Recommendations for the Diversion of Food and Organic Waste in Ontario

Climate Change Series Discussion Paper

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Foreword

The purpose of this discussion paper is to explore ways in which the provincial government could focus actions related to food and organic waste to:

- Reduce the amount of food and organic waste being generated;
- Increase the amount of food and organics being diverted from landfill;
- Generate greater value from the organic waste materials being diverted; and
- Create a more sustainable environment for planning and investment.

Municipal governments have championed efforts to reduce and divert organic material (e.g., food waste and leaf and yard waste) from disposal through operation of household organics collection programs for nearly two decades. These programs have increased the amount of organic waste diverted from under 500,000 tonnes in 2004 to over 1.1 million tonnes in 2019.[1]

These efforts are important as they:

- Reduce greenhouse gas (GHG) emissions. The significant role that food and organic waste reduction and diversion have in reducing greenhouse gas (GHG) emissions is often overlooked. The value should be viewed not only in reducing methane generation in landfills, but instead, by the cascading benefits associated with reducing the need for primary resource extraction, processing, transportation and production. Activities like prevention, food donation, use as animal feed, rendering, and returning nutrients back to the soil (e.g., composting and anaerobic digestion) all contribute to reducing greenhouse gas emissions.
- Conserve resources. It is estimated that across Canada 35.5 million tonnes of the food we produce annually is lost or wasted.[2] This loss represents an annual cost of $1,766 per Canadian household.[3]
- Reduce the burden on our dwindling landfill capacity. The Ontario Waste Management Association in their latest report indicates the province only has about 15 years of remaining capacity based on current disposal rates.[4]
- Create greater opportunities to replenish our soils. Ontario's Agricultural Soil Health and Conservation Strategy[5] outlines the importance soil management has to our agricultural sector and the role compost and other nutrients amendments have in building soil organic matter. These regenerative outcomes are also consistent with local and regional efforts to transition to a circular economy.
- Create greater opportunities to generate jobs and investment. The Canadian Biogas Association estimates the construction of over 1,260 biogas facilities across Canada would result in a capital investment of $7 billion, with an economic spinoff of $21 billion.

[1] Numbers based on the Resource Productivity and Recovery Authority's municipal Datacall. Available at https://rpra.ca/programs/about-the-datacall/.
[2] Second Harvest. The Avoidable Crisis of Food Waste: The Roadmap, 2019. Available at https://secondharvest.ca/wp-content/uploads/2019/01/Avoidable-Crisis-of-Food-Waste-The-Roadmap-by-Second-Harvest-and-VCMI.pdf.
[3] Ibid.
[4] Ontario Waste Management Association. State of Waste in Ontario: Landfill Report, January 2021. Available at https://www.owma.org/down/eJwFwQEKgCAMAMAXqeGmab!ZKynKlDYIen13u!qQxTk5rlOUHrUClhp9@aZXLPfmphQjUkbDgNVggs0UzMVA8Jl59gF8tGOtP8LsF0U=/OWMA%20Landfill%20Report%202021%20_FINAL_lowres.pdf.
[5] Available at http://www.omafra.gov.on.ca/english/landuse/soil-strategy.pdf.

Construction projects would create about 16,700 FTE jobs for one year, and about 2,650 long-term operational jobs.[6]

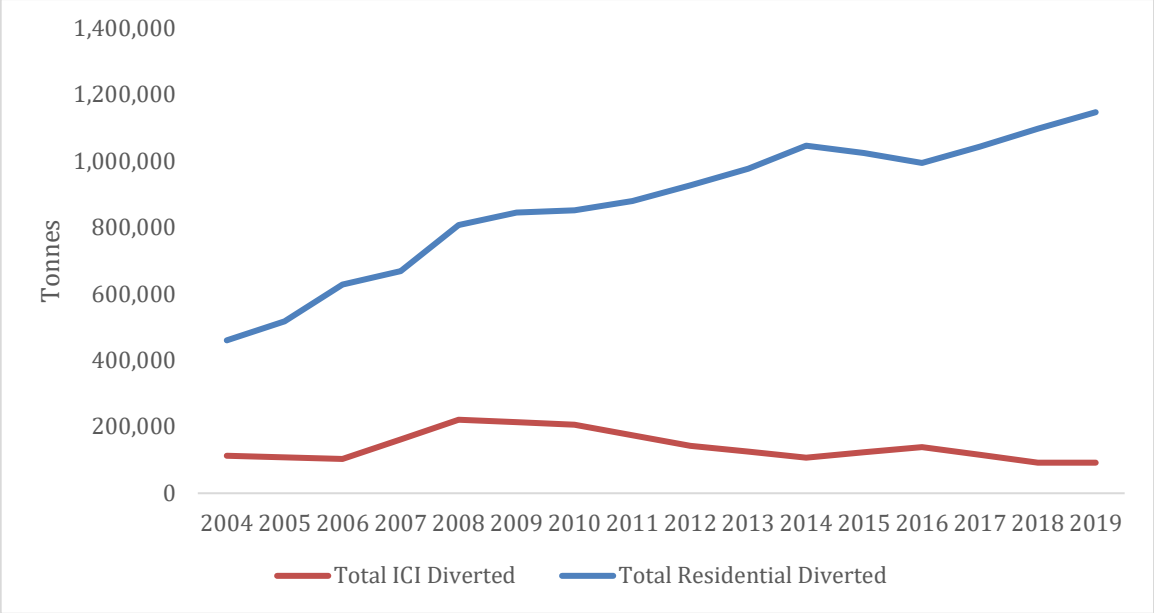
This transformative change does however come with a financial cost at a time of tightly stretched municipal government resources.

