves as the legislative framework for the governance, organization, and administration of the City of Montreal • The Charter recognizes Montreal's unique status as a metropolis and provides it with specific powers and responsibilities that reflect its importance within the province.	**Note:** Key provisions relating to waste management and by-law authority under this act did not differ significantly from Quebec's 'Municipal Powers Act'.
New Brunswick	
The Local Governance Act (2017, c.18) • The Act confers authority to municipalities for the purposes of providing good government, services, facilities, or things, developing and maintaining safe and viable communities, and fostering their economic, social, and environmental well-being.	• **Section 10(1):** Local governments can pass bylaws on nuisances (noise, pollution, waste), municipal programs and services, and utilities or infrastructure on public or private property. • **Section 106:** Municipalities can regulate waste management through bylaws requiring licenses, permits, or approvals, setting terms, fees, and procedures, and prohibiting unapproved activities. The Minister may also set sorting and packaging rules for solid waste. • **Sections 144-151:** Bylaw officers can inspect properties, enforce compliance, issue notices and penalties, and manage appeals and enforcement processes, with some restrictions on property entry.
Nova Scotia	

Law & Authority	Key Provisions for Waste Management
Municipal Government Act • The Act confers authority by the Province to municipalities, and they specify exactly which municipalities in Sections 4-7. • The purposes of a municipality are to provide good government, services, facilities, and other things, and develop and maintain safe and viable communities.	• **Section 49(1):** Councils can regulate solid waste facilities, set usage times, conditions, charges, and issue licenses or permits. • **Section 81(1):** Councils can impose and enforce payment of charges for waste management facilities. • **Section 220(4-5):** Site-plan approvals can address waste storage placement, and land-use bylaws can regulate waste disposal site locations if supported by a municipal planning strategy. • **Section 274(1):** Municipal planning strategies can include subdivision bylaw infrastructure charges for waste facility expansions. • **Section 325:** Councils can regulate all aspects of waste management, including collection, disposal, separation, licensing, facility operations, fee-setting, compliance enforcement, and integrated waste strategies.
Halifax Regional Municipality Charter, 2008 • The Halifax Regional Municipality Charter is the primary legislation under which the municipality operates.	• **Section 60:** Councils can regulate solid-waste facility use, set usage times, conditions, and charges. • **Section 335:** Councils can pass bylaws for solid waste management, including collection, disposal, separation, licensing, fee-setting, and enforcing waste diversion and integrated strategies. • **Halifax Example:** Halifax used Section 335 of its Charter to mandate source separation bins, signage, and waste management plans (By-law S-600).
Prince Edward Island	
Municipal Government Act • The Municipal Government Act (MGA) grants municipalities the authority to pass bylaws and provide services within the scope of provincial jurisdiction. Section 180 of the MGA provides broad powers, allowing municipalities to create bylaws tailored to their needs, as well as to amend or repeal them.	• **Section 77:"** Limits a council's jurisdiction to its municipality's boundaries unless explicitly authorized by this or another Act to act beyond them. • **Section 180:** Grants councils broad authority to pass, amend, or repeal bylaws for municipal purposes, including public safety, utilities, businesses, land acquisition (excluding certain government and First Nation lands), nuisance and waste management, and environmental protection, subject to laws. • **Section 182:** Empowers councils to regulate activities, businesses, or developments through bylaws, classify them for specific rules, and establish systems for licenses, permits, and inspections with fees, conditions, durations, and enforcement measures.
Newfoundland & Labrador	