The management of residential waste only makes up part of the overall picture. The industrial, commercial and institutional (ICI) sectors generate a larger proportion of waste disposed of.

Over 2.2 million tonnes[7] of organic waste generated in Ontario is still being sent to landfill and most of that is generated by the ICI sector. While it is recognized that the Food and Organic Waste Policy Statement includes targets for certain ICI facilities to achieve by 2025, historically little action has been taken to increase diversion of organic waste from this sector.

Organic waste being diverted from ICI entities significantly trails behind the performance of municipal government programs. Figure 1 illustrates difference in food and organic waste diversion between the residential and the ICI sectors.

Figure 1 – Total Food and Organic Waste Diverted in Ontario[8]



Further progress will not come without tackling food and organic waste from the ICI sectors. These sectors need to be addressed to help create greater system efficiencies and to improve outcomes.

[6] Canadian Biogas Association. Canadian 2020 Biogas Market Report, April 2021. Available at https://biogasassociation.ca/resources/canadian_2020_biogas_market_report.
[7] Canadian Biogas Association. 2019 Market Overview and Outlook, 2019. Available at https://biogasassociation.ca/resources/empowering_municipal_rng_market_participation.
[8] Based on the Resource Productivity and Recovery Authority's municipal Datacall and Statistics Canada Waste Industry Survey

This discussion paper does not propose radical change but instead seeks for Ontario to implement practical policies that are already being applied by other leading jurisdictions, including many of those that surround us. These recommendations include four key actions that are discussed in further detail in the proceeding sections:

1. **Develop and implement a coordinated provincial plan to address food loss and waste,** including:
    a. An awareness/public education campaign to drive sustained consumer behaviour change in all sectors to avoid and reduce food loss and waste.
    b. Working with retailers to develop and promote "smart shopping" offerings and merchandising in grocery/food stores to support consumer behaviour change (e.g., smaller size offerings, information on best before dates, uses for left over foods).
    c. Promoting and participating in reallocation of surplus food by supporting food rescue organizations through food donation provisions in government catering contracts including food waste reduction measures.

2. **Implement an organic waste disposal ban for Ontario,** including:
    a. Progressive source separation requirements for Ontario businesses, institutions, and commercial entities starting with the largest organizations.
    b. Mechanisms to help maintain and expand current infrastructure, develop new infrastructure, and incent better environmental and economic outcomes.
    c. Provide enough time to allow for proper planning and consultation.
    d. Phase-in of smaller generators and exemptions for unique environments.
    e. Reporting requirements for all organic waste processing facilities.
    f. Ensuring proper oversight and enforcement mechanisms.

3. **Establish an escalating landfill levy** for all waste being sent to disposal in Ontario or being exported outside Ontario to address the true cost of waste, climate change and Greenhouse Gas reduction and to create incentives for reduction or diversion activities. Funds raised from this levy should be allocated to municipal governments through a joint fund established to reduce waste, increase waste diversion, offset costs related to municipal operations (e.g., diversion at municipally operated buildings, administrative costs associated with the ban and levy), and promote other activities that reduce GHG emissions.

4. **Address issues related to compostable products and packaging** by:
    a. Finalizing the Blue Box Regulation under the RRCEA and include reporting, collection and management targets, and enforcement for compostable materials.
    b. Enforce labelling requirements to ensure only products and packaging that can be proven to compost at scale and in practice without contaminating end products are labelled as compostable.
    c. Researching the efficacy of compostable materials in existing organics processing facilities (e.g., compost and anaerobic digestion) and make recommendations on how producers of these materials should best manage them at end-of-life.