Law & Authority	Key Provisions for Waste Management
Municipalities Act, 1999 • The Act defines the powers, duties, and responsibilities of municipal councils, ensuring local governance and service delivery to residents.	• **Section 34:** The Lieutenant-Governor in Council can transfer specific powers from Section 35 to a regional council, giving it full authority over those functions. • **Section 35:** Regional councils can manage regional waste systems, charge user fees, plan waste management, and provide contract services or technical support to municipalities, ensuring full cost recovery. • **Section 397:** Local service district committees can establish or contract garbage collection systems, controlling service specifics like timing, method, and scope. • **Section 414:** Councils can pass regulations for municipal governance, public safety, nuisances, and waste management, including solid waste collection and disposal. • **Section 403.6:** Committees or franchise holders must manage waste systems, prevent health hazards, collect fees, report to the minister, and ensure compliance with the Environmental Protection Act, with unpaid fees recoverable through civil action.
Yukon	
Municipal Act • The Act grants local governments the responsibility to provide good governance and deliver services, facilities, or resources deemed necessary or desirable for their communities.	• **Section 4:** Municipalities in Yukon are corporate entities with the rights, powers, and privileges of individuals. • **Section 167-168:** Municipal councils exercise powers exclusively within their boundaries unless authorized otherwise by law. • **Section 216:** Councils can exercise powers through bylaws or resolutions unless specified otherwise. • **Section 263-265:** Councils have broad bylaw authority for public health, safety, utilities, nuisances, property management, and bylaw enforcement. • **Section 266:** Councils can regulate, control, or prohibit activities, classify businesses and developments, and implement licensing systems with fees, terms, conditions, and appeal processes. • **Section 338:** Municipalities can enforce bylaws and other laws granting enforcement powers to the municipality or its officers.
Northwest Territories	

Law & Authority	Key Provisions for Waste Management
Cities, Towns & Villages Act • The Act states that municipal corporations are established to provide good governance, ensure safety, and deliver necessary or desirable services, products, and facilities to their residents, as permitted by legislation or determined by the council.	• **Section 4:** Councils have broad bylaw authority to govern within their jurisdiction, address unforeseen issues, and supplement general powers with specific ones under other laws. • **Section 58:** Municipalities can provide utilities and services, set fees and terms via bylaws, and enforce compliance, including property access. Services may extend beyond municipal boundaries under agreements. • **Section 70:** Councils can pass bylaws for health, safety, nuisances, utilities, land use, and enforcement, subject to territorial and federal laws. Inconsistent bylaws are invalid. • **Section 71:** Bylaws generally apply within municipal boundaries but can extend beyond with Executive Council approval for public utilities. • **Section 72:** Bylaws can regulate or prohibit activities, create offences, adopt standards, set service fees, and establish licenses or permits with terms, inspections, and penalties for non-compliance. • **Sections 137 & 140:** Councils can appoint bylaw officers with powers to inspect, enforce, and remedy bylaw violations. Officers may enter properties with notice, except in emergencies, and must show identification when requested.
Hamlets Act • The Act states that hamlets are established to provide good governance, maintain safety, and deliver services, products, and facilities deemed necessary or desirable by council or as permitted by law for the municipality and its residents. • A Hamlet is defined as a municipal corporation with the status of a hamlet established or continued under this Act.	• **Section 4:** Hamlet councils have broad authority to make bylaws within their jurisdiction, including addressing unforeseen issues, with specific powers supplementing general legislative authority. • **Section 60:** Hamlets can provide utilities and services, set fees and terms via bylaws, and enforce compliance, including property access. Services can extend beyond boundaries through agreements. • **Section 72:** Councils can pass bylaws for nuisances, land management, utilities, and facilities, subject to territorial and federal laws. Inconsistent bylaws are invalid. • **Section 73:** Bylaws apply within municipal boundaries but can extend outside with Executive Council approval for matters like public utilities. • **Section 74:** Bylaws can regulate activities, create offences, adopt external standards, set service fees, and establish licensing systems with conditions, inspections, penalties, and appeals. • **Sections 139 & 142:** Councils can appoint bylaw officers to enforce bylaws, with authority to inspect properties, enforce compliance, and request or copy relevant materials, following proper notice.