Reducing Food Loss and Waste

While it is often the forgotten tenet of the 3Rs, reducing food loss and waste need to be prioritized over diversion. Individuals and companies need to have the tools available to understand how they can reduce the amount of food loss along the food supply chain and reduce food waste resulting

from decisions and actions by retailers, food service providers and consumers, and to ensure they understand why change is important.

Municipal governments support a province-wide education campaign on avoiding food waste and how to safely donate food. The issue of food loss and waste touches many areas in addition to the environment that will need to be considered, such as social and health services on issues such as food insecurity and food donation/re-distribution. Food loss and waste occurs throughout the supply chain and all stakeholders including producers, post-harvest handling and storage operators, processors and manufacturers, distributors and retailers, and consumers need to be engaged and encouraged to play a role in the development and implementation of this campaign.

This type of campaign could be informed by similar collaborative initiatives like that of the "Love Food, Hate Waste" campaign and work by WRAP in the UK, which have proven successful in reducing avoidable food waste from consumers and across the supply chain. The Love Food, Hate Waste campaign has been adapted for Canada. Work has also been completed by the National Zero Waste Council, the Provision Coalition, and the Ontario Food Collaborative. The success of campaigns like these have been centered on creating sustainable behaviour change by having a consistent and continuous message. It is important that any type of provincial campaign not be a one-time initiative.

Recommendation 1:

Develop and implement a coordinated provincial plan to address food loss and waste, including:

a. An awareness/public education campaign to drive sustained consumer behaviour change in all sectors to avoid and reduce food loss and waste.
b. Working with retailers to develop and promote "smart shopping" offerings and merchandising in grocery/food stores to support consumer behaviour change (e.g., smaller size offerings, information on best before dates, uses for left over foods).
c. Promoting and participating in reallocation of surplus food by supporting food rescue organizations through food donation provisions in government catering contracts.

Food and Organic Waste Disposal Ban

Ontario, through the implementation of its Food and Organic Waste Policy Statement, is already moving towards a food and organic waste disposal ban. This is a direction already successfully taken by Nova Scotia in 1998 and Prince Edward Island in 2002. Québec is moving in this direction by requiring all businesses and citizens to have source separation programs in place by 2025. Manitoba is considering a ban and a number of US state governments, particularly in the US Northeast have implemented or are in the process of implementing bans (e.g., Connecticut, Massachusetts, Rhode Island, Vermont, New York).

The directives in Ontario's Food and Organic Waste Policy Statement start to move Ontario in this direction but the focus remains narrowly centered on the residential sector when the greater impact and opportunity lies in the ICI sector. The Policy Statement requires residential source separated organic collection systems to be in place for 80-90% of the residential population by

2025. More focus is needed on the ICI sector where little progress has been made to date. The disposal ban recommendations we have included are designed to reflect this focus:

- **Waste reduction first –** see recommendation 1 above

- **Largest generators first** – The largest generators of organic waste have the greatest ability to affect change (e.g., reduce waste) and to ensure proper infrastructure is in place. Unlike Ontario, many other jurisdictions have focused on large generators of food waste such as supermarkets, large food service businesses, higher educational institutions, hotels, food processors, and sports or entertainment venues. The materials generated from these sectors also help to create opportunities for economies of scale.

- **Evolution over revolution** – Food and organic waste bans are typically implemented over a five to 10-year period to provide time for adequate infrastructure to be put in place, to allow entities to take appropriate steps to reduce waste and for economies of scale to be developed.

- **Complementary push and pull mechanisms** – Most jurisdictions will establish common mechanisms to encourage or discourage certain outcomes:
    - Incentives related to conventional and renewable energy generation (e.g., gas fuel, heat, electricity), compost or agricultural amendments, construction of processing or collection infrastructure (e.g., grants & funding) that do adversely impact better outcomes like reduction and redistribution,
    - Quality standards for recycled products (e.g., fertilizer and other soil amendments), and
    - Government procurement practices (e.g., servicing & end-market related).

- **Mechanisms to develop and maintain organics processing infrastructure** – The Environmental Approvals system in Ontario is expensive and time-consuming. The complexity of the approvals process can be reduced with common templates and requirements for the same type of facility whether they be anaerobic digestion or aerobic composting facilities. This would make it faster and less costly to establish the new infrastructure that will be required to support additional organics diversion from landfill.

- **Clear established direction and consistent communication** – There needs to be clear direction about whether the ban or restriction is based on the source of the waste (e.g., large commercial food waste generators), type of waste (e.g., food waste, leaf and yard waste) or a combination thereof, and if a process or set of rules exists that allow for exemptions.

- **Phase-in and exemptions** – Most jurisdictions provide for a phasing in of smaller waste generators (e.g., under 10 tonnes of organic waste annually) and also consider exemptions for rural, northern and remote communities. A process for exemption may often be applied due to issues with organic waste processing capacity. Additional flexibility should be considered for rural, northern and remote communities to comply using on-property treatment, partnerships with local growers etc.

- **Incorporate source separation requirements in the Ontario Building Code** – in order to ensure food and organic materials are diverted from disposal there must be consideration

for collection mechanisms, sufficient storage space, and access for collection vehicles in new commercial, institutional, industrial, single family and multi residential developments.

- **Proper oversight and enforcement** – Proper resources must be in place and capture both material that is sent to disposal and at consolidation points to ensure material does not simply move to other waste streams or is illegally dumped. Given there are less waste service providers than generators, oversight could be much more effectively applied to these entities.

- **Promotion & education** - Most jurisdictions have focused on establishing the tools necessary to help families, businesses and institutions ensure they are in compliance.

Recommendation 2:

Implement a disposal ban for Ontario, including:

a. Progressive source separation requirements for Ontario businesses, institutions, and commercial entities starting with the largest organizations.
b. Mechanisms to help maintain and expand current infrastructure, develop new infrastructure, and incent better environmental and economic outcomes.
c. Provide enough time to allow for proper planning and consultation.
d. Phase-in of smaller generators and exemptions for unique environments.
e. Reporting requirements for all organic waste processing facilities.
f. Ensuring proper oversight and enforcement mechanisms.

Cost Mitigation

Improving residential organic waste diversion programs comes with significant cost at a time when municipal resources are limited. The provincial government has an important role to play to better support organics infrastructure, and in the creation of renewable energy, compost or other soil amendments and supporting food rescue and redistribution programs. Examples of actions undertaken by other provincial governments in these areas include:

- British Columbia amended its Greenhouse Gas Reduction Regulation to include a renewable portfolio allowance of up to 5% RNG of the natural gas system and FortisBC is providing a preferred pricing of up to $30/GJ.
- Québec has also recently enacted a regulation that requires the natural gas distributor (Énergir) to increase annually the quantity of RNG to 2% in 2022, and 5% in 2025 and is also providing preferred pricing. Québec has also announced they will be providing $1.2 billion in funding to support organics diversion.
- Manitoba launched a financial incentive program, Manitoba Composts, which provides $10/T for compost facilities that process over 2,500 tonnes of compost per year (with a maximum of $25,000 annually and $25/T for facilities that process under 2,500 tonnes of compost per year.

Ontario municipalities support these initiatives that address the economics of waste, climate change and greenhouse gas reduction using a provincial landfill levy. Landfill levies are used often to

internalize the environmental cost of disposal and to create incentives for diversion activities such as composting and recycling. The funds generated are often used directly to support waste reduction and diversion activities.

Landfill levies are becoming increasingly common in North America with Québec implementing a disposal levy in 2006, Manitoba in 2009 and Saskatchewan currently considering implementing one. They are also common throughout the United States with landfill levies being applied in California, Illinois, Indiana, Michigan, Minnesota, New Jersey, Ohio, Pennsylvania, Vermont, and Wisconsin.

In Manitoba, the landfill levy is set at $10 per tonne and there is a revenue sharing formula with municipalities. Eighty percent of the revenue is rebated to municipalities to promote diversion and the remaining 20% is used to support provincial initiatives such as the Manitoba Composts Program.[9]

In Québec, the landfill levy was initially established at $10 per tonne and subsequently doubled to $23.51 per tonne. Québec has recently proposed to increase the levy to $30 per tonne with subsequent increases of $2 per tonne per year.[10] Fees collected are redistributed back to municipalities based on a formula that includes performance. Fees are also used to support other provincial initiatives like the Program for Processing Organic Matter Using Biomethanization and Composting.[11] Any funding approach should not stifle new innovation and emerging technologies in this area.

Based on the latest data available[12], every $1 per tonne associated with a disposal levy in Ontario would generate roughly $12 million in annual revenue. This would likely decrease over time as waste is reduced and more waste is diverted from landfill.

Ontario municipalities support the development of an Ontario landfill levy, with the funds raised allocated to municipal governments through a joint fund established to reduce waste, increase waste diversion and promote other activities and deliver services or operations that reduce GHG emissions.