Law & Authority	Key Provisions for Waste Management
Tåîchô Community Government Act • The purpose of this Act is to implement provisions of the Tåîchô Agreement related to Tåîchô community governments, with the Agreement serving as an interpretive aid. In cases of inconsistency or conflict, the Tåîchô Agreement takes precedence over this Act and its regulations, but this Act and its regulations prevail over any conflicting Tåîchô law. • "Tåîchô Agreement" means the Land Claims and Self-Government Agreement among the Tåîchô and the Government of the Northwest Territories and the Government of Canada, signed on August 25, 2003; (Accord tåîchô)	• **Section 6:** Councils have broad authority to make bylaws within their jurisdiction, addressing unforeseen issues, with specific powers supplementing general legislative authority. • **Section 51:** Peace officers and government agents can access community government property for programs, inspections, enforcement, and emergencies. • **Section 57:** Councils can provide utilities and services, set terms and fees via bylaws, and enforce compliance, including property access, and extend services beyond boundaries through agreements. • **Section 66:** Councils can create waste management bylaws covering land use, utilities, nuisances, public health, infrastructure, and enforcement, in alignment with the Tåîchô Agreement and other laws. • **Section 67:** Bylaws apply within community boundaries but can extend outside for utilities with Executive Council approval, excluding expropriation of external lands. • **Section 68:** Councils can regulate activities, set fees, adopt standards, and establish licensing systems with terms, inspections, penalties, and appeals. • **Sections 133, 135, 136:** Councils can appoint bylaw officers to enforce bylaws, provide notice for property access, and conduct inspections or enforcement with reasonable notice and documentation.
Charter Communities Act • Charter communities are established to ensure good governance, maintain a safe environment, and provide necessary or desirable services, products, and facilities to meet the needs of their residents as outlined by legislation or deemed appropriate by the council. • A charter community is defined as a municipal corporation with the status of a charter community established or continued under this Act.	• **Section 4:** Charter communities have broad legislative powers to govern within their jurisdiction and address unforeseen issues, supplemented by specific powers from other laws. • **Section 5:** Protects Aboriginal and treaty rights under Section 35 of the *Constitution Act, 1982*. • **Section 62:** Councils can operate municipal services, utilities, and facilities, set terms and fees via bylaws, and provide services beyond municipal boundaries through agreements. • **Section 64:** Councils can establish boards or commissions to manage municipal services, defining their powers, duties, and operational procedures via bylaws. • **Section 65:** Allows agreements with external parties to manage, operate, or expand services, transfer property rights or liabilities, and provide support. • **Section 74:** Councils can make bylaws for public utilities, subject to Northwest Territories and Canadian laws. • **Section 75:** Bylaws apply within municipal boundaries but can extend outside for public utilities with Executive Council approval. • **Section 76:** Councils can regulate activities, create offences, adopt standards, set fees, establish licensing systems, and enforce compliance through inspections, appeals, and penalties.

Law & Authority	Key Provisions for Waste Management
	• **Section 94:** Public utility bylaws must specify funding sources, regulate utility system discharges, mandate property connections, and impose connection charges.
Indian Act • The Act governs matters related to Indigenous peoples, specifically "Indians" as defined under the Act. It outlines the legal framework for the administration of reserves, the governance of bands, and the management of lands and resources on reserves.	• **Section 2(3):** Band powers require majority consent from electors or councillors at a properly convened meeting. • **Section 4:** "Indian" excludes Inuit; the Governor in Council may exempt specific groups or lands from parts of the Act, with revocation options. • **Section 81:** Band councils can pass bylaws for infrastructure and building regulation, enforceable by courts through penalties or legal action. • **Section 83:** With Ministerial approval, councils can pass money-related bylaws for land taxation and business licensing. • **Section 85(4):** Violating bylaws result in fines and/or imprisonment depending on the bylaw type.
Nunavut	
Cities, Towns & Villages Act • The purposes of municipal governments are to provide good governance, deliver necessary or desirable services and facilities, and foster safe and sustainable communities.	• **Section 53.3:** Councils can authorize contracts for municipal purposes and outsource services through bylaws. • **Community Agreements:** Councils can approve agreements for delivering services with governments, municipalities, Inuit organizations, or private entities, including joint boards or partnerships. Services may extend beyond boundaries with Ministerial approval. • **Section 53.94:** Councils can manage infrastructure, utilities, and private works, set fees, enforce compliance, and disconnect services. Ministerial approval is needed if competing with private services. • **Section 54:** Councils can pass bylaws for public safety, utilities, nuisances, and enforcement. Bylaws must comply with higher laws and may regulate activities, set fees, and implement licenses. • **Section 55:** Bylaws apply within municipal boundaries but can extend outside with Executive Council approval for services like incinerators and garbage dumps.

Law & Authority	Key Provisions for Waste Management
	• **Sections 85, 86, 88:** Councils can regulate waste management, including incinerators, dumps, garbage collection, mandatory system use, and by-product sales. • **Section 171/174:** Councils can appoint bylaw officers and define their duties. Municipal officers can enter properties with reasonable notice to inspect, enforce, or act, and may request and copy relevant materials.