Recommendation 3:

Establish an escalating landfill levy for all waste being sent to disposal in Ontario or being exported outside Ontario for disposal to better reflect the environmental cost of disposal and to create incentives for reduction or diversion activities. Funds raised from this levy should be allocated to municipal governments through a joint fund established to reduce waste, increase waste diversion, offset costs related to municipal operations (e.g., diversion at municipally operated buildings, administrative costs associated with the ban and levy), to offs et higher landfill costs to property taxpayers, and promote other activities that reduce GHG emissions.

[9] More information available at https://www.gov.mb.ca/sd/wastewise/compost/program.html.
[10] Québec Gouvernement. Stratégie de valorisation de la matière organique, 2020. Available at http://www.environnement.gouv.qc.ca/matieres/organique/strategie-valorisation-matiere-organique.pdf.
[11] More information available at https://www.environnement.gouv.qc.ca/programmes/biomethanisation/.
[12] Ontario Waste Management Association. State of Waste in Ontario: Landfill Report, January 2021. Available at https://www.owma.org/down/eJwFwQEKgCAMAMAXqeGmab!ZKynKlDYIen13u!qQxTk5rlOUHrUClhp9@aZXLPfmphQjUkbDgNVggs0UzMVA8Jl59gF8tGOtP8LsF0U=/OWMA%20Landfill%20Report%202021%20_FINAL_lowres.pdf.

Compostable Plastic Packaging and Products

The ubiquitous nature of plastic and concern over its dismal recycling rates have made it a focus for new environmental policy with the federal government considering bans of some single use items. According to a recent study conducted by Deloitte, over 3 million tonnes of plastics were discarded as waste in Canada in 2016, and only 9% was recycled. Plastic waste is also a burden to our economy, representing a $7.8B annual lost opportunity. When leaked into the natural environment, plastic threatens the health of our wildlife, ecosystems, rivers, lakes and oceans. In 2016, 29,000 tonnes of plastic waste entered the Canadian environment as pollution.

As brand owners look to respond to these concerns with traditional petroleum-based plastic, many have or are considering a switch to compostable plastics. While the materials' promise of natural degradation has an intuitive appeal, operators of organics processing facilities and municipal governments have expressed concern about the ability of these materials to break down in facilities that were never designed to process them. These facilities were designed and constructed on a specification to process and convert food and some soiled paper products into compost or biogas; not compostable plastic consumer packaging or single-use items like cutlery and straws.

Many jurisdictions are engaged in examining the implications of compostable plastics and \ concerns are consistently expressed about ensuring that an attempt to solve one problem does not result in a greater problem. A recent report from the United Kingdom Department for Environment, Food and Rural Affairs recommended that "…compostable plastics should only be encouraged in very specific circumstances". And that there is a "…need for labelling to be clear and provide guidance on how to dispose of products…"[13]

Compostable packaging should only be labelled compostable, if it can actually be composted at scale and in practice without contaminating end products. There is an important role the federal government needs to play to ensure environmental claims especially related to end-of-life management are accurate.

Municipal governments continue to advocate that compostable packaging and packaging-like products (e.g., coffee pods) are included in extended producer responsibility regulations to ensure a level playing field across all packaging material types and to prevent incentive for producers to switch their packaging from plastic to compostable plastic. We support the policy directive this government has committed to by having producers be fully responsible for the management and funding of their discards. While we are still awaiting a final Blue Box regulation under the RRCEA, we are concerned that the draft Blue Box regulation includes no provisions to incent producers to collect or manage compostable packaging and products for the foreseeable future. This is a lower bar than in the current Blue Box Program Plan, and the proposed changes to the Policy Statement wrongly place more responsibility onto municipal governments and their service providers than producers.

Further research into the best methods of collecting and processing compostable plastics should be completed by the Province. We understand that some of this work is underway in partnership with the federal government. Municipal governments support:

[13] UK Department for Environment, Food and Rural Affairs, "Standards for bio-based, biodegradable, and compostable plastics. Summary of responses to the call for evidence and Government Response.", April 2021

- the use of pilot projects and research on the aerobic and/or anaerobic processing of compostable products and packaging to maximize recovery and minimize contamination;
- examining the feasibility and cost of updating existing technology to process compostable products and packaging; and
- considering the adoption of technology to collect and process compostable products and packaging in their systems when they are planning for new technology.

Recommendation 4:

Address issues related to compostable products and packaging by:

a. Finalizing the Blue Box Regulation under the RRCEA and include reporting, collection and management targets, and enforcement for compostable materials.
b. Enforce labelling requirements to ensure only products and packaging that can be proven to compost at scale and in practice without contaminating end products are labelled as compostable.
c. Researching the efficacy of compostable materials in existing organics processing facilities (e.g., compost and anaerobic digestion) and make recommendations on how producers of these materials should best manage them at end-of-life.